

# Winter cattle grazing to create foraging habitat for choughs *Pyrrhocorax pyrrhocorax* at South Stack RSPB Reserve, Anglesey, Wales

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## SUMMARY

At a coastal site in Wales, year-round cattle grazing was introduced to an area of ungrazed semi-improved grassland, which was rarely used by foraging choughs *Pyrrhocorax pyrrhocorax*. Grazing greatly reduced the sward height and the area became a major feeding area for chough.

## BACKGROUND

The chough *Pyrrhocorax pyrrhocorax* is declining throughout most of its European range. In the UK they used to be relatively widespread but by the early 19<sup>th</sup> century they had disappeared from inland areas and are now confined to coastal areas in the west of Britain. Habitat loss (including reduction of cliff-top livestock grazing leading to a loss of favoured cliff-top foraging areas) combined with persecution were the main reasons for the decline.

In those few localities where they persist in the UK, choughs are now heavily dependent upon appropriate land management to provide suitable foraging habitat. Conservation organisations manage tracts of coastal land within and adjacent to current chough range for their benefit. At one such site, a formerly un-grazed semi-improved grassland at South Stack RSPB Reserve (north-west Wales), year-round grazing by cattle was introduced, the aim being to create suitable feeding habitat for choughs.

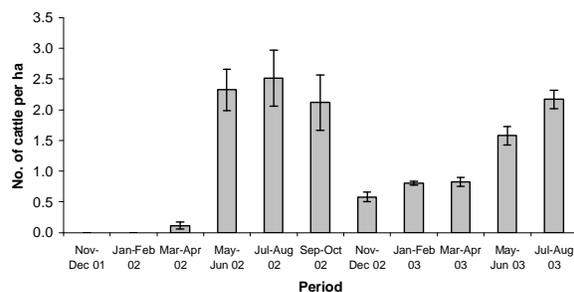
## ACTION

**Study Site:** South Stack RSPB Reserve is located on the island of Anglesey, north-west Wales. Its sea cliffs support large numbers of breeding seabirds as well as a small chough population. Year-round grazing by cattle was introduced to 26 ha of formerly un-grazed

semi-improved grassland (known as Pen-y-bonc) on the reserve.

**Grazing management:** Grazing was introduced to Pen-y-bonc in spring 2002. The animals used were Gloucestershire/Welsh Black cattle. These animals were not treated with antihelminthic drugs while on site. Cattle were out-wintered on the grassland, since this was thought to be beneficial to choughs. Once a widespread practice, very few cattle are now out-wintered on Anglesey. In the winter and spring cattle densities were typically less than 1/ha, rising up to 2.5/ha in the summer. Cattle grazing densities on Pen-y-bonc are shown in Figure 1.

**Chough monitoring:** Use of the 26 ha site, and additional surrounding areas of farmland, by choughs was recorded by walking weekly transects. On each visit the grass height in each



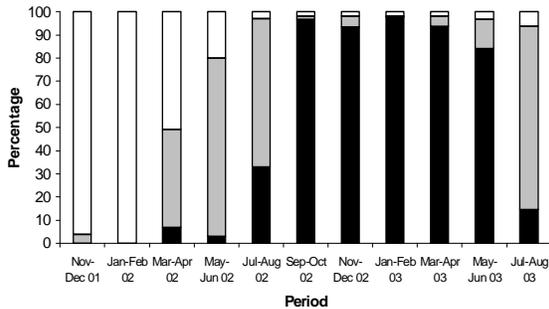
**Figure 1.** Cattle densities at Pen-y-bonc, 2001-2003. Bars show the mean number per visit  $\pm$  one standard error.

field was assessed by eye and assigned to one of three height categories: 0-5 cm, 6-10 cm and 10+ cm.

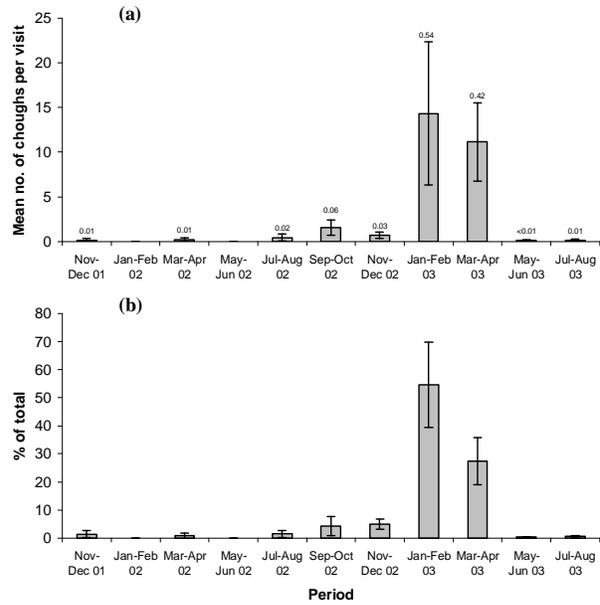
**CONSEQUENCES**

**Effect of grazing on sward height:** Introduction of cattle grazing greatly reduced the height of the sward (Figure 2). Prior to the introduction of grazing, in the winter of 2001/02, over 95% of the sward was estimated to be 10+ cm tall. In the following winter over 90% of the grassland was estimated to be between 0-5 cm tall.

**Field use by choughs:** The reduction in sward height was accompanied by a large increase in use of Pen-y-bonc by choughs during late winter and early spring 2003 (Figure 3a). Even though the 26 ha of grassland at Pen-y-bonc represented just 9.5 % of the total area of heathland and farmland surveyed, this 26 ha of grassland regularly supported 30-60% of feeding choughs (Figure 3b).



**Figure 2.** The percentage of the area of Pen-y-bonc in different sward height categories. Black = 0-5 cm, grey = 5-10 cm, white = 10+ cm.



**Figure 3.** Changes chough use of Pen-y-bonc 2001-2003. a) Mean numbers of choughs recorded at Pen-y-bonc. b) Chough numbers recorded at Pen-y-bonc expressed as a percentage of the total number recorded in the study area. Bars show means ± one standard error. Labels in (a) are the mean density of choughs/ha.

**Conclusions:** From this study, winter cattle grazing appears to be important in providing and maintaining suitable foraging conditions, i.e. short sward that is rich in invertebrate prey, for choughs on Anglesey.

**ACKNOWLEDGEMENTS**

This work was part of a collaborative project with the Countryside Council for Wales (CCW). We particularly thank John Ratcliffe.

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