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British Trust for Ornithology

The state of the UK's birds 2000

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- **The UK Government is committed to using breeding bird populations as an indicator of sustainability. Its headline indicator shows that common birds are declining, woodland ones modestly and farmland ones steeply, giving considerable cause for concern. A slight upturn in 1999 does little to change the long term declines.**
- **Progress towards meeting the species targets in the UK Biodiversity Action Plan is poor. Three-quarters of the plan targets are unlikely to be met. Encouraging progress with stone-curlew, bittern, corncrake and cirl bunting is outweighed by the critical status of black grouse and capercaillie, sustained declines of farmland species, and the effective extinction of red-backed shrike and wryneck.**
- **Populations of scarce breeding species, in particular some birds of prey, have recovered strongly as a result of conservation action. Raptor persecution, however, remains a threat to these fragile populations, and is still limiting hen harrier numbers.**
- **On the basis of long-term declines, breeding birds such as lapwing, lesser spotted woodpecker, starling, willow tit, marsh tit and yellowhammer may need to be added to the list of Biodiversity Action Plan priority species in the near future.**
- **Wintering waterbirds have increased strongly as a consequence of protection, re-creation and management of habitats. Waders and wildfowl have benefited from changes in hunting legislation and the creation of reserve networks linking migration sites and breeding grounds.**
- **Climate is known to have a considerable impact upon both breeding and wintering birds, and climate change will pose a very significant challenge to the conservation of species and their habitats.**

Black-tailed godwits by C H Gomersall (RSPB Images)

Introduction

The state of the UK's birds 2000 is the second in a series of annual reports summarising the fortunes of bird populations in the United Kingdom (UK). Wherever possible, population trends are presented for the whole of the UK and cover the period 1970–2000. Information is drawn from the best sources available. The report is divided into two parts covering breeding and wintering birds. Most breeding birds in the UK are residents, but their numbers are swelled each spring by migrants with wintering grounds far to the south. 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.

The first section (page 4) begins with the UK Government's latest *Quality of Life* headline bird indicator published by the Department of the Environment, Transport and the Regions (DETR). This gives a measure of the health of the environment by summarising trends in the numbers of common breeding birds. It then considers the species which are priorities in the UK Government's *Biodiversity Action Plan* (BAP) (page 5). The BAP[1] identifies the work that is necessary to improve the adverse status of these priority species. Overall, and individual, progress towards the BAP targets is assessed.

The report then focuses on population trends among other well monitored breeding species, including species red-listed in *Birds of Conservation Concern* (BoCC)[2] but not BAP priorities (page 10). It highlights those birds that are doing particularly badly and those doing well.

The second section begins with an indicator based on wintering waterbirds (page 16), using the same methods as those in the UK Government's *Quality of Life* breeding bird indicator.

The report ends by summarising the main areas of success and failure for bird conservation and calls for more concerted and widespread conservation action to help the recovery of common but declining breeding birds (page 19).

The names of BoCC red list species appear in red and amber-listed species in orange[2].

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

▲ Marsh warblers rallied in the 1990s but are falling in number once again

1 Throughout this report BAP refers to UK and not Local Biodiversity Action Plans
2 BoCC red-listed species 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, the UK holds > 20% of the north-west Europe or flyway population.

Breeding birds

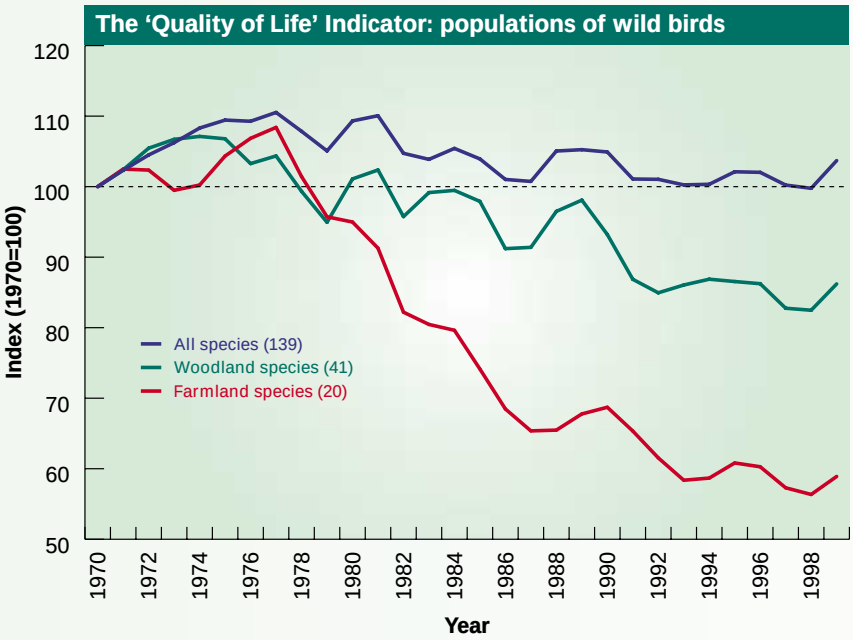
The 'Quality of Life' indicator of breeding birds

In 1999 DETR 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. Work is underway with DETR support to develop England, Scotland, Wales and Northern Ireland versions of the headline wild bird indicator, as well as ones for Government regions in England. These and other indicators using country-specific data are being considered by the devolved executives in Scotland, Wales and Northern Ireland.

The publication of a wildlife indicator among more familiar economic and social indicators is a radical 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 allow them to be used as barometers of change in the environment. Added to this, birds have a wide appeal among the general public and, through expenditure associated with birdwatching, contribute substantially to local economies.

C H Gomersall (RSPB Images)

◀ Skylark: a species that has become a symbol of farmland bird decline



The wild bird indicator summarises information on the status of nearly 140 breeding species over the last 30 years. The data come from a range of sources, notably the Common Birds Census (CBC)[3]. The lines plotted are indices fixed arbitrarily to 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. Although the index for all common birds rose slightly up to the mid 1970s, the pattern from then on is a shallow decline. The marked upturn in 1999 is due to milder weather in the winter of 1998/99 which increased the survival of small birds susceptible to harsh winter conditions. Even so, the common bird index has fallen by around 5% from the mid 1970s to 1999. Looking at these trends in more detail, woodland birds show a slow drop in numbers since the mid 1970s (down by 20%) and farmland birds have been in steep decline over the same period (down by 40%). Both groups of birds increased in numbers in 1999 in response to milder weather. While the upturn in bird numbers is welcome, it is too early to tell if this is the start of a long-term recovery.

There is general acceptance that the declines among farmland birds have been driven by agricultural intensification. In a positive step forward, the Ministry of Agriculture, Fisheries and Food (MAFF) has recently adopted a target to reverse the long-term decline in the number of farmland birds by 2020, using the farmland birds indicator to measure their success. As this report shows, wide scale changes in farming will be required to deliver such a recovery even on this relatively long timescale.

3 More details of the CBC are included on page 11.

Trends in Biodiversity Action Plan species

The UK Government's Biodiversity Action Plan includes targeted action plans for 25 species of breeding bird which are either globally threatened or which have declined by more than 50% in the last 25 years. Trends, population data and the BAP targets for these species are shown below. Six species which have been the focus of conservation effort have already met or look likely to meet their BAP targets. Most of the remainder show continuing rates of slow or more rapid recent decline and it is unlikely that any of these will now meet the published BAP targets.

