

Skomer Voles in 2016 by Alice Brooke

The Skomer Vole *Myodes glareolus skomerensis* is a sub species of Bank Vole found only on Skomer Island. It is one of four small mammal species found on the island, the others being Long-tailed Field Mouse *Apodemus sylvaticus*, Pygmy and Common Shrew *Sorex minutus*, *Sorex araneus*.

The Short-eared Owl has nested on Skomer for many years. It is commonly seen in spring and summer when hunting to feed young. Analysis of pellets in 2014 suggest that the Skomer Vole makes up a large amount of the Short-eared Owls diet (37%) (Compton et al, in prep.).

In 2016 trapping of the Skomer Vole was carried out, following Dr Tim Healings methodology. This mark and recapture population study has been carried out for over 40 years on the same sites.

Two trapping sites were used, the first with a high density of voles, containing tall bracken, called grid C. The second with a low density of voles, containing patches of open ground and short bracken called grid E.

At each site a grid of 60x60meter was made with points 10meter apart, each point had two traps, giving 72 traps per site. Long worth traps with shrew escape holes were used. All traps had bedding and sufficient food in them, both to tempt the animals into the traps and keep them warm and comfortable overnight. The traps were opened in the evening, then checked and closed in the morning for a total of five nights at each site. Once trapped, the voles were sexed, weighed and marked (fur clipped), their breeding condition was also noted, they were then released.

The numbers of pairs and fledged young of the Short-eared Owls were found by looking through old systematic lists of the island. However, there are some gaps in the data which could be due to the difficulty of finding the owl nests themselves. The number of Skomer Voles has been taken from Dr Tim Healings previous studies.

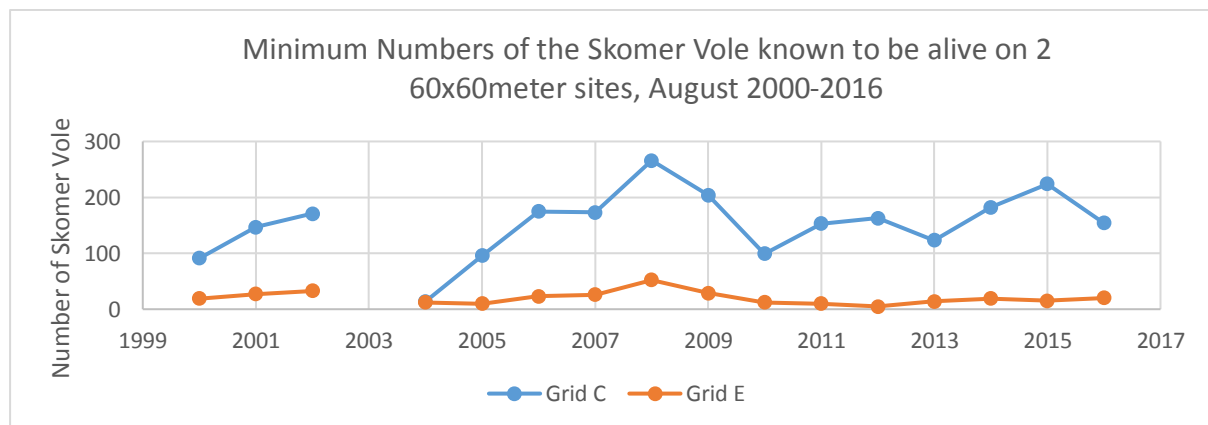


Figure 1. Number of the Skomer Vole known to be alive in between 2000-2016. No data collected in 2003.

Figure 1 shows that there is a large variation in the number of voles found. This could be due to a lot of different factors including weather and predator abundance. It also shows that the voles favour habitat with tall and dense Bracken (Grid C).

