

Report to EURING meeting from BTO - 2009

ORGANISATION

The Ringing Scheme in Britain & Ireland is run by the British Trust for Ornithology (BTO). This year has been an exciting one for the Ringing Scheme with its integration, along with the Nest Record Scheme, under a joint Demography Team banner. This is helping to foster greater collaboration between the schemes, and encourage both ringers and nest-recorders to see the 'bigger picture'. Staff primarily involved in the Ringing Scheme are as follows:

BTO Director Andy Clements
Science Director Stephen Baillie
Principal Ecologist Rob Robinson (Modelling)
Senior Secretary Mandy Andrews
Secretary Debbie Nicholls

Demography:

Head Jacquie Clark
Research Ecologist Liz Coiffait
Secretary Jane Waters

Ringing Licensing & Sales:

Manager Jeremy Blackburn
Ringing Officer Diana de Palacio (on maternity leave)
Ringing Officer (temporary) Sabine Schaefer
Sales Officer (part-time) Anne Trehwitt

Ringing Data Management:

Manager Bridget Griffin
Ringing Database Officer Dorian Moss
Recoveries Officer (temporary) Lee Barber
Recoveries Officer (part-time) Miranda Shephard
Ringing Assistant (part-time) Brenda Read

Demographic Monitoring Projects

Senior Research Ecologist Dave Leach
Research Ecologist Mark Grantham (Organiser of CES & RAS)
Nest Records Organiser Carl Barimore
Nest Records Officer Viv Greenough

BTO RINGING SCHEME OPERATIONS

Numbers ringed	Annual (2008)	835,326
Ever (to end 2008)		36,165,157
Numbers recovered	Annual (2008)	15,164
Ever (to end 2008)		709,183
Number of ringers	(2008)	2,349 (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 11 million birds have been received from ringers electronically. Data have been accepted electronically since 1996. 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. In addition, 58% of all recoveries are received electronically (92% of controls) and 82% have electronic ringing details available.

Recoveries

Recovery processing is up-to-date, now that there is a full complement of staff. About 40% of recovery reports from members of the public are reported via the Web (www.ring.ac), and this data is now loaded directly onto the database after checking via a Web based processing form, developed in 2008. This has helped to speed up recovery processing turnaround time.

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 <i>Ringling & Migration</i>
<i>Ringers' Bulletin</i>	Published twice a year (now in colour)
<i>CES News</i>	Published annually
<i>RAS Newsletter</i>	Published annually
<i>Ringer's Manual</i>	Latest edition (with major revisions and additions) published December 2001
<i>Bird Ringing: A concise guide</i>	Published 2008

We have recently published a special issue of *Ringling & Migration* to celebrate the centenary of the Scheme. The specially commissioned papers in this issue illustrate the importance of ringing in research and conservation and set the scene for further developments in the future.

BTO RINGING SCHEME RESEARCH – PROJECTS

Constant Effort Sites (CES) Scheme

The CES scheme monitors demographic changes for 25 widespread passerines. The number of sites operated fell, from a peak of 140, following the Foot & Mouth outbreak in 2001. In 2008, 116 sites were operated (with good geographical spread). We have recently started work on the estimation of adult survival rates using data from all CE 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.

We are hoping to attend the annual meeting of water company conservation ecologists as a number of CE Sites are on water company land. The meeting would be an opportunity for us to promote the value of CES and demography in general.

Retrapping Adult For Survival (RAS) Scheme

The RAS scheme 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 2008, there were 92 active projects covering 34 species. Of these projects, 67 were for species of conservation concern in the UK. Pied Flycatcher *Ficedula hypoleuca*, Sand Martin *Riparia riparia* and House Sparrow *Passer domesticus* were the most popular species. There are also 43 current 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.

We hope to be able to promote the Scheme further in the future via regional conferences. We have also been able to identify those ringers who are already retrapping enough adult birds to ‘qualify’ as a RAS project and we may approach them to encourage them to register their work for RAS. For all species (including many non-passerines), there are about 240 possible projects, covering 52 species. Although many of these projects will not be suitable for RAS, these ringers will be our best source of recruitment.

Swallow Roost Project

Analysis of the SRP data is almost complete and the results are currently being written up in the form of two papers, the main one on fattening strategies of British & Irish Swallows, and a shorter paper on differential fattening in juveniles from first and second broods. The main finding was that, rather than gaining weight in a gradual, linear pattern (as has previously been suggested), British & Irish Swallows begin putting on weight quite rapidly from the end of August, which mirrors the pattern shown by Swallows caught at roosts in Italy and Spain. We are also working through EURING to promote further analyses of the European scale data from this project. This work is being led by Fernando Spina and his co-workers in Italy.

Breeding Birds In The Wider Countryside: Their Conservation Status 2008

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.

BTO RINGING SCHEME RESEARCH – ANALYSES

Blackbirds are probably the species best represented in the BTO datasets, and can be used as a model species to help us understand the processes underlying population dynamics (which are common to all bird species) and to develop methods for making greater use of our data.

Firstly, we have used a RAS study which involves a good number of individuals and a particularly high effort resighting the colour-marked birds to look at seasonal patterns of survival. This is one of the first times anyone has been able to do this, and it shows that, perhaps unexpectedly, highest mortality occurs during the spring when resources are probably at their lowest and birds are setting up breeding territories. These results have been accepted for publication in *Journal of Avian Biology* and should appear towards the end of the year.

Secondly, we have undertaken a large-scale analysis of population dynamics of the British breeding population using the latest Bayesian statistical techniques. This allows integration of data from all the

different demographic sources: survival, productivity and abundance, and should enable us to gain information on parameters that have hitherto been difficult to measure, such as post-fledging survival and the relative numbers of breeding attempts in a year. This work is in progress and we are hoping to exploit these techniques to provide a greater understanding of spatial variation in Blackbird population dynamics.

As part of our work on migrants, we are working with the Wetland Trust on data collected by BTO ringers on expeditions to Senegal. We are supporting analyses being carried out on migratory strategies, including fuelling strategies and stopover durations and considering other analyses possibly looking at survival at different times of year.

We have a PhD student using BTO data to investigating Willow Warbler declines. She has completed a paper using BBS data to investigate variation in population trends and is now working on nest record data. Results from the first year of isotopic analyses of Willow Warbler feathers were mixed, but further data have been collected this year.

BTO staff have continued their involvement in the collection and analysis of data on staging waders in Delaware Bay, US. Work has included looking at stopover durations, survival rates (overall and between wintering areas) and fattening strategies within and between years.

There was also further work on the turnover of waders with a second winter of data being collected on the Stour/Orwell. In addition we have analysed data for Greenshank collected on the Solent. Preliminary analyses were recently presented at the EOU conference in Switzerland.

BTO staff have this year put dataloggers on a small sample of Nightingales caught in East Anglia as part of a Europe-wide project led by Sempach (Switzerland). The data loggers will record day length and time of dawn and dusk to allow us to work out where this elusive species spends the winter.

Jacquie Clark, Rob Robinson and Bridget Griffin
September 2009