Biodiversity Action Plan species

	Long-term trend	Short-term trend	Most recent population estimate	Date of population estimate	BAP Target	On BAP target?
Song thrush	-59	-5	1100000	1988–91	Restore to 1970 population level	NO
Skylark	-52	-12	1000000	1997	Reverse decline	NO
Linnet	-54	-13	540000	1988–91	Increase 1996 index 50% by 2008	NO
Reed bunting	-54	-25	240000	1988–91	Increase 1996 index 50% by 2008	NO
Bullfinch	-52	-10	200000	1988–91	Increase 1996 index 50% by 2008	NO
Grey partridge	-84	-27	150000	1988–91	Over 150000 by 2010	NO
Spotted flycatcher	-78	-10	130000	1988–91	Increase 1996 index 50% by 2008	NO
Tree sparrow	-95	-11	110000	1988–91	Increase 1996 index 50% by 2008	NO
Turtle dove	-70	-24	75000	1988–91	Increase 1996 index 50% by 2008	NO
Corn bunting	-85	-30	19800	1993	Increase 1996 index 50% by 2008	NO
Black grouse	decline	-74 1	6500 1	1995–96	Maintain at 1996 level	NO
Nightjar	62 1	?	3400	1992	4000 by 2003	YES
Woodlark	704 2	83 2	1552	1997	Maintain at 1500	YES
Capercaillie	decline	-51 3	1070 2	1998–99	20000 by 2010	NO
Corncrake	-12 3	10 4	638 1	2000	Maintain at 1993 level of 478	YES
Cirl bunting	42	30 5	453	1998	550 by 2003	YES
Stone-curlew	-15 4	46 4	254	2000	200 by 2000, 300 by 2010	YES
Roseate tern	-94 5	-61 6	55	2000	200 by 2008	NO
Common scoter	-69 6	-54 5	41	1998	100 for Scotland in 2008	NO
Marsh warbler	-69 6	-23 5	24	1998	Maintain populations, encourage natural expansion	NO
Bittern	-69 4	16 4	22 1	2000	20 by 2000, 50 by 2010	YES
Red-necked phalarope	-25 5	-16 6	17 1	2000	55–60 in Shetland by 2003, 10 in Hebrides by 2005	NO
Wryneck	decline	extinct	0	1998	Retain as regular breeder	NO
Red-backed shrike	decline	extinct	0	1998	Ensure success of breeding attempts	NO

Data for common birds from the CBC; for more scarce species from special surveys and the Rare Breeding Birds Panel.
Long-term trends relate to 1970–1998, except 1=1981–1992; 2=1970–1997; 3=1978 / 79–2000; 4=1970–2000; 5=1970–1999; 6=1973–1998.
Short-term trends relate to 1993–1998 except 1=1991 / 92–1995 / 96; 2=1995–1997; 3=1992 / 94–1998 / 99; 4=1995–2000; 5=1995–1998; 6=1995–1999.
Population estimates shown are breeding pairs except 1 = displaying or breeding males and 2 = individuals.

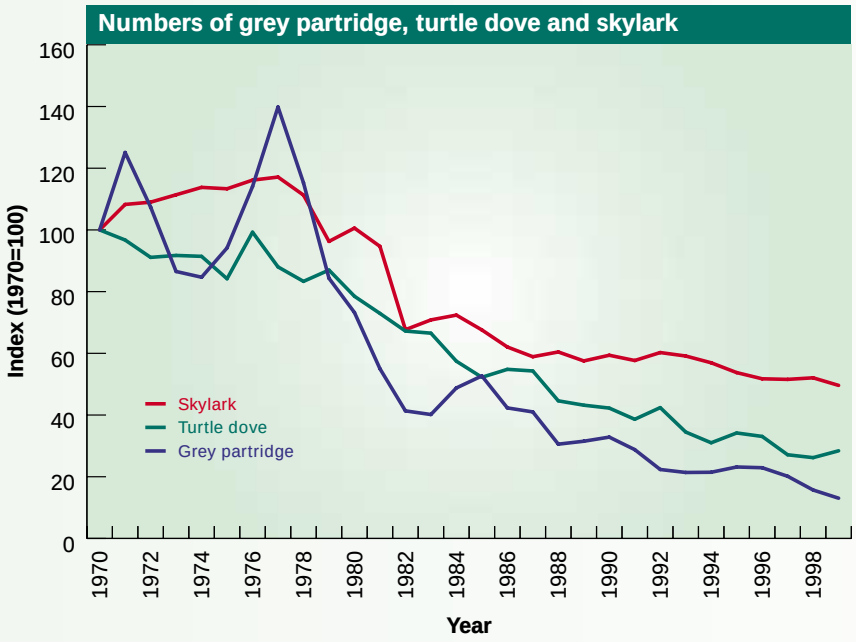
Widespread BAP species

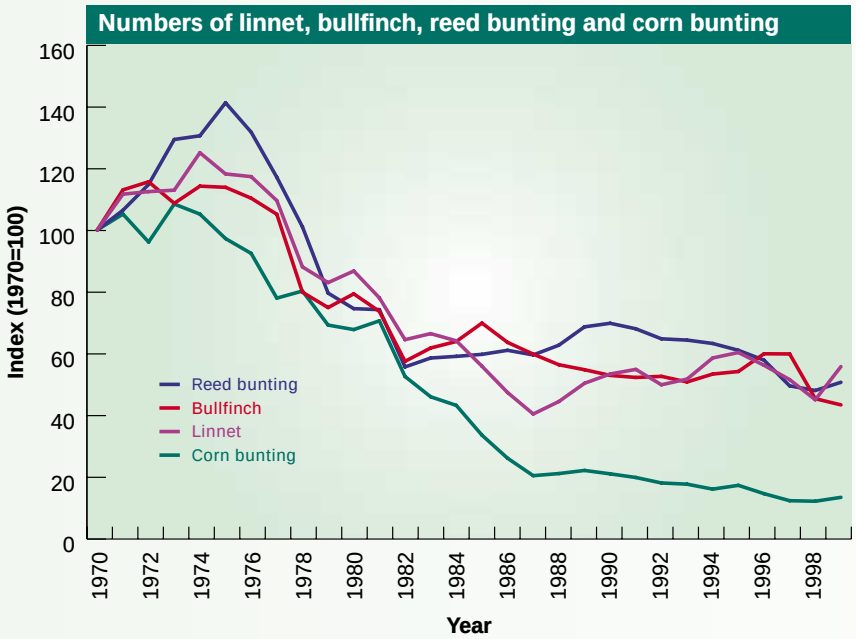
Ten BAP species, which are still relatively abundant and widespread birds throughout most of the UK, have declined alarmingly since the mid-70s. Their population trends, based on data from the CBC, mirror the *Quality of Life* indicators for woodland and farmland birds. These declines coincide with a period of rapid intensification in farming in the mid-1970s and have continued since. In 1999, seven of the 10 species increased, although six of the seven had decreased in the previous year. Two species (**grey partridge** and **bullfinch**) have declined in each of the last two years, whereas none has increased in both. It now seems unlikely that any of these widespread birds will meet their BAP targets.

