The state of the UK'S BIRDS 2008

RSPB BTO WWT Countryside Council for Wales NATURAL ENGLAND

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NIEA Northern Ireland Environment Agency www.environment-ni.gov.uk

Scottish Natural Heritage
All of nature for all of Scotland

JOINT NATURE CONSERVATION COMMITTEE

Introduction

This, the tenth *The state of the UK's birds* (SUKB) report, published in 2009, contains results from annual, periodic and one-off surveys and studies from as recently as 2008. It draws on many sources to give an up-to-date overview of the health of bird populations in the UK.

It is produced by a coalition of three NGOs – the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Wildfowl & Wetlands Trust (WWT) – and the UK Government's statutory nature conservation agencies – the Countryside Council for Wales (CCW), Natural England (NE), Northern Ireland Environment Agency (NIEA), Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC).

This report should be referenced as Eaton MA, Balmer DE, Conway GJ, Gillings S, Grice PV, Hall C, Hearn RD, Musgrove AJ, Risely K and Wotton S. 2009. *The state of the UK's birds 2008*. RSPB, BTO, WWT, CCW, NIEA, JNCC, NE and SNH, Sandy, Bedfordshire.

Chris Gomersall (rspb-images.com)

Corn bunting

Eleanor Bentall (rspb-images.com)

A special thank you to volunteers

Bird monitoring in the UK is led by NGOs in collaboration with the Government, but depends on the efforts of many thousands of volunteers, without whom the evidence base upon which bird conservation in the UK relies would be sorely lacking. *The state of the UK's birds* gives us the opportunity to recognise and celebrate the massive role of volunteers in bird monitoring, and to thank them for the time and effort they devote to the schemes described within the report. If this is you, then thank you; if not, why not consider joining one of the schemes outlined at the back of the report? Through simple and enjoyable birdwatching activities, you will be able to make a valuable contribution to conservation.

Mark Hamblin (rspb-images.com)

Lapwing

Contents

Ben Hall (rspb-images.com)

Throughout this report, species are colour-coded according to their conservation status, as published in *Birds of Conservation Concern 3* in June 2009. The 52 species identified as being of the greatest conservation concern are **red-listed**, the 126 species of moderate concern are **amber-listed** and 68 species of lowest concern are **green-listed**. In a few cases where particular races are discussed, the colour-coding from a separate race level assessment is used.

Wild bird indicators

UK wild bird indicator

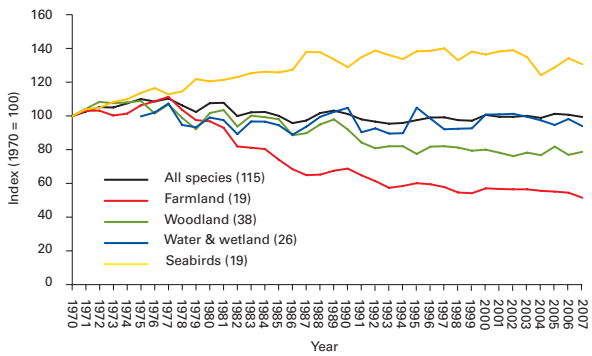
The UK wild bird indicator is one of a suite of indicators used by the Government for measuring sustainable development and trends in biodiversity. This year, for the first time, this indicator includes a new line for breeding birds of water and wetlands, and we also show the indicator for seabirds. Water and wetland bird populations have remained roughly stable since 1975; large declines in some species (eg **yellow wagtail** and snipe) have been counterbalanced by increases in others such as little egret and **Cetti's warbler**. Seabird populations rose between 1970 and 1985, but have subsequently levelled off.

The indicators for woodland and farmland show the by-now-familiar pattern of decline, mainly in the 1980s, with more recent stabilisation. Worryingly, the farmland bird indicator has declined further since last year and is now at its lowest-ever level.

Individual trends for the species within these indicators are given on pages 19–22 (common breeding birds) and 25–26 (seabirds).

The indicators start from a value of 100. If an index rises to 200 then, on average, populations of species in the indicator have doubled: if it falls to 50 then they have halved.

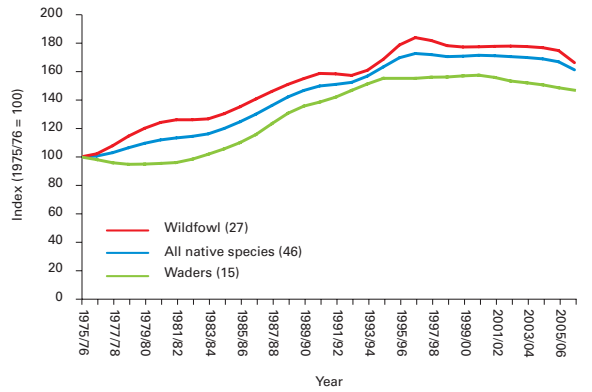
UK wild bird indicator



UK wintering waterbird indicator

In the winter, the UK holds internationally important populations of swans, geese, ducks and wading birds. The wintering waterbird indicator shows how numbers of both waders and wildfowl rose steadily from the mid 1970s to the late 1990s and then, from 2000, on average, stabilised. There is a suggestion of decline over the most recent winters, although only the fullness of time will reveal whether this is a short-term fluctuation or the beginning of a serious decline. See page 28 for trends in individual species.

UK wintering waterbird indicator



Sue Tranter (rspb-images.com)

Red kite

Ten years of *The state of the UK's birds*

The 2008 report marks the tenth anniversary of *The state of the UK's birds*. This provides an opportunity to look back at the key results and issues arising from the wide range of bird survey and monitoring work undertaken in the UK since the first report. The timeline shown on page 9 provides a snapshot of some of the headlines over the last 10 years.

The continuing decline in farmland birds has been a recurring theme throughout the period – the **skylark** even featured on the cover of the first edition. Whilst the farmland bird index seemed to level off from around 2000, the indicator has been in decline again since 2005, and in 2007 dropped to its lowest-ever level, 48% down from the 1970 baseline. We have also become increasingly aware of declines in other widespread birds, especially those associated with woodland and those that are long-distance migrants. Understanding the causes of the declines in these groups, and identifying practical remedial measures, remains a key focus of research for the bird conservation community.

By contrast, many of the UK's rarer breeding birds have prospered over the last 10 years, often in response to targeted conservation efforts. For example, the 1999 edition reported a modest rise in the number of booming male **bitterns** to 19, whereas in 2008 the number (75 males) was at a similar level to the 20th century peak in the mid-1950s. A major programme of reedbed restoration and creation has fuelled this increase. Similar efforts to conserve lowland heathland have undoubtedly assisted the recovery of **Dartford warblers**, **nightjars** and **woodlarks**, although the increase in the latter two species also has much to do with the recent management of conifer plantations (and to two hurricanes!). Other examples of scarcer species responding well to habitat management include the **corncrake**, **capercaillie**, **stone-curlew** and **cirl bunting**. All these species have met or exceeded UK BAP targets, in contrast to many of the more widespread species that share 'priority species' status.

Most of the UK's raptors are continuing to recover well from the low levels of a few decades ago, aided by more enlightened attitudes to their presence in the environment and, in the case of the **white-tailed eagle** and **red kite**, successful

Andy Hay (rspb-images.com)

Kittiwakes

reintroduction programmes. Illegal persecution continues to limit the numbers and distribution of some species, such as the **hen harrier**, in certain parts of the UK.

The response of birds to climate change has become increasingly evident over the last 10 years. On the plus side, a number of recent colonists with more southern affinities have prospered. For example, breeding by **little egrets** was first confirmed in 1996 and, by 2006, there were around 600 pairs. The 1999 edition reported that four species per decade had colonised the UK since 1970 and more look set to follow, such as the **cattle egret**, which first bred in 2008, and the **spoonbill**, which bred successfully for only the third time in 2008. By contrast, there is growing evidence that recent climatic trends may be affecting two groups of birds for which the UK is of global importance: breeding seabirds and wintering waterbirds.

The 2004 edition reported on the poorest breeding season on record for many of the UK's breeding seabirds, with almost complete breeding failure for some species (eg **guillemot** and **kittiwake**) in northern waters. Low sandeel availability through much of the North Sea was the cause. Whilst the reasons for poor availability of sandeels remain a matter for speculation, it is possible that rising sea temperature driven by climate change is a key factor. As detailed in last year's report, the new Scottish seabird productivity indicator shows that low breeding success prevailed in both 2005 and 2006.

Whilst there was a steady increase in wintering waterbirds in the UK between the mid-1970s and late 1990s, average waterbird abundance is now showing signs of decline. Indeed, the numbers of 15 species have declined (albeit some only slightly) when trends are viewed over both the long- (25 years) and short- (10 years) term. It is likely that the declines in some species are due to "short-stopping", that is migratory birds wintering closer to their more northern breeding grounds as weather conditions become more favourable – a phenomenon undoubtedly driven by climate change. However, there is a dearth of analyses on the breeding success, survival rates and movements of many species so, without further research, we cannot be sure whether real population declines are being experienced by these species.

