

BRITISH TRUST FOR ORNITHOLOGY**DEVELOPMENT OF DEMOGRAPHIC MONITORING UNDER THE NEW JNCC/BTO PARTNERSHIP****Introduction**

A key aim for the BTO is to understand how populations change in order to inform effective conservation policies. The demographic monitoring schemes (Ringing and Nest Record Schemes, CES and RAS) have a critical part to play in this by providing information on survival, productivity and dispersal with which to interpret data on abundance collected by schemes such as BBS and WeBS. Much of this work is undertaken within the BTO/JNCC Partnership and, as part of the renewal of the Partnership Agreement, JNCC and BTO have identified a need to develop improved targeting of demographic monitoring effort during the current partnership period (2010-2016) to better support conservation policies (see Annex I). A key aim of this targeting should be to increase the number of species for which good quality demographic analyses can be produced (and hence for which causes of population change can be inferred) and to provide measures of cross species patterns that are indicative of broad environmental change, such as trends towards earlier laying dates linked to climate change and changes in survival in response to changing agricultural practices.

While there continues to be a role for general ringing and nest-recording, there is increasing recognition that quantifying variation in demographic patterns is vastly easier with data collected in a structured fashion. This allows for better accounting of (inevitable) sampling biases and also the potential for greater understanding of how survival and productivity vary in relation to factors operating at a site level, such as food availability and predation, since it is these that influence how demographic parameters change. We have already made some progress in this regard, as the success of CES and RAS testify, but in order to make best use of data collected by ringers and nest-recorders, and to ensure we are able to influence the conservation agenda effectively, we need to consider the strategic development of the schemes. Communicating the need for such an approach to our volunteers and determining how such efforts can best be supported (e.g. through ring pricing/subsidies) will form the two key elements of this strategy.

Work Programme

2010/2011 - Evaluate the current species coverage of all demographic monitoring schemes (general ringing, CES, RAS and NRS) and identify priorities for demographic monitoring effort that would increase the number of species for which integrated population models can be produced in particular those species which may be used as indicators of broader environmental change.

2011/2012 - Complete review of the species coverage of all demographic monitoring schemes (general ringing, CES, RAS and Nest Recording) and identification of priorities. Review system of ring subsidies in order to best support identified priorities. Hold a stakeholder workshop on the value of the demographic monitoring undertaken within this work stream and its future direction.

RIN will play a critical role in developing the implementation of this plan, both through guiding the strategy and in communicating its importance to ringers and nest-recorders. The following schedule is proposed:

April 2010 – RIN to consider plan, identify any immediate actions, and discuss communication of outline plans to ringers and nest-recorders.

Oct 2010 – RIN to consider assessment of priorities within each group and initial discussion of how these targets may be promoted.

April 2011 – RIN to discuss and agree a set of outline proposals concerning the new targeting strategy and its promotion through ring pricing and other means within the Ringing and Nest Recording Schemes.

June 2011 – Stakeholder Workshop (including Country Agencies, JNCC, RIN and others) to consider and refine proposals.

October 2011 – RIN to agree new targeting strategy and ring subsidy system to come into effect for ringing in 2012 (new subsidies would therefore start to be paid in early 2013 for ringing carried out in 2012).

For the purposes of developing such a strategy it is likely that we will want to concentrate on four broad groups of bird species:

- I. terrestrial breeding birds,
- II. top predators (ie heron, larger raptors)
- III. wintering waders
- IV. seabirds,

as each group poses different challenges in terms of gathering high quality data. Ringing of wildfowl has largely been undertaken by WWT and wintering passerines, both of migratory and (partially) resident species pose particular analytical challenges, so these may best be considered at a later date. Within these groups we will need to identify those species where encouragement of effort will yield greatest gain in terms of improving our capacity to monitor species with a broad suite of ecologies, based on the amount of effort that is likely to be achievable. We will also need to consider how best to inform and encourage ringers and nest-recorders to participate in this program, especially those who are newly qualified and may appreciate guidance on how their new talents may be put to best use.