



Report to EURING meeting from BTO - 2007

Organisation

The Ringing Scheme in Britain & Ireland is run by the British Trust for Ornithology (BTO). The Ringing Scheme forms part of the BTO's Populations Research Department. Staff primarily involved in the Ringing Scheme are as follows:

BTO Director Andy Clements

Director of Populations Research Stephen Baillie

RINGING UNIT

Head of Unit Jacquie Clark

Secretary Jane Waters

Licensing & Sales Team:

Leader Jeremy Blackburn

Ringing Officer Diana de Palacio (on maternity leave)

Ringing Officer (temporary) Trevor Girling

Sales Officer (part-time) Anne Trehwhitt

Data Team:

Leader Bridget Griffin

Ringing Data Officers Sue Adams, Kate Risely

Recoveries Officers Viola Kimmel (part-time), Jeff Knott (temporary)

Ringing Assistant (part-time) Brenda Read

DEMOGRAPHY UNIT

Senior Population Biologist Rob Robinson (Ringing)

Population Biologist Mark Grantham (Organiser of CES)

CENSUS UNIT

Team Leader John Marchant (Organiser of RAS)

BTO RINGING SCHEME OPERATIONS

Numbers ringed	Annual (2005)	873,581
Ever (to end 2005)		33,691,642
Numbers recovered	Annual (2005)	12,658
Ever (to end 2005)		631,764
Number of ringers	(2005)	2,131

(proportion professional less than 10%)

Computerisation

Recoveries of all BTO-ringed birds and all foreign-ringed birds received since 1979 have been computerised. Recoveries for all the foreign ringed birds received before 1979 are being input. Ringing captures for nearly 9 million birds have been received from ringers electronically. Data have been accepted electronically since 1996. Around 95% of ringing data are submitted electronically by ringers. The majority of the electronic data is received via email. Ringers have been supplied with a free program (IPMR – based on Access) to allow input and submission of ringing and recovery data. The remaining data coming in on paper are now being computerised. Recaptures and biometrics are now also collected from ringers electronically.

Problems

Staffing problems and database work over the last couple of years have meant that we have been unable to process recoveries as quickly as we would like.

Finance

Ringers pay towards cost of rings, pay for equipment and pay an annual permit fee. Other costs are met from a partnership between BTO and JNCC (Government) and by the BTO. Ring prices are based on current conservation concern of species being ringed. Where all, or most species, that have a particular ring size are of conservation concern the ring price is reduced. If only a few of the species taking a particular ring size are of conservation interest, a refund is given to ringers at the end of the year. Refunds are only given for data submitted electronically.

Publications

- Annual Report** Published in BTO Ringing Scheme Journal *Ringling & Migration*.
Ringers' Bulletin Published twice a year (now in colour).
CES News Published annually
RAS Newsletter Published annually.
Ringer's Manual Latest edition (with major revisions and additions) published December 2001.

BTO RINGING SCHEME RESEARCH – PROJECTS

CONSTANT EFFORT SITES SCHEME (CES)

This scheme monitors demographic changes for 25 widespread songbird species. The number of sites operated fell from a peak of 140 following the Foot & Mouth outbreak in 2001 when access was restricted. 111 sites were operated in 2006 (with good geographical spread). We have recently started work on the estimation of adult survival rates using data from all CES sites by taking advantage of the constant effort regime to simplify the modelling of re-sighting effort. The models are based on a modification of the standard CJS mark-recapture model by Roger Pradel to take account of transient birds. Preliminary results from this work were presented at the EBCC meeting in April, and will be submitted for publication soon.

A paper recently published in *Bird Study* (Robinson *et al.* 2007 Volume 54:230-235), on the expansion of Cetti's Warblers *Cettia cetti* in Britain, described the methods used to model productivity using CE data and showed that the increase in population was probably the result of increased survival.

RAS

This scheme was started in 1998 to collect mark–recapture data for monitoring adult survival rates in a range of species. Ringers choose their own study area and attempt to ring and retrap (or resight) all the breeding adults in the study area each breeding season. RAS concentrates on species not monitored well by CES or other types of ringing. In 2006, there were 95 active projects covering 36 species. Of these projects, more than half were for species of current UK conservation concern. Pied Flycatcher *Ficedula hypoleuca*, Sand Martin *Riparia riparia*, Swallow *Hirundo rustica* and House Sparrow *Passer domesticus* were the most popular species. There are 26 projects with 10 or more years of data. An analysis of survival rates for the three hirundine species Swallow, Sand Martin and House Martin *Delichon urbicum* will be submitted for publication shortly.

SWALLOW ROOST PROJECT

The BTO Swallow Roost Project (part of the EURING Swallow Project) started in 2002 finished in 2006. Ringers have been catching Swallows as they come into post-breeding roosts from late July into October, taking measurements and recording fat reserves to look at the preparation the birds make prior to migration to their distant wintering grounds in southern Africa. This project proved popular with 51 sites operating during the five-year period. The data are currently being collated in preparation for analysis in the coming months.

BREEDING BIRDS IN THE WIDER COUNTRYSIDE: THEIR CONSERVATION STATUS 2006

This report on bird population trends is available on the BTO Website (<http://www.bto.org/birdtrends>). It includes abundance and productivity trends from CES as well as information from census schemes and nest recording.

AVIAN INFLUENZA

The arrival of a highly pathogenic strain of Avian Influenza type H5N1 (AI) generated a lot of media interest, particularly with regard to the possibility of its spread by migratory wild birds. We have developed a semi-automated technique to visualize the movement of wild birds from the pattern of ringing recoveries using a GAM-based smoothing technique to estimate monthly mean locations and kernel mapping to estimate the spread of recoveries. This was further developed in a web-based tool to help inform analyses of the risk of incursion of AI into Britain from migratory wild birds for Defra, the UK Government's food and environment department. This has already been used as part of a Qualitative Risk Assessment process relating to the recent outbreak of AI in central Europe. A paper detailing the methods used is being prepared for publication.

BTO RINGING SCHEME RESEARCH – ANALYSES

An analysis of survival rates in a small range of common passerines in relation to various weather variables showed that winter weather is very important for survival, and that which variable is important is related to birds foraging strategy (Robinson *et al.* 2007 *Ibis* 149:357-364).

With an increasingly computerised dataset, good amounts of biometric data are now available for analysis. The mass of birds varies in response to many factors, including predators. A recent analysis (Macleod *et al.* 2007 *Ecology Letters* doi:10.1111/j.1461-0248.2007.01088.x) shows that species respond to predators differently, either by maintaining lower mass, or by reducing foraging time. This difference appears to correlate with population trend and so may have important implications for conservation strategies. Further analyses investigating this pattern are planned.

Jacque Clark and Rob Robinson
August 2007