Chris Gomersall (rspb-images.com)

Skylark

Year	Headlines from *The state of the UK's birds*
1999	Wild bird populations adopted as an indicator of the quality of life in the UK: the first results showed that whilst bird populations as a whole remained largely unchanged since 1970, woodland birds had declined by 20% and farmland birds by 40%.
	A survey of **spotted crakes** found 79 singing males, more than ever recorded before.
2000	Government adopted a target to reverse the decline in farmland birds in England by 2020.
	A survey of **red kites** found an amazing 429 pairs.
	A newly-created indicator of wintering waterbirds showed a sustained increase since the mid-1970s.
2001	An outbreak of Foot and Mouth Disease massively restricts bird survey work.
	After eight years of work, a review of UK Special Protection Areas was heralded as "probably the most detailed account of a protected area network by an EU member state". It identified 243 special sites for conserving birds, covering more than 1,454,500 hectares of terrestrial and coastal habitats, and was targeted at 103 species.
2002	A revision of *Birds of Conservation Concern* in the UK saw nine species added to the red list with five species moving from red to amber. Overall, 40 species appeared on the red list and 121 on amber.
	A review of birds on the UK's Overseas Territories noted their international importance, especially for seabirds and endemic landbirds.
	The numbers of **bearded tits** had increased by nearly 60% since 1992, reaching around 650 pairs, and **mute swan** numbers were up by 23% since 1990.
2003	The first complete census of the UK's breeding seabirds for 15 years showed increases in **gannets**, **cormorants**, **great skuas** and auks, but declines in **shags**, **kittiwakes** and several tern species.
	Large declines in breeding waders on English and Welsh lowland wet meadows were recorded by a repeat of a 1982 survey.
	A survey of **cirl buntings** found nearly 700 territories, an increase of over 50% since 1998 and surpassing its 2003 BAP target of 550 territories.
	A **golden eagle** survey found that the population had remained stable at 442 pairs.
2004	A winter 2003/04 survey estimated the **capercaillie** population at 1,980 individuals, suggesting that the species' decline had at least been halted.
	A survey of **corncrakes** located over 1,000 singing males for the first time.
	Around 4,600 churring male **nightjars** were recorded by a national survey, a 32% increase since 1992 and exceeding the UK BAP target.
	A national survey of **hen harriers** estimated the population at 749 pairs, up 44% since 1998. Despite increases in Northern Ireland, Wales and western Scotland, numbers had fallen in England and southern Scotland.
	A massive crash in seabird breeding productivity, linked to the low sandeel stock, was observed in northern UK waters.
2005	A review of progress with UK BAP species found mixed fortunes for priority birds: whilst there had been major gains for some of our rare species, most of the more widespread BAP-listed birds continued to decline.
	A spring survey of lekking male **black grouse** found a worrying 22% decline since the mid-1990s.
	The number of **stone-curlews** reached at least 307 pairs, reaching the 2010 UKBAP target of 300 pairs five years ahead of schedule.
	A major survey of woodland birds was published, which found significant declines in 10 species and significant increases in 11: changes in woodland structure appeared to be linked to the declines.
	A survey of **marsh harriers** found that the population had doubled since 1995, with an estimated 364 breeding females.
2006	A revision of the UK BAP priority species list saw the number of birds increase from 26 to 59, largely driven by recent declines in woodland and farmland species.
	A national survey of **woodlarks** and **Dartford warblers** found large increases in both species: **woodlarks** were up by 88% since 1997 to 3,064 territories, with **Dartford warblers** up by 70% since 1994 to 3,214 territories.
	The first surveys of our two breeding diver species since 1994 revealed good news, with an increase of 34% (to 1,255 pairs) in **red-throated divers** and an increase of 16% (to 217 summering territories) in **black-throated divers**.
2007	A survey of breeding **common scoters** found a very worrying decline of 45% since 1995, to just 52 pairs.
	A major survey of winter gull roosts estimated that the UK is home to nearly 3.9 million individuals of the five main species. Most species had increased considerably in the last 50 years, although there had been a sharp decline in **herring gulls** since the 1970s.
	There are concerns over declines in a number of wintering wildfowl and wader species.

Birds of Conservation Concern 3

Nigel Blake (rspb-images.com)

Dunlin

The threats to biodiversity are many and varied, and appropriate conservation responses depend on being able to target limited resources where they are most needed. In the UK, this process has been aided by the regular production of lists of bird species for which we have particular concern, firstly in a Red Data Book in 1990 and, since 1996, by *Birds of Conservation Concern* (BoCC) assessments. The year 2009 saw the launch of the third BoCC review, which placed all the UK's regularly occurring species on to red, amber or green lists indicating high, moderate and low concern respectively. These lists are produced by drawing on the most up-to-date information on species status within the UK, and elsewhere within their ranges, in order to assess each species against a set of quantitative criteria, given below.

The red list criteria

Species that meet any of the following criteria are red-listed:

IUCN Global Conservation Status. Species listed by BirdLife International as being Globally Threatened using IUCN criteria.

HD Historical Decline. A severe decline in the UK between 1800 and 1995, without substantial recent recovery.

BDp Breeding Population Decline. Severe decline in the UK breeding population size, of more than 50%, over 25 years (BDp^1) or the entire period used for assessments since the first BoCC review, starting in 1969 ("longer-term") (BDp^2).

WDp Non-breeding Population Decline. Severe decline in the UK non-breeding population size, of more than 50%, over 25 years (WDp^1) or the longer-term (WDp^2).

BDr Breeding Range Decline. Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years (BDr^1) or the longer-term (BDr^2).

The amber list criteria

Species that meet any of the following criteria, but none of the red list criteria, are amber-listed:

SPEC European Conservation status. Categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3).

HDrec Historical Decline – Recovery. Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).

BDMp Breeding Population Decline. As for red list criteria BDp^1 and BDp^2, but with moderate decline (by more than 25% but less than 50%).

WDMp Non-breeding Population Decline. As for red list criteria WDp^1 and WDp^2, but with moderate decline (by more than 25% but less than 50%).

BDMr Breeding Range Decline. As for red list criteria BDr^1 and BDr^2, but with moderate decline (by more than 25% but less than 50%).

BR and **WR** Rarity. UK breeding population of fewer than 300 pairs (BR), or non-breeding population of fewer than 900 individuals (WR).

BL and **WL** Localisation. At least 50% of the UK breeding (BL) or non-breeding (WL) population found in 10 or fewer sites.

BI and **WI** International Importance. At least 20% of the European breeding (BI) or non-breeding (WI) population found in the UK.

The green list criteria

All regularly occurring species that do not qualify under any of the red or amber criteria are green-listed. The green list could also include those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Of the 246 species assessed, 52 were red-listed, 126 amber-listed and 68 green-listed. There was a substantial increase in the length of the red list; whilst 34 of 40 species red-listed in the previous review (2002) remained on the list, a further 18 species joined the red list, meaning that more than 20% of the UK's birds are now red-listed. Six species moved from red to amber. The red and amber lists are given in the tables overleaf, with the criteria against which they qualified marked.

Andy Hay (rspb-images.com)

Black grouse

Species on the BoCC3 red list

Species[a]	IUCN[b]	HD	BDp[1]	BDp[2]	WDp[1]	WDp[2]	BDr[1]	BDr[2]	SPEC	HDrec	BDMp[1]	BDMp[2]	WDMp[1]	WDMp[2]	BDMr[1]	BDMr[2]	BR	WR	BL	WL	BI	WI
Balearic shearwater	*								*													
Bittern		*							*								*	*				
Scaup						*			*											*		
Common scoter			*	*					*						*		*			*		
White-tailed eagle		*							*								*					
Hen harrier		*							*													
Black grouse		*	*						*													
Capercaillie								*							*							
Grey partridge			*	*					*													
Corncrake		*		*				*	*													
Lapwing			*						*			*										*
Temminck's stint			*	*													*					
Dunlin						*			*				*						*	*		*
Ruff			*	*					*					*			*					
Black-tailed godwit		*							*								*			*		*
Whimbrel			*														*					
Red-necked phalarope		*															*					
Arctic skua			*																			
Herring gull				*	*						*											*
Roseate tern			*	*				*	*								*					
Turtle dove			*	*					*													
Cuckoo			*	*																		
Nightjar								*	*										*			
Wryneck		*	*	*					*								*					
Lesser spotted woodpecker			*	*																		
Skylark				*					*		*											
Tree pipit			*	*																		
Yellow wagtail			*	*																		
Ring ouzel			*																			
Fieldfare				*							*						*					
Song thrush				*																		
Redwing				*													*					
Grasshopper warbler			*	*																		
Savi's warbler			*	*													*					
Aquatic warbler	*				*				*									*				
Marsh warbler			*	*													*					
Wood warbler			*						*													
Spotted flycatcher			*	*					*													
Marsh tit				*					*		*											
Willow tit			*	*																		
Golden oriole			*									*					*					
Red-backed shrike		*	*	*					*								*					
Starling			*	*					*													
House sparrow			*	*					*													
Tree sparrow			*	*					*													
Linnet				*					*		*											
Twite		*	*																			
Lesser redpoll			*	*																		
Hawfinch			*																			
Yellowhammer			*	*																		
Cirl bunting								*							*							
Corn bunting		*	*	*					*													

[a] The 18 species new to the red list are given in bold

[b] Refer to text for criteria codes and descriptions

Species on the BoCC3 amber list

Species	SPEC	HDrec	BDMP[1]	BDMP[2]	WDMP[1]	WDMP[2]	BDMr[1]	BDMr[2]	BR	WR	BL	WL	BI	WI
Red-throated diver	*													
Black-throated diver	*								*	*				
Great northern diver														*
Little grebe			*	*										
Red-necked grebe					*					*				
Slavonian grebe	*		*	*					*	*				
Black-necked grebe									*	*				
Fulmar			*								*			
Sooty shearwater	*													
Manx shearwater	*							*			*		*	
European storm-petrel											*			
Leach's storm-petrel	*										*		*	
Gannet											*		*	
Shag			*	*							*		*	
Little egret											*			
Spoonbill	*									*				
Bewick's swan	*											*		*
Whooper swan									*			*		
Bean goose										*				
Pink-footed goose												*		*
Greylag goose												*		*
Barnacle goose												*		
Brent goose	*											*		*
Shelduck												*		*
Wigeon												*		*
Gadwall	*													*
Teal														*
Mallard					*	*								
Pintail	*								*			*		*
Garganey	*								*					
Shoveler	*													*
Pochard	*				*	*								*
Tufted duck	*													
Eider					*									
Velvet scoter	*											*		
Goldeneye									*					
Smew	*									*				
Honey-buzzard									*					
Red kite	*													
Marsh harrier										*	*			
Montagu's harrier									*					
Golden eagle	*													
Osprey	*								*					
Kestrel	*													
Merlin		*												
Red grouse			*	*										
Quail	*	*												
Spotted crake									*					
Crane	*								*					
Oystercatcher												*	*	*
Avocet											*	*		
Stone-curlew	*							*			*			