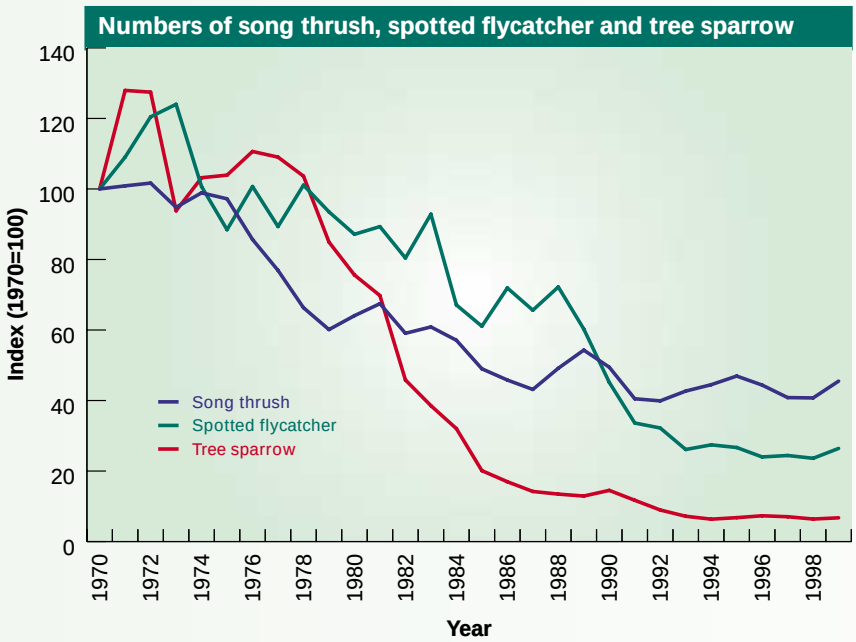
Changes in farming are implicated in many of these declines. Long term research on **grey partridges** has shown that pesticides have reduced chick survival by killing off their insect food. The biggest declines of **skylarks** have occurred in arable areas of southern England. Sowing cereal crops in autumn instead of spring has reduced the number of nesting attempts and hence the total number of chicks produced by **skylarks**. Autumn sown crops rapidly become too dense in late spring for **skylarks** to nest. Although **turtle doves** are migrants which may be affected by events in their African wintering grounds, there is already evidence that changes in food availability have reduced the number of breeding attempts made each year.

Changes in food availability for chicks have also affected farmland **linnets**. Herbicides have removed the weeds on which they prefer to feed and, where oil seed rape is grown, this has become an important alternative food. Policy changes that reduce the amount of oil seed rape grown could have serious implications for **linnets** in the absence of other conservation measures. In southern England, **bullfinches** in farmland also now feed their young on oil seed rape, but nest success may be more related to changes in the extent and quality of hedgerows and woodlands. **Reed bunting** nests appear to be more likely to be lost to predators in heavily managed farmland where nesting cover is sparse. Shortage of food as a result of increased pesticide use is believed to be important for breeding **corn buntings**.

Tree sparrows may have been affected by a reduction in winter seed supplies and have been targeted for emergency feeding trials in several parts of the UK where declines have been most severe. In southern England, farmland **song thrushes** have

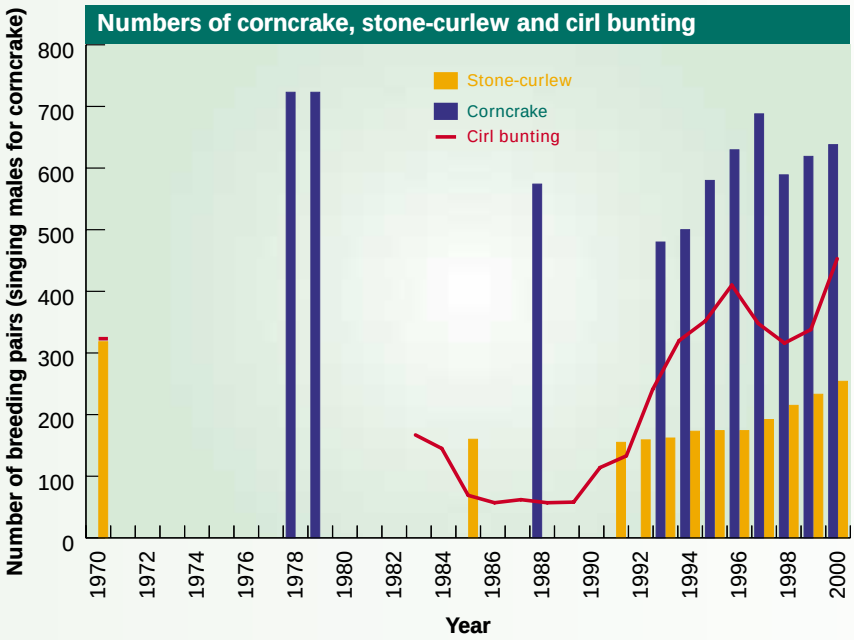






Clockwise from top left: **farmland** by Andrew Hay (RSPB Images), **woodlark** by Roger Wilmshurst (RSPB Images), **red-necked phalarope** and **grey partridges** by Steve Knell (RSPB Images)

suffered from the loss of grassland in intensively managed areas. Survival rates have declined and the number of nesting attempts and thus the eventual number of chicks produced is markedly higher in areas of more mixed farming. **Song thrushes**, **spotted flycatchers** and **bullfinches** are the only widespread BAP species to make extensive use of woodland. As with woodland birds in general in the *Quality of Life* indicator, little is known about the causes of declines in these populations (see page 12).

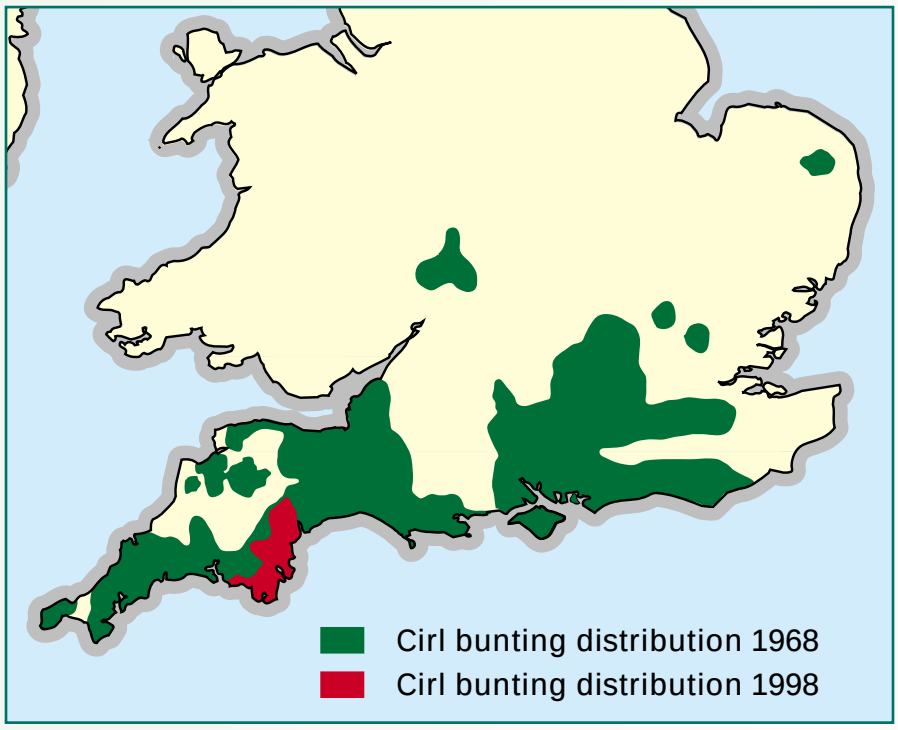


Scarce and rare BAP species

The situation with the scarce and rarer BAP species is rather less gloomy. With 254 pairs in 2000, **stone-curlews** have exceeded their first BAP target and are well on the way to that set for 2010. **Corncrakes** again increased slightly in 2000 and are now well past their original BAP target. Continuing action by conservationists and farmers maintains the hope that **cirl buntings** will also achieve their 2003 target. All three have benefited from a variety of agri-environment, nature reserve management and nest protection schemes. Despite this, they remain substantially less abundant than they were 40 years ago. New targets need to be set and more done to return them to their former ranges.

Strong recoveries by **nightjar** and **woodlark** populations are largely the result of their successful exploitation of clear-felled and recently planted areas within commercial conifer plantations. Sympathetic forest management has enhanced their recovery. **Woodlarks** have met their BAP target and it is likely that **nightjars**, which are due to be surveyed fully in 2002, will also achieve this goal. Favourable forest management practices will continue to be needed to ensure these recoveries are sustained.

