

## Severn Estuary Colour-ringed Curlew Project First year summary July 2011

The bird species features of UK Special Protection Areas (SPAs), such as the Severn Estuary, are identified from counts from national schemes, such as the Wetland Bird Survey (WeBS). Species may be included as features of these protected sites if their numbers exceed 1 % of the species' national or international population. However, there is growing evidence that individual movements during passage periods and over winter mean that a far larger number of individuals may be supported on a site over the course of a year than are recorded at any one time. This population turnover may mean that sites are overlooked when it comes to designation. As a result of these concerns, a method has been developed<sup>1,2</sup> whereby count data and colour ring re-sightings can be combined to estimate the total population using a site over a given period.

Here we provide a summary of the first year of a colour-marking project for the Curlew *Numenius arquata* on the Severn Estuary. The Curlew is a feature of the Severn Estuary SPA, with a mean peak count of 3047 individuals recorded between 2004/05 and 2008/09<sup>3</sup>. The project aims to measure the winter turnover, and thus the full winter population, of the species on the estuary and also to provide estimates of annual survival.

On the 26<sup>th</sup> September 2010, 66 Curlews were caught by cannon-netting at Wibdon Wharf in Gloucestershire, on the north shore of the Severn. Each bird caught was fitted with combinations of colour-rings to enable its subsequent identification in the field (Figure 1).



**Figure 1.** Curlew colour-ringed at Wibdon Wharf on the Severn Estuary on 26<sup>th</sup> September 2010. *Photo Steve Dodd.*

These colour-marked birds have already provided valuable insights into the movements of the Severn Estuary Curlew population. Out of these 66 birds, 25 have subsequently been re-sighted on a total of 65 occasions. The majority of these records have come from the area of the Severn in Gloucestershire where the birds were ringed (Wibdon Wharf: 4 sightings, Aylburton Warth: 5

<sup>1</sup> Atkinson, P., Choquet, R., Frederiksen, M., Pradel, R. & Rehfisch, M. In prep. Estimating turnover of migrants: an improved capture-recapture analysis.

<sup>2</sup> Atkinson, P., Choquet, R., Frederiksen, M., Gillings, S., Pradel, R. & Rehfisch, M. M. 2007. *Towards developing thresholds for waterbirds that take into account turnover.* BTO Research Report No. 463, Thetford.

<sup>3</sup> Calbrade, N.A., Holt, C.A., Austin, G.E., Mellan, H.J., Hearn, R.D., Stroud, D.A., Wotton, S.R. & Musgrove, A.J. 2010. *Waterbirds in the UK 2008/09: The Wetland Bird Survey.* BTO/RSPB/JNCC in association with WWT, Thetford.

sightings; Oldbury: 49 sightings). One bird was also seen at Coombe Hill and Ashleworth Ham near the upper Severn Estuary in late March / early April. Although some Curlews do breed locally, this bird may have been at the start of its migration

Four international movements have been recorded. Amongst the birds captured on the 26<sup>th</sup> September 2010 was Curlew CT113993, a female that had been ringed 13 years previously at Vaasa in Finland, almost 1200 miles from Wibdon Wharf. Further evidence of movements by Severn Curlews to Finland came when FP01419 was sighted at Ilmajoki in the west of the country on 24<sup>th</sup> April 2011 (Figure 2). A third bird, FP01412, was also sighted on breeding grounds, at Reusel in the Netherlands on the 23<sup>rd</sup> and 25<sup>th</sup> February 2011. Another bird caught on 26<sup>th</sup> September had a Dutch ring, 5330307, ringing details of which are awaited. These movements are consistent with previous records of birds breeding in Scandinavia and central Europe moving to southern England for the winter<sup>4</sup>.

**Figure 2.** Curlew FP01419 at Ilmajoki in Western Finland on 24<sup>th</sup> April 2011, 1200 miles from where it was originally ringed at Wibdon Wharf on 26<sup>th</sup> September 2010.



These data are providing useful insights into the population movements of Curlew on the Severn. It is hoped that further data collected over coming winters will allow both turnover and survival rates of Curlew on the Severn to be estimated, thereby providing a fuller understanding of the conservation status of the species on the estuary.