Species on the BoCC3 amber list

Species	SPEC	HDrec	BDMP1	BDMP2	WDMP1	WDMP2	BDMr1	BDMr2	BR	WR	BL	WL	BI	WI
Ringed plover			*											*
Dotterel											*			
Golden plover														*
Grey plover												*		*
Knot	*											*		*
Purple sandpiper					*				*					
Jack snipe	*													
Snipe	*													
Woodcock	*													
Bar-tailed godwit												*		*
Curlew	*		*	*									*	*
Spotted redshank	*									*				
Redshank	*		*	*										*
Green sandpiper									*					
Wood sandpiper	*								*	*				
Common sandpiper	*		*											
Turnstone														*
Great skua											*		*	
Mediterranean gull									*					
Little gull	*													
Black-headed gull					*									*
Common gull	*													*
Lesser black-backed gull											*		*	
Yellow-legged gull									*					
Iceland gull										*				
Glaucous gull										*				
Great black-backed gull					*									
Kittiwake			*								*			
Sandwich tern	*							*			*			
Common tern											*			
Arctic tern								*						
Little tern	*							*			*			
Black tern	*													
Guillemot											*		*	
Razorbill											*			
Black guillemot	*													
Puffin	*										*			
Stock dove													*	
Barn owl	*													
Short-eared owl	*													
Swift			*											
Kingfisher	*													
Green woodpecker	*													
Woodlark	*							*			*			
Shorelark										*				
Sand martin	*													
Swallow	*													
House martin	*		*	*										
Meadow pipit			*	*										
Water pipit										*				
Grey wagtail				*										
Dunnock				*										
Nightingale			*											
Black redstart			*	*					*					
Common redstart	*													
Whinchat			*											

Species on the BoCC3 amber list

Species	SPEC	HDrec	BDMP1	BDMP2	WDMP1	WDMP2	BDMr1	BDMr2	BR	WR	BL	WL	BI	WI
Wheatear	*													
Mistle thrush			*	*										
Dartford warbler	*										*			
Common whitethroat				*										
Willow warbler			*	*										
Firecrest									*					
Pied flycatcher			*											
Bearded tit								*			*			
Crested tit	*													
Short-toed treecreeper									*					
Chough	*													
Serin			*						*					
Scottish crossbill	*												*	
Parrot crossbill									*					
Bullfinch			*	*										
Lapland bunting										*				
Snow bunting									*					
Reed bunting				*										

Andy Hay (rspb-images.com)

Gannet

Birds in the UK Biodiversity Action Plan

Although the criteria were largely comparable with those used in previous BoCC assessments, the adoption of a second, longer time period for measuring change in numbers and range was a significant amendment. This was used to ensure that species that had undergone severe declines leading to red-listing in previous assessments would not be moved to the amber or even the green list without having shown any recovery (they may even have continued to decline, albeit at a slower rate). As a result, 11 species were red-listed that would not have been under the previous approach.

Analysis of the 18 species new to the red list reveals a number of "themes" of concern. Although one common farmland bird, the **reed bunting**, moved from red to amber due to a degree of recovery, two farmland species moved to the red list; with the addition of **lapwing** and **yellow wagtail**, 10 of the 19 species on the farmland bird index are now red-listed. It is worrying that despite the roll-out of agri-environment measures designed to help such farmland birds, most are yet to show any response and a number continue to decline further.

No fewer than four new widespread woodland birds – **tree pipit**, **wood warbler**, **hawfinch** and **lesser redpoll** – have moved on to the red list. *BoCC2* raised awareness of declines in woodland birds through the red-listing of the likes of **lesser spotted woodpecker**, and *BoCC3* should raise the profile of woodland birds further still. **Tree pipits** have declined by 70% over 25 years, and **wood warblers** by 62% since 1994.

Twenty-one of the 52 red-listed species, including new additions such as **wood warbler**, **tree pipit**, **yellow wagtail** and the emblematic **cuckoo**, are sub-Saharan migrants. This hints at problems outside the UK, although it is difficult to disentangle the effects of pressures on the breeding grounds, on African wintering grounds and the migration routes as well as potential interactions between them.

The UK lies at the southern and/or western edge of the ranges of five rare breeders added to the red list due to recent population decline: **ruff**, **Temminck's stint**, **whimbrel**, **fieldfare** and **redwing**. Recent research has suggested that the ranges of European birds will shift north and east during the 21st century in response to predicted climate change, and that populations of some of the UK's rarest breeding birds have been changing in line with changes in climate "suitability". It may be that some of these new red list species (and others such as **common scoter** and **red-necked phalarope**) may struggle to retain footholds as breeding birds in the UK.

Finally, we should celebrate the good news: six species moved from red to amber: **stone-curlew**, **woodlark**, **bullfinch**, **quail**, **Scottish crossbill** and **reed bunting**. **Stone-curlews** and **woodlarks** have increased in numbers and range thanks to targeted conservation action, demonstrating how, if properly designed and resourced, such efforts can succeed.

A second, parallel assessment was made at the level of race, recognising the different threat faced by some races, and the value of the UK's endemic races. Full details on this, and further details on the species-level assessment, can be found in the *BoCC3* paper downloadable from www.britishbirds.co.uk.

Redwing

Greenland white-fronted geese

Greenland white-fronted goose

The UK Biodiversity Action Plan priority species list now includes the **Greenland white-fronted goose**, one of the two races of **white-fronted goose** wintering in the UK, listed because of rapid recent declines in numbers. This subspecies breeds in western Greenland and winters only in northern and western Britain and Ireland, predominantly on Islay in Scotland, and the Wexford Slobs in the Republic of Ireland.

Numbers declined to approximately 15,000 by the late 1970s but, following bans on winter shooting, recovered, peaking at 35,600 by spring 1999. Since then, numbers have again fallen to 23,208 by spring 2008 (a 35% decline), qualifying the subspecies as Endangered under IUCN criteria.

Thirty years of monitoring by the Greenland White-fronted Goose Study shows falling numbers result from progressive declines in overall breeding success, such that the annual production of young now falls short of replacing annual losses. In response to the declines, the annual Iceland autumn kill of around 3,000 birds was stopped in autumn 2006. The reasons for declining productivity are not known, but are likely due to heavy spring snowfall in recent years which may have affected nesting, competition with rapidly increasing Canada goose numbers in west Greenland, or a combination of these factors.

Successful conservation of this goose continues to require co-ordinated flyway-wide efforts. In this context, participants at a workshop in Islay in February 2009 reviewed the status and threats to **Greenland white-fronted geese** and progressed an international Action Plan for eventual government endorsement by the four Range States, providing a basis and driver for future co-ordinated research and conservation efforts.

Scottish crossbill

The first ever survey of the **Scottish crossbill** was carried out in 2008. The **Scottish crossbill** is Britain's only endemic bird species. However, we know little about its numbers and habitat requirements, and this information is essential for its conservation.

There are two other species of crossbills breeding in Britain; the **common crossbill** and **parrot crossbill**. All three crossbills have similar plumage but differ in size, most noticeably in bill size, which reflects differences in the types of conifer cone they break into to get seeds from. The small-billed **common crossbill** is a spruce specialist, the large-billed **parrot crossbill** is a Scots pine specialist and the **Scottish crossbill** has an intermediate size of bill and is thought to specialise on the seeds in the woody cones of Scots pine, but also feeds on other conifers.

A big problem with crossbills is that the size differences among the species are small, making them difficult to identify. However, it has been discovered that each species has a different voice – distinct flight and excitement calls – which can be clearly identified when a sonogram or sound picture is made from tape-recorded calls. It is possible to make crossbills call in answer to a played excitement call. This lures them out of the forest from up to 250 m away, and gives the chance to record their response. Therefore, it is possible to

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Twites

lure the birds (to find out how many were within a 250 m radius) and record their calls (to identify the species).

For the survey, tape lures were played at 852 sample points spread systematically across conifer woods in the Highlands – the range of the **Scottish crossbill**. In all, 1,767 birds were counted at these points, of which a third were **Scottish crossbills**. Accounting for the availability of woodland around the sample points and knowing the response distance of the crossbills, densities and total numbers were calculated, giving a first estimate of about 14,000 **Scottish crossbills**. They occurred mainly in the eastern Highlands in Moray, Banffshire and Aberdeenshire, but there was also a concentration in southern Sutherland. This distribution will change between seasons and between years as the crossbills follow the changes in the crops of cones produced by different conifers. As a result of this new knowledge, the **Scottish crossbill** has been moved from the red list to amber, as previous guesses of numbers were considerably lower.

Scottish crossbills were found mainly in areas where non-native conifers were found, but this may have been due to the large cone crops produced by these conifers in 2008. Only further surveys will give a fuller understanding of the habitat requirements of the **Scottish crossbill**.

