

Twite (*Carduelis flavirostris*)



Twite
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The twite is a small, brown finch that feeds on the seeds of a variety of plants, especially dandelion, sorrel, annual meadow-grass and thistles. It has declined in England by 50% since 1991 and the entire English breeding population was estimated in 1999 at only 215 pairs⁽¹⁾.

The main area where twites breed in England is the southern Pennines. Here, the birds nest in areas of bracken or heather in the unenclosed land at the edges of moors. To breed successfully they need in-by- farmland within 1-2 km of the nest that can provide enough food for them to raise a brood.

The twite is a partial migrant with some birds remaining in the breeding areas in winter but most moving to coastal sites.

Main Habitat(s): Hay meadows; pastures; moorland edge; unimproved or semi-improved grasslands; saltmarsh (winter).

National Status

In 1999 the UK twite population was estimated at 10,000 pairs, more than 95% of which were in Scotland. The English population is almost entirely confined to the South Pennines.

The twite is on the 'Red List of Birds of Conservation Concern' ⁽³⁾ because of its historical population decline. It is known to have undergone a significant fall in numbers recently but the full extent of this decline is unknown and, for this reason, it was not identified as a UK BAP Priority Species in 1995.

Regional Status

Evidence suggests that twite numbers in the region have declined consistently since the 1970s ⁽⁴⁾.

However, twite is very difficult to census reliably. The South Pennine population was estimated at 415+ pairs in 1990 and by 1999 this had fallen by 50% to around 215 pairs. Information on breeding range may be a more reliable indicator of trends and over the same period the birds' range has contracted by half. Bird recorders have reported the recent loss of twite from several traditional breeding sites ⁽⁵⁾.

The remaining twite breeding sites in the North West are clustered in five areas: the West Pennine Moors, Rossendale, Burnley, Rochdale and Oldham. In addition, it continues to be found around Pendle Hill and, sparsely, in the Forest of Bowland and the Forest of Trawden.

Colour-ringing has indicated that the majority of the Yorkshire Pennine population winters on saltmarshes around the Wash but, it is thought that more westerly breeders move to the Lancashire coast.

Local Status

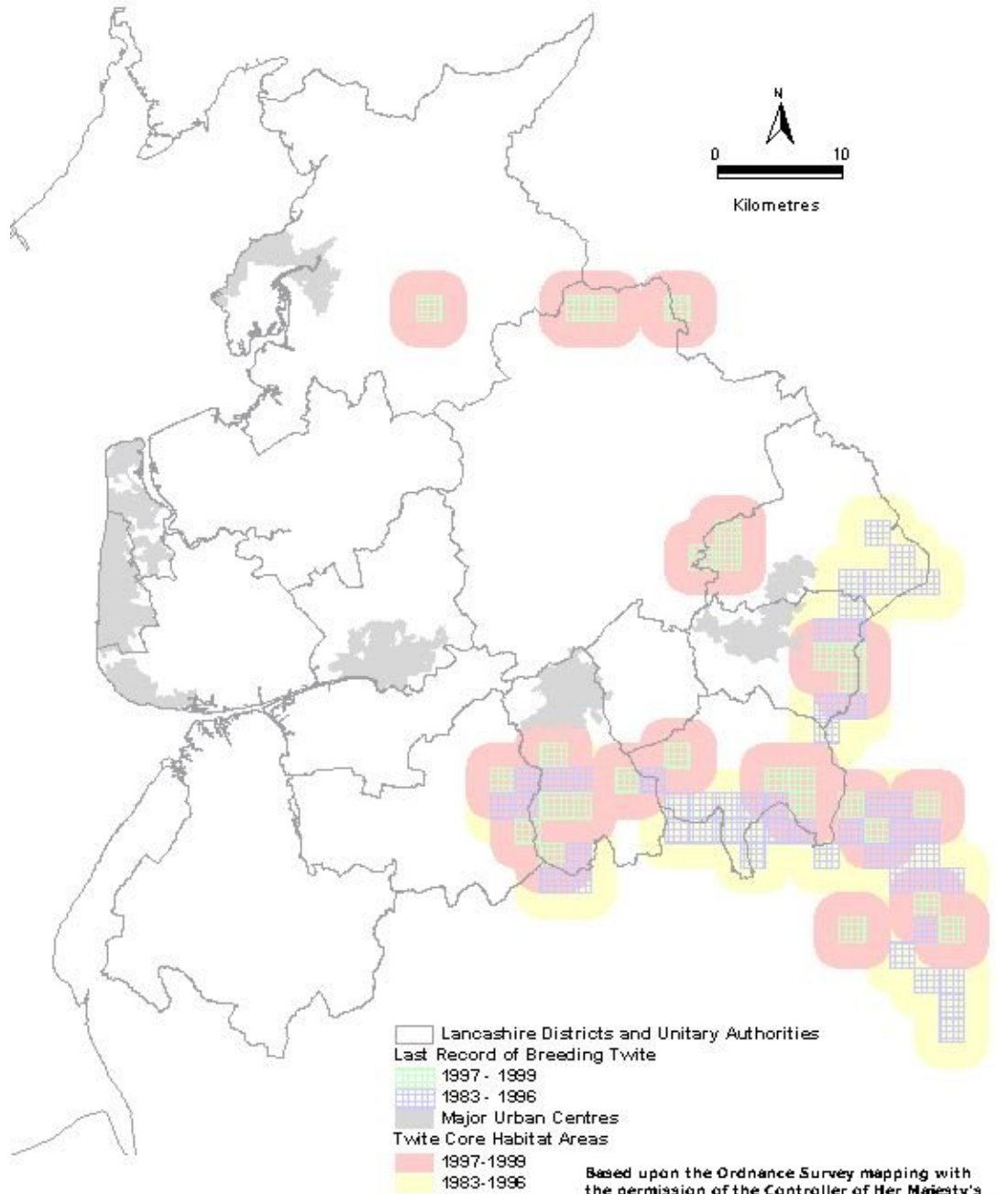
Lancashire and Greater Manchester account for about 20-25% of the English breeding population.

