

Mortality

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Numbers of Common Eider Beached on the German North Sea Coast During the Mass Mortality in the Winter of 1999/2000

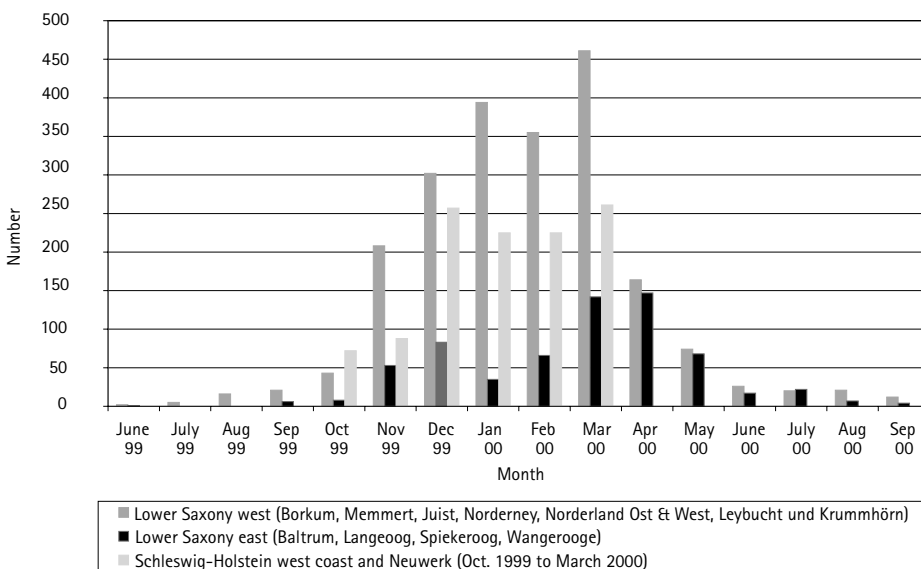
Every second bird corpse found on the German North Sea coast in the winter of 1999/2000 was a Common Eider. In total, about 4000 dead Common Eiders were recorded in the German Wadden Sea from June 1, 1999 to July 31, 2000. Most of these birds (95%) were found in the period from October 1999 to May 2000 (Fleet et al. 2001). Monthly totals of the number of dead Common Eider found in different parts of the German Wadden Sea are presented in Figure 1. Above average numbers of dead Eider were already being washed ashore on coasts in the west of Lower Saxony in September 1999, while in Schleswig-Holstein, they were first recorded in October when systematic beached bird counts started. Above average numbers of beached Common Eider were first recorded in eastern Lower Saxony in November. The numbers of dead birds washed ashore remained relatively stable at a high level during the months from December through to March. Numbers peaked in western Lower Saxony in March and in eastern Lower Saxony in March and April. Systematic counts stop in Schleswig-Holstein at the end of March so there is no clear picture of the development in April and May for this region. A comparison of the number of birds washed ashore per km of coastline in the period from September 1, 1999 to March 31, 2000 indicates that

generally higher numbers were washed ashore in Lower Saxony than in Schleswig-Holstein and more in the west of Lower Saxony than in the east (Fig. 2).

In Schleswig-Holstein, highest numbers/km were recorded on the mainland coast of Nordfriesland and lowest numbers on the west coast of Sylt. The high value for southern Dithmarschen is the result of counts on only 1.5 km of coastline and possibly is not representative of the whole southern part of that region. The distribution of the dead birds in Schleswig-Holstein corresponds to the observed distribution of living birds in that part of the Wadden Sea in that winter and with the region where they would be expected to be washed ashore. In Schleswig-Holstein, the counting effort was generally the same for each site with two counts conducted per month at each site. In Lower Saxony, the counting effort varied between sites. If the number of dead birds per surveyed km – which takes into consideration differences in counting effort – is used to compare the data in between regions, average numbers found in Schleswig-Holstein are very similar to those found in Lower Saxony. The general pattern in Lower Saxony, however, remains unchanged with large numbers of Common Eider washed ashore in the west (Borkum to Baltrum),

fewer in the middle (Spiekeroog and Langeoog) and larger numbers again in the east (Wangerooge). The exceptionally high numbers of beached Common Eider on Memmert are probably due to the fact that the location of the island is favorable for the beaching of floating debris (Schulze Dieckhoff pers. communication). The fact that lower than usual numbers of living birds were recorded in the west of the Lower Saxony Wadden Sea in the winter of 1999/2000, suggests that an exceptionally high mortality and/or the drift of corpses from the Netherlands led to the high numbers of beached birds recorded in that region. The high numbers/km recorded on Wangerooge reflect the exceptionally large numbers of Common

Figure 1: Monthly totals of dead Common Eider found on German North Sea coasts in the period June 1999 to September 2000.



Eider recorded in the eastern part of the Lower Saxony Wadden Sea in 1999/2000 (Scheiffarth et al. 2001).