Twite

In 2008 a Species Recovery Project for the **twite** began in England, funded by the RSPB and Natural England. In England, breeding **twites** nest in loose groups on moorlands and feed on seeds from herb-rich meadows and pastures, while in winter they feed on the saltmarshes of the east coast. The stronghold of the English breeding population is in the Pennines south of Skipton, in the counties of Yorkshire, Lancashire, Derbyshire and Greater Manchester. However, this population has undergone a massive recent decline in both numbers and range. Numbers in the South Pennines SPA declined by 84% between 1990 and 2004-05 (as reported in *The state of the UK's birds 2006*).

Breeding **twites** in the south and west Pennines were surveyed in 2008 to provide an up-to-date assessment of the population at the start of the recovery project. The survey, undertaken largely by volunteers, covered all known recently occupied sites and estimated the size of the population as between 93 and 111 pairs, more than 60% of which occurred at just seven sites. Numbers at some sites had declined by more than 50% since 2004-05. While the focus of the recovery project is on the breeding grounds, in particular the provision of suitable feeding habitat, effort will also be made to increase the area of suitable wintering habitat. A core part of the project involves annual monitoring of **twite** numbers and breeding success at a sample of sites in order to measure the population response to habitat intervention. The year 2008 formed a baseline for monitoring, with the first intervention work starting in 2009.

Trends in common breeding birds

The table shows the trends since the beginning of the UK-wide Breeding Bird Survey (BBS) in 1994, alongside long-term trends based on data from the BBS combined with the trend from its predecessor, the Common Birds Census (CBC). For six riverine species the long-term trends are based on data from the Waterways Bird Survey (WBS), which is more suited to monitoring them.

Trends in common breeding birds

Species	Long-term trend (1970–2007)	BBS trend (1995–2007)
Mute swan	159 [1]	14
Greylag goose	na	118
Canada goose	na	116
Shelduck	188 [1]	5
Mallard	100	19
Tufted duck	112 [5]	46
Red grouse	na	-10
Red-legged partridge	-7	32
Grey partridge	-89	-45
Pheasant	75 [1, 4]	34
Little grebe	175 [1]	21
Great crested grebe	na	28
Red kite	na	333
Sparrowhawk	99 [1, 5]	1
Buzzard	545 [1, 2, 4]	53
Kestrel	-30 [1]	10
Hobby	na	12
Moorhen	-3	16
Coot	82 [1]	37
Oystercatcher	na	-14
Golden plover	na	-8
Lapwing	-45 [1]	-14
Woodcock	-86 [1]	na
Snipe	na	35
Curlew	-54 [1]	-38
Redshank	na	-26
Common sandpiper	-36 [5]	-18
Feral pigeon	na	9
Stock dove	71 [1, 4]	-2
Woodpigeon	121 [1]	34
Collared dove	379 [1, 6]	27
Turtle dove	-88	-66
Ring-necked parakeet	na	600
Cuckoo	-50 [1]	-37
Little owl	-25	-18
Tawny owl	-12 [1]	1
Swift	na	-29
Kingfisher	1 [5]	0
Green woodpecker	123	47
Great spotted woodpecker	337	123
Lesser spotted woodpecker	-68 [1, 2]	na
Skylark	-53	-11
Sand martin	-2 [5]	20
Swallow	24	33
House martin	-37 [1]	9
Tree pipit	-73 [1]	-4
Meadow pipit	-43 [1]	-16
Yellow wagtail	-71 [2]	-49
Grey wagtail	-26 [5]	38
Pied wagtail	43	4
Dipper	-30	na
Wren	74	26
Dunnock	-26	21
Robin	49	20
Nightingale	na	-41
Redstart	19 [1, 2]	1
Whinchat	na	-43
Stonechat	na	209
Wheatear	na	-11
Blackbird	-14	25
Song thrush	-49	25
Mistle thrush	-45	-8
Grasshopper warbler	na	22
Sedge warbler	-16	4
Reed warbler	134 [1, 2]	29
Blackcap	148	57
Garden warbler	-1	-16
Lesser whitethroat	-16	-1
Whitethroat	-4	18
Wood warbler	na	-60
Chiffchaff	34	36
Willow warbler	-43 [1]	-12
Goldcrest	-12 [1, 3]	33
Spotted flycatcher	-85	-38
Pied flycatcher	na	-51
Long-tailed tit	62 [3]	10
Marsh tit	-67	-22
Willow tit	-89	-67
Coal tit	41	7
Blue tit	27	6
Great tit	94	46
Nuthatch	171	47
Treecreeper	-1	4
Jay	-8	13
Magpie	96	-2
Jackdaw	112	31
Rook	na	-8
Carrion crow	81	13
Hooded crow	na	-4
Raven	na	34
Starling	-73 [1]	-31
House sparrow	-68 [2, 7]	8
Tree sparrow	-93	44
Chaffinch	36	11
Greenfinch	22	24
Goldfinch	66	42
Siskin	na	8
Linnet	-57	-24
Lesser redpoll	-90 [1]	1
Common crossbill	na	43
Bullfinch	-51	-11
Yellowhammer	-55	-15
Reed bunting	-31	30
Corn bunting	-89	-30

1 The trend during the period covered solely by the CBC (prior to 1994) may be unrepresentative of the UK due to geographical or habitat-related bias.

2 Small sample size during some part of the survey period.

3 The species shows large natural fluctuations from year to year.

4 Long-term trend may be biased by differences in BBS and CBC methodologies.

5 Long-term trend 1975 to 2007.

6 Long-term trend 1972 to 2007.

7 Long-term trend 1977 to 2007.

Data in the preceding table are derived from Common Birds Census (CBC) plots from 1966 up to 2000 and the Breeding Bird Survey (BBS) from 1994 to 2008, except for long-term trends for **tufted duck**, **grey wagtail**, **sand martin**, **dipper**, **kingfisher** and **common sandpiper**, which come from the Waterways Bird Survey (WBS, 1974–2007) and Waterways Breeding Bird Survey (WBBS, 1998–2008). For long-term trends, counts were modelled using a full site by year log-linear Poisson regression model with post-hoc smoothing of the annual indices. Reported long-term population changes are the differences in the smoothed annual indices in joint CBC-BBS models from 1970 to 2007 – the year prior to the last available data, except for the six species covered by the WBS (from 1974) and for **sparrowhawks** (from 1974), **collared doves** (from 1971) and **house sparrows** (from 1976). However, for species where there is evidence of substantial and significant differences in trends within and outside England, the overall trends are based solely on CBC prior to 1994 and solely on the BBS from 1994 to 2008. Further caveats related to unrepresentative habitat coverage, small sample sizes or fluctuating populations are listed on the previous page. BBS trends are derived from counts on BBS squares analysed using a full site by year log-linear Poisson regression model. For the first time, SUKB 2008 presents smoothed BBS trends for the period 1995 to 2007.

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Kingfisher

More details on the BBS, including The Breeding Bird Survey 2008 report, can be found at www.bto.org/bbs.

Results from the Breeding Bird Survey continue to provide up-to-date information on the population trends of widespread terrestrial birds, forming the basis of scientific research and conservation action.

When examining population trends, it is often useful to group birds by their preferred breeding habitat, such as farmland, woodland or the urban environment. This gives an overall indication of the condition of that habitat in the UK. Many farmland specialists continue to decline, including **grey partridges**, **kestrels**, **lapwings**, **turtle doves**, **skylarks**, **yellow wagtails**, **linnets**, **yellowhammers** and **corn buntings**. Woodland birds, such as **wood warblers**, **spotted flycatchers**, **pied flycatchers** and **willow tits** also show severe declines.

However, it is not necessarily true that species that breed in the same habitat are declining for the same reasons. Declines can be driven by reduced breeding success, by reduced survival of full-grown birds, or by both. In turn, reduced breeding success could be because fewer young survive to fledge, or fewer eggs are laid in the first place – and reduced survival of full-grown birds could relate to one particular age group, such as first-year birds. Birds rely on very different resources at different stages of their lives, and it is necessary to identify at which stage of the life-cycle changes are occurring before attempting to reverse population declines. This can be done by comparing overall population trends with results from the Nest Record Scheme, which measures breeding success, and from the British and Irish Ringing Scheme, which provides information on survival rates. Importantly, a national analysis of changes in such demographic rates shows whether particular aspects of a species' ecology have changed sufficiently to account for the observed population change.

By examining productivity and survival, it was found that long-term **lapwing** declines can be explained by reduced breeding success, which probably relates to changes in agricultural management. Declines in other farmland species such as the **turtle dove** and **linnet** are also thought to have been caused, in large part, by decreases in breeding success, whereas nesting success for seed-eating species, such as the **tree sparrow**, appears to be increasing, suggesting that the population decline is caused by a decrease in survival. A reduction in survival is often associated with a decrease in food resources. This is likely to be particularly important in the case of seed-eating birds on farmland, which have seen the amount of seed available to them fall dramatically in the last three decades. Analysis of ringing data, for example, shows that the decline in

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Kestrel

reed bunting populations in the 1970s and 1980s was almost certainly due to changes in survival, particularly of first-year birds. Where changes in survival rates are causing declines, productivity often increases, as there is less competition for resources, but such increases are usually not enough to compensate for the decline in survival rates.

In other habitats, **song thrushes** have shown a long-term decline of 49%, and as we reported in *SUKB* last year, the lower survival of young birds in their first year is sufficient to explain this decline. This is likely to have been caused by a loss of damp habitats in farmland, reducing their ability to find food. Indeed, the periods of steepest population decline coincide with hot, dry summers and long, cold winters, when food is hardest to find. This species has shown a welcome increase since the low of the mid-1990s, though numbers are still less than half what they were in the 1960s. **House sparrows** have also shown a large long-term decline, and it appears that changes in survival helped drive this population change in the 1970s, but that more recently, poor breeding performance, especially because of high nest failure rates at the chick stage, is preventing the population from recovering.