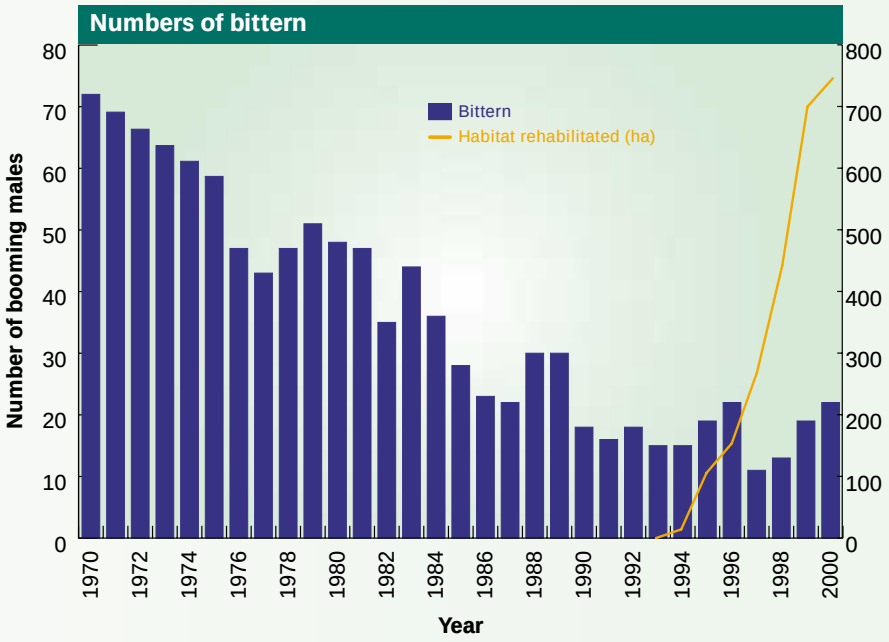
Declining cirl bunting distribution ▶



Still one of the most threatened species in the UK, **bitterns** continue to make a slow recovery with 22 booming males in 2000. In the last six years, under an EU-funded scheme, more than 700 ha of reedbed have been re-habilitated and a further 300 ha created. Sustaining this level of effort should help to ensure that the 2010 target of 50 booming males is met. When last surveyed in 1995, there were 95 pairs of **common scoters** in Scotland, close to the 2008 target. Numbers may have declined since.

Red-backed shrikes and **wrynecks** can no longer be considered as regular breeding birds within the UK. Having rallied during the early 1990s, **marsh warblers** have again fallen in number. Whilst site protection and habitat management at existing sites is important, this species looks unlikely to meet its BAP target.

Although breeding **red-necked phalaropes** can respond to appropriate management of their wetland habitats, the target for their Shetland strongholds is unlikely to be met in the short-term. **Roseate tern** numbers within the UK continue to remain at a very low level. A further decrease in 2000 shows that there is little prospect of meeting the 2008 target. Colonies in the UK form only part a larger population in north-west Europe. Any further recovery is likely to be determined by what happens at the thriving colony at Rockabill in the Irish Republic.



Continuing long-term declines of **capercaillie** and **black grouse** give considerable cause for concern. Both species are now the subjects of major programmes of conservation action to improve their pinewood and moorland habitats. Although **black grouse** are showing some encouraging signs of recovery in Wales and the north Pennines, there is little chance that either will achieve their BAP targets. **Capercaillie** became extinct in Scotland in the 18th century; preventing this from happening again is an ambitious short-term goal.

The status of the remaining BAP species, the **Scottish crossbill**, remains unclear because of difficulties in identification. Ongoing research is examining their taxonomic status and separation from other crossbill species.

The challenging aim for the capercaillie is to prevent its extinction as a breeding bird in the UK ▶


Phillip J Newman (RSPB Images)

Trends in widespread and common birds

Of about 70 species monitored by either of the two long running terrestrial surveys – CBC and Waterways Bird Survey (WBS) – roughly half have declined since 1970. Eighteen species have declined by more than 50% and another 13 by more than 25%. Species for which results give greatest concern include a number of farmland BAP species – **tree sparrow**, **grey partridge**, **corn bunting**, **linnet** and **turtle dove** (see page 5). The main causes of these declines are changes in agricultural practices towards more intensive farming. Declines in two other farmland species – yellowhammer and **starling** – suggest that they may now warrant red listing. Woodland species such as lesser redpoll, **spotted flycatcher**, tree pipit, **willow tit**, **marsh tit**, **bullfinch** and lesser spotted woodpecker have also declined by 50% or more. Causes of long-term declines in woodland species are varied (as described below) and may include changes in forest management, increased browsing by deer and competition with other species.

Of the species that have increased over the past 30 years, the collared dove, buzzard, sparrowhawk and stock dove exhibit the most dramatic gains. Numbers of the two raptors and stock doves have probably increased due to recovery from the effects of organochlorine pesticides and, in the case of the raptors, from reduced persecution. Reasons for the rapid expansion of collared doves across Europe are unclear. Magpie, carrion crow and jackdaw increased considerably since the late 1960s, whereas the jay has declined. Waterbirds such as mute swan, mallard and coot have increased on CBC plots, trends mirrored on WBS.

The CBC and WBS may not be the best source of data for upland species such as meadow pipit or curlew because most plots are on farmland or woodland in the south and east of Britain. Forthcoming surveys of upland habitats across the UK will confirm whether the declines in these species shown by the CBC are common to all habitats.

The CBC shows a 40% decline in **lapwing** numbers between 1970 and 1998, but this may underestimate the true extent of decline across the UK. A survey in England and Wales in 1998 showed an almost 50% decline in 11 years and similar marked declines over short periods of time have been found in Northern Ireland. Taken together, there is a strong case for considering the **lapwing** for the red list and as a BAP priority species.

▼ Birds of deciduous woodland show a moderate decline, for reasons that are still unclear

Paul Collin (RSPB Images)

Population trends of widespread and common breeding birds

	Long-term trend	Caveats	Red List candidate
Tree sparrow	-95		
Lesser redpoll	-93	3	X
Corn bunting	-85	2	
Grey partridge	-84		
Spotted flycatcher	-78		
Tree pipit	-77	3	X
Willow tit	-72		X
Woodcock	-71	3	X
Turtle dove	-70		
Starling	-65		X
Lesser spotted woodpecker	-64	2,3	X
Marsh tit	-62		X
Song thrush	-59		
Linnet	-54		
Yellowhammer	-54		X
Reed bunting	-54		
Skylark	-52		
Bullfinch	-52		
Grey wagtail	-48		
Dunnock	-44		
House sparrow	-43	1	
Mistle thrush	-42		
Lapwing	-40	3	
Willow warbler	-37		
Meadow pipit	-35	3	
Yellow wagtail	-31	2	
Cuckoo	-31		
Curlew	-30	3	
Goldcrest	-30	4	
Red-legged partridge	-27		
Blackbird	-26		
Whitethroat	-20	5	
Little owl	-18	3	
Moorhen	-18		
Common sandpiper	-16		
Dipper	-16		
Treecreeper	-16		
Kestrel	-15		
Kingfisher	-14		

	Long-term trend	Caveats
Sedge warbler	-11	3
Jay	-11	
Lesser whitethroat	-9	
Tawny owl	-6	3
Greenfinch	5	
Goldfinch	12	
Coal tit	15	
House martin	19	
Chiffchaff	19	
Swallow	23	
Robin	23	
Garden warbler	24	
Chaffinch	24	
Wren	25	4
Blue tit	28	
Pheasant	29	
Long-tailed tit	31	4
Redstart	38	1,3
Great tit	40	
Pied wagtail	45	3
Coot	54	3
Crow	73	
Mallard	74	
Jackdaw	80	
Little grebe	86	3
Woodpigeon	88	1
Green woodpecker	90	
Magpie	102	
Great spotted woodpecker	102	
Blackcap	104	
Stock dove	108	
Reed warbler	114	1,3
Nuthatch	115	
Mute swan	160	3
Sparrowhawk	188	3
Shelduck	191	3
Buzzard	350	1,3
Collared dove	638	

Long-term trend – data are derived from counts on Common Birds Census plots since 1966 (except grey wagtail, dipper, kingfisher and common sandpiper, which come from the Waterways Bird Survey, running since 1974). The CBC has been run by BTO in partnership with JNCC and WBS is run by BTO. Data from the start year to 1999 were analysed in a Poisson regression model that allows trends to change non-linearly and smooths the data to reduce the effects of short-term fluctuations. The figure reported is the percentage population change from 1970 to 1998.

