# The state of the UK's birds 2014

# Contents



Throughout this report species names are colour-coded according to their conservation status as identified by *Birds of Conservation Concern 3*, published in 2009.

All bird species are shown in **bold**. The 52 species identified as being of the greatest concern are **red-listed**, the 126 species of moderate concern are **amber-listed** and the 68 species of least concern are **green-listed**.

Nigel Blake (rspb-images.com)

*SUKB* looks at the status of all the UK's birds, but our focus for this issue is the UK's migratory species, such as the yellow wagtail

# Headlines

Here are some of the headlines from this year's report on bird monitoring in the UK and its Overseas Territories.

## Migratory birds

A new migratory bird indicator highlights dramatic declines in a suite of species wintering in the humid zone of Africa, including **nightingales**, **tree pipits** and **spotted flycatchers**.

The first Breeding Bird Survey (BBS) volunteers, who surveyed their squares 20 years ago, would have counted twice as many migratory **cuckoos** and **whinchats** as they do today.

## Overseas Territories (OTs)

There have been mixed fortunes for the OTs' important albatross populations, with **black-browed albatrosses** changing from Globally Threatened to Near Threatened. In contrast, **grey-headed albatrosses** have been uplisted from Vulnerable to Endangered due to rapid population declines.

Protection from habitat loss and impacts of invasive non-native species remains top priority for **St Helena plovers** and **Montserrat orioles**.

## Species highlighted

The latest national survey results from 2013 reveal declines in **woodcocks**, a woodland species, and in **twites**, birds of upland farmland and moorland.

Three wintering wading bird species of non-estuarine habitats have declined in recent years: **turnstones**, **purple sandpipers** and **ringed plovers**.

The latest international census reported the highest ever recorded numbers of **Greenland barnacle geese**.

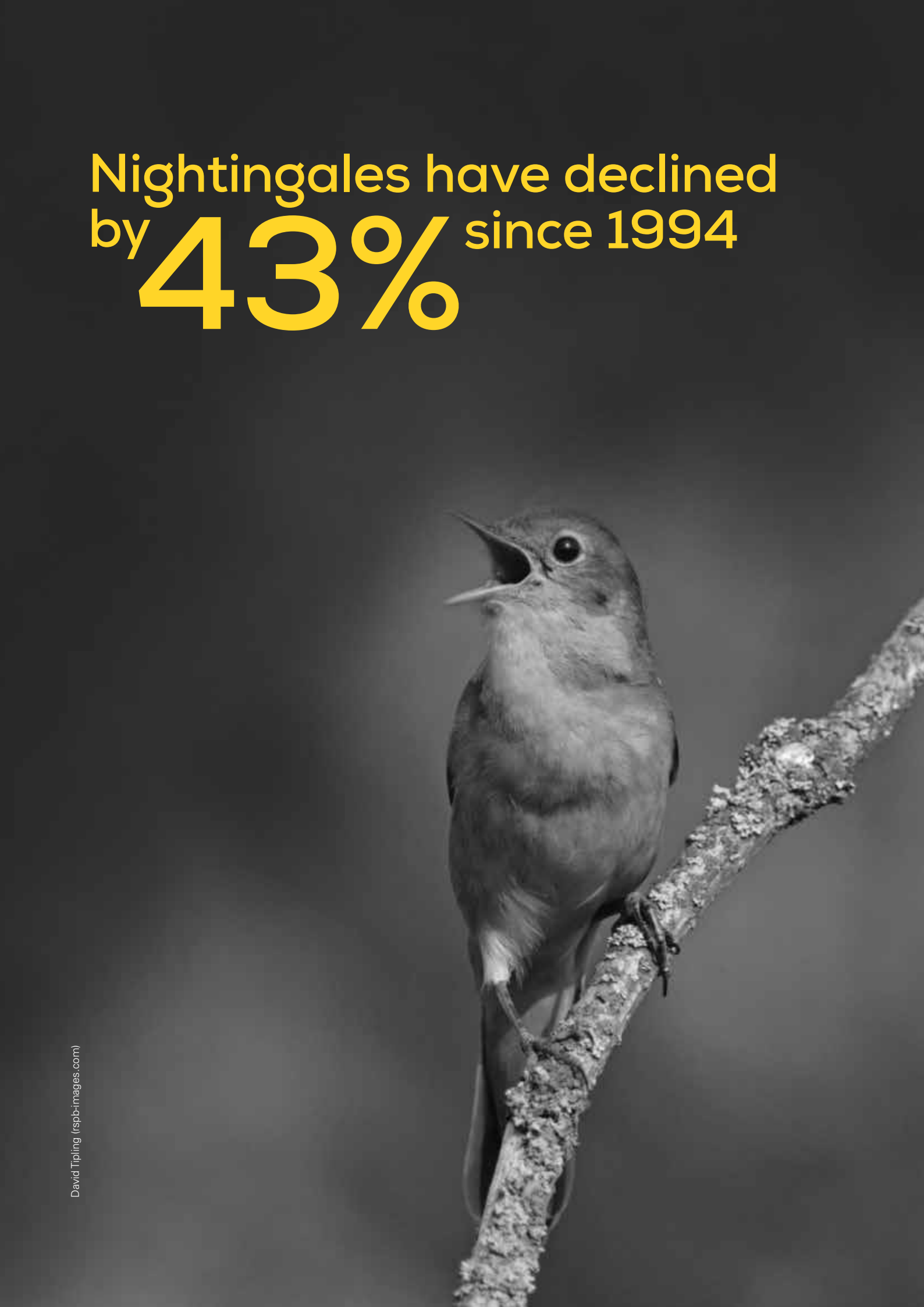
## Scarce and rare breeding birds

For the first time in *The state of the UK's birds* (*SUKB*), we have attempted to summarise the trends of our scarce and rare breeding species. This includes declines in breeding wading birds (**ruffs** and **purple sandpipers**), and wildfowl (**Slavonian grebes** and **common scoters**), as well as increases for a number of species that have been the subjects of conservation action, including **corncrakes**, **bitterns** and **stone-curlews**.

