

Curlew

1. A Definition

The curlew (*Numenius arquata*) is Britain's largest wader, with a wing span of almost a metre and the characteristic long downward pointing bill which helps it feed by probing into damp ground.

The return of curlews to breeding grounds from mid-February is accompanied by the well recognised and evocative bubbling call heard during territorial displays.

In Devon the curlew is found on heaths, moors, estuaries and the coast. Breeding birds favour the wide open spaces of moist, poorly drained, peat moors and heaths, rush pastures and rough grassland. The wintering birds, which include visiting migrants, have a mainly coastal distribution, on muddy estuaries where they roost and feed on the intertidal mud flats. Large numbers of wintering birds also feed on permanent pastures, taking earth worms and insects.



Curlews are dependent on open landscapes for successful breeding, where they have good visibility and can defend the nest with characteristic swooping on predators. They still breed on some larger Culm sites, and on the moorland, Rhôs pastures and valley mires of Dartmoor, but numbers are declining. There are also small populations on Exmoor and the Blackdown Hills of East Devon.

2. Why an Action Plan?

Curlews have particular requirements from breeding sites, (as described below) and as a consequence of agricultural change suitable sites are now in very short supply and have been subject to much fragmentation. This has led to drastic loss of breeding birds with a 43% loss on the Culm Measures between 1972 and 1991 compared with only a 3% decline during that period nationally.

There are possibly only 30 pairs of curlew currently still breeding in the County, yet Devon has large areas that were once suitable breeding grounds and which could be again with sympathetic management.

(Note: figures as 1998)

3. Relevant ecology

The curlew is the largest of Britain's waders, inhabiting both uplands and coasts. Curlews nest in a wide range of habitats, but in Devon they are restricted to the moist poorly drained peaty moors and heaths, rush pastures and rough grassland as breeding sites. These habitats within the Culm Measures and valley mires and Rhôs pastures of Dartmoor provide their preferred sites.