Conversely, increased breeding performance may be helping to drive the increase of corvids, such as **jackdaws** and **magpies**. There has also been a significant increase in **robin** numbers, but in this case it could be that over-winter survival is contributing to the increase, as this species has been shown to survive better in years when there is less winter snow cover, as in more recent, milder winters.

Calculating population trends, therefore, is only the first step towards understanding the status of the UK's birds. Understanding the drivers of change is particularly important for migrant birds, as these might be linked to factors outside the UK, such as changes in their wintering or staging habitats. Changing climates are likely to have a big effect on birds, and by understanding how climate affects bird productivity and survival, both here and abroad, we will be much better placed to conserve our bird populations effectively. The declines in migrant species such as **wood warbler** and **pied flycatcher** warrant this kind of investigation, in order to target conservation action where it is most needed.

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House sparrow

The Rare Breeding Birds Panel

The Rare Breeding Birds Panel collates records of the UK's rarest and most threatened breeding species, including some, such as the red-backed shrike and wryneck, which have declined almost to extinction. Conversely, the panel also covers those species new to the UK: in some cases these may be occasional, or one-off breeding attempts, but for other species the panel may be recording the early years of large-scale colonisation. Looking back at records of such potential colonists in recent years, there is a strong flavour of the Mediterranean, with species from southern Europe attempting to breed with increasing frequency.

Little egrets were first reported breeding in the UK in 1996, since when numbers and range have increased rapidly. The RBBP report for 2006 suggests that the population has reached close to 600 pairs, and it seems likely that the species will cease to be covered by the Panel soon. However, another egret is soon to join the species reported upon: as reported on the RBBP website (www.rbbp.org.uk), two pairs of **cattle egrets** bred successfully in Somerset in 2008, following a large influx into southern UK in 2007. It remains to be seen whether this is the start of a "little egret-style" colonisation, a one-off event, or somewhere in-between.

Spoonbills bred in the UK in 2008, for only the third time since the 17th century, raising three young in Dumfries & Galloway. Although successful breeding remains rare, increasing numbers of spoonbills summer in the UK, and nest-building is frequent: it may be only a matter of time before spoonbills establish a breeding population. Having only nested in the UK four times prior to the current decade, **black-winged stilts** have upped the ante with attempts in 2005, '06 and '08, although all were unable to fledge young. **Bee-eaters** were successful in County Durham in 2002, but a 2005 attempt in Herefordshire was predated by foxes and a pair in Dorset in 2006 may have laid eggs, but did not raise young. Finally, with one foot in the breeding species list, following summering in the early part of the decade, a **black kite** raised two young, paired with a red kite in Northern Scotland in 2006.

It is hard to predict what species may be next. Male **great reed warblers** establish territories in most years, but none has attracted a mate. Similarly, a **scops owl** that sang in Oxfordshire in 2006 and 2007 was unrequited. With predictions that species' ranges will shift north in Europe in response to climate warming, it seems certain that more new arrivals are on their way.

Jody Randall (rspb-images.com)

Little egret

Survey round-up

Ringed plover

The breeding ringed plover and little ringed plover surveys conducted in 2007 have provided the most comprehensive estimates of these species in the UK since the 1980s.

An estimated 1,115 pairs of **little ringed plovers** bred in Great Britain in 2007, an increase on previous estimates of 608-631 from a national survey in 1984 and 825-1,070 pairs from the 1988-1991 New Atlas of Breeding Birds. Of 746 pairs of **little ringed plovers** actually counted, 78% were recorded in England, 19% in Wales and 3% in Scotland, but none in Northern Ireland or the Isle of Man.

In comparison, an estimated 5,291 pairs of **ringed plovers** bred in Great Britain in 2007 and a further 147 each in Northern Ireland and the Isle of Man, representing a large decrease compared to the respective 8,483, 134 and 70 pairs estimated in 1984. Of 4,232 pairs actually counted, 63% were recorded in Scotland, 28% in England, 5% in Wales, 2% in Northern Ireland and 3% in the Isle of Man. Changes on individual sites surveyed in both 1984 and 2007 suggest decreases of 47%, 6%, 41%, 66% and 9% in England, Wales, Scotland, Northern Ireland and the Isle of Man respectively and that the largest decreases occurred at inland sites.

The surveys have highlighted differences in the conservation status of these two species in the UK. **Little ringed plover** numbers have continued to increase, although their spread is becoming limited by geography. Only one site – the Afon Tywi Site of Special Scientific Interest (SSSI) in Wales (which supported 5.3% of the GB population in 2007) – is currently designated for the species. In contrast, breeding **ringed plovers** are a feature of six Special Protection Areas (SPAs) in England and Scotland, five of which held over 1% of the GB population estimate in 2007. Given the large decline in the numbers of the species across the country, it is important that the species' status in these key sites is maintained.

Breeding seabirds in the UK

The JNCC-led Seabird Monitoring Programme (SMP) has co-ordinated the collection of data from a UK-wide sample of seabird breeding colonies since 1986, in order to provide annual measures of seabird numbers and breeding success. Recent advances in the analysis of SMP data have generated annual trends in abundance for 16 species, allowing a more representative indicator of breeding seabird numbers in the UK to be produced (see page 5). This indicator couples SMP data with data from the three UK seabird censuses, Operation Seafarer (1969-70), the Seabird Colony Register (1985-88) and Seabird 2000 (1998-2002), in order to report changes from 1970 onwards for 19 species.

The UK seabird indicator shows that, in general, numbers of seabirds rose steadily from 1970 until the mid-1980s, after which it has fluctuated around 30-40% above the starting level and may be showing signs of a decline in the latter half of the current decade. However, as with all such indicators, this overall pattern hides much variation within individual species, some of which give great cause for concern.

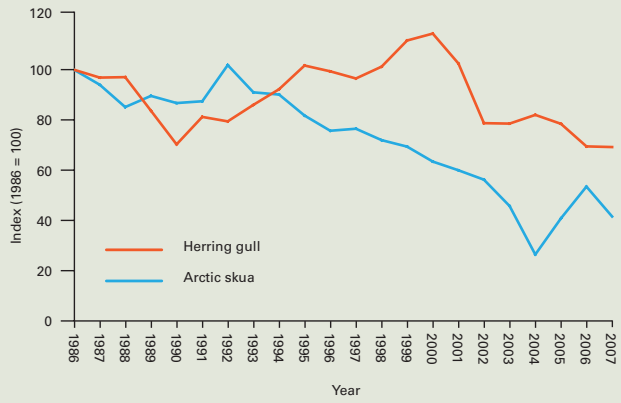
As the table shows, there is marked variation in trends between species since 1986. **Great skuas** and **razorbills** have both shown large increases, the former continuing an increase shown from 1970 onwards. Conversely, a number of species have shown marked declines,

Trends in seabird numbers from the SMP, from 1986 to 2007

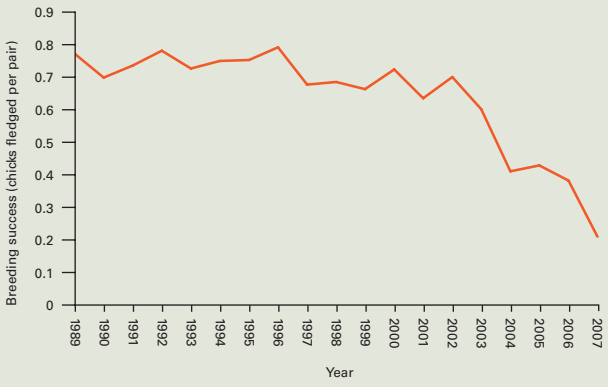
Species	1986–2007 trend %
Fulmar	-27
Gannet	52
Cormorant	12
Shag	-40
Arctic skua	-71
Great skua	235
Black-headed gull	20
Lesser black-backed gull	-6
Herring gull	-23
Great black-backed gull	-3
Kittiwake	-48
Sandwich tern	-7
Common tern	12
Arctic tern	13
Little tern	2
Guillemot	29
Razorbill	55

Common gull and puffin are also reported in the UK seabird indicator, but using data from seabird censuses only, with trends extrapolated from 2000 onwards. The **gannet** trend is derived from periodic **gannet** surveys.

Trends in Arctic skua and herring gull



Trend in productivity for guillemot

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Guillemots

amongst them **Arctic skua**, **shag**, **kittiwake** and **herring gull**.

The **Arctic skua** has moved straight from green to red in the *BoCC3* review (see pages 10-16) and is the first species ever to make this jump. The population, which is centred in the Northern Isles, declined by 56% since 1987, but has dropped particularly sharply since the early 1990s (see figure). In common with **kittiwakes**, the decline in **Arctic skuas** may be caused by failures in sandeel stocks which look likely to be linked to rising water temperatures in the North Sea. Increased persecution by **great skuas** may also be a contributing factor.

Two other seabirds moved to the red list this year. The **Balearic shearwater** is a non-breeding visitor to the UK that is considered Critically Endangered globally, but, although we should keep a close eye on the (increasing number of) birds visiting UK waters, the concern arises chiefly because of pressures on its breeding sites. The **herring gull** was also red-listed, on account of a severe breeding population decline over the long-term and a decline in wintering numbers over the last 25 years, as reported in *SUKB 2007*. More research is needed to determine what has driven this decline in **herring gulls**; is it simply a return to more natural numbers from a population inflated by the previous availability of food on land-fill tips and from wasteful fishing practices? Or is the decline symptomatic of more worrying changes in our marine environment?