David Kjaer (rspb-images.com)

Corncrake numbers are increasing

# Nightingales have declined by 43% since 1994



David Tipling (rspb-images.com)

# Introduction

This publication, *The state of the UK's birds 2014* (*SUKB*), is the fifteenth edition of this report. It provides a one-stop shop for all the latest results from annual, periodic and one-off surveys and monitoring studies.

We provide an in-depth, up-to-date overview of the status of bird populations in the UK and its OTs, and give an update on trends for as many of the UK's regularly occurring species as possible. This year, for the first time, we have included a table of trends for rare and scarce breeding species.

This year's *SUKB* focuses on the migratory birds that spend part of their annual cycle in the UK, whether breeding, wintering or passing through on migration.

We present new indicators for birds with different migratory strategies, and results from research using the latest tracking technologies. There is growing awareness of the importance of understanding the inter-connectedness of migrant bird populations, and the pressures and threats they face at each stage of their migration.

Developing our understanding on an international scale, and increasing our knowledge of the role the UK plays in sustaining these populations, will be essential to the successful implementation of flyway-wide conservation.

*SUKB* 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), together with the UK Government's statutory nature conservation agencies: the Joint Nature Conservation Committee (JNCC), Natural England (NE), Natural Resources Wales (NRW), Northern Ireland Environment Agency (NIEA) and Scottish Natural Heritage (SNH).

Sally Dunn (RSPB)

Staff and volunteers work together to tag and track declining species such as the turtle dove, to find out the migration routes and wintering areas

## A special thank you to volunteers

**Bird monitoring in the UK is led by NGOs in collaboration with the Government, but relies on the efforts of many thousands of volunteers, without whom the evidence base upon which bird conservation in the UK depends would be much poorer.**

*SUKB* gives us the opportunity to recognise and celebrate the huge role that volunteers play in bird monitoring, and to thank them for the time and effort they devote to the schemes described within the report. If you are one of these volunteers, then thank you. If you're not a volunteer, why not consider joining one of the wide variety of monitoring opportunities outlined on page 51?

**This report should be referenced as** Hayhow DB, Conway G, Eaton MA, Grice PV, Hall C, Holt CA, Kuepfer A, Noble DG, Oppel S, Risely K, Stringer C, Stroud DA, Wilkinson N and Wotton S, 2014. *The state of the UK's birds 2014*. RSPB, BTO, WWT, JNCC, NE, NIEA, NRW and SNH, Sandy, Bedfordshire.

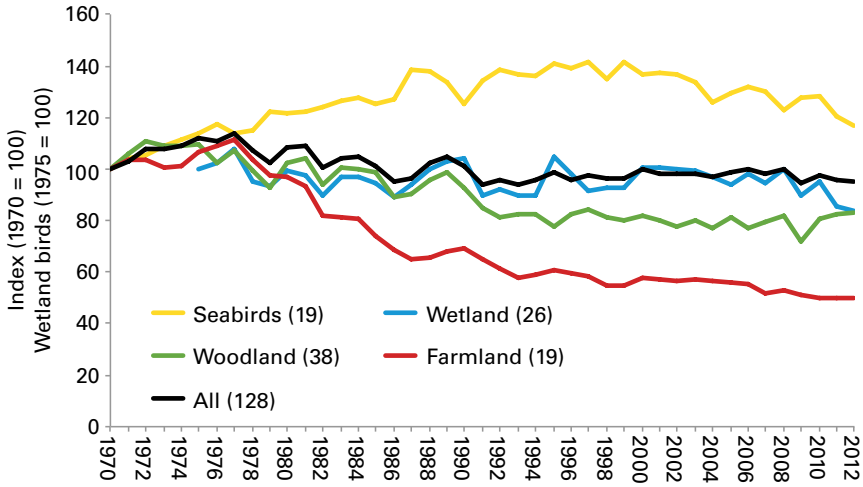
# Tiny tags are allowing us to track small migrant birds

Andy Hay (rspb-images.com)

# Wild bird indicators

## UK wild bird indicator

The UK wild bird indicator is a high-level measure of the state of an important element of biodiversity: the populations of wild birds. Along with indicators for other well-monitored taxa, such as butterflies and bats, it is used as a proxy for the overall state of biodiversity. It has also been used to assess progress towards sustainable development goals.

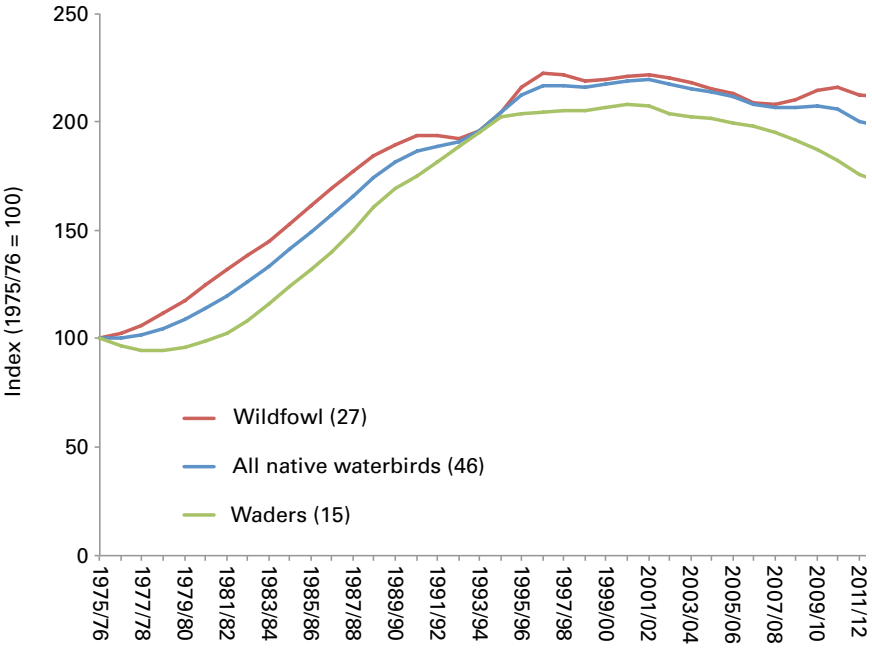



UK wild bird indicator

The indicator is typically broken down by broad habitat type, presenting the average population trends for bird species associated with farmland, woodland, and wetlands, and for seabirds, as well as for all species combined. It is important to note there is considerable variation in the individual species trends which go into calculating the indicator. To see which species are thriving and which are declining, see pages 12–13 for common breeding bird trends included in the farmland, woodland, and wetland indicators, and page 30 for seabirds. The latest wild bird indicators for the UK were published in autumn 2013. The indicators for water and wetland birds, and seabirds, continue to decline, while the farmland bird indicator remains at less than half its 1970 starting value.

