

ACCELERATING DECLINES REVEALED BY NEW BTO REPORT

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The latest report of bird population trends from the BTO's monitoring schemes has just been published — but this time on the World Wide Web. It brings together information from BBS, CBC, WBS, NRS and CES to provide a detailed picture for over 100 species of landbirds. *Humphrey Crick, John Marchant, David Noble and Stephen Baillie* describe the report and its latest results. Susan Waghorn has been designing and putting together the report's web site (which can be found on <http://www.bto.org>).

NUEVO INFORME DEL BTO REVELA UNA ACELERACIÓN EN LOS DECLIVES

El último informe sobre tendencias poblacionales de aves de los programas de seguimiento del BTO acaba de ser publicado, pero esta vez en Internet. Recoge información del BBS, CBC, WBS, NRS y CES para aportar una detallada descripción de más de 100 especies de aves terrestres. *Humphrey Crick, John Marchant, David Noble y Stephen Baillie* describen el informe y sus últimos resultados. Susan Waghorn ha diseñado el sitio del informe en internet (en <http://www.bto.org>).

The reports entitled "*Breeding Birds in the Wider Countryside*," produced by the BTO/JNCC Partnership in 1996 and 1997, had a great impact, not only in the press, but also because they became a bible for conservationists. These reports were essentially "one-stop-shops" for information about the population status of our common terrestrial birds and they brought into widespread use all the valuable information that BTO members contribute each year, in a way that had never been achieved before.

Now, a new step has been taken that should ensure even wider circulation of the BTO's information on bird trends: the development of a web-based report. This allows ready access by all those concerned about bird populations, whether at home, in the office, in schools or universities, as well as by those in professional conservation. We are no longer restricted by the space afforded by an A4 sheet of paper and by reproduction

charges and can make much greater levels of detail available than ever before. For those that do not have access to the web, a summary printed version will also be available.

An example of a typical web page is shown on p139. New for this report are trends from the BTO/JNCC/RSPB Breeding Bird Survey (BBS), not only for the UK but also for each of its constituent countries (England, Scotland, Wales and Northern Ireland) when data are sufficient.

A new system of Alerts has also been introduced, to highlight where population declines of greater than 25% or greater than 50% have occurred over the past 5, 10, 25 and 30 years. This is the new standard system that has been widely discussed with those concerned with bird population monitoring and that we hope will be extended to other bird monitoring schemes in due course. It should be emphasised that these Alerts do not result in any immediate

changes to existing lists, such as the Biodiversity Steering Group and Birds of Conservation Concern lists, but they flag up those species that are most in trouble and that may warrant redesignation at the next revision.

WINNERS AND LOSERS

While many species show relatively small long-term trends or may vary up-and-down with changes in the weather, for example, there are a substantial proportion that have shown large long-term trends (Table 1). Thus 12 species have more than doubled in population size over the past 25 years, while 22 have halved. The “winners” include species such as the raptors, which have benefited from conservation action to curb the use of damaging pesticides. Mute Swan has benefited substantially from banning the use of lead weights by fishermen. The pigeons appear to have taken advantage of various changes in agricultural practice, including the increase in *brassicas* such as

oilseed rape and may be benefiting from climate warming through increased breeding season length and perhaps decreases in overwintering mortality. The reasons for increases in the warblers, Redstart and Nuthatch are currently unknown, but the last has been spreading northwards into Scotland at a remarkable rate.

The species that have declined by greater than 50% or 25% over the past 25 years are largely unchanged since the last report. The only differences are that Yellow Wagtail, Marsh Tit, Starling and Linnet have now moved onto the higher level of decline, and the declines for Kestrel and Cuckoo are now greater than 25%. Little Grebe is a new species to the list of declining species and needs further investigation. Although winter surveys show no trend over the past 15 years, the decline measured by the Waterways Bird Survey (WBS) occurred mainly before this period and represents changes only in birds using rivers and canals, not lakes, gravel pits or reservoirs.

TABLE 1. Species showing substantial population changes over the past 25 years (1973–1998).