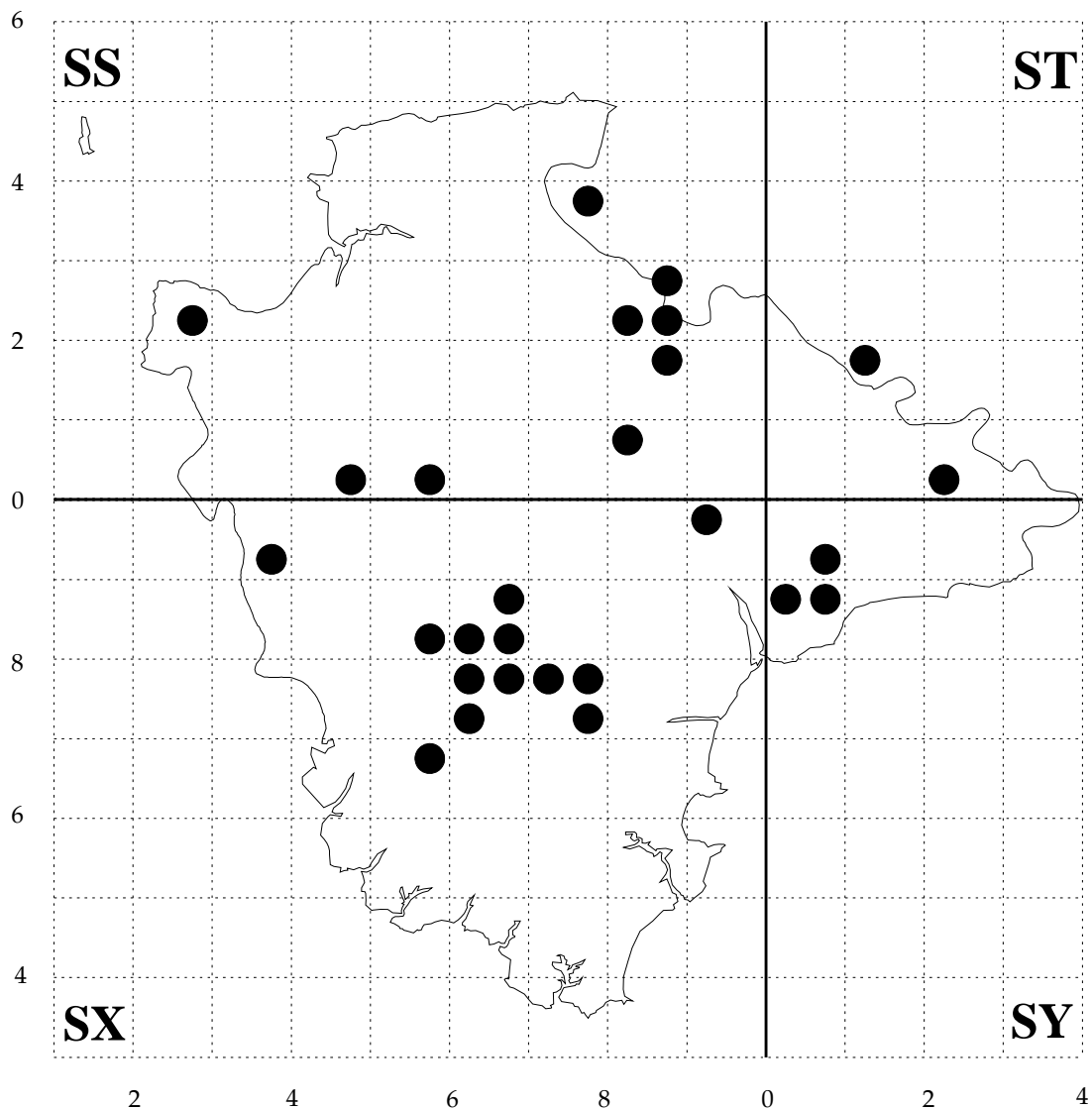
On Dartmoor breeding curlew are found mainly on the open moorland as well as in the valley mires and on the Culm grasslands on large heathy sites and the large expanses of rush pasture, both of which have good visibility for these easily disturbed birds.

Four blotched, variable brown-green eggs are laid on the ground in an open scoop during April and May. Both adults are nervous and alert and the non-sitting bird remains on guard in the territory whilst the other broods the eggs. The nest site is deserted by July or early August when the adults congregate in flocks on the moors, beginning their moult.

Curlews feed solely on invertebrates. Adults take insects found on or just beneath the ground surface, and the young chicks with their shorter bills select those found on the surface. On grassland sites where traditional hay cutting and grazing regimes occur there are more likely to be these insects available at the right time of year for the young chicks.

Curlew gather on the coasts from July onwards after breeding. A few non- or failed breeders spend the summer in the estuaries. In Devon many of the over-wintering birds have travelled from breeding grounds further north, so the winter population far exceeds breeding numbers. Wintering curlew concentrate around the Exe, Taw/Torridge, Tamar and Kingsbridge estuaries, where they feed on the intertidal mud flats probing in the mud for bivalve molluscs, worms, crabs and other crustaceans. Large numbers also feed on adjacent permanent pastures, especially at high tide, taking earthworms and insects. They start returning to nest sites from February.

4. Distribution of curlew in Devon (1998)



● Curlew presence in 5 Km squares

(Data supplied by Devon Bird Watching and Preservation Society)

5. Current population (1998)

In Devon: the current Devon breeding population may be as low as 30 pairs, with only 2 pairs on Devon's Exmoor (1992/93 RSPB/EN/ENPA/MAFF moorland survey), possibly 2 on East Devon Pebblebed Heaths, probably fewer than 20 pairs on Dartmoor, up to 6 pairs on Culm grassland sites (Devon Birds Reports), and up to 5 pairs in the Devon Blackdown Hills.

The wintering population is in the order of 3000-4000, principally on the Exe, Tav/Torridge, Tamar and Kingsbridge estuaries (Devon Bird Reports, WeBS counts).