## UK wintering waterbird indicator

The UK holds internationally important populations of swans, geese, ducks and wading birds every winter. The wintering waterbird indicator shows steady increases in numbers of these birds from the mid-1970s to the late 1990s. A period of stability followed, before numbers entered a shallow decline, and now the wading bird indicator has fallen to its lowest since 1990. See page 38 for trends in individual species and more discussion of the indicator.




UK wintering waterbird indicator

# UK migratory bird indicator

We have, for the first time, used an indicator approach to summarise trends in UK breeding species grouped by migratory strategies. Species included are restricted to passerines and near-passerines, which breed in the UK but winter elsewhere, and are well monitored by common bird monitoring schemes.

We use the longest trend available for each species, incorporating information from the BBS's predecessors (the Common Birds Census and the Waterways Bird Survey) as well as bespoke surveys, and we use the same methods as for the established wild bird indicators. Work is underway to develop indicators for Arctic-breeding waterbirds that accurately account for breeding origin.

Following recent publications on migratory birds in the UK, we have placed breeding migrants in four categories (see pages 12–13).

The partial/short-distance migrant category is comprised of six species, many of which winter in continental Europe, with some going as far south as North Africa. Some include a sedentary element and stay in the UK.

The longer-distance, Afro-Palearctic migrants are sub-divided into three categories:

- those wintering in the arid zone of Africa immediately south of the Sahara (the Sahel and Sudan savannah)
- those wintering in the humid zones of central Africa (the Guinea savannah and forest)
- those wintering further south in the tropical and subtropical zones of Africa.

The indicator for all other "non-migratory species" is also shown for comparison. Species for which only small proportions of the UK population winter outside the UK (for example **linnets** and **goldfinches**) are categorised as non-migratory.

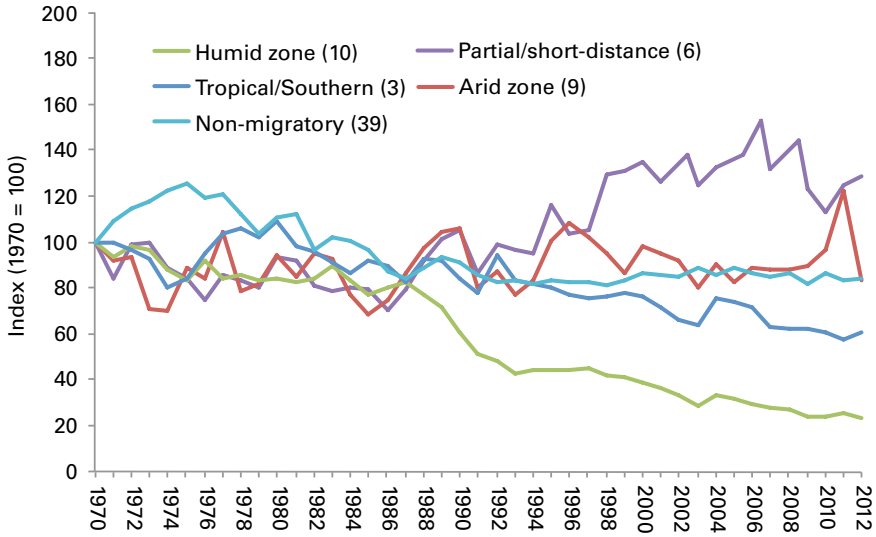
Humid zone species (such as **whinchats**, **nightingales**, **tree pipits** and **spotted flycatchers**) show the most dramatic declines; the indicator has dropped by just over 70% since the late 1980s. This contrasts with species wintering in the arid Sahelian areas of Africa (including **sand martins**, **whitethroats** and **sedge warblers**), which have fluctuated considerably since 1970 but show a less than 20% decline overall.

The largest declines in this group were probably in the late 1960s. Common bird monitoring schemes were in their infancy in the UK at the time and were poor at monitoring some species, although these early surveys did pick up the dramatic fall in **whitethroats** over this period.

Species wintering furthest south (represented here by **cuckoos**, **swifts** and **swallows**) also show a substantial decline since the early 1980s, whereas the group of species that winter north of the Sahara (the partial/European migrants) show a substantial increase since the mid 1980s. This latter group includes **blackcaps**, **meadow pipits**, **chiffchaffs** and **stonechats**.

As with all indicators, each line masks some variation in individual species trends. Recent research has also highlighted that some species have divergent trends across the UK. For example, **willow warblers**, which are humid zone migrants, show a long term decline (page 13), but research has shown that populations breeding in the north and west of the UK are increasing while those breeding in the south and east are decreasing.

Read more about how migratory birds are faring on pages 20-27.




UK migratory bird indicator

All of the indicators start at 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.

# An update on common breeding birds

The Breeding Bird Survey (BBS) has now been running for 20 years, and each year's data adds to our understanding of the changing populations of common and widespread breeding birds.

Every year, thousands of BBS volunteers collectively walk 10,000 miles and count more than a million individual birds. Many sites have been surveyed by the same dedicated volunteers in each of the 21 seasons, resulting in a powerful standardised dataset for monitoring changes in breeding bird numbers.

## Data comparison

Counts are analysed, compared with previous records and, finally, distilled down to a single figure for each species, which we present here.