Greater than 50% decline		25 – 50% decline		Greater than 100% increases	
Little Grebe W	(51%)	Kestrel	(26%)	Mute Swan U	(165%)
Grey Partridge	(83%)	Lapwing U	(40%)	Mallard W	(190%)
Woodcock U	(72%)	Cuckoo	(29%)	Tufted Duck U	(645%)
Turtle Dove	(69%)	Meadow Pipit U	(43%)	Sparrowhawk	(149%)
Lesser-spotted Woodpecker	(72%)	Grey Wagtail W	(48%)	Buzzard U	(290%)
Skylark	(54%)	Pied Wagtail W	(49%)	Oystercatcher W	(109%)
Tree Pipit U	(77%)	Duncock	(46%)	Woodpigeon	(101%)
Yellow Wagtail W	(81%)	Blackbird	(25%)	Collared Dove	(216%)
Song Thrush	(57%)	Mistle Thrush	(43%)	Nuthatch	(114%)
Goldcrest	(57%)	Willow Warbler	(31%)	Redstart U	(109%)
Spotted Flycatcher	(77%)			Reed Warbler U	(122%)
Marsh Tit	(52%)			Blackcap	(100%)
Willow Tit	(75%)				
Starling	(61%)				
House Sparrow	(51%)				
Tree Sparrow	(94%)				
Linnet	(55%)				
Lesser Redpoll U	(94%)				
Bullfinch	(56%)				
Yellowhammer	(56%)				
Reed Bunting	(61%)				
Corn Bunting	(86%)				

The percentage changes for each species is given in parentheses, each decline is statistically significant. Please note that although we use data from the most recently processed year, 1999, in the analysis, statistical considerations require the changes to be measured only up to 1998.

Notes: W means that the information comes from the WBS over the past 23 years (1975-1998); U means that a major part of a species' distribution is not covered by the CBC, (see example web page on pg__no).

DECLINING FASTER AND FASTER

What is most worrying about the new figures is that eight of the species in Table 1 appear to have declined faster than ever over the last five years on Common Birds Census CBC plots. They show declines greater than 25% between just 1993 and 1998: Grey Partridge, Lesser Spotted Woodpecker, Tree Pipit, Yellow Wagtail, Willow Tit, Starling, Tree Sparrow and Lesser Redpoll. The quality of information for some of these species is often unsatisfactory because they now occur on very few CBC plots, although the recent declines are confirmed by significant BBS results for Grey Partridge, Yellow Wagtail and Willow Tit and for Tree Pipit in England. The general lack of information on these species combined with evidence of rapid declines means that they surely warrant urgent conservation attention. For two other species in Table 1, Bullfinch and Corn Bunting, BBS shows significant declines of greater than 25% between 1994 and 1999 – see *BTO News* 230: 12–14.

CONSERVATION PLANNING

BTO data have been very important in helping government draw up lists of priority species needing conservation action. Under the International Convention on Biodiversity, the government has produced a series of Biodiversity Action Plans for individual species and habitats. These plans list the main factors that may be causing population declines in each species, suggest policies to halt and reverse declines and outline what further research is still required. Following their publication, there has been much new action at national and local levels to conserve the UK's biodiversity.

Grey Partridge was one of the first species with an Action Plan and has been the subject of intensive research work for many years by the Game Conservancy Trust (GCT). Based on all available evidence, GCT has made strong recommendations about how the species' fortunes can be turned around, principally to do with the provision of chick food – insect larvae – that have all but disappeared with the use of insecticides and of herbicides that kill the weeds the insects feed on. However, it looks as though

there is still a great deal of work to do to achieve the stated aim of halting its population decline by 2005.

Tree Sparrow, Bullfinch and Corn Bunting are also the subjects of Biodiversity Action Plans as well as of a number of research projects and conservation initiatives by BTO, RSPB, GCT and others. These have highlighted the potential importance of investigating the impact of providing extra seed in winter, to make up for the loss of natural food supplies due to widespread changes in farming practice. All three Action Plans aim to achieve at least a 50% increase in the BBS index of each species between 1996 and 2008.