During 1997-1999, 40 breeding pairs of twite were located in 28 Lancashire tetrads (2 km squares). They have been lost as breeding birds from 16 tetrads (36% of total) since 1990 with the largest range contractions in Rossendale and Boulsworth Hill/Trawden.

Little is known about the wintering grounds of the Lancashire population, but some birds appear to stay in the uplands. Relatively large numbers of twite congregate in the Ribble saltmarshes and in fields bordering the Lune estuary during the winter. Areas around Pilling, Cockerham and Cockersands host flocks of 50+ in the winter - a sizeable number compared to the total that remains in England. However, neither the origin of these wintering birds nor trends in their numbers are known conclusively.

Map(s):

Density of Breeding Pairs of Twite (*Carduelis flavirostris*)
in Lancashire according to
data collected by Lancashire Bird Club



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Current factors affecting the species

It is thought that the twite has declined because of decreased breeding success. Changes to feeding rather than nesting areas are believed to have been critical, perhaps causing a reduction in the number of successful second broods. There is little hard evidence to substantiate this but the only marked change in recent decades to twite habitats that is apparent has been the switch from hay meadows to silage production.

Twites require access to a succession of seed sources throughout the breeding season. At first they feed upon seeds of annual meadow-grass and purple moor-grass. Moorland, quarry bottoms and reservoir edges provide important feeding sites. Later they switch to the seeds of dandelions as they become available, then to those of sorrels. Second broods of young are fed largely on the seeds of these sorrels which are abundant in hay meadows. Access to a rich supply of these and other 'weed' seeds (e.g. in hay meadows) 1-2 km from the nest is crucial for the successful rearing of young.

In fields converted to silage production grass-harvesting occurs earlier and once cut, meadows provide no food for twite. Intensification of pastures reduces opportunities for grasses and other plants to set seed.

Mowing of roadside verges before flowers set seed removes another source of food.

Loss of small mixed farming and its associated arable crops, which provided a winter food resource, may have contributed to greater winter dispersal from the breeding grounds.

Increased stocking rates and other changes on the moorland edge are believed to have reduced suitable nesting sites and led to increased losses of clutches through trampling or exposure to predation.

Uncontrolled landscape-scale burning of grass moor or bracken control can remove bracken litter that is important for nesting in the absence of heather.

Current Action / Mechanisms

English Nature, RSPB and Yorkshire Water, as part of an EU Life project have carried out detailed research into the ecological requirements of twite in West Yorkshire.

MAFF's Countryside Stewardship Scheme is available for the maintenance and re-creation of species-rich hay meadows and is being actively promoted for twite conservation in West Yorkshire.

The Lancashire Bird Club conducted a survey of twite distribution and population in Lancashire during 1997-1999 (3). A re-survey of the South Pennines was carried out by RSPB/English Nature in 1999 (1) to measure population changes since 1990.

Objectives, targets and proposed actions for twite in Lancashire

Broad Objective:	A. Halt the decline in the population by 2005			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Coordinate	1. Establish a group to	RSPB, EN	S	RM

initiatives in Lancashire with other twite conservation schemes.	monitor implementation of this plan and to liaise with twite conservation bodies throughout the South Pennines. (High)	LWT, BTO		
2. Promote land management that benefits breeding twite.	1. Target advice and agri-environment payments to encourage measures that help twite breeding on agricultural land. (High)	MAFF, FWAG, BHSP, NFU, CLA, LCC	S	LM,P, PR
	2. Ensure mowing or spraying of roadside verges or reservoir embankments is not carried out within 3 km of twite breeding areas during the breeding season (April-Sept), unless for over-riding road safety reasons or to accommodate other biodiversity interests. (High)	LCC, HA, NWW	S	LM
	3. Encourage retention of areas of bracken and heather on the moorland edge. (Medium)	MAFF, FWAG, BHSP, NFU, CLA	M	LM, PR
	4. Encourage sympathetic management of disused quarries and other derelict sites. (Medium)	LCC, LAs, Quarrying Industry	M	LM
	5. Consider use of Wildlife Enhancement Scheme to promote suitable land management on existing SSSIs. (Medium)	EN	M	P,LM
	6. Encourage late mowing of recreational grasslands in twite areas to allow birds to exploit dandelion seeds.(Medium)	LAs, LCC, RSPB	M	LM,PR