The table overleaf shows the estimated long-term (1970 – 2012) and BBS (1995 – 2012) trends for common breeding birds in the UK, based on the results of four annual bird surveys: the Common Birds Census (CBC) from 1970 to 2000, its replacement scheme, the BBS, from 1994 onwards, the Waterways Bird Survey (WBS) from 1974 to 2011, and its replacement, the Waterways Breeding Bird Survey (WBBS), from 1998 onwards.

## Striking declines in migrant birds

As highlighted when discussing the migratory bird indicator on page 9, some of the most striking declines are seen in species that breed in the UK, but spend the winter months in Africa. BBS volunteers surveying their squares 20 years ago would have counted twice as many **cuckoos**, **whinchats** and **spotted flycatchers** as they do today, and long-term trends derived from CBC data tell us that the populations of these migrants were already severely depleted when the BBS started.

Migrants in trouble include woodland breeding birds, such as **wood warblers** and **pied flycatchers**. Farmland specialists, such as **turtle doves** and **yellow wagtails**, may be affected by conditions on migration and on their wintering grounds, in addition to the pressures they face here.

## Potential impacts

Away from the UK, birds encounter loss of important habitats and changes to seasonal weather patterns. They face hunting in parts of their winter range and on stop-over sites in Europe. We discuss these and other drivers in more detail on pages 20-27.

David Kjaer (rspb-images.com)

**BBS volunteers surveying their squares 20 years ago would have counted twice as many cuckoos, whinchats and spotted flycatchers**

# Many organisations are joining forces to save turtle doves

David Tipling (rspb-images.com)

# Trends in common breeding birds in the UK

| Species | Long-term trend % (1970 – 2012) | BBS trend % (1995 – 2012) | Wintering Zone (categories as described on page 9) | BOCC |
|---|---|---|---|---|
| Mute swan | 200 | 29 | Resident | |
| Greylag goose | n/a | 203 | Resident | |
| Canada goose | n/a | 54 | Non-native resident | |
| Shelduck* | 111 | -10 | Resident | |
| Gadwall | n/a | 107 | Partial/Short Distance | |
| Mallard | 97 | 17 | Resident | |
| Tufted duck | 64 | 1 | Partial/Short Distance | |
| Red grouse | n/a | 13 | Resident | |
| Red-legged partridge | -19 | 19 | Non-native resident | |
| Grey partridge | -91 | -56 | Resident | |
| Pheasant* | 72 | 32 | Non-native resident | |
| Grey heron | 3 | -14 | Resident | |
| Little grebe | -53 | -37 | Partial/Short Distance | |
| Great crested grebe | n/a | 8 | Partial/Short Distance | |
| Red kite | n/a | 805 | Resident | |
| Sparrowhawk | 89 | -4 | Resident | |
| Buzzard* | 438 | 79 | Resident | |
| Kestrel* | -48 | -35 | Partial/Short Distance | |
| Hobby | n/a | 8 | Humid/Tropical/Southern | |
| Peregrine | n/a | -28 | Resident | |
| Moorhen | -29 | -14 | Resident | |
| Coot | 65 | 24 | Resident | |
| Oystercatcher | n/a | -13 | Partial/Short Distance | |
| Golden plover | n/a | -6 | Partial/Short Distance | |
| Lapwing | -64 | -42 | Partial/Short Distance | |
| Snipe | n/a | 11 | Partial/Short Distance | |
| Curlew* | -62 | -43 | Partial/Short Distance | |
| Common sandpiper | -48 | -36 | Humid | |
| Redshank | n/a | -44 | Partial/Short Distance | |
| Feral pigeon | n/a | -17 | Resident | |
| Stock dove* | 97 | 12 | Resident | |
| Woodpigeon | 135 | 42 | Resident | |
| Collared dove | 361 | 16 | Resident | |
| Turtle dove | -96 | -88 | Humid | |
| Ring-necked parakeet | n/a | 1060 | Non-native resident | |
| Cuckoo* | -62 | -49 | Humid/Tropical/Southern | |
| Barn owl | n/a | 277 | Resident | |
| Little owl | -60 | -51 | Non-native resident | |
| Tawny owl | -35 | -25 | Resident | |
| Swift | n/a | -38 | Tropical/Southern | |
| Kingfisher | -20 | -7 | Resident | |
| Green woodpecker* | 111 | 38 | Resident | |
| Great spotted woodpecker | 360 | 139 | Resident | |
| Lesser spotted woodpecker | -82 | n/a | Resident | |
| Magpie | 96 | -1 | Resident | |
| Jay | 12 | 25 | Resident | |
| Jackdaw | 143 | 53 | Resident | |
| Rook | n/a | -17 | Resident | |
| Carrion crow* | 95 | 17 | Resident | |
| Hooded crow | n/a | 7 | Resident | |

