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The state of the UK's birds

2001

The state of the UK's birds 2001

- The UK Government is committed to using breeding bird populations as an indicator of sustainability. Its headline indicator shows a long-term decline in common birds; woodland birds have declined moderately and farmland birds steeply. The latest edition of the indicator shows a modest short-term recovery of common birds since 1998, including woodland birds, but a continuing downward trend in farmland birds. There is a considerable way to go to reverse the long-term downward trends of woodland and farmland birds.

- Progress towards meeting the species targets in the UK Biodiversity Action Plan is mixed, but there are signs of recovery for some species. Encouraging progress with the stone-curlew, bittern, corncrake, and cirl bunting is balanced against the critical status of the black grouse and capercaillie, and the effective UK extinction of the red-backed shrike and wryneck.

Bittern

Richard Brooks (RSPB Images)

- Population recovery for widespread declining birds, such as the farmland birds in the UK Biodiversity Action Plan, requires solutions that are carefully designed, delivered at a sufficiently large scale and are both economically and environmentally sustainable. Increasing investment in agri-environment schemes, such the Countryside Stewardship Scheme in England, is likely to benefit bird populations and other farmland wildlife in target areas. Attention is increasingly directed towards finding ways of supporting bird populations in the countryside through stewardship options that the majority of farmers would be able to undertake. Such policies show a commitment from Government to tackle these issues in a positive manner and at a sufficiently large scale.

- Populations of scarce breeding species, including some birds of prey, have recovered strongly in response to conservation action. Illegal persecution, particularly indiscriminate poisoning, however, continues to hamper the recovery of the red kite in some areas. Persecution remains a significant threat to hen harrier populations.

- Based on long-term declines, breeding birds such as the lesser spotted woodpecker, starling, willow tit, marsh tit, house sparrow, yellowhammer and others may need to be added to the list of Biodiversity Action Plan priority species in the near future.

- Wintering waterbirds have increased strongly in most habitats because of protection, re-creation and management of sites. Wildfowl and waders have benefited from changes in hunting legislation and the creation of reserve networks linking migration sites and breeding grounds. Rapid increases among some non-native wildfowl species are, however, causing conservation problems in the UK and abroad.

- Climate change is a fact. The areas that are currently suitable for bird species are likely to change markedly in extent and location over this century. We do not know whether birds or the key habitats on which they depend will be able to shift their ranges rapidly enough to keep pace with change. Breeding and wintering birds will increasingly face climatic conditions outside the range that they normally experience – the consequence of this for their populations is uncertain. Climate change will pose a very significant challenge to the conservation of species and their habitats in the future.

Stone-curlew numbers are increasing thanks to nest protection, agri-environment schemes and the co-operation of farmers.

Chris Knights (RSPB Images)

Introduction

The state of the UK's birds 2001 is the third in a series of annual reports summarising the fortunes of bird populations in the United Kingdom (UK). Wherever possible, population trends, drawn from the best sources available, are presented for the whole of the UK and cover the period 1970–2001. The most significant event to affect the countryside in 2001 was undoubtedly the foot and mouth disease (FMD) epidemic. The onset of FMD in early spring 2001 had a devastating impact on the countryside across the UK, affecting farmers, landowners and rural economies alike. In such a situation, and with the real threat that fieldwork activities could exacerbate disease spread, most major bird-monitoring projects were suspended. The effect of FMD on this report is relatively small, however, because data from one field season takes at least a year to become integrated into the trends. The impact on subsequent reports will be considerable because, in many cases, a complete year's data will be missing. Hence, this report contains little information from 2001, except in a few cases where bird monitoring could proceed with minimal risk of disease transmission. The statutory conservation agencies and non-governmental organisations (NGOs) worked together with volunteer birdwatchers to ensure that conservation activities did not intensify the impact of the disease.

The report is divided into three parts, covering breeding birds, wintering birds, and climate change. Most breeding birds in the UK are residents, but summer migrants, with wintering grounds far to the south, swell their numbers each spring. Wintering birds in the UK are a mixture of residents and visitors with breeding grounds farther north and east. Most notable among winter visitors are the wildfowl and waders and their populations are considered in the second part of the report. If the current predictions for climate change are realised, then the effects are likely to be seen in both our breeding and wintering birds.


Barnacle geese

Chris Gomersall (RSPB Images)

The report starts with the recent review of the UK's Special Protection Areas and then the UK Government's latest *Quality of Life* headline bird indicator, published by the Department for Environment, Food and Rural Affairs (DEFRA). This provides a measure of the health of the environment by summarising trends in the numbers of common breeding birds. The report then considers the species that are priorities in the UK Government's *Biodiversity Action Plan* (UKBAP). The UKBAP identifies work necessary to improve the adverse status of these priority species. Progress towards the UKBAP targets is assessed.

The report then focuses on population trends of well-monitored breeding species, including those 'red-listed' in *Birds of conservation concern* (BoCC)[1] but not UKBAP priorities. It highlights those birds that are doing particularly badly and those doing well.

The second section begins with an indicator based on wintering waterbirds, using the same methods used in the UK Government's *Quality of Life* breeding bird indicator. With a few exceptions, the fortunes of wintering waterbirds contrast markedly with those of breeding species.

The third section looks at some of the growing evidence linking changes in bird numbers, distributions and life cycles with climate change. There are signs that some UK birds are already responding to changing conditions. Evidence suggests that areas with environmental conditions suitable for individual bird species are likely to shift with climate change. It is unclear, however, whether birds will be able to respond rapidly enough to the pace of change and what impact this will have on their populations.

The report ends by summarising the main areas of success and failure for bird conservation and highlights the need for more concerted and wide scale conservation action to help the recovery of common but declining breeding birds.

The names of BoCC 'red-list' species appear in red and 'amber-list' species in orange[1].

The report has been produced by a group of NGOs – the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Wildfowl & Wetlands Trust (WWT) – and the governmental organisation most closely involved in bird monitoring in the UK, the Joint Nature Conservation Committee (JNCC). Bird monitoring in the UK is undertaken in collaboration with Government (principally the JNCC and the statutory nature conservation agencies), non-governmental organisations (such as the RSPB, BTO and WWT) and many individual skilled volunteer ornithologists.

1 The terms 'red-' and 'amber-list' refer to the classification of species within *Birds of Conservation Concern* (BoCC). 'Red-listed' species are those that have undergone ≥50% decline in UK breeding population or range over the previous 25 years, or a historical decline 1800–1995, or are species of global conservation concern. Species are 'amber-listed' for several reasons, but particularly because they have undergone a 25–49% decline in breeding population or range in UK during the last 25 years, or, for wintering wildfowl and waders, because the UK holds ≥ 20% of the north-west Europe or East Atlantic flyway population.

The Special Protection Area review

In September 2001, the JNCC published the UK Special Protection Area (SPA) review. The SPA review is probably the most detailed account of a protected area network ever produced by a European Union member state. Taken together with Special Areas of Conservation, UK SPAs will form an integral part of the pan-European Natura 2000 network of protected sites classified under European conservation directives. The JNCC's review, which was limited to terrestrial SPAs, identifies 243 special sites for conservation, covering an area of more than 1,454,500 hectares.

The UK SPA network will provide vital habitat protection targeted for the needs of over a hundred different bird species, including those for which the UK is especially important, such as breeding gannets and puffins, the Bewick's swan in winter, and the endemic Scottish crossbill. In summer, the network holds nearly five million breeding seabirds (more than 85% of the UK total), and in winter it contains more than two million non-breeding waterbirds (c 40% of the UK total), most of which breed in the Arctic. The habitat protection provided for these birds is a major contribution to their international conservation and recognises the significance of the UK bird populations in a European context. It brings us one step closer to ensuring that the UK manages its conservation sites effectively in the future.

A collaborative exercise, the review has taken eight years to complete and drew on an extensive range of surveys and existing knowledge of important UK bird sites; its production would not have been possible without the input of thousands of skilled volunteer birdwatchers. The review does not represent the final list; indeed a working group is currently considering whether the network is sufficiently comprehensive across all parts of the UK. Due to the dynamic nature of the UK's countryside and our ongoing monitoring programme, if new information becomes available and there is a conservation requirement, further SPAs may be classified. Indeed, two additional SPAs for capercaillie have been classified since the review's publication. In addition, the process to identify marine SPAs has now started with the aim of having a draft list of these produced by summer 2003.