Note that census plots are concentrated in south-east England and may not be representative of all parts of the UK.

Caveats – interpretative notes to indicate the reliability of the 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 completely recovered from 1968–69 crash caused by drought in Sahel.

Graphs and further details of these population changes can be found at http://www.bto.org/birdtrends.

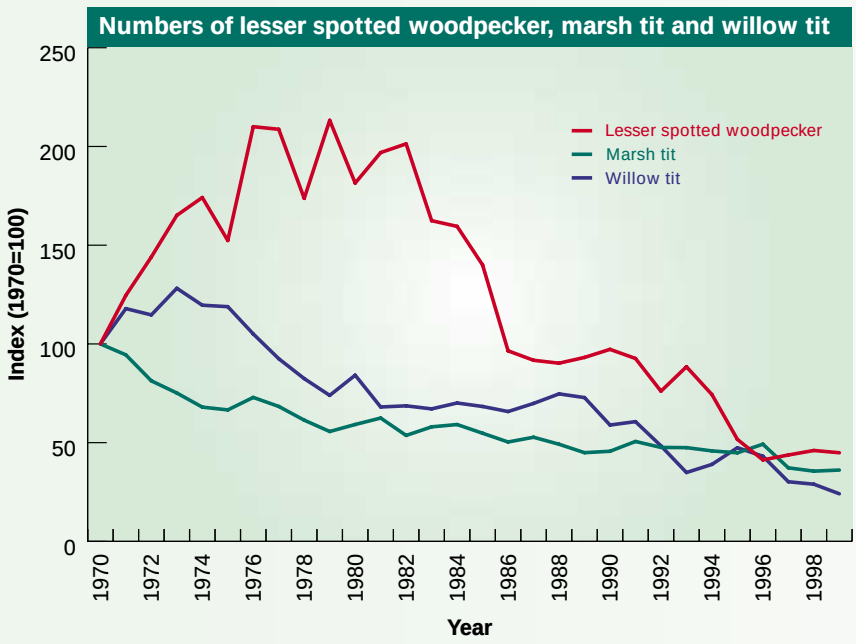
George McCarthy (RSPB Images)

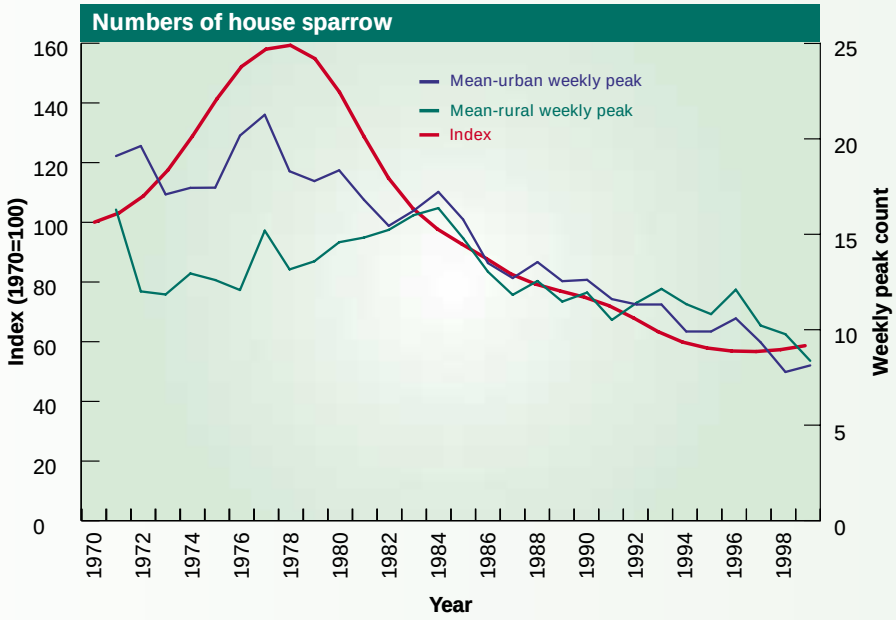
◀ Lesser spotted woodpecker declines may suggest that woodland habitats could be deteriorating in quality

Woodland birds

Although declines in farmland birds have attracted most attention, and have served to highlight the adverse effects of recent agriculture changes in the UK, a number of species in woodland are also showing worrying declines. Three species, **bullfinch**, **song thrush** and **spotted flycatcher**, are already included in the UK's BAP (see page 5). Tree pipit and lesser redpoll prefer younger, more open woodland and their declines in south and central Britain may be related to the maturation of plantations. The declines of woodland specialists such as **marsh tit**, **willow tit**, woodcock and lesser spotted woodpecker suggest that certain woodland habitats may be deteriorating in quality. The causes of declines in these birds and other residents, such as the dunnock, remain something of a mystery. At least in some areas, increased browsing by deer and the loss of understorey vegetation have been implicated. Among the migrant woodland species, like lesser whitethroats and willow warblers, some of the declines may be attributable to conditions on their wintering grounds or on migration.

In contrast to these species, other woodland birds, such as green and great spotted woodpeckers, have actually increased strongly over the past 30 years. Resident woodland species such as the wren and long-tailed tit, whose numbers tend to fluctuate according to winter severity, have undoubtedly benefited from the recent run of mild winters. Some migrant warblers such as blackcaps also appear to be doing very well. Although the reasons for this have yet to be determined, it may be related to their increasing tendency to overwinter farther north.



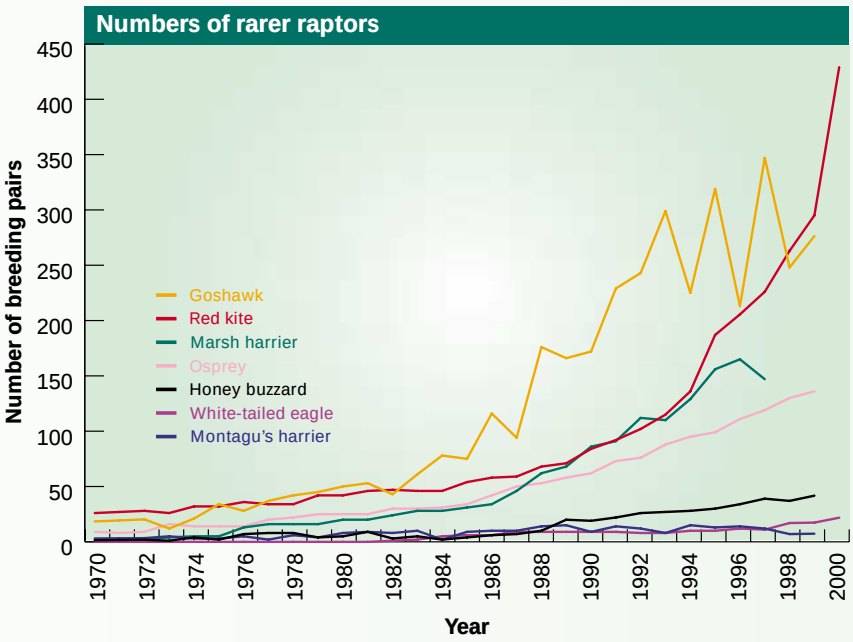


▲ House sparrow numbers are falling

House sparrows

Although the table on page 11 highlights a 43% decline in house sparrows on CBC plots since 1968, the graph shows that numbers actually increased during the 1970s and started to fall during the 1980s and 1990s. The disappearance of the familiar house sparrow from many of its usual haunts is still a mystery – a number of studies to understand the problem are underway. Hypotheses include the lack of suitable nest sites in modern houses, increased predation from sparrowhawks, magpies and cats, the loss of winter feeding supplies of grain, and possibly additives in unleaded petrol. A recent survey has shown that modern, urban houses make much poorer nest sites than older, rural houses.