#### **Contacts:**

**Sightings of the colour-ringed Curlews should be sent to [niall.burton@bto.org](mailto:niall.burton@bto.org), British Trust for Ornithology, The Nunnery, Thetford Norfolk IP24 2PU (T: 01842 750050)**

The Curlews have been marked with a combination of five colour-rings and a metal ring so that they can be identified individually. In addition to the precise combination and positions of colour-rings, please record date, time and location (a six-figure grid reference would be ideal).

It would also be useful to receive data on the proportions of birds colour-ringed in flocks. Please record the numbers of birds colour-ringed and the numbers of birds checked for rings (not necessarily the total flock size) and provide data even for those flocks that had no colour-ringed birds.

#### **Acknowledgements:**

Our thanks to all who have provided sightings of the Curlews to date, without whom this project would not be possible: Mike Smart, Peter Hazelwood, Darryl Spittle, Andy Jayne, Matt Plenty, Andy Middleton, Pieter Wouters, Graeme Smith, Lawrence Skipp and Wilf King. The Curlews were caught by a team lead by Steve Dodd and our thanks to Steve and Dave Coker for their co-ordination of ringing activities and data, and to the volunteer ringers who helped with the catching and ringing.

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<sup>4</sup> Wernham, C., Toms, M., Marchant, J., Clark, J., Siriwardena, G. & Baillie, S. 2002. *The Migration Atlas: Movements of the Birds of Britain and Ireland*. T & AD Poyser, London.

Summary of sightings of individually colour-ringed Curlews from the Severn Estuary.

Ring Number	Right Leg				Left Leg				Sightings	
	Tibia Top	Tibia Bottom	Tarsus Top	Tarsus Bottom	Tibia Top	Tibia Bottom	Tarsus Top	Tarsus Bottom	UK	International
CT113993	White	Black		Metal		Dark Blue	Yellow	White	1	
FP01401	Dark Blue	Lime Green		Metal		Dark Blue	Yellow	White	6	
FP01405	Dark Blue	Yellow		Metal		Dark Blue	Yellow	White	2	
FP01408	Dark Green	Lime Green		Metal		Dark Blue	Yellow	White	1	
FP01410	Dark Green	Red		Metal		Dark Blue	Yellow	White	1	
FP01412	Dark Green	White		Metal		Dark Blue	Yellow	White		2
FP01417	Lime Green	Red		Metal		Dark Blue	Yellow	White	6	
FP01419	Orange	Dark Blue		Metal		Dark Blue	Yellow	White		1
FP01420	Lime Green	Yellow		Metal		Dark Blue	Yellow	White	1	
FP01421	Black	Red		Metal		Dark Blue	Yellow	White	1	
FP01433	Orange	Yellow		Metal		Dark Blue	Yellow	White	3	
FP01435	Red	Dark Green		Metal		Dark Blue	Yellow	White	1	
FP01436	Red	Lime Green		Metal		Dark Blue	Yellow	White	5	
FP01437	Red	Black		Metal		Dark Blue	Yellow	White	3	
FP01438	Red	Orange		Metal		Dark Blue	Yellow	White	1	
FP01439	Red	Red		Metal		Dark Blue	Yellow	White	4	
FP01440	White	Dark Blue		Metal		Dark Blue	Yellow	White	1	
FP01441	Red	White		Metal		Dark Blue	Yellow	White	1	
FP01443	White	Red		Metal		Dark Blue	Yellow	White	2	
FP01448	White	Yellow		Metal		Dark Blue	Yellow	White	6	
FP01449	Yellow	Dark Blue		Metal		Dark Blue	Yellow	White	1	
FP01455	Yellow	White		Metal		Dark Blue	Yellow	White	8	
FP01456	Yellow	Yellow		Metal		Dark Blue	Yellow	White	1	
FP01460	Dark Blue	Red		Metal		Lime Green	Yellow	White	1	
FP01461	Dark Blue	Yellow		Metal		Lime Green	Yellow	White	5	