

Providing supplementary food as a conservation initiative for twite *Carduelis flavirostris* breeding in the South Pennines near Worsthorne, Lancashire, 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 reinstatement of 'twite-friendly' meadow-management to try and bolster breeding twite populations. Despite presence of a nearby source of seed supplied at a feeding station, breeding 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 locality where the feeding station was to be established (within a United

Utilities reservoir catchment estate). A range of seeds were initially provided at the station, but nyjer proved to be the most attractive to twite flocks and subsequently became the only seed used.

A cleared area of ground roughly 2 m² 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. Considerations for the location of the feeding site included:

- i) being within a 2 km radius of the breeding colony (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 or grasses (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 come to feed naturally)
- iv) being accessible to volunteers, so that it would be easy to put out food and ensure a constant food supply

The feeding station 'Station 1' was established in the spring of 2002 and was located approximately 1.5 km from a colony of between 20 and 30 pairs of twite. Nyjer seed was subsequently provided throughout the year, including the winter when most twite have migrated to lowland 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

During the breeding season twite very rarely visited the feeding station. They instead preferred to feed on natural food sources in the area, such as the seeds of sorrel *Rumex acetosa*, dandelion *Taraxacum officinale* and thistles *Cirsium* spp. This suggests that within the vicinity of the breeding colony there is suitable natural food present during the breeding season to sustain adults and provide food for the young.

However, the feeding station proved to be very attractive to twite during pre-breeding and post-breeding periods, with flocks of up to 150 individuals being recorded using the feeding station in September (Fig. 1). The feeding station appeared to lie along a well-used localised migration circuit, hence the large number of birds appearing in the post-breeding

period. The results indicate that this feeding station provided an important provisional source of food for newly fledged birds and for birds building up energy reserves for winter migration. The feeding station also held small twite flocks throughout the winter months where previously in this area at this time of year they had only been rarely recorded.

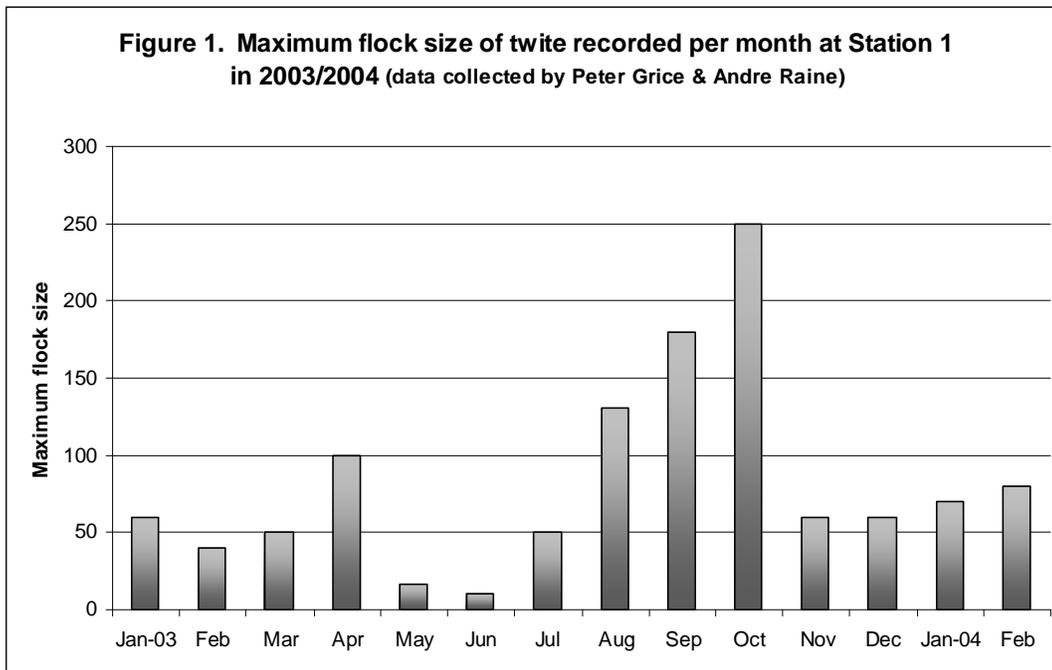
Interaction between this feeding station (Station 1) and Station 2 (Raine 2004), located 12.6 km to the south, was also noted. After the breeding season, both adult and newly fledged birds from the vicinity of Station 1 were regularly found at Station 2. A movement of birds from Station 2 to Station 1 was also noted, although less frequently. Birds from other breeding colonies in a 20 km radius were also recorded at this station.

The feeding station was also regularly used by smaller flocks of linnet *Carduelis cannabina* (another declining finch species) and occasionally goldfinch *Carduelis carduelis*, which followed the same general pattern of monthly utilisation as that of twite.

Conclusions: This study shows that twite utilise natural food sources to provision nestlings during the breeding season. However, the creation of feeding stations adjacent to twite breeding colonies (thus securing areas of pre- and post-breeding food sources) appears to be very useful, judging by the number of visiting birds. As an initial and simple conservation measure it may help to locally bolster twite populations, whilst where feasible, areas are established and managed sympathetically to provide more natural food sources.

REFERENCES

- Raine A. (2004) Providing supplementary food as a conservation initiative for twite *Carduelis flavirostris* breeding in the South Pennines near Littleborough, West Yorkshire, England. *Conservation Evidence* 1, 26-28.



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