The SPA network holds a high proportion of the UK's puffins

L J Borg (RSPB Images)

Breeding birds

The 'Quality of Life' indicator for breeding birds

In 1999, Government published the White Paper *A Better Quality of Life*, which contains 150 indicators of the sustainability of lifestyles in the UK. Several of these indicators relate to landscape and wildlife. Within a set of 15 'headline' indicators is one based on population trends of breeding birds, which is updated annually. The publication of a wildlife indicator among more familiar economic and social indicators is a considerable step forward and shows that the UK Government has recognised that the maintenance of biodiversity is a key measure of sustainability. Birds have been chosen partly because the data are so good but also because their varied ecology and widespread distribution across the UK allows them to be used as 'barometers' of change in the wider environment. Added to this, birds have a wide appeal among the public and, through expenditure associated with birdwatching, contribute substantially to local economies.

Parallel work is underway with DEFRA support to develop headline bird indicators for England, English regions, Scotland, Wales and Northern Ireland. The devolved administrations in Scotland, Wales and Northern Ireland are considering these and other indicators using country-specific data.

The Government has recently published *Achieving a better quality of life: Government Annual Report 2001*, which is the second report in a series to review progress towards sustainable development, as measured against the set of 15 headline indicators. Taken as a whole, the indicators appear to be moving in the right direction, but significant challenges remain – reversing the long-term declines of woodland and farmland birds being foremost among these.

The wild bird indicator summarises information on the status of more than 100 breeding species over the last 30 years. The data come from a range of sources, notably the Common Birds Census (CBC)[2]. The lines plotted are indices starting with a value of 100 in 1970. If an index rises to a value of 200 then, on average, the populations in that group will have doubled; if it falls to 50, on average they will have halved since 1970. Although the index for all common birds rose slightly up to the mid 1970s, the pattern from then on is a shallow decline with a marked upturn from 1998. This recent upturn is partly due to milder winter weather that has increased the survival of small birds susceptible to harsh winter conditions. Even so, the common bird index has fallen by over 5% from the mid-1970s to 2000.

Looking at these trends in more detail, woodland specialists show a slow but steady drop in numbers, down 22% from the mid-1970s to 2000. They have, however, also increased in number each year since 1998 – to some degree this is driven by mild winter weather but other factors seem to play a part too.

Farmland specialists have been in severe long-term decline – down, on average, by 46% between the mid-1970s and 2000. Warmer winter weather does not seem to have compensated for the continuing steep declines in a number of farmland birds and their populations remain in a precarious position. There is a considerable way to go to reverse the long-term downward trends of woodland and farmland birds.

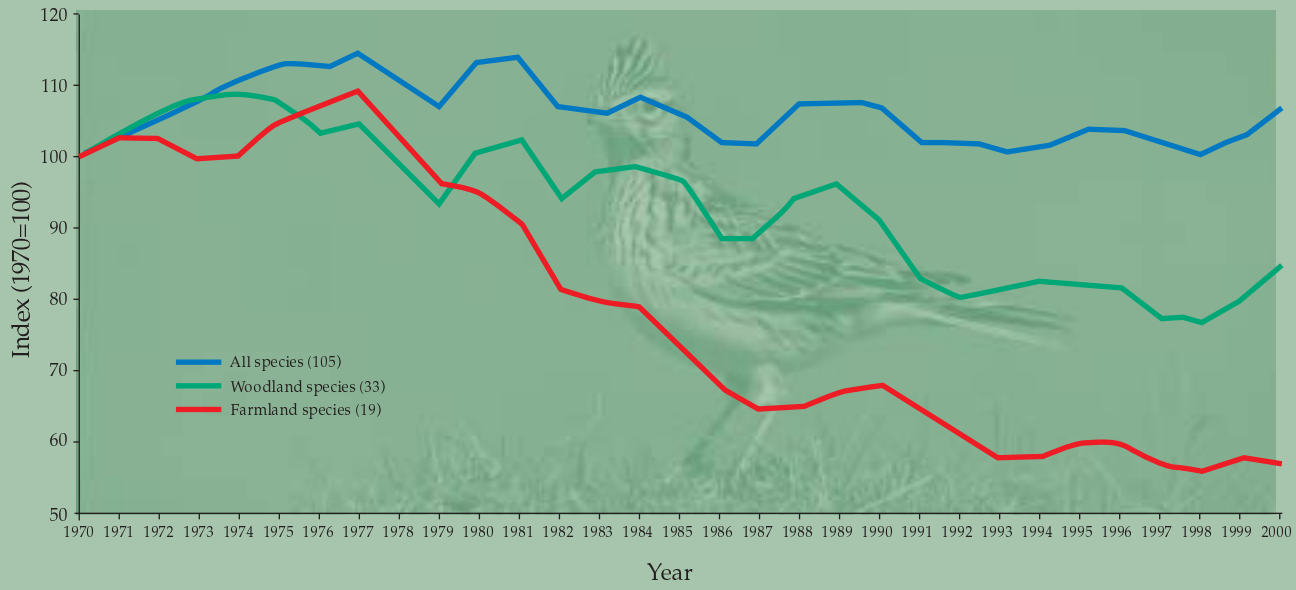
There is general acceptance that the declines among farmland birds have been driven by agricultural intensification. The Government has pledged to reverse the long-term trends in woodland and farmland birds. With respect to farmland birds, DEFRA has published a Public Service Agreement target to reverse the long-term decline in the number of farmland birds by 2020. While there has been a series of positive policy initiatives designed to help farmland birds, this target remains a significant challenge.

Trends in UK Biodiversity Action Plan species

The targeted action plans in the UK Government's BAP provide a strong focus and context for the 26 species of highest conservation concern. Trends and the most recent population estimate for each are shown below, except for the Globally Threatened aquatic warbler that only comes to the UK as a passage visitor each autumn (and where we are unable to assess its conservation status using data from the UK alone), and the Scottish crossbill, for reasons given below. Although it seems unlikely that the majority of these species will meet their individual longer-term UKBAP targets, 2001 was a year in which there were important developments particularly for the suite of widespread farmland species. The introduction of arable options into the Countryside Stewardship Scheme in England means that there is now a mechanism for addressing some of the factors implicated in their declines, at a large enough scale to start to meet the targets. Tîr Gofal in Wales and the Rural Stewardship Scheme in Scotland have similar potential if suitably targeted and adequately funded.

2 More details of the CBC are included on page 11

The Quality of Life Indicator: population of wild birds



Biodiversity Action Plan species

Species	Long-term trend %	Short term-trend	Population	Year
Song thrush	-57[1]	12[1]	1,100,000[1]	1988–91
Skylark	-52[1]	-8[1]	1,000,000[1]	1997
Linnet	-52[1]	-6[1]	540,000[1]	1988–91
Reed bunting	-54[1]	-4[1]	240,000[1]	1988–91
Bullfinch	-53[1]	-25[1]	200,000[1]	1988–91
Grey partridge	-85[1]	-22[1]	150,000[1]	1988–91
Spotted flycatcher	-77[1]	-21[1]	130,000[1]	1988–91
Tree sparrow	-95[1]	25[1]	110,000[1]	1988–91
Turtle dove	-71[1]	-24[1]	75,000[1]	1988–91
Corn bunting	-88[1]	-35[1]	19,800[1]	1993
Black grouse	decline[na]	-74[4]	6,500[2]	1995–96
Nightjar	62[5]	?[na]	3,400[1]	1992
Woodlark	704[6]	83[6]	1,552[1]	1997
Capercaillie	decline[na]	-51[5]	1,070[3]	1998–99
Corncrake	-77[2]	12[1]	648[2]	2001
Cirl bunting	42[7]	30[7]	453[1]	1998
Stone-curlew	-15[4]	54[1]	254[1]	2000
Common scoter	-29[3]	?	95[1]	1995
Roseate tern	-94[2]	-11[2]	58[1]	2001
Bittern	-58[2]	36[2]	30[2]	2001
Marsh warbler	-63[3]	-6[3]	29[1]	1999
Red-necked phalarope	-43[2]	-56[2]	16[2]	2001
Wryneck	decline [na]	verge of extinct [na]	1[1]	1999
Red-backed shrike	decline [na]	verge of extinct [na]	1[1]	1999

Long-term trends for common birds from the Common Birds Census, short-term trends from the Breeding Bird Survey. Data for the scarce and rare species comes from special surveys and the Rare Breeding Birds Panel.