The CBC is not the only survey to reveal house sparrow declines. The BTO's Garden Bird Feeding Survey, running since the winter of 1970–71, shows that average weekly peak counts declined, from between 15–20 birds in the late 1970s to about six birds in the late 1990s. The downturn is slightly more pronounced in urban areas. The RSPB's Big Garden Birdwatch shows that garden counts have more than halved from 10 in 1979 to four in 2000. Repeat surveys in London and Glasgow confirm this picture of decline. Counts in Maxwell Park, Glasgow, fell from five birds per ha in 1959 to less than one per ha in 1997. Autumn counts in Kensington Gardens, London, have fallen progressively from 2,063 in 1925 to 544 in 1975 and just 81 in 1995. Recent evidence from the Breeding Bird Survey (see page 22), however, highlights considerable regional variation in the trends from 1994 to 1999, such as significant declines in England, particularly the southern regions, but stable or increasing populations in northern England, Wales and Scotland.



Birds of prey

The numbers of most rarer birds of prey have recovered over the last 30 years. Among those illustrated, the **red kite**, goshawk, **marsh harrier** and **osprey** have recovered most rapidly, but population gains of **honey buzzard** and **white-tailed eagle** are nonetheless very encouraging. The spectacular rise in **red kite** numbers is thanks to protection in Wales and a highly successful reintroduction programme in England and Scotland (see Recent Surveys overleaf). The numbers of **white-tailed eagles** are rising due to a

reintroduction programme supported by nest protection. The **Montagu's harrier** population remains dangerously low and has been so for many years. Although not illustrated, **hen harrier** populations remain flat, numbers continuing to be limited by human persecution associated with grouse management for shooting. The numbers of young **hen harriers** raised on grouse moors are very low, acting as a barrier to recovery. Extinction as a breeding species in England is a real possibility.

Among the more common birds of prey, the hobby and buzzard have increased most dramatically in recent years. The welcome rise in the numbers of hobbies may partly be the result of the increased availability of habitat for their favoured prey, dragonflies. Buzzards and sparrowhawks have both spread eastwards in Britain as part of a recovery from the effects of the organochlorine pesticides in the 1950s and 1960s, helped by lower levels of illegal persecution in lowland areas. The CBC shows sparrowhawk numbers to have stabilised. Other sources of information, however, point to local population declines in the 1990s. The **kestrel** is the only common raptor in long-term decline. The numbers of this familiar bird have fallen by a third since the mid 1970s, a clear signal, if one were needed, that farmland is becoming a poorer place for birds.

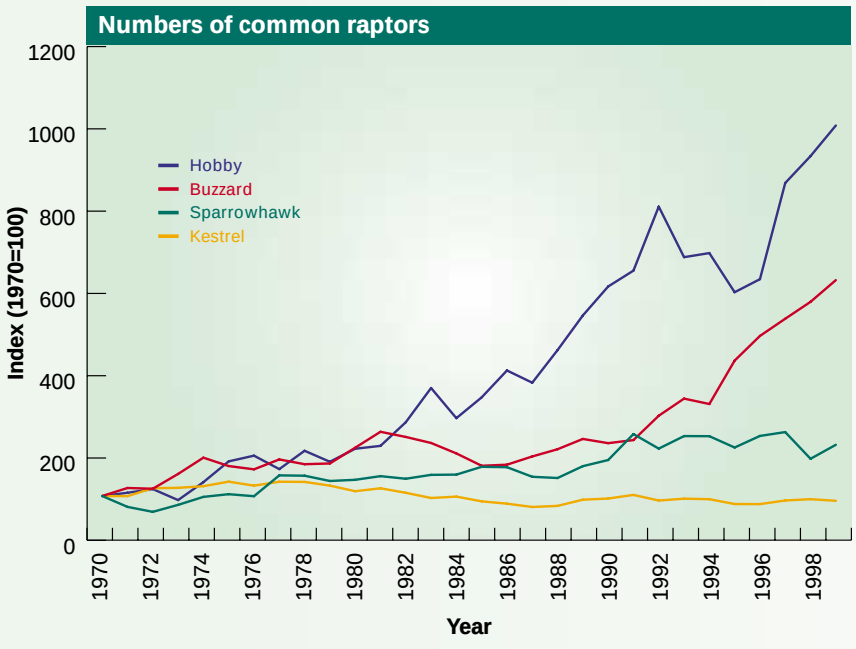
New colonists

The number of different species breeding in the UK has increased steadily over the last century. There has been a net gain of around 10 species over the last 30 years. Part of the increase is no doubt due to more birdwatchers, and part is due to better protection of potential colonists when they first nest. The little egret first bred in 1996 and shows every sign of becoming established; the latest figures (1998) suggest as many as 18 breeding pairs. The spoonbill became the latest addition to the list of breeding species in 1998 and could also become established.

Recent surveys

Three surveys carried out in 1999 provide baseline information on the status of some relatively scarce and less well known species in the UK. A survey of **spotted crakes** in marshland habitats found 72 singing males, more than ever before. Widespread breeding birds in the uplands are generally less well surveyed than those in the lowlands, so the first ever surveys of two species are particularly helpful. Fewer than 11,600 pairs of **twites** were recorded in a survey of marginal, moorland and coastal habitats. Although comparable historic data are not available, the decreasing range of this poorly-known species is of concern. **Ring ouzels** are also found in marginal and moorland habitats and the first ever survey estimated a population of between 6,000 and 7,500 pairs. As with **twites**, there is evidence of range contraction in many parts of the UK in recent years, following on from long-term declines of ring ouzels in the 19th century.

A full survey of **red kites** in the UK found an amazing 429 breeding pairs in 2000. At their lowest point at the turn of the century there were as few as a dozen pairs left in Wales, but concerted protection, combined with a highly successful reintroduction programme in England and Scotland, has brought this enigmatic bird back from the brink. In Wales, recovery of the native population has seen numbers rise to 259 breeding pairs while reintroduction programmes have seen numbers rise to 131 pairs in England and 39 pairs in Scotland. One concern is that the kites' habit of eating carrion leaves them vulnerable to secondary poisoning by rodenticides. Incidents of this kind have increased recently and need to be monitored closely.

