

Waterways Bird Survey

Title

Waterways Bird Survey (WBS) 1974-2007

Description and Summary of Results

When the Common Birds Census (CBC) had become established, it was realised that several common species which occurred primarily along waterways were not recorded often enough for effective monitoring. (In fact they are still relatively under-recorded by the BTO/ JNCC/ RSPB Breeding Bird Survey (BBS).)

To improve the monitoring of such waterside birds, the BTO began to operate the Waterways Bird Survey (WBS) as an annual census of the breeding birds along rivers and canals in 1974. Species that WBS has monitored more effectively than either the CBC or the BBS include (in order of improvement): Kingfisher *Alcedo atthis*, Goosander *Mergus merganser*, Dipper *Cinclus cinclus*, Common Sandpiper *Actitis hypoleucos*, Little Grebe *Tachybaptus ruficollis*, Sand Martin *Riparia riparia*, Grey Wagtail *Motacilla cinerea*, Mute Swan *Cygnus olor* and Reed Warbler *Acrocephalus scirpaceus*.

About 100 stretches of water were surveyed each year and, as for CBC, a substantial commitment of time was needed by the observers (although not as great as for CBC).

Overall more than 3480 surveys were completed.

After 34 successful seasons, the scheme closed after the 2007 breeding season. Its role was taken up by the Waterways Breeding Bird Survey (WBBS).

As for the CBC, and even though it is no longer operating as a fieldwork project, data from the survey remain constantly in use for the assessment of long-term population changes of the relevant species, and are displayed -- as the earlier parts of the trend graphs for waterways species -- in the annually updated report on the BTO website *Breeding Birds of the Wider Countryside* (www.bto.org/birdtrends). A few tens of thousands of bird territory maps are stored at BTO headquarters, and are accessed for a variety of research projects.

Methods of Data Capture

The survey used territory-mapping like that of the Common Birds Census. However there were some important differences which is why it was always treated as a separate survey. Observers visited their chosen stretch, usually 2-5km along a river, stream or canal, nine times (ideally) each breeding season between about late March and early July. On each visit the location of every individual of the required species seen or heard was plotted onto a large-scale map (normally 1:10000) with codes for each species (the now-standard 1- or 2-letter codes used by BTO for many surveys) and activity – eg circling singing males.

Observers were asked to walk the whole stretch on each visit, and on average a visit would last about 2 hours.

Observers were asked, when first taking up a plot, to provide a habitat map with as much detail as they could provide, and each year they were asked to note any changes. The main division into "habitats" used for analysis were 'slow rivers', 'fast rivers' and 'canals'. At the end of the season all the records of each species were transferred from the 'Visit Maps' to 'Species Maps'. These were returned to BTO headquarters where the species maps were analysed by one of the trained analysts to determine how many and where were the territories.

Full details and field instructions are published as a separate 6-page leaflet, and a separate 8-page document covers territory analysis (see Publications below).

Purpose of Data Capture

The end product each year was the number of territories of each waterway species on each plot and when compared to the numbers on the same plots in other years an index of levels and trends could be calculated. Some limited analyses of habitat requirements could also be made by comparing locations of bird territories with habitat features.

Geographic Coverage

All of the UK. There were regional differences in the distribution of each type of waterway covered but these were because of the availability of the different types rather than any bias caused by observers choosing particular sorts. Relatively few plots were covered in Scotland and Northern Ireland.

Temporal Coverage

The survey ran every year from 1974 to 2007, with fieldwork in the breeding season from about late March to early July.

Other Interested parties

The project was funded as part of the contract to the BTO from the Nature Conservancy Council. This support was continued by the Joint Nature Conservation Committee partnership after the NCC was split up.

Organiser(s)

Ken Williamson was the driving force behind the setting up of the survey and was the organiser for 1974-1977. John Marchant took over on Ken's death and, except for spells by Kenny Taylor (1980-1984) and Steve Carter (1986-1992) continued till 2007, with major assistance at various times from Phil Hyde, Lynette Musty, Dawn Balmer, Andy Wilson, Peter Beaven and Rachel Coombes. Several others had major inputs at times including Gwen Bonham, Caroline Hunt, Liz Murray, Raymond O'Connor and Susan Waghorn.

Current Staff Contact

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Publications

Data from the survey are used as the earlier parts of the waterway bird species trend graphs in the annually updated report on the BTO website *Breeding Birds of the Wider Countryside* (www.bto.org/birdtrends).

An annual report was produced. Until the report for changes 1981 to 1982 this was published in *Bird Study*, subsequent ones are in *BTO News*.

The instructions were formalised in:

Taylor, K. 1982. *BTO Waterways Bird Survey instructions*. BTO, Tring. 6 pp.

Marchant, J.H. 1994. *Guidelines for territory analysis on Waterways Bird Survey species maps*. BTO, Thetford. 8pp.

A major summary of the results to 1988 (and which included results from other BTO surveys) was included in a BTO book:

Marchant J.H., Hudson R., Carter S.P. & Whittington P. 1990. *Population Trends in British Breeding Birds*. BTO, Tring.

In addition there have been a few research papers on the populations of different bird species and their habitat requirements. Many of these have been authored or co-authored by BTO staff and in *Bird Study* but papers have appeared in several other journals.

Available from NBN?

No.

Computer data -- location

The BTO network Unix network central area.

Computer data -- outline contents

Numbers of territories of each species on each stretch in each year.

Computer data -- description of contents

The annual data consist of a header line (plot number, year, length of waterway stretch, region, altitude) and then the birds identified by a number and the number of territories recorded (or P (=present but no territory) or for some species the number of nests found.

Information held in BTO Archives

Visit and species maps of each plot are stored, arranged by plot number.

A folder is stored for each plot containing the habitat map, the annual changes to this, any photographs and any other relevant information.

Notes on Access and Use

Other information needed

Notes on Survey Design

Specific Issues for Analysis