Given the complexity of marine ecosystems and the likelihood of large-scale change in response to climate warming, accurate annual monitoring through SMP is an extremely valuable resource. However, the naturally low fecundity, delayed maturation and high longevity of many seabirds means that population levels can take years to respond to breeding failures, such as have been recorded in recent years. Therefore, the annual measures of productivity for seabirds in Scotland that we reported on in *SUKB 2007* have now been developed for the whole UK as an additional, more immediate measure of seabird population health. These new measures reflect the recent widespread breeding failures observed for some species, in particular **guillemot**, **razorbill** and **kittiwake**. The annual productivity in **guillemots** has declined by nearly 50% over the 1989-2007 period, with most of that fall being in the last decade (see figure).

Wintering waterbirds


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Avocets

Every winter, the UK plays host to millions of waterbirds, which visit to take advantage of our varied and extensive wetland habitats, notably the many estuaries. The fact that such large numbers of birds are able to find sufficient food to survive the winter is partly as a result of the relatively mild climate, due to the Gulf Stream keeping us warmer than equivalent latitudes of continental Europe. In the spring, these birds depart from our shores to head for breeding areas as far away as northern Canada and Siberia. Many of the most important UK sites are designated as Special Protection Areas and Ramsar sites (ie wetlands of international importance).

The wintering waterbird indicator on page 5 of this report shows trends in overall abundance for 46 native species or populations, derived from the Wetland Bird Survey (WeBS) and the Goose & Swan Monitoring Programme. It shows that there was a steady increase in wintering waterbirds in the UK from the mid-1970s to the late-1990s, which was due in part to the establishment of a network of protected wetland sites. For some species, reductions in hunting pressure will have contributed to an increase. However, since the mid-1990s, the indicators suggest that average waterbird numbers have levelled off, both for wildfowl and waders, and are now showing signs of a decline.

It should always be remembered that the indicators give only a general indication of change in the abundance of the UK's waterbirds since the mid-1970s. When individual species or populations are examined separately, markedly different patterns can be seen. Some species have increased strongly over time, with the largest increases over the last 25 years apparent for the **avocet** and re-established populations of the **greylag goose**; both of these species have benefited from the creation of new wetland habitat. On the other hand, 15 species show declines when measured over both the long-term and the last 10 years, the most striking being the continued decline of the **European white-fronted goose**. It is thought likely that this population, amongst many others, is shifting its distribution as the winter climate in northern Europe becomes milder, leading to fewer birds finding it necessary to travel as far as the UK. However, whether there is an effect on overall population sizes remains less clear.

Trends in wintering waterbirds

Species/population	Long-term trend %	Ten-year trend %
Mute swan	106	13
Bewick's swan	29	-25
Whooper swan	257	98
Pink-footed goose	221	23
European white-fronted goose	-70	-70
Greenland white-fronted goose	80	-29
Icelandic greylag goose	-8	-5
North-west Scotland greylag goose	326	224
Re-established greylag goose	717	66
Canada goose	159	30
Greenland barnacle goose	165	57
Svalbard barnacle goose	197	25
Dark-bellied brent goose	28	-20
Canadian light-bellied brent goose	n/a	10
Svalbard light-bellied brent goose	257	39
Shelduck	-16	-17
Wigeon	63	5
Gadwall	318	33
Teal	41	13
Mallard	-34	-15
Pintail	-8	10
Shoveler	61	23
Pochard	-38	-44
Tufted duck	-1	-11
Scaup	-3	25
Eider	-28	-18
Goldeneye	-15	-35
Red-breasted merganser	-1	-36
Goosander	-10	-39
Ruddy duck	243	14
Little grebe	n/a	30
Great crested grebe	n/a	3
Cormorant	n/a	15
Coot	n/a	0
Oystercatcher	3	-8
Avocet	>1,000	102
Ringed plover	-15	-25
Golden plover	332	69
Grey plover	59	-33
Lapwing	129	-9
Knot	24	6
Sanderling	12	12
Purple sandpiper	-51	-45
Dunlin	-26	-39
Black-tailed godwit	304	72
Bar-tailed godwit	-18	-20
Curlew	34	-6
Redshank	16	-4
Turnstone	-2	-14

Trend figures are derived from the Wetland Bird Survey and Goose & Swan Monitoring Programme. Lower coverage of some habitats (such as non-estuarine open coast, rivers and farmland) means that trends for species found largely on such habitats (such as **sanderling, mallard** and **lapwing**) may be less representative than those for species found in habitats with better survey coverage.

Long-term trends are the percentage changes between the smoothed index values for 1980/81 and 2005/06. Ten-year trends are the percentage changes between the smoothed index values for 1995/96 and 2005/06. Calculation of smoothed indices by use of a generalised additive model is detailed further at www.bto.org/webs/alerts/alerts/index.htm. Long-term trends for **Greenland white-fronted goose** and **Greenland barnacle goose** are unsmoothed, between national estimates in 1982/83 and 2007/08. National monitoring of **Canadian light-bellied brent goose**, **little grebe**, **great crested grebe**, **coot** and **cormorant** started later than for other species, so only 10-year trends are shown.

Waders

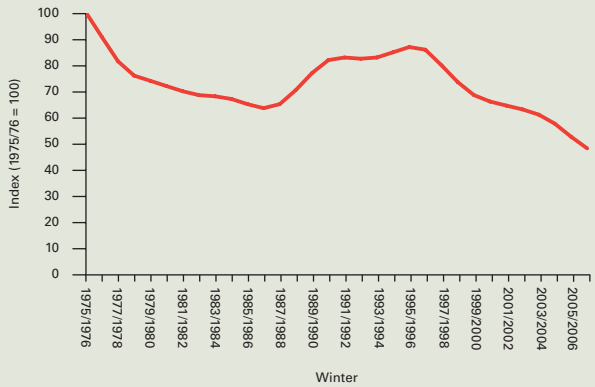
In the winter, large flocks of waders, feeding across mudflats or flying in to high tide roosts, are a familiar and important part of our biodiversity. Moreover, they are also one of the best-monitored groups of birds in the UK. The wader indicator shows an overall 6.5% decline since its peak in 2000/01, which, whilst not yet negating the overall increases of the previous three decades, gives cause for concern. Of all the individual species, only the **avocet** and **black-tailed godwit** have shown a consistent and continuing increase in numbers, although the data suggest that **golden plovers** and **lapwings** are also doing relatively well, at least on the better monitored coastal sites (but see page 33). Long-term trends of **knots** are relatively stable. Whilst the same would appear to be true for **sanderlings**, further investigation of the data for non-estuarine open-coast habitats actually suggests that numbers there have declined (see page 32). The other three non-estuarine specialists (**ringed plover**, **purple sandpiper** and **turnstone**) have also all declined markedly, although there has been a recent indication of some improvement for **turnstones**, on estuarine sites at least.

The remaining species are all very widespread estuarine species, and all are currently showing clear signs of declines, although the period over which these declines have occurred varies. **Grey plover** and **dunlin** numbers have declined every winter since 1995/96, **oystercatchers** began to decline in 1997/98, **curlews** in 1999/2000, **redshanks** in 2001/02 and **bar-tailed godwits** in 2002/03. Trends of **oystercatchers** and **curlews** have been typified by a slow but steady decline, whereas the decline in **bar-tailed godwit** numbers has been much more rapid, falling by more than 30% to the lowest ever recorded level. The **dunlin**, traditionally considered the most numerous coastal winter wader in the UK, has also reached its lowest ever recorded level, approximately half of those seen in the mid 1970s, and has been red-listed as a consequence. Notably low peak **dunlin** counts were recorded in 2006/07 from sites all around the UK, including the Wash, the Severn Estuary, the Firth of Forth and Langstone Harbour. There would appear to be no underlying cause for the declines at the level of such diverse wintering sites, and so their reasons are likely to be elsewhere. British wintering birds breed from northern Fennoscandia to western Siberia; there is no evidence for changes here, although this may be hard to ascertain. What is known, however, is that **dunlin** numbers are increasing in the Netherlands. It seems most likely that a smaller proportion of the birds are finding it necessary to cross the North Sea to winter in the UK, due to milder winter weather on the near-continent.


Sue Tranter (rspb-images.com)

Dunlin

Dunlin trend



Wildfowl

The overall trend of abundance of wildfowl wintering in the UK increased from the mid-1970s to the late 1990s. Since then, however, there has been a slight decline, and in the most recent year overall numbers fell again. This was reflected in the pattern of abundance for a number of individual species, with 19 showing a decline in numbers compared with the previous year (not including the non-native **ruddy duck**, which is subject to a Government-led eradication programme); only eight species showed an increase.

Amongst the swans, the status of the **Bewick's swan** remains a concern. In the last 10 years numbers in the UK have fallen by around a quarter. However, information on whether this is representative of the whole population is currently lacking, although anecdotal information suggests that this is likely. Better data are therefore urgently needed, and an international census due to take place in January 2010 should clarify the status of this species across the European flyway.

The outlook for the majority of goose populations, in both the long and short terms, is currently good. After a sustained decline since the mid 1990s, the number of **dark-bellied brent geese** has taken an upward turn, largely due to an excellent breeding season in 2005. However, it remains to be seen whether this upturn is sustained, as this would require a return to former levels of frequency of good breeding years of high breeding success. The recent International Census of **Greenland barnacle geese**, in spring 2008, produced the highest estimate for the population to date (see opposite). In contrast, the two **white-fronted goose** populations continue to show a decline, with numbers of **European white-fronted geese** in Britain at their lowest recorded thus far, although this is not a reflection of their status at the flyway scale (as discussed in previous editions of *SUKB*). Of much greater concern is the decline of the **Greenland white-fronted goose**, which is known to be at a population (and thus sub-species) scale. This sub-species is now BAP-listed, and on the red list, as a result of its steep recent decline and further information is provided on page 17.