| | | | | |
|---|---|---|---|---|
| Raven | n/a | 14 | Resident | |
| Goldcrest* | -30 | -9 | Resident | |
| Blue tit | 25 | 5 | Resident | |
| Great tit | 88 | 43 | Resident | |
| Coal tit | 28 | 11 | Resident | |
| Willow tit | -94 | -83 | Resident | |
| Marsh tit | -71 | -29 | Resident | |
| Skylark* | -61 | -24 | Resident | |
| Sand martin | -47 | -26 | Arid | |
| Swallow* | 20 | 32 | Humid/Tropical/Southern | |
| House martin* | -45 | -5 | Humid | |
| Long-tailed tit* | 94 | 15 | Resident | |
| Wood warbler | n/a | -66 | Humid | |
| Chiffchaff | 85 | 88 | Partial/Short Distance | |
| Willow warbler* | -36 | 0 | Humid | |
| Blackcap | 277 | 137 | Partial/Short Distance | |
| Garden warbler | 0 | -14 | Humid | |
| Lesser whitethroat | 10 | -6 | Arid | |
| Whitethroat | 10 | 35 | Arid | |
| Grasshopper warbler | n/a | -6 | Arid | |
| Sedge warbler | -18 | 4 | Arid | |
| Reed warbler | 120 | 21 | Arid | |
| Nuthatch | 250 | 91 | Resident | |
| Treecreeper | -12 | 6 | Resident | |
| Wren | 21 | -3 | Resident | |
| Starling* | -81 | -51 | Resident | |
| Dipper | -32 | -17 | Resident | |
| Blackbird | -17 | 21 | Resident | |
| Song thrush | -58 | 5 | Resident | |
| Mistle thrush | -61 | -34 | Resident | |
| Spotted flycatcher | -88 | -49 | Humid | |
| Robin | 32 | 7 | Resident | |
| Nightingale | n/a | -43 | Humid | |
| Pied flycatcher | n/a | -53 | Humid | |
| Redstart | 65 | 44 | Arid | |
| Whinchat | n/a | -55 | Humid | |
| Stonechat | n/a | -3 | Partial/Short Distance | |
| Wheatear | n/a | 2 | Arid | |
| Dunnock | -30 | 21 | Resident | |
| House sparrow* | -65 | -2 | Resident | |
| Tree sparrow* | -90 | 128 | Resident | |
| Yellow wagtail | -68 | -43 | Arid | |
| Grey wagtail | -60 | -32 | Resident | |
| Pied wagtail | 20 | -11 | Resident | |
| Tree pipit* | -71 | 6 | Humid | |
| Meadow pipit* | -44 | -17 | Partial/Short Distance | |
| Chaffinch | 35 | 11 | Resident | |
| Greenfinch | -24 | -23 | Resident | |
| Goldfinch* | 144 | 112 | Resident | |
| Siskin | n/a | 77 | Resident | |
| Linnet* | -57 | -25 | Resident | |
| Lesser redpoll* | -85 | 48 | Resident | |
| Common crossbill | n/a | 74 | Resident | |
| Bullfinch | -42 | 5 | Resident | |
| Yellowhammer | -55 | -14 | Resident | |
| Reed bunting | -41 | 14 | Resident | |
| Corn bunting | -90 | -39 | Resident | |

All BBS trends are based on the smoothed estimates of change in the UK between 1995 and 2012, except for seven riverine species (**tufted ducks**, **little grebes**, **common sandpipers**, **kingfishers**, **sand martins**, **dippers** and **grey wagtails**) for which a similar measure is calculated by combining the WBS and WBBS data, and **grey herons**, which is based on the Heronries Census.

For most species, the long-term trends are based on the smoothed estimates of change between 1970 and 2012 in a combined CBC-BBS analysis. However, for species with evidence of marked differences in the population monitored by the BBS and its predecessor the CBC (coded*), we use the CBC results until 1994, and solely the BBS from 1994 to 2013. Hence, long-term trends for these species may not be representative of the UK population prior to 1994, due to the more limited geographical and habitat coverage of the CBC (mainly farmland and woodland sites in England).

Long-term trends for the seven riverine species are based on smoothed WBS-WBBS estimates of change between 1975 and 2012. Although all data including the most recent from 2013 are included in these analyses, we report measures of change from 1970 or 1995 to the penultimate year (2012), to avoid unreliable effects due to smoothing at the endpoints of time series. Apart from the seven riverine species, long-term trends cover shorter time periods, due to the later availability of reliable data, as follows: 1972 – 2012 for **collared doves**, 1975 – 2012 for **sparrowhawks** and 1977 – 2012 for **house sparrows**.

More details on the BBS, including The Breeding Bird Survey 2013 report, can be found at **www.bto.org/bbs**

# Trends of scarce and rare breeding birds

While population trends for our common and widespread breeding birds are provided by the BBS (pages 12–13), for many other species with smaller populations and/or restricted ranges, a generic approach is not suitable.

To enable us to track the fortunes of such species, which include many of our greatest conservation priorities, a range of methods is used.

Many of our scarcer breeding species are surveyed at regular intervals of either six (for species of the greatest concern, such as **hen harriers** and **capercaillie**) or 12 years. Some species, such as **white-tailed eagles** and **stone-curlews**, are surveyed annually. These surveys, which may entail a complete census of the breeding population or a scientifically rigorous sample, provide updated population estimates that enable the trend over intervening years to be calculated. Many surveys are funded and organised as part of the Statutory Conservation Agency and RSPB Annual Breeding Bird Scheme (SCARABBS). In addition, the BTO runs surveys for a range of species, such as **peregrines**. Nearly all these surveys employ the skills, experience and enthusiasm of hundreds of bird recorders.

## Multiple sources of data

For the first time in *SUKB*, we have attempted to summarise the trends of our scarce and rare breeding species. The table on pages 16 and 17 draws on the best sources of information. Where possible, we have given trends for the most recent 25 years, but in many cases different trend periods (some considerably shorter than 25 years) are provided.

## The work of the Rare Breeding Birds Panel

The RBBP reports on the UK's rarest breeding birds. The RBBP is an independent body supported by the JNCC, RSPB and BTO. Since 1973 the Panel has collated information from a wide range of sources, relying mainly on reports of breeding birds by birdwatchers that have been submitted through the county bird recorder network. Other data sources include the monitoring of reserves, returns from activities (such as bird ringing) conducted under licence, and the work of dedicated experts in raptor study groups and other expert networks. By bringing all these data streams into one secure database, the RBBP is able to provide annual updates on the populations of more than 80 species, as well as monitoring those that only occasionally attempt to breed in the UK.

Combined with bespoke seabird monitoring (see pages 30–33), we have regular updates on the status of nearly all the UK's breeding birds. Some gaps remain for birds that are particularly difficult to survey, such as **short-eared owls** and **ptarmigans**, or those for which coverage is poor despite falling under the RBBP's remit, such as **lesser spotted woodpeckers**. Typically, gaps in our species coverage are for those species found in woodlands and in the uplands of the north and west of the UK, where the numbers of birdwatchers are lower and the difficulties of surveying, in remote and rugged terrain, are greater.