Elsewhere in Britain: there appears to have been a decline in breeding bird numbers in West Scotland, the Midlands, Pembrokeshire, Devon and Dorset so

that nationally there has been a loss of evidence of birds of 2.8% (Gibbons *et al.* 1993). Between 1968-72 breeding birds were recorded in 1714 ten km squares, compared with 1354 squares in 1988-91. The most recent population estimates are 33,000-38,000 pairs in Britain (Reed 1985) which, when combined with Irelands figure of 12,000 represents at least 35% of the European breeding population.

6. Current problems for curlew in Devon (1998)

Loss and fragmentation of breeding sites: agricultural improvement of grasslands with the switch from late hay to multiple silage cuts in the late 1970s to early 1980s brought about principally by reseeded, increased fertiliser applications and drainage has led to the loss and fragmentation of breeding sites. A DBWPS survey in 1985 found curlew in only 17 out of 43 tetrads compared with 38 in 1979 and 37 in 1982. In almost half the tetrads where curlew were not found in 1985 the unimproved moor and marshy grassland had either been improved or was in the process of being so.

Groundwater abstraction: from the East Devon Pebblebeds may have an effect on the quality of breeding grounds.

Afforestation: on Culm Grassland sites resulting in fragmentation and loss of breeding habitat.

Habitat management: inappropriate management - too frequent burning, over-grazing, or lack of management leading to scrub and bracken encroachment on moorland habitats.

Recreational pressure: on breeding grounds may be a factor in disturbing these birds.

Egg losses: nest predation is possibly a contributory factor affecting the species.

7. Recent changes in population (1998)

The current breeding population represents a substantial decline since the Tetrads Atlas (Sitters, 1988) in 1977-85 when there were estimated to be 200-250 pairs. Numbers were already declining at the end of that survey when there were estimated to be 200 pairs and had declined further to an estimated 100-150 pairs by 1987. It is clear that there has been a substantial decline since, especially on Exmoor and the Culm Measures, with no more than 26 pairs reported in any one year.

Wintering birds on the largest site on the Exe estuary have shown a gradual increase over the last decade to a mean monthly maximum of 700 in 1994/95, with annual peak counts usually in the region of 1400 (Devon Bird Reports 1995).

8. Current protection

The curlew is protected under the Wildlife and Countryside Act and Appendix II of the Bonn Convention.

9. Current positive initiatives for curlew in Devon (1998)

Conservation status:

- The curlew is listed on the long list of globally threatened/declining species of conservation concern in the UK Steering Group Report on Biodiversity.
- The curlew appears on the RSPB Amber list of the Birds of Conservation Concern.
- The Exe estuary is a Special Protection Area for its bird interest.

Habitat management:

- The Blackdown Hills, Dartmoor and Exmoor ESAs incorporate measures to decrease agricultural production, allowing for less intensive grazing regimes. It is hoped that this will result in a halt in the decline of breeding curlews, but as yet this is still awaited.
- The Countryside Stewardship Scheme, run by MAFF (now DEFRA), has been successfully taken up by farmers for managing their Rhôs pasture on the Culm. The hoped for halt in declining numbers of breeding birds is still awaited.
- Dartmoor National Park's Rhôs Pasture Initiative helps with protecting breeding sites and encouraging appropriate management.
- Estuary management plans across the County are addressing problems of disturbance to feeding and roost sites, and are trying to increase provision of high tide roost sites.

Monitoring:

- BTO WeBS counts of wintering birds cover all the main estuaries in Devon. In addition monthly maxima counts for all the principal sites are published annually in the Devon Bird Report.
- Although the species is not monitored systematically, data on breeding numbers is collected by the DBWPS and published annually in the Devon

10. Biodiversity planning context

National BAP Context

Species of principal importance in England (NERC Act, S.41):

- Curlew

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

Associated Action Plans within the Devon BAP:

- Rhôs pasture
- Estuaries
- Grazing marsh
- Rocky foreshore
- Barn owl

11. Biodiversity objectives and targets for curlew in Devon

Please note: objectives and targets have not yet been reviewed.