Amongst the ducks, **mallards**, **pochards**, **red-breasted mergansers**, **goosanders** and **goldeneyes** continue to show the most serious declines. However, as highlighted previously, most of these species are likely to have trends in the UK that are strongly influenced by short-stopping. Two other species that have also undergone declines in numbers over both short- and long-terms are the **shelduck** and **eider**. These are much less migratory and thus have trends unlikely to be influenced strongly by short-stopping. Numbers of **shelducks** have been relatively stable in recent years, but dropped by just over 15% between 1997 and 2002. This decline is likely to reflect trends in the resident British population, although little is understood about what may be driving this. Despite a slight increase in the most recent year, numbers of **eiders** are also lower than those recorded during a period of stability in the late-1990s/early 2000s. In the UK, the largest congregations of **eiders** can be found wintering in the Firth of Clyde, however, numbers there have fallen notably: down almost by half in the two most recent years. Similarly, the Shetland population has declined considerably, and this has added significance because these birds are of a scarce sub-species *faeroensis*. **Eider** numbers at some other sites are, however, increasing, so the trend at the population scale is less clear. Close surveillance must continue in the coming years so that effective conservation action can be triggered should it be required.

Greenland barnacle goose

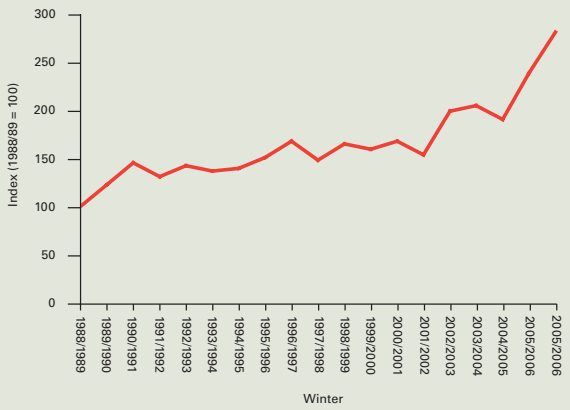
The population of the **barnacle goose** that breeds in eastern Greenland winters almost exclusively in north and west Scotland, throughout the Inner and Outer Hebrides and north to Orkney, and west Ireland, where the main concentrations occur between the Dingle Peninsula, Co Kerry, and Inishowen in north Co Donegal. The latest international census of this population was undertaken in spring 2008 and found that numbers had increased by 25% since the previous census in 2003, giving the highest population estimate to date.

In total, 328 islands and mainland sites were surveyed, with 12,200 birds located at 33 sites in Ireland, and 58,300 at 40 sites in Scotland, resulting in an overall population estimate of 70,500.

Total numbers of **Greenland barnacle geese** have followed an upward trend since surveys began in the 1960s. Numbers on Islay, the most important site, have closely followed this trend, whereas numbers elsewhere in Scotland remained relatively constant throughout the 1970s and 1980s, although they have increased since 1994. Numbers on the Inishkea Islands, the most important site in Ireland, have remained comparatively stable, while numbers at other Irish sites are also following a long-term upward trend.

The majority of the population occurs at a small number of key sites. Currently Islay, Tiree, Coll and South Walls in Scotland, and Inishkea Islands and Ballintemple/Lissadell in Ireland, hold around 80% of the total, with Islay alone holding nearly 64% of the entire population. The suite of SPA/SSSIs which have **Greenland barnacle goose** as a qualifying species held 94.9% of the national population in Scotland and 73.5% of the national population in Ireland, indicating that site protection for this population remains comprehensive.

Greenland barnacle goose trend



Waders of open coasts

Whilst the Wetland Bird Survey does an excellent job of monitoring waders using estuaries, many species also occur along the non-estuarine open coasts of the UK. Indeed, some species show a distinct preference for rocky or sandy shores, notably **turnstone**, **ringed plover**, **sanderling** and **purple sandpiper**. As the UK supports important numbers of these species, a special survey of the open coasts is carried out every decade to supplement the annual counts made by the Wetland Bird Survey.

Following previous surveys, known as NEWS (Non-estuarine Coastal Waterbird Survey), in 1984/85 and 1997/98, the latest of these surveys was carried out in the winter of 2006/07. In total, more than 15,000 km were surveyed, representing 51% of the UK's open coast. The survey was designed to enable estimation of numbers of birds present on the uncounted sections of coastline.

During this survey, which was undertaken largely by volunteers, 21 species of waders were noted. Population estimates (for open non-estuarine coast only) were made for the 13 most numerous of these species and are shown in the table.

Across the UK as a whole, all 13 key species of wader were estimated to have declined on open coasts between 1984/85 and 2006/07.

A number of species that had declined in numbers between 1984/85 and 1997/98 appear to have experienced a partial recovery subsequently, notably **ringed plover**, **purple sandpiper** and **turnstone**, although all remain down considerably on 1984/85 levels. Further analyses of the results are in hand to explore these findings further.

The survey suggested that **ringed plovers**, **curlews**, **redshanks** and **turnstones**, all species for which the open coast holds a considerable proportion of the over-wintering population, appear to be spread reasonably evenly relative to open coast availability throughout the UK. Of the other two species for which the open coast is particularly important, the **sanderling** has a southerly bias to its distribution and the **purple sandpiper** a strong northern bias. With the exception of the **sanderling**, this may suggest that, with increasingly mild winters, the distribution of these species within the UK will be less limited in the north than previously.

Estimates for open non-estuarine coasts

Species	UK 2006/07 estimate
Oystercatcher	71,104
Ringed plover	15,774
Golden plover	24,355
Grey plover	818
Lapwing	9,890
Knot	2,176
Sanderling	6,467
Purple sandpiper	11,329
Dunlin	10,012
Bar-tailed godwit	1,596
Curlew	46,243
Redshank	24,263
Turnstone	33,922

Wintering golden plovers and lapwings

Most of the UK's wintering wader species are monitored very effectively by WeBS but **golden plovers** and **lapwings** are exceptions, because a large proportion of their populations is found on non-wetland habitats, in particular pasture and arable fields. Since the 1970s their numbers on east coast estuaries have increased dramatically, but how have inland numbers fared? During the winter of 2006-07, the BTO (in partnership with JNCC) organised a survey of **golden plovers** and **lapwings** on farmland, synchronised with the monthly WeBS counts, with the aim of deriving new population estimates and understanding trends better. Between November and February WeBS reported between 110,000 and 178,000 **golden plovers** and between 132,000 and 326,000 **lapwings**. A further 25,000 to 52,000 **golden plovers** and 25,000 to 41,000 **lapwings** were counted at important terrestrial sites. From a sample of randomly selected tetrads we estimate that at least a further 160,000 **golden plovers** and 185,000 **lapwings** may be thinly distributed across the country outside wetlands and other well known locations.

This means that, in the peak month for each species, the current British wintering populations of **golden plovers** and **lapwings** are around 400,000 and 620,000 respectively. Compared with previous population estimates these figures are higher and lower respectively. The degree to which better counting versus real population changes has influenced these trends is uncertain, but the declining trend for breeding **lapwings** across Europe (from the Pan-European Common Bird Monitoring Scheme) suggests that, at least for **lapwings**, the figures represent a real winter population decline. Full results and discussion will be published in the Wader Study Group Bulletin.

David Tipling (tsph-images.com)

Golden plover

Bird Atlas 2007–11

Andy Hay (rspb-images.com)

More than 12,500 volunteers have taken part in fieldwork across Britain and Ireland in the first year of Bird Atlas 2007–11. The Bird Atlas aims to map the distribution of birds in both winter and the breeding season and to produce maps of relative abundance. Previous atlases have been carried out in the winter (1981–84) and breeding seasons (1968–72 and 1988–91), so the current combined winter and breeding season project aims to document changes in range since those landmark publications. The BTO, BirdWatch Ireland and Scottish Ornithologists' Club work closely with a network of local Atlas Organisers across Britain and Ireland to recruit, train and enthuse volunteers.

The aim over the four years of the project is to produce comprehensive species lists for every 10-km square in Britain and Ireland in both seasons. To do this, casual birdwatching sightings are submitted as Roving Records, additional records are drawn from BirdTrack (www.birdtrack.net) and at a later stage "top-up" records will be included from other schemes such as BBS, ringing and the Nest Record Scheme. In order to produce maps of relative abundance, Timed Tetrad Visits are carried out in at least eight tetrads (2 x 2 km squares) in every 10-km square.

The first complete year of fieldwork was very successful, with more than one million Roving Records submitted, over 16,000 tetrads covered for timed counts in the winter and over 14,000 tetrads covered for the breeding season. Geographical coverage was generally good, although as with all national surveys, coverage was best in the more populated areas. Over the two remaining years of the project, volunteer effort will need to focus on those areas poorly covered such as parts of Wales, Scotland and Ireland. Detailed maps of coverage can be found online at www.birdatlas.net.