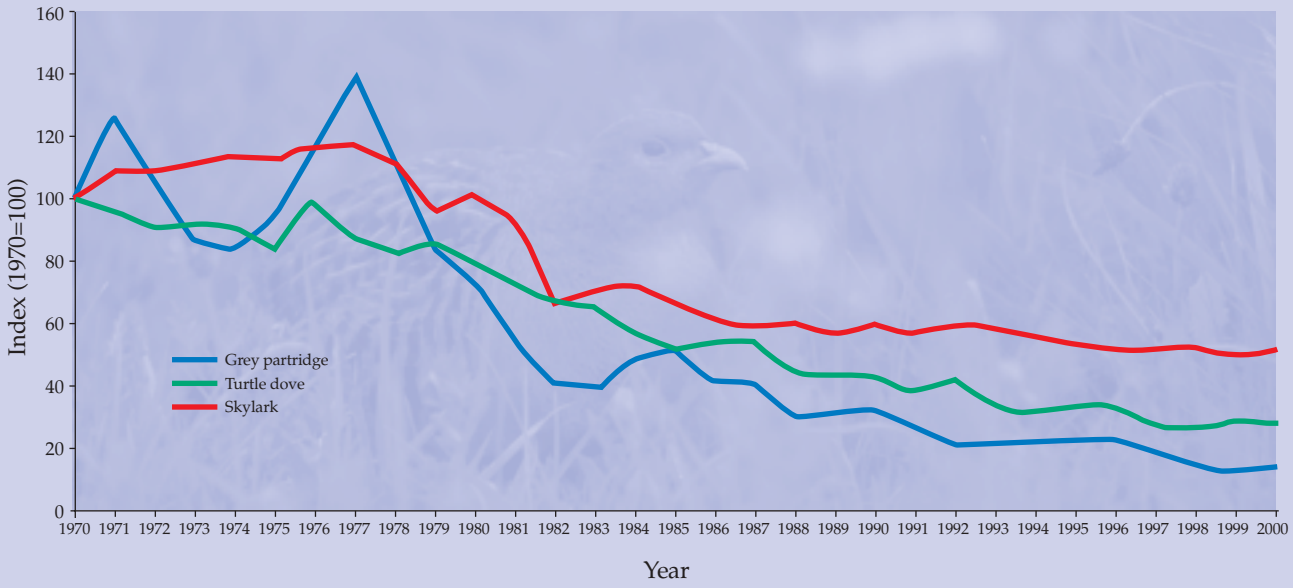
Long-term trends
1=1970–1999
2=1970–2001
3=1973–1995
4=1970–2000
5=1981–1992
6=1970–1997
7=1970–1998

Short-term trends
1=1994–2000
2=1996–2001
3=1995–1999
4=1991/92–1995/96
5=1992/94–1998/99
6=1995–1997
7=1995–1998

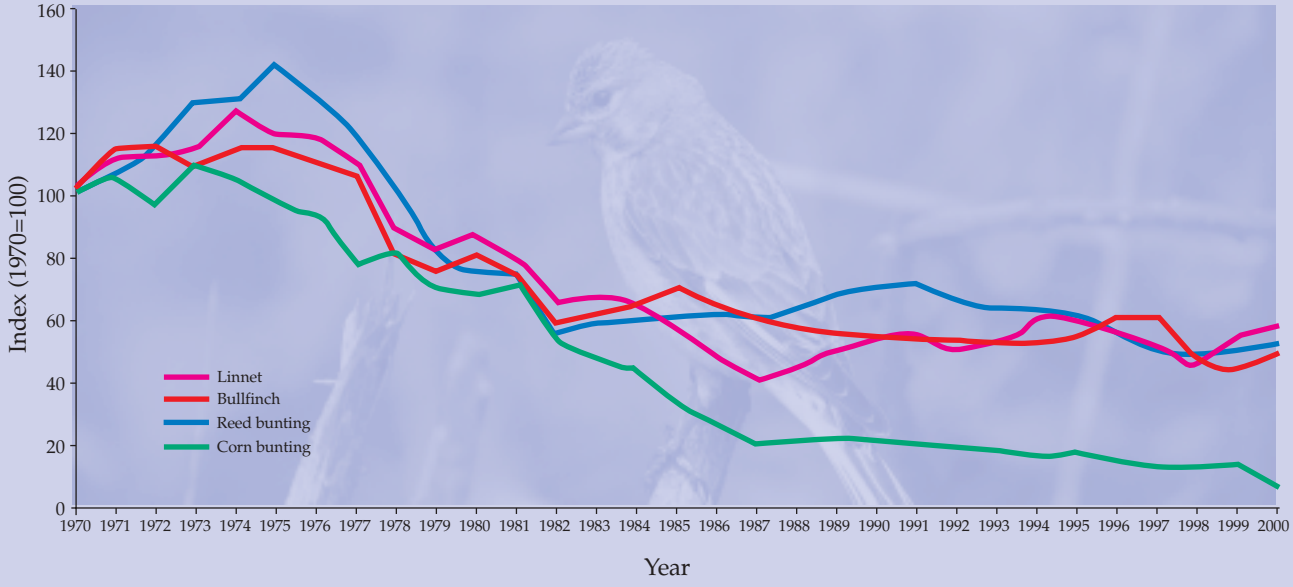
Breeding units
1=Breeding pairs
2=Singing, displaying or breeding males
3=Individuals

Although the *Quality of Life* indicator for farmland birds fell again, the indices for several of the widespread UKBAP species showed at least small year-on-year increases on CBC plots – the song thrush, spotted flycatcher, linnet and reed bunting doing so for the second year in a row. Short-term trends derived from the Breeding Bird Survey (BBS)[3] suggest that song thrush and tree sparrow (which have increased) and skylark, linnet and reed bunting (decreases of less than 10%) may be faring rather better than the rest, all of which declined by more than 20% in the last six years. It is to be hoped that these improving trends in several species are consolidated in the next few years and that a significant start has been made towards meeting their UKBAP targets, most of which aim to increase population indices by 2008. Unfortunately, the long-term decline of the corn bunting appears to continue unabated. The situation is now so serious for seed-eating birds in some parts of the UK that emergency recovery programmes have been set up for them.

Numbers of grey partridge, turtle dove and skylark

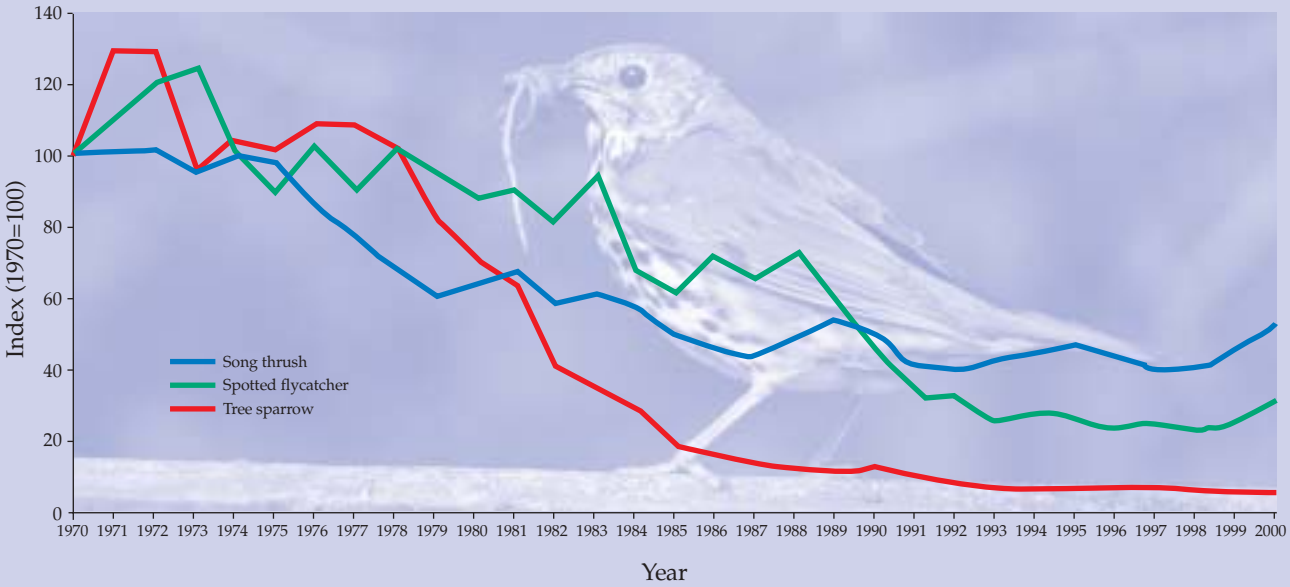


Numbers of linnet, bullfinch, reed bunting and corn bunting



3 More details of the BBS are included on page 11

Numbers of song thrush, spotted flycatcher and tree sparrow



Carefully targeted recovery programmes backed by funding from the European Union, Government, the statutory conservation bodies and NGOs, are continuing to prove their worth for several species. Although FMD meant that full surveys of each were not possible in 2001, the corncrake, stone-curlew and cirl bunting all appear to be proceeding towards or beyond their initial UKBAP targets. The bittern (30 booming males in 2001) also had another good year and, with further EU funding secured for the next phase of reedbed restoration, looks well on its way to achieving the 2010 target of 50 booming males. Despite the investment of a considerable amount of effort and resources, recovery work directed towards black grouse and capercaillie has yet to produce any real measurable progress towards meeting the UKBAP targets. Projects in the North Pennines and Wales have succeeded in improving populations or productivity of black grouse in relatively small focal areas, but extending such benefits to wider areas remains a challenge for both landowners and the government agencies funding recovery. Similarly, despite the efforts of government agencies, landowners and NGOs, leading to many improvements in its native pinewood habitat, the situation for the capercaillie remains critical. The removal or marking of most deer fences in breeding areas, which pose a threat through collisions with flying birds, should, however, result in a reduction in the mortality of capercaillie.

