

DECISION TIME FOR THE WATERWAYS SURVEYS

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Two waterways monitoring surveys have been running side-by-side since 1998 but only one can continue. *Andrew Joys, David Noble and John Marchant* consider the future of the Waterways Bird Survey and Waterways Breeding Bird Survey.

HORA DE DECIDIR SOBRE LOS CONTEOS DE CURSOS FLUVIALES

Dos programas de monitoreo de cursos fluviales han sido implementados simultáneamente desde 1998 pero sólo uno puede continuar. *Andrew Joys, David Noble y John Marchant* consideran el futuro del Conteo de Aves Acuáticas (WBS) y el Conteo de Aves Acuáticas Reproductoras (WBBS).

A streak of blue as a Kingfisher darts down a canal, the squeal of a Water Rail from a riverside reedbed: canals and rivers are among our richest and most attractive bird habitats, but they have never been covered particularly well by either the Common Birds Census (CBC) or the BTO/JNCC/RSPB Breeding Bird Survey (BBS). We currently run two separate schemes monitoring these habitats: the long-running Waterways Bird Survey (WBS), a territory-mapping scheme that started in 1974, and the more recent Waterways Breeding Bird Survey (WBBS), which commenced in 1998. Unfortunately we cannot continue to run both, so the decision has to be made soon as to which will survive.

There is a precedent for this, as in 2000 we adopted the BBS as a replacement for the CBC. We now produce joint trends using both CBC and BBS data, so a similar approach should be possible for the waterway schemes. We are now busy investigating whether the two schemes are comparable in their coverage and the population trends they produce. The challenge is linking counts of birds from WBBS with estimates of

breeding pairs calculated from the WBS visit maps.

Though the geographical spread of WBS and WBBS plots are similar, there are often marked differences in habitat or type of waterway between WBS and WBBS. The problem here is that WBS observers choose their own stretch of waterway to survey, and it's only natural for them to select a river or canal that provides as great a variety of species as possible. Not many of us would opt to walk a canal that boasts nothing more exciting than a couple of Coots and a few tame Mallard when there's a chance of Goosanders or perhaps Dippers not far away.

COMPARING SURVEYS

We have compared the results from the two schemes, and encouragingly discovered that there was no significant difference in trends except for four species: Moorhen, Sedge Warbler, Reed Warbler and Whitethroat. Fourteen species (61%) have a population change in the same direction on both WBS and WBBS sites (e.g., Fig. 1), and for most of the others the trends are similar or

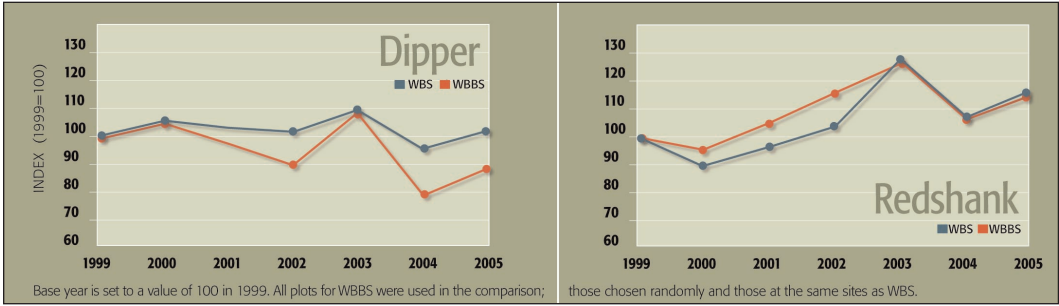


FIGURE 1. Comparison of population trends for 1999-2005 between WBBS and WBS.

roughly stable. Those showing the closest agreement include Common Sandpiper, Coot and the red-listed Reed Bunting. Yellow Wagtail and Curlew have suffered large declines between 1999 and 2005 on both WBS and WBBS.