The *Bird Atlas 2007–11* has shown us how the ranges of these poorly-monitored species have changed over the last 40 years, giving us some idea of their conservation status. In some instances this has heightened our concern, such as in the case of **short-eared owls**, which have undergone a 47% contraction in range since the first breeding bird atlas in 1968–72.

# The RBBP monitors the UK's rarest breeding birds

Chris Knights (rspb-images.com)

## There is still a knowledge gap

Data are still lacking for some species and we need to improve monitoring to track their changing fortunes.

A number of species have only been added to the list of species covered by the RBBP in recent years, so there is insufficient data to allow trends to be produced for **water rails**, **shovelers**, **long-eared owls**, **short-eared owls**, **lesser spotted woodpeckers**, **willow tits** and **hawfinches**.

Furthermore, for a number of species, the coverage achieved by collating birdwatchers' reports is very poor and so reliable trends cannot be calculated for **greenshanks**, **wigeons**, **parrot crossbills** and **snow buntings**. Three of these four species (not **wigeons**) have been surveyed under the SCARABBS programme, but only once, so we do not yet have a second population estimate from which to produce a trend.

A number of other species have bred in the UK in recent years, but only infrequently or not for sufficient years for us to produce a meaningful trend. They include **little bitterns**, **cattle egrets**, **great white egrets**, **purple herons**, **spoonbills**, **great bustards**, **black-winged stilts**, **little gulls**, **yellow-legged gulls**, **bee-eaters**, **icterine warblers** and **common rosefinches**. As reported in *SUKB* 2012, a larger number of species have exhibited some breeding behaviour in the UK – singing males in spring, for example – but are not known to have attempted to breed as yet. At least some of these may be future colonists, as more species shift ranges northwards in response to climate change.

## Trends in scarce and rare breeding birds in the UK

| Species[1] | Population estimate[2] | Trend (% change) | Trend source and period[3] | BOCC |
|---|---|---|---|---|
| Whooper swan | 9 – 14 | 2,475 | RBBP | |
| Pintail | 9 – 33 | 44 | RBBP | |
| Garganey | 14 – 93 | 74 | RBBP | |
| Pochard | 350 – 630 | 281 | RBBP | |
| Common scoter | 52 | -63 | RBBP | |
| Goldeneye | 200 | 87 | RBBP | |
| Quail | 540 | 523 | RBBP | |
| Black grouse | 5,100 | -80 | SCARABBS 1991/92 – 2005 | |
| Capercaillie | 1,300 | -42 | SCARABBS 1992/93 – 2009/10 | |
| Red-throated diver | 1,300 | 38 | SCARABBS 1994 – 2006 | |
| Black-throated diver | 220 | 16 | SCARABBS 1995 – 2006 | |
| Bittern | 120 [2013] | 567 | Annual surveys 1990 – 2013 | |
| Little egret | 660 – 740 | Large increase | RBBP | |
| Slavonian grebe | 30 | -62 | Annual surveys | |
| Black-necked grebe | 32 – 51 | 54 | RBBP | |
| Honey-buzzard | 33 – 69 | 788 | RBBP | |
| Red kite | 1,600 | 2,054 | RBBP | |
| White-tailed eagle | 79 [2013] | 850 | Annual surveys | |
| Marsh harrier | 320 – 380 | 988 | RBBP | |
| Hen harrier | 630 | 15 | SCARABBS 1988/89 – 2010 | |
| Montagu's harrier | 12 – 16 | 76 | RBBP | |
| Goshawk | 280 – 420 | 448 | RBBP | |
| Golden eagle | 440 | 5 | SCARABBS 1982 – 2003 | |
| Osprey | 200 – 250 | 462 | RBBP | |
| Merlin | 1,100 | 94 | SCARABBS 1983/84 – 2008 | |
| Hobby | 2,800 | 314 | RBBP | |
| Peregrine | 1,500 | 92 | SCARABBS 1981 – 2002 | |

| | | | | |
|---|---|---|---|---|
| Spotted crake | 28 [2012] | 172 | RBBP | |
| Corncrake | 1,200 | 163 | Annual surveys | |
| Crane | 9 – 14 | 1,660 | RBBP | |
| Avocet | 1,500 | 504 | RBBP | |
| Little ringed plover | 1,200 | 80 | Surveys 1984 – 2007 | |
| Dotterel | 423 [2011] | -57 | SCARABBS 1987/88 – 2011 | |
| Whimbrel | 400 – 500 | > -50 | Surveys 1995 – 2007 | |
| Black-tailed godwit | 61 – 66 | 23 | RBBP | |
| Ruff | 0 – 11 | -62 | RBBP | |
| Purple sandpiper | 1 | -43 | RBBP | |
| Red-necked phalarope | 20 – 24 | 86 | RBBP | |
| Wood sandpiper | 11 – 27 | 540 | RBBP | |
| Mediterranean gull | 600 – 630 | >10,000 | RBBP | |
| Nightjar | 4,600 | 114 | SCARABBS 1981 – 2004 | |
| Golden oriole | 2 – 5 | -81 | RBBP | |
| Red-backed shrike | 1 – 3 | -66 | RBBP | |
| Chough | 350 – 500 | 58 | SCARABBS 1982 – 2002 | |
| Firecrest | 550 | 686 | RBBP | |
| Bearded tit | 630 | 34 | RBBP | |
| Woodlark | 3,100 | 1,086 | SCARABBS 1986 – 2006 | |
| Cetti's warbler | 2,000 | 695 | RBBP | |
| Dartford warbler | 3,200 | 663 | SCARABBS 1984 – 2006 | |
| Savi's warbler | 1 – 3 | -74 | RBBP | |
| Marsh warbler | 2 – 8 | -77 | RBBP | |
| Ring ouzel | 5,332 [2012] | -72 | Atlas and SCARABBS 1988/91 – 2012 | |
| Fieldfare | 1 – 2 | -50 | RBBP | |
| Redwing | 4 – 16 | -73 | RBBP | |
| Black redstart | 19 – 44 | -52 | RBBP | |
| Cirl bunting | 860 | 629 | SCARABBS 1989 – 2009 | |

1 Trends for three rare breeding seabirds – **Arctic skuas**, **roseate terns** and **little terns** – are presented on page 30.