There have been no recent comprehensive surveys of the woodlark or nightjar, but both species are known to have benefited from sympathetic management of clear-felled and recently planted areas within commercial forestry. The woodlark had met its target (1500 pairs) when last surveyed in 1997 and there is no reason to believe that it has not continued to fare well since. The planned survey of the nightjar in 2003 is likely to show that it too has met its target (4,000 pairs by 2003).

Although the main and currently thriving population of roseate terns in the British Isles is on Rockabill Island in the Irish Republic, a small, scattered population remains within the UK. A slight increase to 58 pairs was recorded in 2001, but this is well short of the 2008 target of 200, which now seems unlikely to be met. Similarly, although not recently surveyed, the common scoter is believed to have declined since 1995 when there were 95 pairs in Scotland and it is uncertain that a target there of 100 in 2008 will be met, or that re-colonisation of Northern Ireland will be achieved. The red-necked phalarope is restricted to the north and west of Scotland and has optimistic targets of 55-60 pairs in Shetland by 2003 and 10 pairs in the Hebrides by 2005. With only 16 pairs in total in 2001, it is clear that neither target will be met, even allowing for the rapidity with which phalaropes are known to respond to suitable habitat management.

Three of the remaining four species have targets expressed in terms of maintaining their populations and perhaps expanding range. Two of these, the red-backed shrike and wryneck, breed on a sporadic basis in the UK after a long-term decline, although both bred successfully in 1999. They remain on the verge of extinction as breeding birds and there seems little prospect of being able to bring them back. Marsh warblers have shown fluctuating fortunes, recovering in the early 1990s after a steady decline, but then falling again. It is now difficult to envisage that in the next few years range and numbers will again match those found only 10 years ago.

The last of the UKBAP species, the Scottish crossbill, remains something of an enigma. Research into its precise taxonomic status and separation from other crossbill species continues. Recent work indicates that Scottish crossbills have diagnostic calls, providing a method of field identification. This has allowed the mapping of their breeding distribution. Accurate estimates of population size are, however, still several years away.

Trends in widespread and common birds

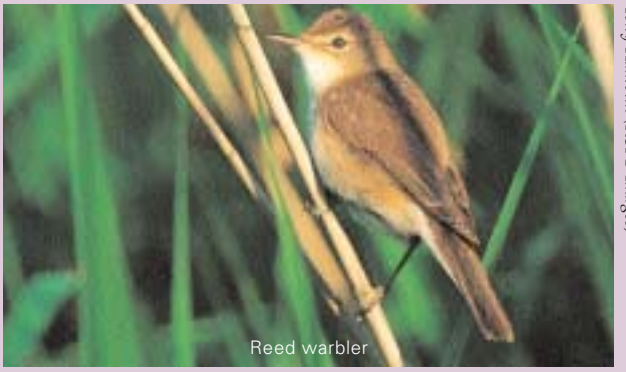
Long-term trends

About 70 species are monitored by one of the two long running terrestrial surveys – the CBC and the Waterways Bird Survey (WBS). Both are carried out by keen volunteers who make 8–10 visits per season to their site to record and map the positions of all breeding birds. Over the period 1970 to 1999, 19 species – the same 18 as reported in last year's report, plus house sparrow – have declined by more than 50%. The tree sparrow and lesser redpoll still lead the list with declines of 95%, followed by grey partridge and corn bunting with greater than 85%. Although declines in some red-listed birds (eg skylark, song thrush), appear to have levelled out in recent years, for nine species the magnitude of the decline on CBC plots has increased since last reported. Willow tit, marsh tit, yellowhammer, starling, lesser spotted woodpecker, tree pipit, lesser redpoll and house sparrow are now all candidates for BoCC 'red listing'. Twelve species show moderate (25-49%) population declines. Grey wagtail numbers appear to have improved since last year but this species, yellow wagtail, dunnock and lapwing have all declined by 40% or more. The house martin, which showed a 37% decline between 1970 and 1999, is a new addition to this category, whereas the status of the blackbird and goldcrest has improved, the former marginally. Nine species, including the two latter species and four riparian species (common sandpiper, moorhen, kingfisher and dipper), declined by between 10 and 24%.

At the opposite end of the scale, the collared dove again heads the list of increasing species, followed by buzzard, sparrowhawk, shelduck, mute swan, reed warbler, stock dove and blackcap. Although these trends are supported by other data, the CBC is not the most appropriate survey for species such as the buzzard (found mainly in the uplands) or shelduck (also found along coasts), mute swan or reed warbler (in wetlands). The strongly increasing trends for common garden birds such as woodpigeon, greenfinch, chaffinch, blue tit, great tit, long-tailed tit, wren, robin, green woodpecker, great spotted woodpecker, nuthatch and the corvids (jackdaw, carrion crow and magpie) are based on large sample sizes and are supported by the results of other monitoring schemes.


Kingfishers

Chris Knights (RSPB Images)


Reed warbler

Tony Hamblin (RSPB Images)

Short-term trends

The caveats in the table highlight one of the problems with the CBC – that because plots are selected by observers and hence concentrated in particular regions and habitats, the trends may not be wholly representative. For this reason, the BBS was introduced in 1994 to increase coverage and representation of habitats and birds. BBS observers carry out two sets of counts per season in squares selected randomly from the UK national grid, and these data have been used to calculate the short-term trends (1994 – 2000) in the table. Only species for which the BBS method is suitable and which are observed in at least 50 squares annually are included. Direct comparison of the CBC and BBS trends is not straightforward, even in the period when they overlap, because of the differences in the two survey designs.

Most species show short-term increases, possibly influenced by recent relatively mild winters. Whereas the BoCC red-listed grey partridge, turtle dove, spotted flycatcher, bullfinch, linnet, skylark and corn bunting continue to decline, for species such as the tree pipit and lesser redpoll, the apparent short-term stability is at odds with the severe long-term decline. This may be due to differences in the populations sampled by the two surveys (both species are most abundant farther north and favour young forestry plantations poorly covered by the CBC) or an increase in suitable habitat. Short-term trends for the tree sparrow and song thrush confirm the recent recovery suggested by the CBC. These BBS results confirm the steep declines in woodland species such as the willow tit, spotted flycatcher, and cuckoo, and reveal a worrying decline in wood warblers. The kestrel, lesser whitethroat and swift also exhibit rapid declines in this short period. The most rapidly increasing BBS species are the goldcrest, sedge warbler, great spotted woodpecker, redstart, blackcap, buzzard, and marsh tit (the BBS trend for the latter is in contrast to its long-term trend). The BBS provides much better information on trends in urban birds than the CBC. The 5% decline in numbers in the BBS confirms the long-term declines in house sparrows found on CBC plots and garden bird surveys. Swifts and starlings declined significantly on BBS plots whereas collared doves and house martins have increased.

Population trends of widespread and common birds

	Long-term trend % 1970–1999	Short-term trend % 1994–2000	Caveats
Tree sparrow	-95	25	
Lesser redpoll	-95	8	3
Corn bunting	-88	-35	2
Grey partridge	-86	-22	
Willow tit	-78	-54	
Spotted flycatcher	-77	-21	
Tree pipit	-76	12	3
Woodcock	-74	-	3
Starling	-71	-5	
Turtle dove	-71	-24	
Lesser spotted woodpecker	-62	-	2,3
Marsh tit	-62	45	
House sparrow	-62	-5	1
Song thrush	-56	12	
Reed bunting	-53	-4	
Bullfinch	-53	-25	
Yellowhammer	-53	-12	
Skylark	-52	-8	
Linnet	-52	-6	
Wood warbler	-	-43	
Grey wagtail	-41	41	
Dunnock	-40	8	
Lapwing	-40	-13	3
Yellow wagtail	-40	-5	2
Willow warbler	-38	13	
House martin	-38	34	
Mistle thrush	-37	-2	
Cuckoo	-33	-19	
Red-legged partridge	-33	27	
Curlew	-32	-13	3
Meadow pipit	-31	4	3
Blackbird	-24	13	
Goldcrest	-22	87	4
Whinchat	-	-21	
Little owl	-19	8	3
Common sandpiper	-18	-1	
Swift	-	-18	
Moorhen	-18	18	
Whitethroat	-16	26	5
Pied flycatcher	-	-16	
Treecreeper	-16	12	
Dipper	-14	-	
Kestrel	-14	-29	
Tawny owl	-10	-8	3