	7. Encourage horse-owners to continue hay production in twite areas through articles in equestrian magazines and contact with local organisations (Medium)	RSPB, FWAG, LWT	M	PR, LM
	8. Review upland reservoir sites for twite presence, and seek suitable areas for sacrificial seed crops. (Medium)	NWW	M	LM
	9. Continue and extend supplementary feeding at existing and new sites to support breeding populations and attract new potential populations to suitable sites. (Medium)	NWW, Rangers	M	LM
3. Protect existing twite breeding areas from adverse impacts (e.g. development, afforestation, etc.).	1. Identify and designate all eligible twite breeding sites as Biological Heritage Sites. (High)	LCC, BHS P/ship	S	SS
	2. Ensure forest strategies and woodland schemes avoid planting trees on areas of importance for twite. (Medium).	FA, LCC, woodland creation schemes	O	P,SS
	3. Consider extending SSSI and SPA designation to all moorland twite breeding areas and key feeding areas. (Low)	EN, RSPB	L	SS
Broad Objective:	B. Increase the breeding distribution of twite, aiming to achieve recolonisation of the 1990 range by 2010 and, ultimately, recolonisation of the 1968-72 range.			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Identify opportunities to expand current breeding range	1. Use breeding bird records to map the historic breeding range of the twite. (High)	LCC, LBC, ELOC, ROC	S	RM

of twite in Lancashire.	2. Investigate the potential of the SCOSPA Heritage Lottery bid to fund restoration or creation of suitable habitat. (High)	SCOSPA	S	RM
	3. Consider use of Objective 2 to support low-density mixed farming systems suitable for twite in its former range within the Forest of Bowland. (Medium)	MAFF, RSPB, LWT	M	LM
	4. Encourage sympathetic restoration of disused quarries and other derelict sites within the historic range of the twite. (Medium)	LCC, LAs, Quarrying Industry	M	LM, PR
Broad Objective:	C. Maintain the area of wintering habitat.			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Protect existing twite over-wintering areas from adverse impacts (e.g. development, etc.).	1. Identify and designate all eligible twite over-wintering sites as Biological Heritage Sites. (High)	LCC, BHS P/ship	S	SS
Broad Objective:	D. Improve knowledge of status, distribution and ecological requirements of twite in Lancashire			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Set up baseline for monitoring system	1. Establish database of all breeding and over-wintering sites. (High)	LBC, LCC, LWT, BTO	S	RM
2. Monitor status of twite in Lancashire on an annual basis.	1. Monitor annual changes through Breeding Bird Survey data (Medium).	LBC	O	RM

	2. Encourage increased participation/submission of records in/to Lancashire Breeding Bird Survey. (Medium)	LBC, BTO	M	PR
3. Establish extent and location of suitable potential habitat for breeding twite.	1. Use aerial photos and ground survey methods to identify current extent and management of key breeding season habitats. (High)	WT, LCC	M	RM
4. Investigate over-wintering birds to establish population trends and origins.	1. Monitor over-wintering population of twite by asking WeBS recorders to count numbers on the Lune Estuary and Ribble Marshes. (Medium)	EN, BTO, LBC	M	RM
	2. Colour-ring wintering birds to establish origins. (Medium).	Bird ringing groups	M	RM
5. Initiate further research into key factors influencing current distribution.	1. Encourage postgraduate studies of twite ecology in the Lancashire/south Pennines area. (Low)	HE/FE, RSPB	L	RM
Broad Objective:	E. Establish Twite as a 'flagship' species for the South Pennines.			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Raise awareness of importance of twite	1. Initiate publicity campaign through local media (High)	RSPB, WT	S	PR

Related Action Plans:

- Neutral species-rich grassland HAP
- Moorland & fell HAP

References & additional reading:

1. Batty, A., Langston, R. H. & Gregory, R.D. (1999) South Pennines Twite Survey 1999. RSPB/English Nature.

2. Brown, A. F. & Shepherd, K. (1991) Breeding Birds of the South Pennine Moors. JNCC Report No.7.

3. Lancashire and Cheshire Fauna Society (In Prep.) Lancashire Atlas Breeding Bird Survey of Lancashire & North Merseyside, 1997 - 1999.

4. Gibbons, D. et al (1996) RSPB Conservation Review 10:pp 7 – 18.

5. SCARABBS (In Prep.) 1999 National Survey of Twite. RSPB/English Nature/JNCC.

6. Ward, E. (1992) The Hile, Rossendale CBC Study. Lancashire Bird Report 1991. Lancashire & Cheshire Fauna Society.

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