A comparison of data gathered on sites where beached bird surveys have been carried out with the same intensity over the last eight years, indicate that numbers washed ashore in 1999/2000 were three (Schleswig-Holstein) to almost five (Lower Saxony) times higher than in the period from 1992/93 to 1994/95. The index for the number of dead Common Eider washed ashore on these selected sites only surpassed the value for 1999/2000 in the extremely cold winter of 1995/96 (Fig. 3). Low numbers of beached Common Eider were recorded on German North Sea coasts in the year following the hard winter. Since then, numbers of dead Common Eider have been increasing steadily, which is probably due to an increasing winter population size (see Scheiffarth et al. 2001). 62% of the 900 birds that were sexed according to plumage characteristics were females. As the Wadden Sea population normally has a higher ratio of males, it appears that proportionally, more females than males died in the German Wadden Sea in the winter of 1999/2000. More male than female Common Eiders were, however, recorded dead on beaches in the Netherlands in 1999/00 (van de Berk et al. 2000). On the basis of the data from beached bird surveys, it is calculated that a minimum of 10,000 Common Eiders were washed ashore on German North Sea coasts in the winter of 1999/2000. This minimum number of dead Common Eider in the German Wadden Sea represents 6% of the total winter population of the region in

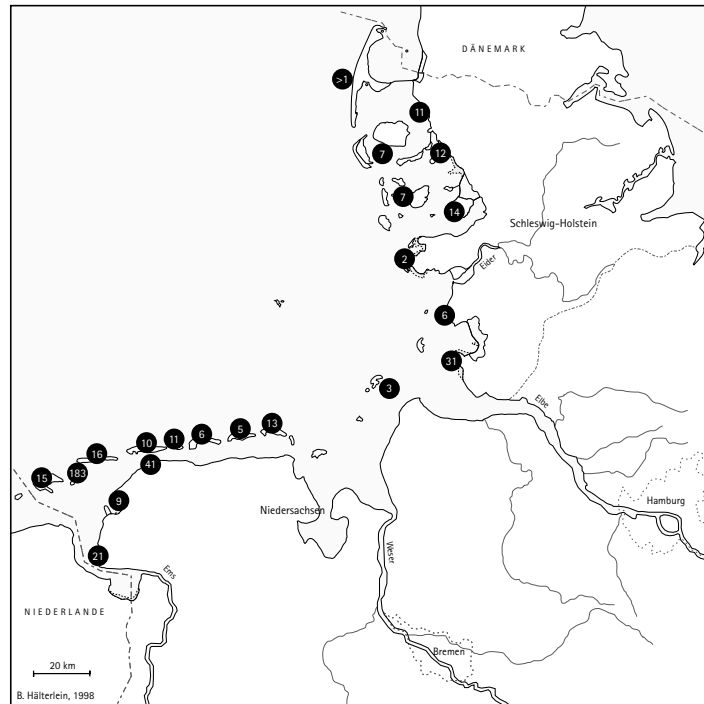


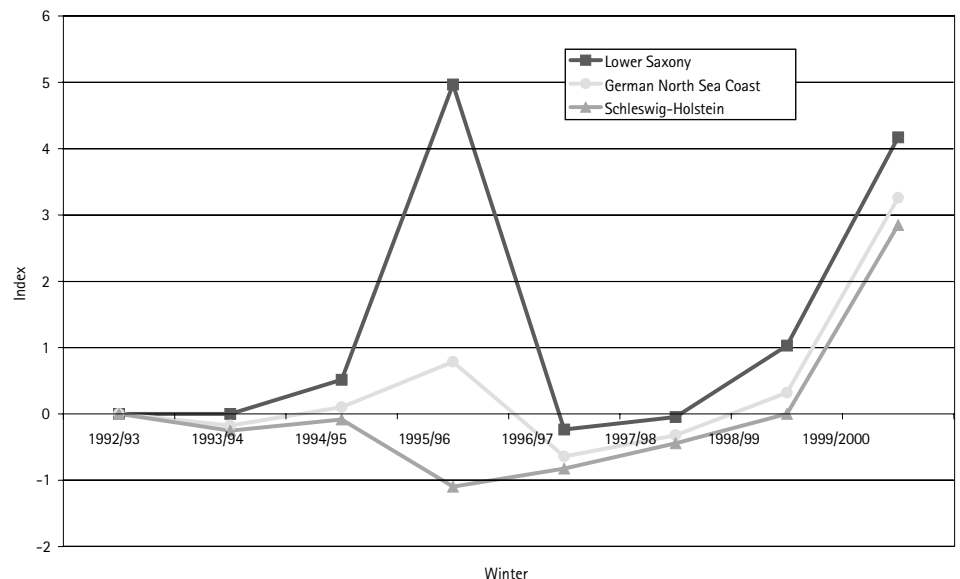
Figure 2: Number of dead Common Eider washed ashore per km on German North Sea coasts in the period 1 September 1999 to 31 March 2000.

1999/2000.

References

- Fleet, D. M., B. Reineking, S. Gaus, E. Hartwig, P. Potel und M. Schulze Dieckhoff (2001): Ölopfers in der Deutschen Bucht im Zeitraum vom 01. Oktober 1999 bis 31. März 2000. Seevögel 2000/21, Heft 4:103 – 107.
- Scheiffarth, G., N. Kempf & P. Potel (2001): Numbers and distribution of Eider Ducks (*Somateria mollissima*) the German Wadden Sea in winter 1999/2000: fleeing the fate of death? Wadden Sea Newsletter, this volume.
- Van den Berk, V. M., S. Dirksen & M. J. M. Poot (2000): Sterfte onder eidereenden in de Waddenzee 1999-2000. - Werkdocument EC-LNV Nr. 186, Ministerie van Landbouw, Natuurbeheer en Visserij, Wageningen, 71pp.

Figure 3: Index of the number of Common Eider washed ashore on selected sites* in the period 1992/1993 to 1999/2000 (* Amrum, Langeneß, Hooge, Pellworm, Sylt (Hörnum), Sylt (Rantum), St. Peter, Hauke-Haien-Koog, Nordstrand, Büsum, Friedrichskoog, Neuwerk, Juist, Norderney, Langeoog, Spiekeroog, Wangerooge)



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