	Long-term trend % 1970–1999	Short-term trend % 1994–2000	Caveats
Jay	-9	-7	
Kingfisher	-7	-4	
Wheatear	-	-6	
Sedge warbler	-7	55	3
Lesser whitethroat	3	-20	
Feral pigeon	-	3	
Greenfinch	13	34	
Red grouse	-	15	
Coal tit	19	7	
Siskin	-	19	
Pheasant	20	41	
Chiffchaff	20	5	
Blue tit	21	3	
Goldfinch	23	11	
Swallow	23	21	
Garden warbler	26	-5	
Chaffinch	30	6	
Great crested grebe	-	30	
Robin	36	2	
Wren	40	24	4
Long-tailed tit	41	22	4
Redstart	42	45	1, 3
Great tit	46	18	
Coot	48	35	3
Pied wagtail	53	25	3
Mallard	82	25	
Raven	-	64	
Crow	85	17	
Jackdaw	88	17	
Little grebe	90	26	3
Woodpigeon	90	3	1
Magpie	105	9	
Green woodpecker	107	22	
Nuthatch	112	14	
Stonechat	-	115	
Great spotted woodpecker	125	55	
Blackcap	125	49	
Reed warbler	125	14	1,3
Stock dove	127	9	
Shelduck	160	-47	
Sparrowhawk	171	-2	3
Mute swan	198	20	3
Buzzard	427	41	1,3
Collared dove	687	18	

Long-term trends – Data are derived from counts on Common Birds Census (CBC) plots, except for grey wagtail, dipper, kingfisher and common sandpiper which come from the Waterways Bird Survey (WBS). CBC data from 1966 (except for house sparrow where monitoring started in 1976), and WBS data from 1974, were analysed in a generalised additive model to generate annual estimates. Because this model 'smoothes' the data, we report the population change to the penultimate year (1999) from 1970 for CBC, from 1975 for WBS, and from 1977 for house sparrow.

Short-term trends – Data were derived from counts on Breeding Bird Survey (BBS) squares analysed using a full site by year log-linear Poisson regression model. The figure reported is the population change from 1994 to 2000.

Caveats – interpretative notes to indicate the reliability of the CBC or WBS trend
1 Small sample size in early years of the time period
2 Small sample size in later years of the time period
3 Trends may not be representative of the whole of the UK due to geographical or habitat-related sampling bias towards populations with low densities
4 The species shows very large natural fluctuations from year to year
5 Population has not recovered completely from 1968-69 crash caused by severe drought on the Sahel wintering grounds.

Birds of prey

The numbers of most rare birds of prey have recovered over the last 30 years. Restrictions imposed by FMD meant that there is little new information for 2001. Monitoring of the **white-tailed eagle** population in Scotland, however, was able to proceed. It showed another year's increase (by just one pair) to 23 territorial pairs in 2001. The numbers of **white-tailed eagles** are rising due to a re-establishment programme supported by nest protection but the population remains fragile. The UK **peregrine** survey planned for 2001 was postponed to 2002 because of FMD.

As well as causing the suspension of monitoring across much of the uplands, FMD reduced the number of reported incidents of illegal killing of birds of prey. It is feared that the lack of public access to the countryside may have provided a cover for increased persecution, perhaps pushing **hen harriers** even closer to extinction in England. Illegal persecution, particularly indiscriminate poisoning, continues to hamper the recovery of the **red kite** in parts of the UK. While the re-established population in the Chilterns continues to grow, illegal poisoning has killed an estimated one-third of the kites in northern Scotland, and birds were killed in several other areas during the year, notably Yorkshire, where the breeding population is very small. There were two confirmed cases of poisoning in Dumfries and Galloway in 2001, less than six months after the re-establishment of birds. Secondary poisoning by recently developed and highly toxic rodenticides continues to give cause for concern.

On a more positive note, following attempts n 1999 and breeding in 2000, three pairs of **ospreys** nested in Cumbria in 2001, a southward extension of the Scottish population. Although one pair probably failed, two were successful. One nest, at Bassenthwaite Lake, was watched by 25,000 people, providing a much-needed boost to the Lakeland tourism industry at a time when visitor numbers were depressed. Another pair, deriving from the re-establishment programme at Rutland Water in the English Midlands, also bred in 2001.

Raptors that are more widespread show mixed fortunes. The CBC data show sparrowhawks and buzzards have increased strongly in the last 30 years, bouncing back from the harmful effects of organochlorine pesticides in the 1950s and 1960s. The sparrowhawk appears to have stabilised at a new population level and there is evidence of local population declines in the 1990s. **Kestrel** numbers fell by 14% over the period 1970–1999, but by nearly 30% from 1994 to 2000 – a worrying signal that this familiar and charismatic bird may be in trouble.

Osprey

C H Gomersall (RSPB Images)

Snipe

Andrew Hay (RSPB Images)

Recent surveys

Upland birds

Compared with lowland habitats, bird monitoring in the uplands is less well developed and our knowledge of bird trends is more variable. Two sets of repeat surveys, however, provide an insight into the fortunes of upland birds, particularly waders and passerines.

A recent study re-surveyed CBC farm plots in areas of marginal upland across the UK, finding evidence of widespread declines in the abundance of 16 bird species out of 33 examined. The CBC plots had originally been surveyed between 1968–1980 and were re-surveyed in 1999 or 2000. Those species most closely associated with unimproved grassland, herb-rich grassland or wet grassland habitats have declined most (**grey partridge**, **lapwing**, **redshank**, **snipe**, **skylark**, meadow pipit, yellow wagtail, whinchat, wheatear, **linnet**, yellowhammer and **reed bunting**). Seven species increased in number (**stock dove**, woodpigeon, pied wagtail, **redstart**, carrion crow, jackdaw and **goldfinch**) and 10 showed no significant change. The **curlew** was the only open grassland species that did not show a significant declining trend. The results and the scale of the declines, are worrying – they add to growing concern about the populations of birds of marginal upland grasslands in the UK.

Complementary surveys of moorland habitats above the farmland edge, originally surveyed between 1980 and 1991, were undertaken in 2000. Four study areas, covering some 885 km^2, were re-surveyed: Sutherland, north-east Scotland, north Pennines and south Pennines. Preliminary results indicate general increases in buzzard, carrion crow, pied wagtail, raven, **snipe**, **stonechat**, whinchat and wren, but decreases in **dunlin**, **ring ouzel**, **twite** and wheatear. More surveys are planned across the UK for 2002 to give us a better understanding of trends in upland bird populations.

Twite

Mark Hamblin (RSPB Images)

Wintering waterbirds

The 'Quality of Life' indicator for wintering waterbirds

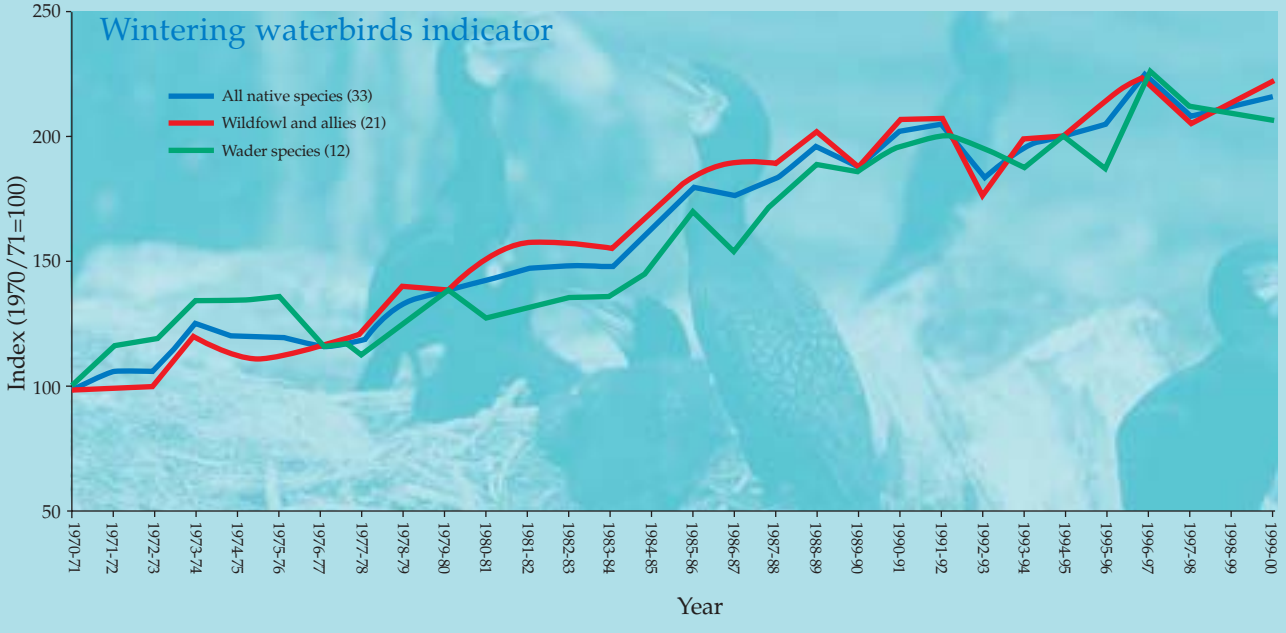
The UK is of particular significance for wintering waterbirds, primarily due to its relatively mild climate and extensive area of wetland habitats, particularly estuaries and inland still-waters. Internationally important numbers of many waterbird populations that breed in western and eastern Europe, and above the Arctic Circle from Canada to central Siberia, migrate to over-winter in the UK. The methods used to produce the UK Government's *Quality of Life* indicator have been used to produce an indicator for 33 species of wintering waterbirds (including swans, geese, ducks and waders), using data derived mostly from the Wetland Bird Survey (WeBS). The lines plotted are indices starting with a value of 100 in the winter of 1970/71. If an index rises to a value of 200, then on average the populations will have doubled since 1970/71.