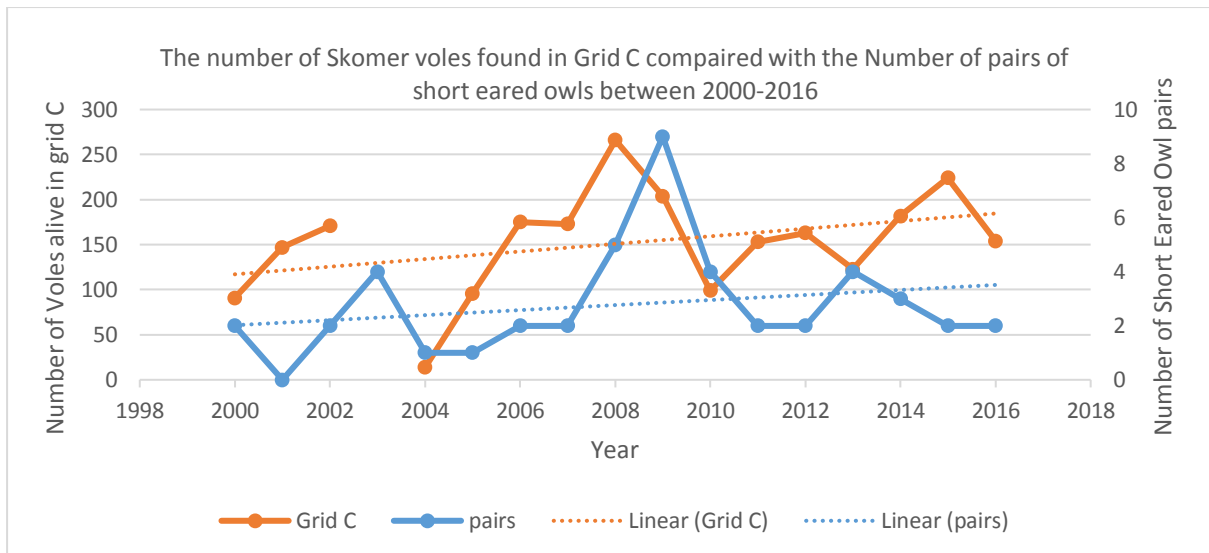


Figure 2. A graph to compare the difference between the numbers of Skomer Voles found in grid C and the number of Short-eared Owl pairs.

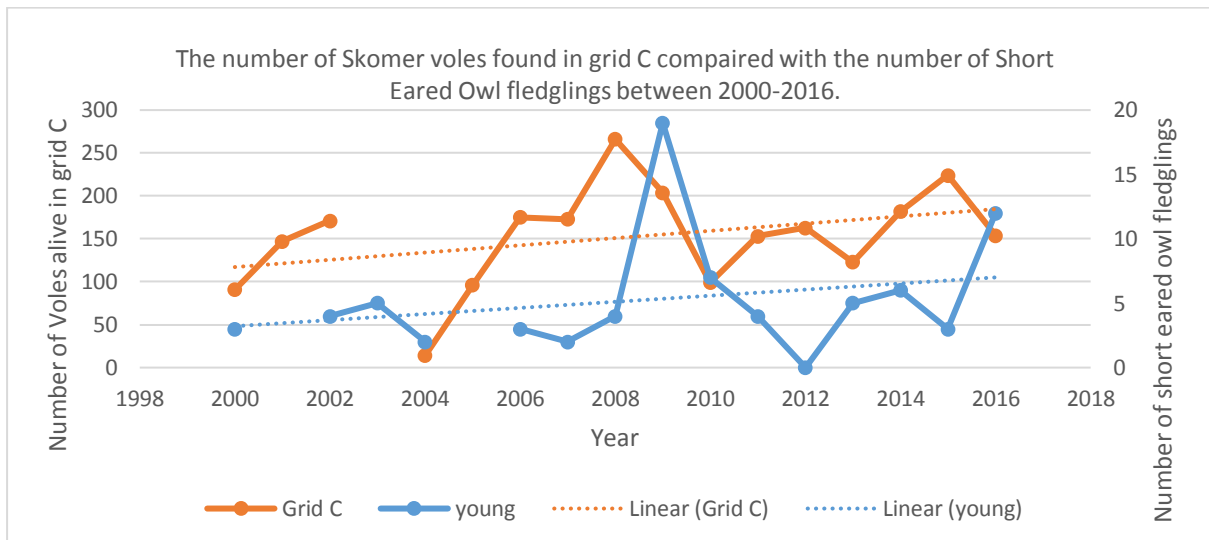


Figure 3. A graph to compare the number of Short-eared Owl fledglings and the number of Skomer Voles found.

The numbers of voles from the dense bracken site (grid C) was used as this seems like the most likely habitat for the Short-eared Owl to use for hunting, due to the high density of voles. There is little correlation between the number of Short-eared Owl pairs and fledglings and the number of Skomer Voles as shown by Figure 2 and 3.

2008 saw a very high number of voles, this was followed, in 2009 by a large number of successfully breeding Short-eared Owls. A similar pattern was observed again in 2015 and 2016 (high number of fledged young). The annual vole study is conducted in August after the Short-eared Owls have finished breeding. The small number of voles found in years of good numbers of breeding Short-eared Owls could be explained by the timing of the vole study.

Diet studies show that the Short-eared Owls must feed on the main land too, badger, rat and field vole remains have all been found in pellets (Compton et al, in prep.). This could be longer trips that the Owls are taking to feed themselves rather than their young.

It is difficult to determine if the Short-eared Owls have a large effect on the population of the Skomer Vole, or if other factors including weather and food availability influence their population.

Alice Brooke (Long-term Volunteer)

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