2 Population estimates are mostly taken from Population Estimates of Birds in Great Britain and the United Kingdom (2013), and are based on the most recent survey results, or are means calculated from RBBP totals from the five years 2006 – 2010. In cases where there is a significant update on that estimate, for instance where a new survey has been carried out, the new estimate is given with the year of origin. Numbers are pairs, territories or units which are likely to be equivalent to breeding pairs, except for **capercaillie** which is of individuals counted in winter.

3 Unless stated, all trends are over 25 years. Trends from annual surveys and RBBP trends are five-year means calculated for the 25-year period between 1983 – 87 and 2008 – 12. The trend periods for those species covered by periodic surveys such as under SCARABBS are given in superscript. RBBP trends for **common scoters** and **spotted crakes** have been given despite SCARABBS coverage as they allow a 25-year trend to be given rather than just for the 12 years between surveys.

# Recent surveys

## Twites

The second national **twite** survey estimated a UK population of 7,842 pairs (95% confidence limits: 5,791 – 10,427) in 2013, 21% lower than the estimate from the first survey in 1999 (10,000 pairs). Although the difference is not statistically significant, further evidence for a decline comes from *Bird Atlas 2007 – 11*, which found an 18% reduction in the number of 10 km squares occupied by **twites** in Great Britain between 1988–91 and 2007–11.

The English population has declined significantly by 71% since 1999, from an estimated 587 pairs, down to 169 pairs in 2013. Scottish birds have fared better, dropping only 18% from 9,361 to 7,652 pairs.

**Twites** breed on moorland in the margins of upland areas and along rocky sea coasts, and feed on seeds in flower-rich areas up to 4 km from nest sites. The majority of the population is found along the coastal fringes of west and north Scotland. There are far fewer **twites** in England, Wales and Northern Ireland. This small songbird is red-listed in the UK due to a long-term population decline, and this survey reinforces the need to protect and sympathetically manage habitat for this vulnerable species. It also confirms that the vast majority of the small English population is found in the South Pennines, where the RSPB and NE are working with farmers in an attempt to recover this important breeding population.

Steve Knell (rspb-images.com)

Conservation measures to aid the recovery of twites are already up and running, such as targeted management of meadows near breeding sites

# Woodcocks

The second national **woodcock** survey was carried out in 2013, 10 years after the first. Both surveys were undertaken through a partnership between the Game & Wildlife Conservation Trust (GWCT) and the BTO. **Woodcocks**' cryptic plumage, together with nocturnal and crepuscular habits, help them to remain inconspicuous during the daytime. But in spring and summer, the males perform unique "roding" displays at dawn and dusk, flying circuits and calling above the woodland canopy. Radio-tracking studies revealed they are akin to aerial leks, with males competing for air-space to attract females. Voice recordings were used to identify individual males, allowing the number of males to be estimated from the number of roding flight passes within a fixed time period.

Surveys were undertaken across the UK and **woodcocks** were recorded in around a third of the woodlands surveyed. A population estimate of 55,241 males was calculated (95% confidence limits (CL) 41,806 – 69,004). This shows a decline in abundance of 29% compared to the 2003 estimate of 78,346 males (95% CL 61,717 – 96,493). Part of this discrepancy may be accounted for by greater accuracy in 2013 owing to improved coverage. Site occupancy declined by 19%, which is broadly in agreement with *Bird Atlas 2007–11*. The atlas showed a 29% decline in the number of 10 km squares occupied during the breeding season in Britain and Ireland in the last 20 years.

## Woodlands important

Occupancy levels were highest in northern Scotland. Among 1 km squares containing more than 10 ha of woodland, 54% are predicted to contain breeding **woodcocks**. This is closely followed by northern England with 45% of suitable wooded squares being occupied. The lowest occupancy levels were in Wales and south-western England. Changes in distribution and abundance will be examined in combination with habitat information to determine potential causes of differing national and regional trends. Initial analyses indicate that occupied sites appear to be clustered around areas with large expanses of wooded habitat in the landscape. Losses seem most common in areas with fragmented, isolated woodlands.

Mike Lane (rspb-images.com)

Large areas of woodland are important for woodcocks

# State of the UK's migrant birds

The UK lies on migration flyways that extend as far north as the Arctic and as far south as Antarctica, so we share the natural heritage of these migrant birds with other countries, often on different continents.

The fortunes of these birds depend on finding suitable conditions in all the areas they visit, and their conservation can be jeopardised at any point along their journeys.

In *SUKB* 2014 we present information on the status and trends of our migrant birds and the conservation issues they face. The migratory bird indicator (page 9) focuses on species that breed in the UK and spend winters south of the Sahara. Here, we look at the status of all migrant birds that spend at least part of their annual cycle in the UK.

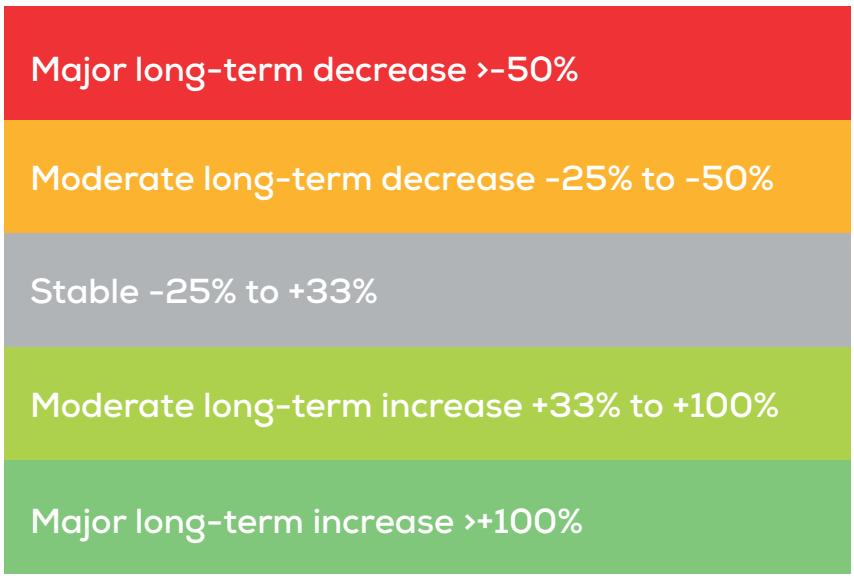
## Methods

We have grouped species by their broad migratory patterns. Species fall into two main groups: those which breed in northern latitudes and spend the winter in the UK (UK winter migrants) and species which breed in the UK but winter further south (UK summer migrants).

