

# Providing supplementary food as a conservation initiative for twite *Carduelis flavirostris* breeding in the South Pennines near Littleborough, West Yorkshire, England

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## SUMMARY

The twite *Carduelis flavirostris*, is a small finch which has undergone serious declines in the UK. In the Pennine Hills, northern England, feeding stations were established as a stop-gap prior to instatement of 'twite-friendly' meadow-management to try and bolster breeding twite populations. As at another feeding station (Raine 2004), despite supplying seed close to a breeding colony, twite utilised seeds of wild plants to feed their chicks. However creation of the feeding station adjacent to a twite breeding colony, judging by the number of visiting birds, appears to benefit them by providing pre- and post-breeding food sources. Birds from other breeding colonies in a 20 km radius were also recorded using the feeding station.

## BACKGROUND

The twite *Carduelis flavirostris* is a red-listed species in the UK that has undergone a serious population decline and range contraction in recent years. One potential reason for this decline is the loss of suitable feeding sites in their upland breeding grounds. During the breeding season twite rely on a range of wild weed seeds for food which formerly, in traditionally-managed upland hay meadows, were abundant. However, due to changes in agricultural practice many meadows are now subject to an early cut for silage production rather than being left until the summer and cut for hay. In consequence many weeds no longer have time to mature and set seed before they are cut. For this reason, it was decided that provision of supplemental feeding sites would be a useful initial conservation tool to bolster populations until suitable 'twite-friendly' meadow management could be re-instated through the Countryside Stewardship scheme in conjunction with local tenant farmers.

## ACTION

Nyjer seed *Guizotia abyssinica* was donated by CJ Wildbird Foods and distributed by the Royal Society for the Protection of Birds

(RSPB) to the site (a United Utilities reservoir catchment estate) north-east of Littleborough, Calderdale in West Yorkshire. A range of supplemental seeds were initially used at the station, but nyjer proved to be the most attractive to twite flocks.

A cleared area of ground roughly 2 m<sup>2</sup> was selected as a suitable feeding site. It was important to ensure that this area consisted of fairly level soil devoid of rocks, to prevent potential injury of birds during subsequent catches for a colour-ringing programme. As there was sand present at the site, this was spread evenly over the top of the cleared area, in order to help cover up any loose stones that could potentially injure birds during catching sessions. Considerations for the location of the feeding site included:

- i) being within a 2 km radius of several nearby breeding colonies (2 km being the average distance that twite travel between the colony and their feeding areas)
- ii) being fairly flat and devoid of tall vegetation (to allow the twite to easily locate the food and to make it easier to see the colour ring combinations of feeding birds)

iii) being near the reservoir edge (where birds often already came to feed naturally)

iv) being accessible to volunteers so that it would be easy to continue to put out and maintain a constant food supply

This site was also already known to local birds as it was the same location that an ornithologist had been putting out seed since 1997, in an effort to attract wintering snow buntings *Plectrophenax nivalis*.

The feeding station 'Station 2' was established in the spring of 2002 and was located approximately 1.5 km from two separate colonies of between 20 and 30 pairs of twite each. Nyjer seed was subsequently provided throughout the year, including the winter when most twite will have migrated to coastal wintering grounds. Feed was put out on a regular basis, with fresh seed being added at least once a week. Enough seed was added to create a thick line of feed about 2 m in length and 5 cm in width. Consideration for the amount of seed used included:

i) yearly amount available from the sponsoring company

ii) taking into account compensation of loss of seed due both to consumption by non-target species e.g. mallard *Anser platyrhynchos*, stock dove *Columba oenas*, other finches, and the effects of wind

iii) average flock size using the site

iv) how often they were likely to utilise the feeding station

## CONSEQUENCES

The feeding stations proved to be very attractive to twite during pre-breeding and post-breeding periods, with flocks of up to 150 individuals being recorded utilising the feeding station in September (Fig. 1). This suggests that supplemental feed provides an important source of food for newly fledged birds and birds building up energy reserves for the winter migration. As with Station 1 (Raine 2004), during the breeding season twite very