The resulting indicator shows that populations of wintering waders and wildfowl have shown impressive increases; their populations have on average more than doubled over the last 30 years. For many species, this increase matches improvements in the fortune of many waterbirds in northwest Europe. The precise reasons vary between species and remain unknown for some, but the increase is coincident with a much better recognition of the value of wetlands for wildlife. Key to this is the 'Ramsar' Convention on wetlands that came into force in 1971. Many wetlands, in the UK as well as elsewhere, have since been afforded protection under various international treaties, securing international networks of sites that act as refuelling stop-overs and wintering sites for waterbirds.

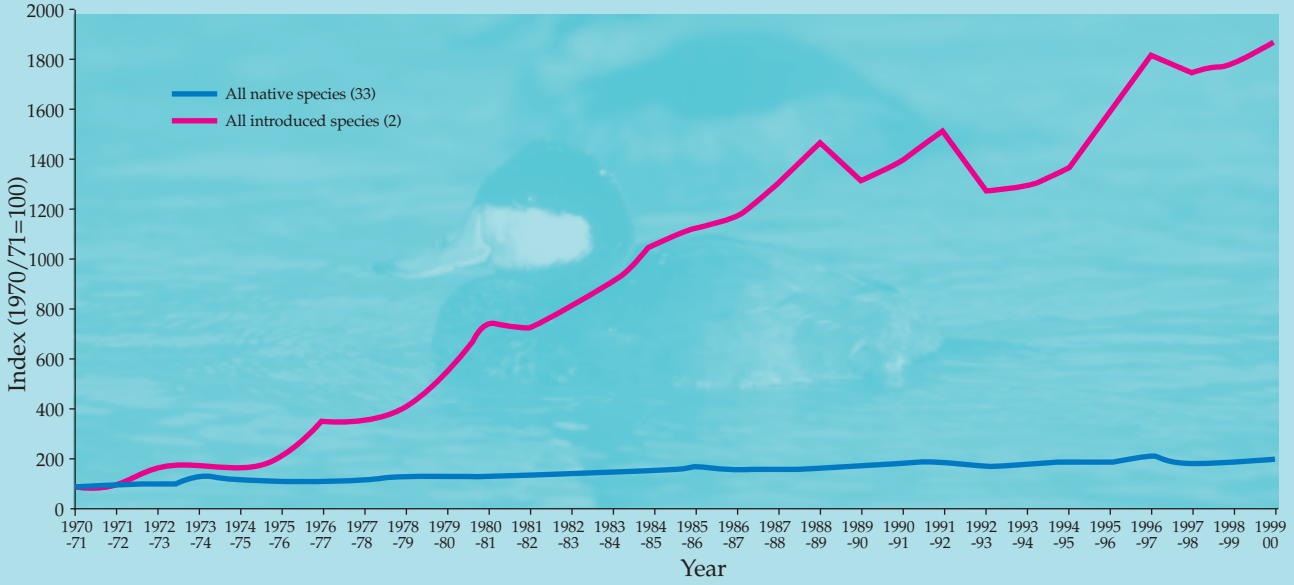
The last 30 years have also seen better understanding and management of wetland habitats. The last decade in particular has seen the creation of many new wetlands. Changes in legislation and hunting practices have also had an influence on certain species of wildfowl and waders. The increase in artificial wetlands, particularly reservoirs and gravel pits, which were not created with conservation in mind, have aided the spread and increase in numbers of some ducks, grebes, cormorants and coots. The waterbird indicator contains only native birds, but two introduced species have also benefited from these changes. They are the Canada goose and ruddy duck. Taken together, their populations have increased nearly 20-fold since 1970. Their burgeoning populations each pose their own problems for bird conservation in the UK and even abroad. The spread of ruddy ducks from the UK into Continental Europe, North Africa and the Middle East is an acknowledged major threat to the globally threatened white-headed duck through interbreeding. Numbers of other introduced waterbirds continue to increase: 48 non-native waterbirds have been recorded during 1997/98 to 1999/2000, of which at least 13 species are known to have bred. A watching brief needs to be maintained on their populations.


Canada goose

Niall Benvie (RSPB Images)



Wintering waterbirds indicator



Waders

In winter, the UK supports more than 25% of the East Atlantic flyway population of nine species of waders listed in the table overleaf and 35% of the population of purple sandpipers (a bird of rocky shores that is poorly covered by WeBS). The UK therefore has a particular obligation to ensure that populations of these species are maintained at favourable conservation status. With the exception of knot and bar-tailed godwit, the numbers of most waders that over-winter predominantly on UK estuaries have either been stable or have increased over the last 30 years. Knot numbers have nearly halved in the UK, declining most severely in the early 1970s probably due to a run of unusually cold springs and summers on their breeding grounds in Greenland. More recently, habitat degradation elsewhere in Europe may have had a negative effect too. Six of the 12 species of wader in the table have declined over the last decade.

Most ringed plovers, sanderlings, purple sandpipers and turnstones winter on non-estuarine coasts, so the tabulated figures reflect only a small part of their UK populations. Full surveys of their preferred habitat in 1984–85 and 1997–98 have shown declines in their non-estuarine populations of 15%, 20%, 21% and 16%, respectively. In contrast, numbers internationally appear to be increasing. Climate change may be contributing to these declines within the UK (see below), possibly arising from shifts in international distribution. All four species have decreased most in the south, but also in the west of the UK for ringed plover and turnstone. The northward shift of these species within the UK broadly coincides with a decrease in very cold winter days over the last decade.


Sanderling

Gerald Downey (RSPB Images)


Ringed plover

Carlos Sanchez Alonso (RSPB Images)

Population trends of wintering waterbirds

	Long-term trend %	Short-term trend %	International importance %
European white-fronted goose	-53	-36	<25
Knot	-46	-22	>75
Mallard	-31	-27	<25
Bar-tailed godwit	-16	-9	50-75
Pochard	-15	-5	25-50
Ringed plover	3	-27	50-75
Dunlin	5	-16	25-50
Turnstone	6	-31	50-75
Icelandic greylag goose	25	-21	>75
Shelduck	27	-20	<25
Oystercatcher	37	-11	25-50
Wigeon	41	20	<25
Sanderling	47	21	<25
Redshank	55	0	50-75
Tufted duck	61	8	<25
Mute swan	84	42	<25
Curlew	96	17	25-50
Goldeneye	99	8	<25
Shoveler	119	8	25-50
Greenland barnacle goose	130	69	>75
Goosander	181	9	<25
Whooper swan	216	42	>75
Pink-footed goose	219	28	>75
Pintail	242	-20	50-75
Dark-bellied brent goose	291	-16	25-50
Bewick's swan	327	-1	25-50
Teal	347	17	50-75
Red-breasted merganser	390	19	<25
Grey plover	456	0	25-50
Svalbard barnacle goose	582	115	>75
Canada goose	616	13	-
Black-tailed godwit	648	89	<25
Gadwall	>1000	92	25-50
Re-established greylag goose	>1000	117	-
Avocet	>1000	311	5
Ruddy duck	>1000	61	-
Coot	-	16	<25
Canadian light-bellied brent goose	-	16	>75
Great crested grebe	-	14	?
Greenland white-fronted goose	-	61	50-75
Cormorant	-	23	<25
Little grebe	-	79	?

Trend figures are derived from the counts of the Wetland Bird Survey and the National Goose Counts

Long-term trends are the percentage changes between the winters 1969/70 and 1999/2000
Short-term trends are the percentage changes between the winters 1989/90 and 1999/2000
National monitoring of coot, great crested grebe, little grebe, cormorant, brent goose and Greenland white-fronted goose started later than for other species and only short term trends are shown
The international importance of the UK for individual species of waterbird is the number of birds wintering in the UK (Stone et al. 1997) as a proportion of the East Atlantic Flyway population for waders (Smit & Piersma 1989) and the Northwest European population for wildfowl (Rose & Scott 1997).