The UK government, through the Department of the Environment, Transport & the Regions, has recently funded a consortium led by the BTO (including Central Science Laboratory, RSPB and Wildwings Bird Management) to investigate the causes of the long-term declines of Starling (and House Sparrow). Also the BTO, through its Nightingale Appeal and with support under the BTO/JNCC Partnership has funded an investigation of the BTO's data on Willow and Marsh Tits.

However, there is now an obvious need for research to begin on the declines of Lesser Spotted Woodpecker, Tree Pipit, Yellow Wagtail and Lesser Redpoll before they disappear from large parts of the country.

ACKNOWLEDGMENTS

Thank you to the sustained long-term efforts of many thousands of the BTO's volunteer supporters, for both undertaking the fieldwork and for generously donating funds towards the Trust's operations. This report would not have been possible without them. The report is produced under the work programme funded by the BTO/JNCC Partnership (on behalf of English Nature, Scottish Natural Heritage, Countryside Council for Wales and the Environment & Heritage Service of Northern Ireland). We are grateful to the many staff at the BTO who have helped in the organisation and curation of the datasets used in the report. Thanks are also due to Mr and Mrs J.A. Pye's Charitable Settlement, which provided additional support towards the development of the website.

THE NEW WEB REPORT

An example of a typical page from the new web report. Please note that where the CBC is noted as unrepresentative, this refers to the fact that the strongholds for Tree Pipits occur (upland Scotland and Wales) outside the main geographic range covered by the CBC (generally lowland England). For the majority of species, the CBC adequately monitors the main distributional strongholds.



British Trust for Ornithology

Breeding Birds in the Wider Countryside 2000



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TREE PIPIT *Anthus trivialis*

Conservation Listings

Unlisted/Green
Biodiversity Steering Group
Conservation Concern List

Status Summary

Tree Pipits occur in greatest abundance in Wales, north England and Scotland, and thus the marked CBC decline may reflect the range contraction that has occurred in central and south-east England (Gibbons *et al.* 1993). This is confirmed by the contrasting patterns of change shown by the BBS in Scotland and England. While populations have increased in Scotland, there has been a substantial decline in England over the past 5 years, corroborating the decline shown by the CBC over the same time period. Improvements have occurred in breeding performance and the causes of the population decline are unclear, but may be linked to changing forest structure (with maturity) and increased grazing pressure in woodland (Vanhinsbergh *et al.* 2001).

Long term trend

Unknown, but recently increasing in UK.
Rapid decline (>50% over 30 years) in lowland England

CBC all habitats 1966–1999
Tree Pipit

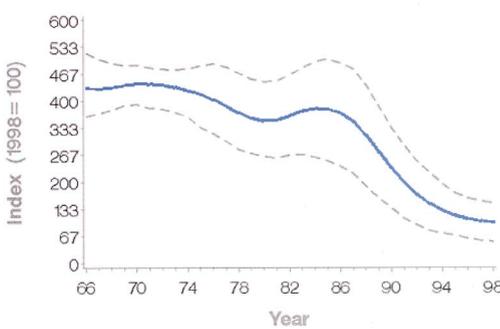


Table of population changes

Scheme	Category	Period	Years	% change	Lower limit	Upper limit	Alert	Mean plots	Comment
CBC	All habitats	30	1968-1998	-77	-88	-65	>50	33	Unrepresentative
CBC	All habitats	25	1973-1998	-77	-87	-64	>50	32	Unrepresentative
CBC	All habitats	10	1988-1998	-68	-81	-54	>50	21	Unrepresentative
CBC	All habitats	5	1993-1998	-31	-53	-13	>25	**20	Unrepresentative
BBS	UK	5	1994-1999	21	-1	48	-	119	-
BBS	England	5	1994-1999	-26	-43	-3	>25	64	-
BBS	Scotland	5	1994-1999	86	19	190	-	27	Small sample

BBS index for UK 1994–1999
Tree Pipit