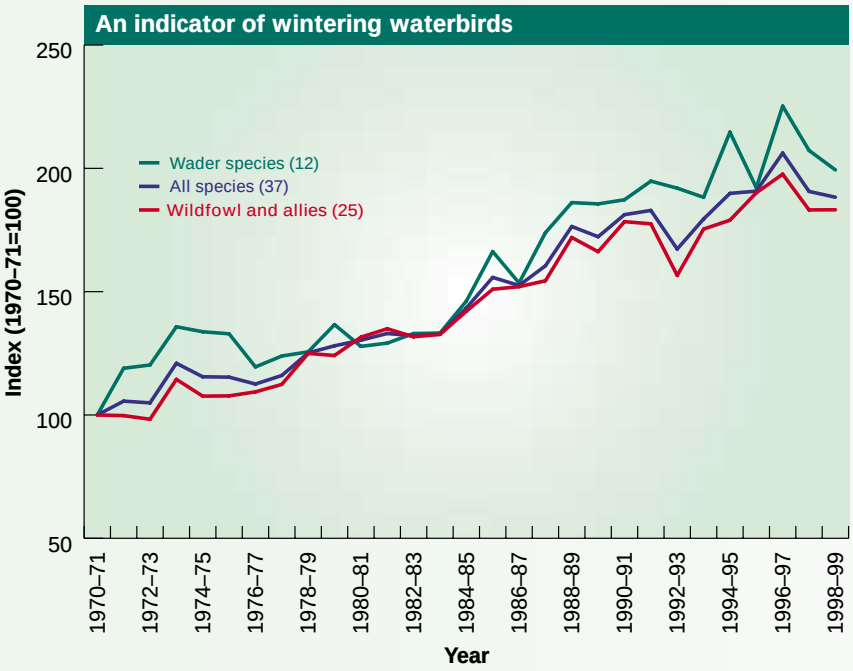


Clockwise from top: **little egret** by Richard Brooks (RSPB Images), **twite** by Tony Hamblin (RSPB Images) and **red kite** by Richard Brooks (RSPB Images)

Wintering waterbirds

An indicator of 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 overwinter in the UK. The UK Government's *Quality of Life* indicator considers only breeding birds, but the same methods can be used to produce an indicator for native wintering waterbirds. The lines plotted are indices fixed arbitrarily to a value of 100 in 1970. If an index rises to a value of 200, then on average the populations will have doubled.



▲ Redshank: a widespread wintering wader on UK estuaries

The outcome, for both wintering wildfowl and waders, is very impressive as their populations have on average doubled over the last 30 years. For many species, this increase matches improvements in the fortune of the population as a whole throughout north-west Europe. The precise reasons vary among 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 of international importance which came into force in 1971. Many wetlands have since been afforded protection under various agreements and conventions, securing international networks of sites that act as refuelling stop-overs for migrating waterbirds and seasonal homes for wintering species.

The last 30 years have also seen better understanding and management of wetland habitats, with an intensification in the last decade, particularly in the creation of new wetlands. Changes in shooting legislation and practices have had an influence on certain species of wildfowl and waders. The increase in artificial wetlands, particularly reservoirs and gravel pits, although not created with conservation in mind, has aided the spread and increase in numbers of ducks, grebes, cormorant and coot.

Waders

In winter, the UK supports over 25% of the East Atlantic flyway population of nine species of waders listed in the table and 43% of the population of **purple sandpiper**. The UK therefore has a particular obligation to ensure the maintenance of their favourable conservation status. With the exception of the **knot**, the numbers

Population trends of wintering waterbirds

	Long-term trend	Short-term trend	International importance		Long-term trend	Short-term trend	International importance
European white-fronted goose	-48	-34	<25	Red-breasted merganser	147	2	<25
Knot	-33	-6	>75	Goosander	170	0	<25
Mallard	-17	-33	<25	Teal	206	36	50–75
Turnstone	1	-31	>75	Pink-footed goose	235	31	>75
Pochard	6	-8	25–50	Whooper swan	291	15	>75
Bar-tailed godwit	7	6	25–50	Dark-bellied brent goose	367	-8	25–50
Ringed plover	8	-19	50–75	Canada goose	377	13	–
Dunlin	17	27	25–50	Grey plover	470	34	25–50
Tufted duck	25	2	<25	Black-tailed godwit	551	119	<25
Icelandic greylag goose	27	-18	>75	Svalbard barnacle goose	580	107	>75
Sanderling	29	15	<25	Gadwall	>1000	83	25–50
Redshank	34	-1	>75	Feral greylag goose	>1000	120	–
Oystercatcher	39	-7	25–50	Ruddy duck	>1000	65	–
Shelduck	51	-5	<25	Avocet	>1000	397	<25
Curlew	57	8	25–50				
Shoveler	77	15	25–50				
Wigeon	88	29	<25	Coot	–	11	<25
Mute swan	91	48	<25	Canadian light-bellied brent goose	–	13	>75
Bewick's swan	99	2	25–50	Great crested grebe	–	32	?
Goldeneye	103	32	<25	Greenland white-fronted goose	–	53	50–75
Pintail	123	-5	50–75	Cormorant	–	78	<25
Greenland barnacle goose	130	69	>75	Little grebe	–	144	?

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

Long-term trends are the percentage changes between the winters 1969–70 and 1998/99.

Short-term trends are the percentage changes between the winters 1988/89 and 1998/99.

Monitoring of coot, great crested grebe, little grebe and cormorant started later than for other species and only short term trends are shown.

The international importance of the UK for individual species of wader is the number of waders wintering in the UK (Stone *et al.* 1997) as a proportion of the East Atlantic Flyway population (Smit & Piersma 1989). The international importance of wildfowl and allies is the number wintering in the UK (Stone *et al.* 1997) as a proportion of the north-west European population (Rose & Scott 1997).

of most waders which overwinter predominantly on UK estuaries have either been stable or have increased over the last 30 years. **Knot** numbers have fallen by a third, declining most severely in the early 1970s due to a run of unusually cold springs and summers on their breeding grounds in Greenland.

Most **ringed plovers**, sanderlings, **purple sandpipers** and **turnstones** winter on non-estuarine coasts and hence 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 that they are not doing well. Over this period their non-estuarine populations have all declined: **ringed plover** by 13%, sanderling by 18%, **purple sandpiper** by 15% and **turnstone** by 20%. Climate change may be contributing to these declines. The decrease in numbers of all four species has been greatest in the south, but also in the west of UK for **ringed plover** and **turnstone**. The northward shift of these species broadly coincides with a decrease in very cold winter days over the last decade.

The wintering distributions of seven of the 12 commonest species of wader are shifting from south-west England and south Wales to south and south-east England. This change may be related to a variety of factors, the foremost being climate change. The tendency towards milder winters over the last 20 years may be allowing waders to make increased use of food-rich estuaries in south-east Britain where previously they had been vulnerable to the effects of cold weather. So climate change may already be affecting bird populations and will raise difficult questions for site and species conservation in coming decades.

Wildfowl and allies

Only two species of wildfowl have shown long-term declines during the period. Numbers of European **white-fronted geese** are much lower than in the 1960s and 1970s, despite a large increase on the continent. This may simply relate to a more easterly shift in its winter distribution, similar, perhaps, to that described above for waders. More worrying is the decline in mallard numbers, particularly in the last 10 years. The underlying reasons for this are unknown. This decline is not evident in the UK breeding population (see table on page 11).

The increase in mute swan numbers is well documented, with a continuing and steady rise since the mid 1980s, following the ban on the sale and use of those sizes of lead fishing weights implicated in lead poisoning, and a run of mild winters.

Increases in nearly all migratory geese are a measure of conservation success, particularly since the UK uniquely supports such a high proportion of their populations. Changes in hunting legislation and the creation of reserves on the wintering, staging and breeding grounds have been key factors. The increase in the small population of Svalbard **barnacle geese**, which winters almost entirely around the Solway Firth, can clearly be attributed to conservation action.

Several geese have also benefited from changes in agriculture, although this has resulted in local conflicts in parts of Scotland and elsewhere. The recent introduction of payments to farmers with key wintering populations on their land (eg Greenland **barnacle geese** on Islay) is proving a successful means of managing this issue. High concentrations of these birds also play an important part in local green tourism.