Gordon Langsbury (RSPB Images)

Greylag geese

Wildfowl and allies

Of the native species of wildfowl in the UK, the gadwall and re-established greylag goose have shown the largest long-term increases during the period. The increase in gadwalls is probably a consequence of the continuing growth in numbers of continental breeding birds that form the majority of the wintering population and, to a lesser extent, an increase in the UK breeding population. Although it is a dabbling duck, by stealing pond-weed from feeding coots, gadwalls are able to feed in the deep waters of artificial reservoirs and flooded gravel quarries, as well as in the shallows. It has been suggested that increases in gadwall numbers could therefore be related to the concurrent increase in the area of these wetland habitats. Greylag geese used to breed widely in UK but by the early 20th century they were restricted to north-west Scotland. Successful re-establishment has taken place across their former range in southern Britain.

There has been a long-term decline in the numbers of European white-fronted geese visiting the UK since the mid-1960s. In contrast, the north-west European population as a whole has increased ten-fold since that time. The decline seen in the UK is thought to be due to birds remaining in wintering sites further east, especially in The Netherlands, possibly due to improved feeding conditions, reduced hunting pressure, and milder winters. The phenomenon of 'short-stopping', as it is known, could also explain why the numbers of mallards visiting the UK during the winter have also undergone a long-term decline over the period. Long-term declines of this nature, which are driven by a shift in distribution, need to be interpreted carefully so that there is consideration of appropriate conservation action.

A worrying short-term trend is the decline in the numbers of the Icelandic greylag goose population that winters almost exclusively in Britain and Ireland. This decline is possibly the result of hunting in Iceland where large numbers are shot annually (eg 31,800 in 2000).

Whooper and Bewick's swan census

The international whooper and Bewick's swan census in January 2000 recorded more than 10,300 and 7,200 birds, respectively, in the UK. The whooper swan total represented 50% of the Icelandic-breeding population. The census total was the highest ever recorded and represented an increase of more than 30% since the previous census in 1995. Low mortality is thought to have contributed to the increase. In England, whooper swans appear to have become concentrated in traditional flocks, particularly at the key resorts of the Ouse Washes and Martin Mere. In contrast, the count of Bewick's swans was similar to the 1995 total. The number of birds in the UK is partly dependent on the severity of the winter, which influences the number of birds moving west from The Netherlands.

Whooper swans

Ray Kennedy (RSPB Images)

Climate change and birds

Global warming is a fact and the latest predictions suggest that the climate will change at an accelerating rate due to the activities of people in producing greenhouse gases. Although the impacts of such climate change for wildlife have already been detected in the UK, their significance is still largely unexplored.

Information on birds in the UK, gathered as part of the extensive historical monitoring schemes carried out by volunteer birdwatchers, has already provided important evidence for the impacts of climate change. These now form part of the UK Government's suite of Indicators of Climate Change. A third of species are already showing trends towards earlier egg laying dates in recent years, as revealed by the analysis of data for 65 species from the Nest Record Scheme. The 20 species affected cover a wide range of ecology: early and late nesters (such as the magpie and corn bunting); water birds, resident and migrant insectivores, corvids and seed-eaters (such as the curlew, long-tailed tit, blackcap, carrion crow and chaffinch). The trends in laying dates are associated with warmer average temperatures and less rain. For migrant birds, warmer springs are associated with records of earlier arrivals as measured by observations taken at the network of bird observatories around the coasts of Britain and Ireland.

It is not known what impact earlier egg laying will have on bird populations. Generally, early fledglings tend to survive better than later ones and one might expect that an earlier start to the season might allow species that have several nesting attempts in a season to produce more young over the course of the year. Evidence from species that have one nesting attempt per year, such as the great tit, however, suggests that there is a danger of a loss of synchrony with the food supplies for their young. Caterpillars, for example, are able to speed up their development under warm conditions, so that only the earliest nesting great tits have access to their normal food supply. As a result, far fewer fledglings from later nests may survive to enter the breeding population. Another example of detrimental effects comes from Scotland, where high June rainfall in recent years has resulted in poorer chick production by female capercaillies. It is predicted that climate change will lead to increased rainfall in northwest Scotland, which would pose a further challenge to conserving dwindling capercaillie populations.

Wintering wading birds, such as the turnstone, might alter their distributions in response to climate change.

Gerald Downey (RSPB Images)

Amongst wintering birds, seven species of waders in the UK have shown a shift in distribution since 1969 away from the warmer estuaries of south-west England and south Wales to the generally cooler estuaries in south-east England and East Anglia. This shift coincides with a 1.5 ^{o}C increase in minimum winter temperatures. With milder winters over the last 20 years, the benefits of wintering on the muddier, prey-rich estuaries of south-east Britain may have started to outweigh the reducing risk of cold weather mortality there. As winters become increasingly mild, it is likely that increasingly large proportions of waders will winter in the east, benefiting from the more productive sediments and, for many, being nearer to their breeding grounds in northern Europe and Scandinavia.

Seven species of waders wintering on the non-estuarine coasts of the UK have also changed their distributions. The changes in distribution of these waders are related to winter weather. Broadly, the waders appear to have followed the milder conditions northwards. It is predicted that, with further warming, these internationally important populations may continue to move northwards and to decline in Britain as they winter elsewhere in Europe. The predictions are particularly stark for the purple sandpiper and turnstone: under an extreme scenario of climate change, it is possible that fewer than 20% of the present population would remain in the UK by 2080. The observed changes in the distributions of the UK's over-wintering waders, and their apparent declines, have implications for site-based conservation policy.

Analysis of the Europe-wide distributions of all breeding bird species, obtained from the *Atlas of European Breeding Birds*, shows that the distributions of the great majority of species can be described well using models which employ a set of three simple 'bioclimate' variables that describe winter cold, summer warmth and the availability of moisture to plants. Because these models fit so well, it might be expected that they could be used to predict changes in the breeding range of birds. This idea has been tested by using bioclimate models to calculate recent trends in the suitability of the climate for 52 songbird species of woodland and scrub for many European countries. These climate suitability trends were then compared with trends in the range size of these species observed by ornithologists in European countries between 1970 and 1990.

For most species, the observed pattern of extensions and contractions of range across different countries did not match the pattern of climate suitability trends. It was found, however, that observed range changes of some small-bodied birds did correlate with changes in winter temperature alone. Bioclimate models indicate that the area of Britain with climate characteristics typical of the present distributions of several breeding birds will change markedly in extent and location under climate scenarios envisaged for the rest of this century. The analysis of recent range changes of European birds, however, suggests that many bird species may not be able to shift their breeding ranges rapidly enough to keep the climate conditions they experience the same. This means that the frequency with which birds experience climatic conditions outside their normal range is likely to increase. The consequences of this for population size are uncertain.

Current (left) and simulated future (right) distributions of the marsh tit. The simulated map predicts the distribution of marsh tits under a likely climate change scenario for 2070–2099. Blue shows occupiedand yellow unoccupied squares.

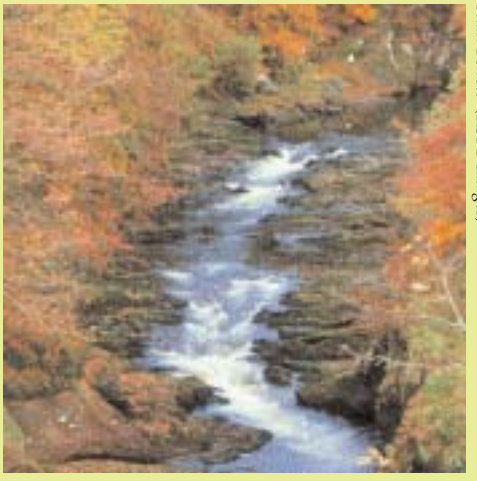
Conclusions

- UK birds are facing mixed fortunes. Progress towards achieving recovery of UK Biodiversity Action Plan species, one of the measures of the UK Government's success in fulfilling its biodiversity and sustainability obligations, is variable. Targets for many UKBAP species, particularly the widespread but rapidly declining ones, are unlikely to be met. Thus far, most conservation successes have involved rare or scarce breeding species. In these cases, focused local action has begun to produce a population recovery.

- The UKBAP has provided an important stimulus for the conservation of declining common species too. For these birds, the mechanisms of population recovery are likely to be different. To be effective they need to be carefully designed, carried out at a sufficiently large scale and economically and environmentally sustainable. Securing changes in agricultural and broader land-use policy, particularly to switch incentives from production into environmentally friendly farming, is the most compelling way of achieving improved habitats for birds, wildlife, and ultimately for people. The introduction of arable options into the Countryside Stewardship Scheme in England is likely to benefit farmland birds in target areas. Attention is increasingly being directed towards finding ways of supporting bird populations in the countryside through basic stewardship options that the majority of farmers would be able undertake. Such policies show a commitment from Government to tackle these issues in a positive manner and at a sufficiently large scale.