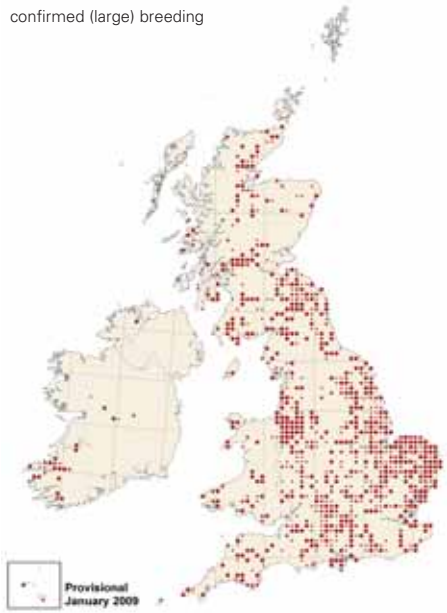
The high proportion of records submitted online allows us to produce provisional species maps quickly and to highlight some of the initial findings. Special surveys in the last 10 years and continued monitoring by BBS have documented population declines for breeding waders, such as **lapwings**, **curlews** and **redshanks**. Early results from the 2008 breeding season suggest a range contraction for **curlews**, with losses across Wales, Ireland, south-west England and parts of Scotland. It is important to remember that not all suitable breeding areas have been visited yet and further fieldwork over the next two breeding seasons will clarify the exact range contraction.

For **barn owls**, the provisional results suggest there have been both gains and losses across Britain and Ireland. There has been range expansion in eastern England, perhaps partly due to local conservation effort and the erection of large numbers of nestboxes in suitable breeding areas. Northward range expansion in Scotland into Ross-shire, Sutherland and Caithness has also been detected in the first year of fieldwork. Few records have been received so far from Wales, Ireland and south-west Scotland, which may indicate potential losses or may be attributable to lower levels of coverage.

As coverage across the whole of Britain and Ireland improves over the remaining years of the project we will get a clearer picture of those species where there have been significant changes in their range – both expansion and contraction.

Provisional breeding season distribution for barn owl

Three sizes of dot indicate possible (small), probable (medium) and confirmed (large) breeding



Provisional breeding season distribution for curlew

Three sizes of dot indicate possible (small), probable (medium) and confirmed (large) breeding

The value of volunteers in bird monitoring

The invaluable contribution of volunteer birdwatchers to bird research and conservation in the UK is obvious from the sources of most of the information reported in SUKB every year. However, this represents only part of the effort put in by volunteer birdwatchers on a variety of surveys and initiatives underway in the UK.

Firstly, there are the garden bird surveys – the BTO Garden BirdWatch and the RSPB's Big Garden Birdwatch – which collect information on birds in hundreds of thousands of gardens across the UK. These data are already used to assess bird abundance in towns and gardens in the Government's English Biodiversity Indicators and study differences in bird populations in urban, suburban and rural environments. Developments are currently underway to assess their use for monitoring rarer species and escaped exotics.

Another major scheme is BirdTrack, a year-round web-based survey that captures the species lists made by birdwatchers to regular birding haunts, and helps birders to manage their own birdwatching records, as well as feeding these records through to county bird recorders. Through BirdTrack (the full-year successor to Migration Watch), the seasonal movements of migrants can be tracked (and followed online with animated maps of weekly coverage) from first arrival on the south coast to their spread into the most northern regions of Scotland.

BirdTrack is also being used as a key mechanism for collecting data on farmland and woodland species of conservation concern in the Bird Conservation Targeting Project. In this joint initiative, BirdTrack data, along with information provided by county bird recorders and bird clubs, and other national schemes such as the BBS, are used to identify areas with the most viable populations of key species, such as **tree sparrow** and **corn bunting**. The presence of key farmland or woodland species in the area can then be used to target Environmental Stewardship or Woodland Grants. Although current use focuses on England, it is planned to extend this approach to the rest of the UK. Examples of maps showing target areas for each species can be viewed on the BirdTrack website (www.birdtrack.net), and the full range of maps and associated information can be accessed through Nature on the Map (www.natureonthemap.org.uk/adv_map_wiz1.aspx). As mentioned on page 34, BirdTrack is also an important portal for observers to submit records to the Bird Atlas 2007-11.

What you can do to help

Current and planned surveys

The information summarised in *The state of the UK's birds 2008* is drawn from the annual and periodic monitoring programmes described below and from the work of individual ornithologists. Anyone interested or wishing to take part in these surveys should contact the relevant organisations at the addresses on pages 38 and 39.

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 British Trust for Ornithology (BTO), the Joint Nature Conservation Committee (JNCC) – on behalf of Natural England (NE), Scottish Natural Heritage (SNH), the Countryside Council for Wales (CCW) and the Northern Ireland Environment Agency (NIEA) – and the RSPB [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 the BTO, the RSPB and JNCC (on behalf of NE, SNH, CCW and NIEA), in association with the WWT [contact BTO].

Goose and swan data are collected by the WWT **Goose & Swan Monitoring Programme**, funded under the WWT/JNCC partnership [contact WWT].

The **Waterways Bird Survey** (WBS) and the **Waterways Breeding Bird Survey** (WBBS) have been running since 1974 and 1998 respectively. These schemes aim to monitor riverside breeding birds, particularly waterway specialists, across the UK [contact BTO].

The **Barn Owl Monitoring Programme** was started in 2000 to monitor populations, through standardised recording at a set of **barn owl** sites representative of the distribution in the UK [contact BTO].

The **Big Garden Birdwatch** is the largest wildlife survey in the world – a simple design (one hour watching birds in the garden each January) means up to 475,000 people have taken part each year. The data provide an excellent snapshot of garden bird numbers across the UK [contact the RSPB].

Garden BirdWatch is a year-round scheme recording the weekly occurrence and numbers of birds in participants' gardens. The data collected provide valuable information on changes in bird use of rural and urban habitats that can be related to population trends in the wider countryside [contact BTO].

BirdTrack is a year-round online bird recording system run by BTO, the RSPB and BirdWatch Ireland. The collection of list data from a large number of observers will enable the fulfilment of a range of national research and monitoring objectives [contact BTO/RSPB or see www.birdtrack.net].

An advance programme of UK-wide surveys of other priority breeding species has been established under the Statutory Conservation Agencies and RSPB Annual Breeding Bird Scheme (**SCARABBS**) Agreement. **Corncrakes**, **capercaillie** and **cirl buntings** are being surveyed in 2009 [contact the RSPB].

Bird Atlas 2007–11. Twenty years since the last breeding atlas, and 30 years on from the last winter atlas, the BTO, BirdWatch Ireland and the Scottish Ornithologists' Club are teaming up to produce the next landmark atlas to document the changing distribution of Britain's and Ireland's avifauna. This atlas combines winter and breeding season fieldwork. More details can be found at www.birdatlas.net

About us

The state of the UK's birds 2008 is also available online on the websites of the BTO, the RSPB and WWT (see addresses below).

Acknowledgements

Monitoring of birds in the UK, such as that covered in this report, involves a broad partnership of government agencies, NGOs, sponsors and independent ornithologists, including: Anglian Water; BirdWatch Ireland; *British Birds*; British Trust for Ornithology; British Waterways; Centre for Ecology and Hydrology; CJ WildBird Foods; Countryside Council for Wales; Department for Environment, Food and Rural Affairs; Environment Agency; Environment Wales; European Bird Census Council; European Social Fund; European Union Life Programme; Forestry Commission; Forest Enterprise; Game and Wildlife Conservation Trust; Greenland White-fronted Goose Study; Hawk and Owl Trust; Irish Brent Goose Research Group; Joint Nature Conservation Committee; Manx Bird Atlas Project; Ministry of Defence; National Trust; National Trust for Scotland; Natural England; Northern Ireland Environment Agency; Northumbrian Water; Raptor Study Groups; Rare Breeding Birds Panel; the Royal Society for the Protection of Birds; Scottish Executive Rural Affairs Department; Scottish Natural Heritage; Scottish Ornithologists' Club; Scottish Raptor Study Groups; Seabird Group; Severn Trent Water; Shetland Oil Terminal Environmental Advisory Group; Thames Water; University of Cambridge; University of Exeter Centre for Ecology and Conservation; Wales Raptor Study Group; Welsh Kite Trust; Wildfowl & Wetlands Trust; the Wildlife Trusts; Woodland 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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www.ni-environment.gov.uk

Scottish Natural Heritage:
Great Glen House, Leachkin Road, Inverness, IV3 8NW
Tel: 01463 725000

Visit the SNH website:
www.snh.org.uk

The RSPB speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing – help us keep it that way. We belong to BirdLife International, the global partnership of bird conservation organisations.

The BTO is the UK charity dedicated to research on wild birds. Through its volunteer network, it monitors populations by organising long-term surveys such as the Breeding Bird Survey and the Wetland Bird Survey, the Ringing Scheme and the Nest Record Scheme, and carries out research related to bird conservation.

The Wildfowl & Wetlands Trust (WWT) is a leading UK conservation organisation saving wetlands for wildlife and people across the world. WWT's conservation department has organised national waterbird monitoring schemes for over 50 years.

The Countryside Council for Wales champions the environment and landscapes of Wales and its coastal waters as sources of natural and cultural riches, as a foundation for economic and social activity, and as a place for leisure and learning opportunities. We aim to make the environment a valued part of everyone's life in Wales.

Natural England works for people, places and nature to conserve and enhance biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas. We conserve and enhance the natural environment for its intrinsic value, the wellbeing and enjoyment of people, and the economic prosperity it brings.

The aim of the **Northern Ireland Environment Agency** is to protect, conserve and promote the natural and built environment and to promote its appreciation for the benefit of present and future generations.

The task of **Scottish Natural Heritage** is to secure the conservation and enhancement of Scotland's unique and precarious natural heritage – the wildlife, the habitats and the landscapes which have evolved in Scotland through the long partnership between people and nature.

Joint Nature Conservation Committee is the statutory adviser to Government on UK and international nature conservation. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems.

Front cover: yellow wagtail by Steve Round (rspb-images.com)

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