The UK also supports a number of non-native waterbirds, mostly escapes from wildfowl collections. Following the escape of a handful of North American ruddy ducks in the early 1960s, a population quickly became established, reaching more than 4,000 in the UK in the mid 1990s. Dispersing birds have since been recorded increasingly in southern Europe and North Africa where they pose a severe risk to the globally threatened white-headed duck through hybridisation. Control measures are currently being investigated in several European countries. The issue has highlighted the need to consider the conservation threat posed by non-native species at an international level.

▼ Whooper swans have increased markedly at traditional wintering areas

C H Gomersall (RSPB Images)

Conclusions

The state of the UK's birds is mixed. Progress towards achieving the BAP targets, one of the measures of the UK Government's success in fulfilling its biodiversity and sustainability obligations, is far from satisfactory. The targets for three-quarters of the BAP species are unlikely to be met. The major conservation successes involve rare or scarce breeding species. Without exception, widespread BAP species are at population levels well below those in the 1970s and their BAP targets will not be achieved. In contrast, most birds of prey and most wintering waterbirds are increasing in the UK.

The BAP has provided an important stimulus for the conservation of declining common species, but there is a need to find more effective and wide-reaching ways of delivering species recovery. Securing changes in agricultural and broader land-use policy, particularly to switch incentives from production into environmentally friendly farming, is the only approach that is likely to improve habitats for birds and other wildlife on a sufficiently large scale and in a sustainable manner. The UK Government has yet to demonstrate that it can address the conservation of biodiversity in the countryside outside nature reserves effectively.

A recurrent theme in this report is the influence of climate on birds. Cold winter weather strongly influences year to year variation in the numbers of both common and rare breeding birds and may dictate the distribution of wintering waterbirds. It is also known that many species of birds in the UK are nesting earlier than they did 20 years ago. Climate change will pose a very significant challenge to the conservation of birds and their habitats. The consequences of, for example, milder, wetter winters, warmer summers and sea level rise on bird populations are difficult to predict. Concomitant changes in land use and agriculture could be either beneficial or harmful to wildlife. Urgent efforts should be made to plan for the consequences of climate change.

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. **Starling**, **yellowhammer** and **lapwing** are strong candidates for red-listing and BAP status.
- Declines of several woodland species give cause for concern. **Marsh tit**, **willow tit** and lesser spotted woodpecker are all now candidates for red-listing and BAP 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 strongly. 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.
- 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 (eg **osprey** and **white-tailed eagle**) and successful reintroduction programmes (eg **red kite** and **white-tailed eagle**). While reduced human persecution in some areas has aided species such as buzzards, **hen harrier** numbers are still limited by persecution associated with grouse management. Like many other farmland birds the **kestrel**, our commonest bird of prey, is in long-term decline.
- The two species of grouse among the BAP species give particular cause for concern. **Black grouse** and **capercaillie** have both declined markedly. Their populations halved during the 1990s as a consequence 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 **capercaillie**. The largest grouse in the world again faces the real threat of extinction in the UK.
- **Wryneck** and **red-backed shrike** are effectively extinct 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 on average almost doubled over the last 30 years. Declines have been recorded, however, for the European **white-fronted goose**, **knot**, mallard and four species of predominantly non-estuarine wader, **ringed plover**, sanderling, **purple sandpiper** and **turnstone**.
- There has been a dramatic increase in the numbers of ruddy ducks. The spread of ruddy ducks from the UK into Continental Europe, North Africa and the Middle East is a threat to the globally threatened white-headed duck.

Clockwise from top left: **reed bunting** by Mike Lane (RSPB Images), **bittern** by Andrew Hay (RSPB Images) and **roseate tern** by C H Gomersall (RSPB Images)

Further reading

The following publications provide more information about bird population monitoring work and the Biodiversity Action Plan in the UK.

Anon (1998) *UK Biodiversity Group Tranche 2 Action Plans*. English Nature.

Anon (1999) *UK Biodiversity Group Tranche 3 Action Plans*. English Nature.

Anon (1999) *A better quality of life – A strategy for sustainable development for the United Kingdom*. Department of the Environment, Transport and the Regions.

Anon (1999) *Quality of life counts – Indicators for a strategy for sustainable development for the United Kingdom: a baseline assessment*. Department of the Environment, Transport and the Regions.

Baillie, S R, Crick, H Q P, Balmer, D E, Bashford, R I, Beaven, L P, Freeman, S N, Marchant, J H, Noble, D G, Raven, M J, Wernham, C V and Thewlis, R (2001) *Breeding Birds in the Wider Countryside: their conservation status 2000*. BTO Research Report No 252, BTO, Thetford. See http://www.bto.org/birdtrends

Gibbons, D W, Avery, M I, Baillie, S R, Gregory, R D, Kirby, J, Porter, R F, Tucker, G M, and Williams, G (1996) Bird species of conservation concern in the United Kingdom, Channel Islands and Isle of Man. *RSPB Conservation Review* 10: 7–18.

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Madsen, J, Cracknell, G and Fox A D (eds) (1999) *Goose populations of the Western Palearctic. A review of status and distribution*. Wetlands International Publ. 48, Wetlands International, Wageningen, The Netherlands.

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Stone, B H, Sears, J, Cranswick, P A, Gregory, R D, Gibbons, D W, Rehfisch, M M, Aebischer, N J and Reid J B (1997) Population estimates of birds in Britain and in the United Kingdom. *British Birds* 90: 1–22.

Tucker, G M and Heath, M F (1994) *Birds in Europe: Their Conservation Status*. BirdLife International, Cambridge.

▲ Many wintering waders, such as these redshanks, benefited from better protection of feeding and roosting areas

Citation

For bibliographic purposes this report should be referred to as Gregory, R D, Noble, D G, Cranswick, P A, Campbell, L H, Rehfisch, M M, and Baillie, S R (2001). *The state of the UK's birds 2000*. RSPB, BTO and WWT, Sandy.

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 will replace 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, RSPB and JNCC (on behalf of EN, SNH, CCW and EHS). Goose data are collected under an additional WWT/JNCC partnership (Contact WWT).

A 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. Peregrines will be surveyed in 2001 (contact BTO) and in 2002 surveys are proposed for golden eagle, whimbrel, nightjar, bearded tit and chough (Contact RSPB).

Additional surveys to be carried out in 2001 include Breeding Waders 2001 – a survey of wet lowland grassland sites in England and Wales; the WeBS Dispersed Waterbird Species Survey; the Waterways Bird Survey – a long running riverine territory mapping survey; and the Waterways Breeding Bird Survey (WBBS) – a more recent transect survey of riverine birds (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, RSPB, Bird Clubs and other bird-related networks. The RSPB, BTO and WWT congratulate them on the key contribution they have made to bird conservation. If you are one of these volunteers, thank you very much 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 partnership of Government agencies, non-governmental organisations, 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; CJ Wildbird Foods; Centre for Ecology and Hydrology; Countryside Council for Wales; Environment and Heritage Service (Northern Ireland); Department of the Environment, Transport and the Regions; English Nature; Environment Agency; Environment Wales; European Union Life Programme; Essex and Suffolk Water; Forestry Commission; Forest Enterprise; Game Conservancy Trust; Hawk and Owl Trust; Hyder; Joint Nature Conservation Committee; Ministry of Agriculture, Fisheries and Food; Ministry of Defence; 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.

Finally, we would like to thank all the companies and other organisations that have undertaken to sponsor or take part in work on priority bird species throughout the UK in support of the Biodiversity Action Plan process.

Lapwing by Andrew Hay (RSPB Images)

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 the charity dedicated to research on wild birds in the UK. It monitors populations through long term schemes such as nest records, ringing, the Common Birds Census and the Breeding Bird Survey, 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 over 50 years.

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Cover photos – Stone-curlew and yellowhammer by Mark Hamblin (RSPB Images)

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