Objective 1

Gain a better understanding of the current and future population of curlew in Devon.

Targets:

- Carry out a County wide survey on existing and historically suitable breeding sites by 2000.
- Continue to monitor until 2010.

Objective 2

Arrest and reverse the decline of curlew breeding in Devon.

Targets:

- Increase numbers of breeding curlew in Devon by 25% from 1998 levels by 2010.
- Revise this target if appropriate after population size is established.

Objective 3

Ensure no further loss, degradation or fragmentation of breeding sites in Devon.

Target:

- Identify and bring suitable breeding habitat into appropriate management by 2000.

Objective 4

Restore suitable habitat to provide links between and to extend key breeding sites.

Target:

- Re-establish 50 hectares of suitable nesting habitat for curlews as appropriate on degraded or semi-improved land on the Culm Measures and Dartmoor.

Objective 5

Ensure that wintering habitat availability and quality is protected.

Target:

- Increase high tide roost site provision in key estuaries in line with the County Estuary BAP.

Objective 6

Study the autecology of the curlew and investigate the causes of

the decline in breeding numbers.

Targets:

- Increase our knowledge and understanding of the autecology of the curlew in Devon by 2002.
- Establish the causes of decline and recommend remedial actions by 2002.

12. Wider benefits from pursuing these objectives

The pursuit of the objectives and targets set out above will not only benefit the curlew. Conservation has wider benefits and advantages for society, by providing a resource which is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways which are beyond financial measure. Thus enhancing the interests of biodiversity also enhances the interests of society as a whole. Some of these wider benefits are as follows:

- Incentives for low intensity farming practices.
- Possible increase in the population of other moorland breeding bird species.
- Curlew is a prominent and well-known species that could be used to bolster "green tourism" initiatives around the County and particularly across Dartmoor and the Culm.

13. Priority or indicative actions for curlew in Devon

Action	Key Partners
1. Encourage and promote suitable rough grassland restoration or enhancement through management agreements or agri-environment schemes for all breeding sites currently occupied or recently occupied by curlews.	DEFRA; EN; DWT; FWAG; DNPA
2. Ensure that relevant catchment-based plans and Estuary Management Plans include appropriate actions to protect breeding and wintering grounds; including action to control disturbance.	EA; RSPB; LAs; Estuary Managers
3. Ensure that planning authorities are aware of curlew distribution and requirements and that development schemes do not compromise the integrity of breeding and wintering grounds.	LAs; DBRC; EN
4. Provide advice and publicity to all user groups on estuaries regarding the sensitivity of breeding and roost sites to protect from disturbance or deterioration in habitat quality.	LAs; RSPB; EA
5. Survey and monitor breeding birds and wintering populations to identify trends and direct suitable management. Pass data to DBRC.	DBWPS; BTO; DBRC

Action	Key Partners
6. Link survey and monitoring effort to studies of habitat preference, disturbance and other factors that may have played a part in reducing breeding numbers.	BTO; DBWPS; RSPB
7. Continue to publicise the decline in breeding numbers to encourage positive habitat management and to reduce disturbance.	RSPB; DWT; DNPA

Curlew Action Plan Champion - Devon Bird Watching and Preservation Society
--

Abbreviations used in text and table

BAP	Biodiversity Action Plan
BTO	British Trust for Ornithology
DBRC	Devon Biodiversity Records Centre
DBWPS	Devon Bird Watching and Preservation Society
DEFRA	Department of Environment, Farming and Rural Affairs
DNPA	Dartmoor National Park Authority
DWT	Devon Wildlife Trust
EA	Environment Agency
EN	English Nature
ENPA	Exmoor National Park Authority
FWAG	Farming and Wildlife Advisory Group
LAs	Local Authorities
LPAs	Local Planning Authorities
RSPB	Royal Society for the Protection of Birds

Discontinued body referred to in text:

MAFF	Ministry of Agriculture, Fisheries and Food
------	---