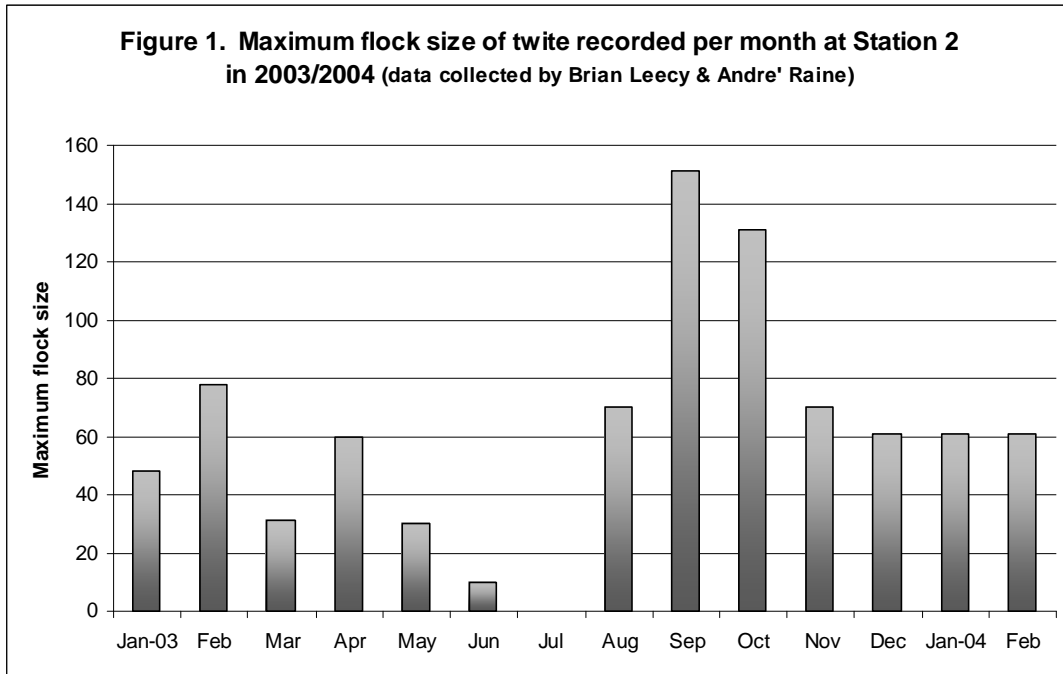
rarely utilised the feeding stations, instead preferring to feed on natural food in the area such as sorrel *Rumex acetosa*, dandelion *Taraxacum officinale* and thistles *Cirsium* spp. This suggests that there are areas within the vicinity of the breeding colony that still hold suitable amounts of natural food during the breeding season. Again as with Station 1, this feeding station also held small flocks of twite throughout the winter months where previously at this time of year they had only been rarely recorded.

Interaction between this feeding station and Station 1, located 12.6 km to the north, was also noted. After the breeding season, both adult birds and newly fledged birds from the vicinity of Station 1 were regularly found at this station. A northward movement of birds from this station to Station 1 was also noted, although less frequently. Birds were also recorded moving back and forth between stations (one bird moving a minimum of six times in the post-breeding season between sites), which demonstrates the ability of this species to locate and use several dispersed feeding areas – an important survival strategy where food sources may be fairly ephemeral or unreliable. Birds from other breeding colonies in a 20 km radius were also recorded at both stations 1 and 2.

**Conclusions:** The creation of feeding stations near twite breeding colonies appears to be a useful conservation measure. The station was used not only by birds breeding nearby but also, in both the pre- and post-breeding season, by birds from colonies further afield. However, where possible it seems that twite utilise natural food sources (ie. seeds gleaned from native plants) to provision nestlings. Therefore securing and enhancing areas that provide such food sources during the breeding season is probably an important goal for long-term twite conservation.

## REFERENCES

Raine A. (2004) Providing supplementary food as a conservation initiative for twite *Carduelis flavirostris* breeding in the South Pennines near Worsthorne, Lancashire, England. *Conservation Evidence* 1, 23-25.



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