If WBBS is chosen over WBS then we need a method of producing joint trends to allow the continuity of population monitoring to extend back to the start of the WBS. To this end, we

recently calculated joint WBS-WBBS trends for 24 riverine species, using a weighting method based on percentage survey coverage. These analyses showed that Sand Martins have declined by an alarming 51% since 1977 while Yellow Wagtail, Pied Wagtail and Reed Bunting numbers have all fallen by more than 25% since 1974 (see Table 1). In contrast, Sedge Warbler and Reed Warbler have increased by more than

TABLE 1. Long-term trends from the joint WBS-WBBS.

Species	Time Period	Mean Sample Size	Change %
WINNERS			
Common Sandpiper	1974-2005	39	+865 *
Greylag Goose	1992-2005	9	+623 *
Canada Goose	1980-2005	29	+239 *
Mallard	1974-2005	91	+193 *
Mute Swan	1974-2005	43	+165 *
Goosander	1980-2005	22	+151 *
Coot	1974-2005	38	+116 *
Tufted Duck	1974-2005	22	+83 *
Reed Warbler	1980-2005	21	+71 *
Curlew	1979-2005	21	+54 *
Kingfisher	1974-2005	31	+50
Oystercatcher	1974-2005	22	+50 *
Sedge Warbler	1974-2005	41	+50 *
Little Grebe	1974-2005	16	0
LOSERS			
Grey Wagtail	1974-2005	55	-2
Moorhen	1974-2005	77	-11
Lapwing	1979-2005	37	-14
Dipper	1974-2005	36	-20
Redshank	1974-2005	17	-22
Common Sandpiper	1974-2005	25	-23
Reed Bunting	1974-2005	51	-31 *
Pied Wagtail	1974-2005	64	-38 *
Sand Martin	1977-2005	21	-51 *
Yellow Wagtail	1974-2005	19	-94 *

The sample sizes appear small as they are taken across the complete time series and reflect the lower coverage under WBS

*An asterisk indicates statistical significance.

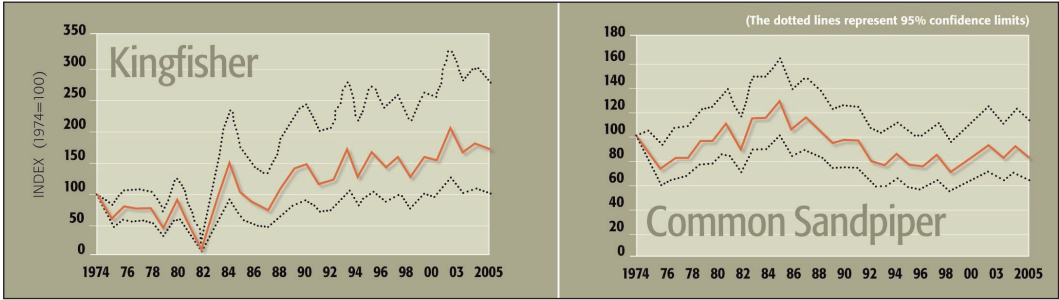


FIGURE 2. Population indices (unsmoothed) for the joint WBS-WBBS trends from 1974 to 2005.

50% since 1974 and 1980 respectively. Most of these 'joint trends' are broadly similar to those reported since last year on the BTO website (www.bto.org/birdtrends) with most differences attributable to annual fluctuations in the numbers of migrant species. Two examples are given (Kingfisher and Common Sandpiper; Fig. 2).

WBBS THE FAVOURITE?

Both schemes are running this year, with WBBS once again supported by the Environment Agency, and the WBS supported by the BTO. By autumn 2007, we should have completed further

comparisons of WBS and WBBS trends, and we will then make a final decision on which scheme to continue. At the moment WBBS is probably the favourite, thanks to its better coverage and random plot selection, but WBS provides the most useful data at a site level. If, for example, the WBS is discontinued, then we hope that observers will be able to continue surveying their stretch of river using WBBS methods or take on a new site. We are very grateful to all participants in these two waterways schemes, particularly those carrying out both methods on the same site, and hope to see an indicator of waterway and wetland birds achieve a much higher profile in the near future.