

# **River Habitat Survey (RHS) & Waterways Breeding Bird Survey (WBBS) 1998-2000 Final Report**

R&D Technical Summary W1-043/ TS

The Environment Agency's principle aim is to protect and enhance the environment. Enhancing biodiversity is also an important concern. This report continues to illustrate the utility of linking the WBBS and RHS. Patterns and changes in bird numbers are being detected, and links with habitat character are clear. Long term trends in numbers of river birds are increasingly apparent and birds (which are the most species-rich vertebrate group in the UK) are also providing some of the clearest indications of how the RHS has relevance to the positive management of rivers for biodiversity. In both respects the Agency is discharging an important part of its statutory duties

R&D Technical Report W22: "The Waterways Bird Survey - An Evaluation and Appraisal of its Future Role" recommended that the British Trust for Ornithology's Waterways Bird Survey be redesigned to target National, Regional, catchment and individual river sections. In particular, linkage with the River Habitat Survey (RHS) would improve the monitoring of population trends and allow a more comprehensive modelling of bird distributions along waterways.

A start was made on this linkage under R&D project W1-031, "Waterways Breeding Bird Survey (WBBS)", and continued through this project in order to provide a more robust measure of the WBBS and its links to the RHS.

This work will contribute to the techniques available to assess the impact of flood defence works on conservation and should form an integral part of monitoring and enhancement programmes. It will provide benefits in assessing the impact of water quality on biodiversity and will be used by those involved in long term analysis of environmental trends both anthropogenic and climatic,

Bird populations, particularly breeding populations, are reliable indicators of change or stability, further the monitoring of riverine bird species in association with for example, aquatic invertebrate surveys and otter surveys which are undertaken at present will contribute to a comprehensive understanding of the health of the riparian environment. Surveying birds is also an efficient use of resources because they require one siting in the field whilst aquatic invertebrates require sorting to identify to family or species and otter spraints can only give an indication of activity and not numbers of otters. The new Waterways Breeding Bird Survey (WBBS) covers specialist riverine species previously poorly accounted for in other surveys.

The project supports the Agency's Environmental Theme on enhancing biodiversity, and will make an informed contribution to the delivery of Integrated River Basin Management.

## **Overall Objectives**

To develop links between bird survey data and RHS in order to better understand species requirements and enable implementation of appropriate river management practices.

The report and data confirms that:

- There are strong correlations between the WBBS bird counts and RHS variables.
- Although there may be strong intercorrelations between the RHS variables, many of the links with birds are likely to have a biological basis.
- The indications are strong, however, that RHS will have a high potential for predicting bird communities, and that RHS is a useful tool for interpreting bird data collected by WBBS.

It is intended that the contents of this report will be used to produce a high profile output with the findings of W1-071, River Habitat Survey (RHS) & Waterways Breeding Bird Survey (WBBS) 2001 –2004 and W1-065, Modelling River Bird Distribution using Habitat Data. The findings of which will be incorporated into the Conservation and Ecology training package under development at present.

This R&D Technical Summary relates to information from R&D Project W1-043 reported in detail in the following outputs: -

**R&D Technical Report W1043/TR**

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