- A recurrent theme in this report is the influence of climate on birds. Cold winter weather reduces numbers of breeding birds and influences the distribution of wintering waterbirds. Models suggest that the areas typical of the present distributions of many breeding birds are likely to change markedly in extent and location over this century. It is not clear, however, whether birds will be able to shift their breeding ranges rapidly enough to keep pace with change, nor how this will impact on their populations. Breeding and wintering birds will increasingly face climatic conditions outside the range they normally experience; the consequences of this for their populations are uncertain. The consequences of milder, wetter winters, warmer summers, increased storminess and a rise in sea level, for example, upon bird populations are difficult to predict. Concomitant changes in land use and agriculture could be both beneficial and harmful to native plants and animals. Urgent efforts should be made to plan for the consequences of climate change.

Andrew Hay (RSPB Images)



Niall Benvie (RSPB Images)

Roger Tidman (RSPB Images)

The following messages emerge:

- The decline of once common farmland birds continues, with skylarks, tree sparrows, grey partridges and corn buntings all declining by more than half in the last three decades. The yellowhammer is now a strong candidate for BoCC red listing and UKBAP status.

- Recent declines in the numbers of the starling and house sparrow, both of which inhabit farmland as well as urban and suburban areas, gives cause for concern. They are strong candidates for red listing and UKBAP status.

- Declines of several woodland species raise alarms about this habitat. Marsh tit, willow tit and lesser spotted woodpecker are all now candidates for red-listing and UKBAP status.

- Stone-curlew, bittern and cirl bunting numbers are at their highest for at least 10 years, as a direct result of targeted conservation action; corncrake numbers are also recovering. These species have benefited from nest protection schemes (stone-curlew), the acquisition and management of nature reserves (bittern) and targeted agri-environment measures (corncrake and cirl bunting). All remain vulnerable and depend on ongoing conservation action.

- Numbers of most birds of prey are at their highest levels for 30 years. This reflects recovery from pesticide poisoning in the 1950s and 1960s, along with nest protection (such as the osprey and white-tailed eagle) and successful re-introduction programmes (such as the red kite and white-tailed eagle). While reduced human persecution in some areas has aided species such as the buzzard, hen harrier numbers are still limited by persecution associated with grouse management. Illegal indiscriminate poisoning, and secondary poisoning by highly toxic rodenticides, continues to hamper the recovery of the red kite in some areas. The commonest bird of prey, the kestrel, is in decline like many other farmland birds.

- The two grouse among the UKBAP species give particular cause for concern. Black grouse and capercaillie have both declined markedly. Their populations halved during the 1990s because of habitat deterioration, poor summer weather in Scotland, collisions with deer fences, and perhaps increased predation. While black grouse show some small signs of recovery in response to targeted action, the same is not true for the capercaillie. The largest grouse in the world again faces the real threat of extinction in the UK.

- Wryneck and red-backed shrike are on the verge of extinction in the UK as breeding species. There is little prospect of re-establishing them as regular breeders.

- The internationally important populations of non-breeding UK waterbirds have been broadly stable or have increased over the last 30 years, the exceptions being the European white-fronted goose, knot, mallard and four species of predominantly non-estuarine wader, namely the ringed plover, sanderling, purple sandpiper and turnstone.

- There has been a dramatic increase in the numbers of two introduced waterbirds: the Canada goose and ruddy duck. The spread of ruddy ducks from the UK into Continental Europe, North Africa and the Middle East is a continuing major threat to the globally threatened white-headed duck. Numbers of introduced waterbirds continue to increase: 48 non-native species were recorded during 1997/98 to 1999/2000, of which at least 13 species are known to have bred.

Yellowhammer

Mark Hamblin (RSPB Images)

Further reading

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The state of the UK's birds series is available on the RSPB's website: www.rspb.org.uk

Current and planned surveys

The information summarised in this report is drawn from the annual and periodic monitoring programmes briefly described below and from the work of individual ornithologists. Anyone interested or wishing to participate in these surveys should contact the relevant organisations at the addresses shown on the back cover.

The Breeding Bird Survey (BBS) is the monitoring scheme for common and widespread breeding land birds throughout the UK and aims to provide data on populations trends to inform and direct conservation action. It is a partnership between the BTO, JNCC (on behalf of EN, SNH, CCW and EHS) and the RSPB. The BBS has replaced the long-running CBC. (Contact BTO).

The Wetland Bird Survey (WeBS) is the monitoring scheme for non-breeding waterbirds in the UK, which aims to provide the principal data for the conservation of their populations and wetland habitats. It is a partnership between BTO, WWT, the RSPB and JNCC (on behalf of EN, SNH, CCW and EHS). Goose data are collected under an additional WWT/JNCC partnership. (Contact WWT for both surveys).

An advance programme of UK-wide surveys of other priority breeding species has been established under the Statutory Conservation Agencies and RSPB Breeding Bird Scheme (SCARABBS) Agreement. Peregrine (contact BTO), chough and bearded tit (contact the RSPB) are being surveyed in 2002. Contact the RSPB or JNCC for details of surveys planned in future years.

Additional surveys being carried out in 2002 include Breeding Waders of Wet Meadows (contact BTO) – a survey of wet lowland grassland sites in England and Wales (postponed from 2001 because of FMD); a national Mute Swan census (contact WWT), the Waterways Breeding Bird Survey (WBBS) – a survey of breeding riverine birds (contact BTO), the WeBS Dispersed Species Survey – a winter survey of wetland birds (contact BTO), as well as long-running BTO schemes such as the Heronries Census (contact BTO).

Special thanks to volunteer birdwatchers

Our detailed knowledge of the state of UK bird populations results from the tremendous efforts of many thousands of volunteer birdwatchers, working in collaboration through the BTO, WWT, the RSPB, bird clubs and other bird-related networks. The RSPB, BTO, WWT, JNCC and the statutory conservation agencies congratulate them on the key contribution they have made to bird conservation. If you are one of these volunteers, we offer a big thank you for all your hard work. If you are thinking of ways to help the cause of bird conservation, more volunteers are always needed. Please contact the appropriate organisation on the back page if you would like to participate in any of these surveys.

Acknowledgements

Monitoring of birds in the UK involves a broad partnership of government agencies, NGOs, sponsors and independent ornithologists, including:

Anglian Water; Birds Eye Wall's; *British Birds*; BBC Radio 4's *Today* programme; British Trust for Ornithology; British Sugar; British Waterways; Broads Authority; Cambridge University, CJ Wildbird Foods; Countryside Council for Wales; Environment and Heritage Service (Northern Ireland); European Bird Census Council, Department for Environment, Food and Rural Affairs; Durham University; English Nature; Environment Agency; Environment Wales; European Union Life Programme; Esmee Fairbairn Foundation; Essex and Suffolk Water; Forestry Commission; Forest Enterprise; Game Conservancy Trust; Hawk and Owl Trust; Institute of Terrestrial Ecology; Hyder; Joint Nature Conservation Committee; Lake District National Park; National Trust; National Trust for Scotland; Norfolk Wildlife Trust; Northumbrian Water; Raptor Study Groups; Rare Breeding Birds Panel; the Royal Society for the Protection of Birds; Scottish Ornithologists' Club; Seabird Group; Severn Trent Water; Shetland Oil Terminal Environmental Advisory Group; Scottish Crofters Union; Scottish Executive Rural Affairs Department; Scottish Natural Heritage; Suffolk Wildlife Trust; Thames Water; Welsh Kite Trust; the Wildlife Trusts; the Wildfowl & Wetlands Trust.

In particular, we thank the landowners and their agents, tenants and employees who have allowed surveyors to visit their land to count birds.

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The RSPB works for a healthy environment rich in birds and wildlife. It relies on the support and generosity of others to make a difference. We work with bird and habitat conservation organisations in a global partnership called BirdLife International.

The BTO is a charity dedicated to research on wild birds in the UK. Through its volunteer network, it monitors populations by organising long-term surveys such as the Breeding Bird Survey, the ringing scheme and the nest records scheme, and carries out research related to bird conservation.

The WWT is a charity dedicated to conserve wetlands and their biodiversity worldwide. WWT's research department has organised national waterbird monitoring schemes for more than 50 years.

The JNCC is responsible to the UK Government for research and advice on nature conservation at both UK and international levels, on behalf of the Countryside Council for Wales, English Nature, and Scottish Natural Heritage, together with independent members and with representatives from the Countryside Agency and Northern Ireland.

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