**UK winter migrants** have been split by breeding location:
- Arctic (24 species)
- Sub-Arctic (20 species)
- Temperate zone (15 species).

**UK summer migrants** have been split by wintering location[1]:
- S Europe and N Africa (9 species)
- Sub-Saharan Africa, further subdivided into:
  - Arid zone (9 species)
  - Humid zone (11 species).

**The longest available trends were used for all species (see trend tables throughout this report). These were classified in the following way:**




1 As on page 9, S Europe and N Africa = partial/short distance migrants, and Tropical/Southern migrants are omitted. There are a few more species included in this graphic, as additional trends, unsuitable for inclusion in the indicator, have been used here.

# The outlook for migrants varies enormously

Chris Knights (rspb-images.com)

# The varied fortunes of the UK's migrants

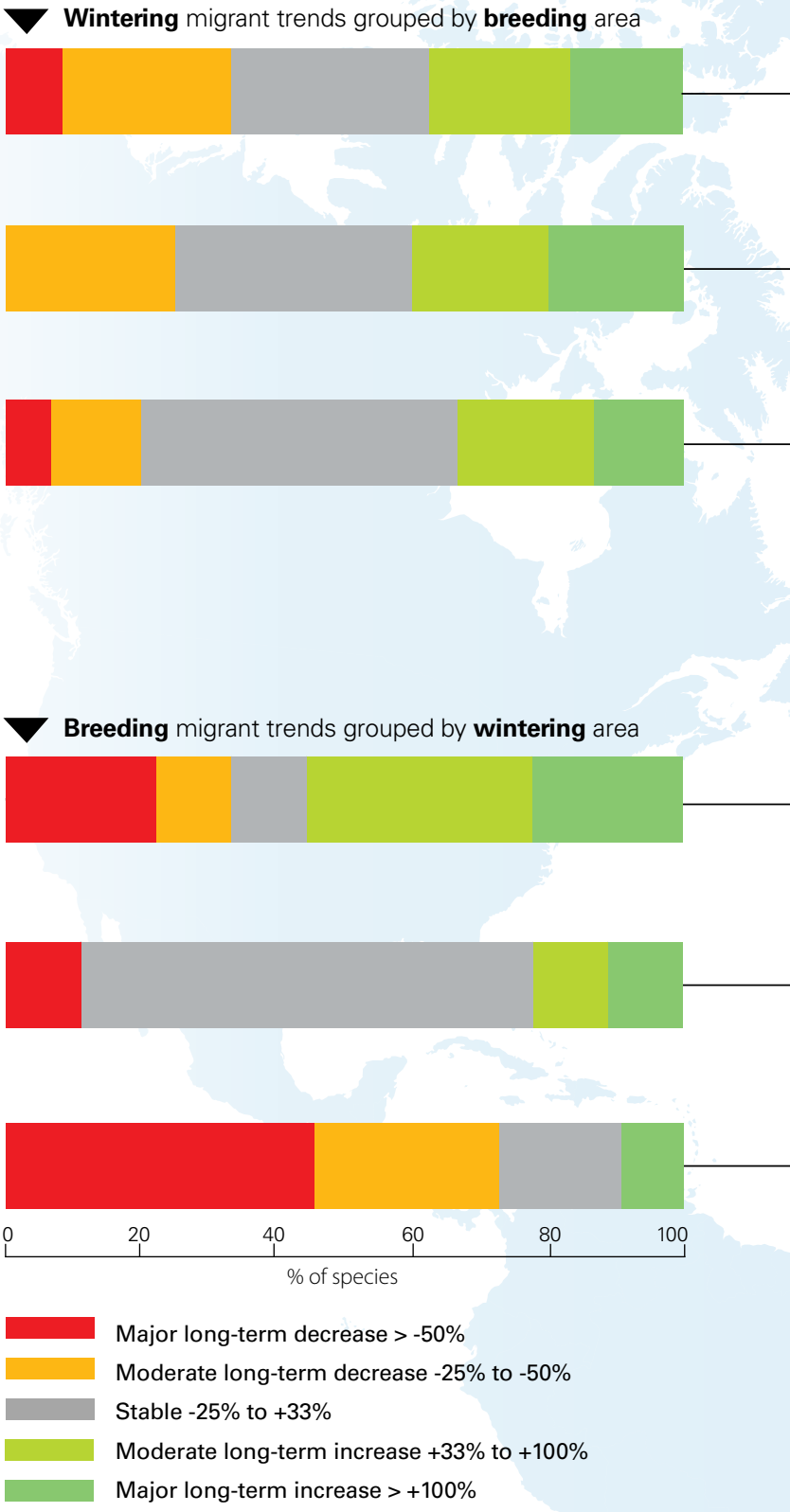
## Winter migrants

Trends for 59 winter migrants that breed in higher latitudes are summarised in the figure. The overall pattern contrasts strongly with that shown by summer migrants, with only 5% showing major declines, although another 22% have declined moderately. There are no great differences between species breeding in the high Arctic, sub-Arctic or Temperate zones.

## Summer migrants

Trends for 29 migrant species that breed in the UK and winter further south, from Continental Europe to sub-Saharan Africa, are summarised in the figure. 41% show long-term declines and 28% have increased. Those in the humid zone are currently faring worst: over 70% have declined, 45% by more than half. Partial/short distance migrants are faring better: 56% show long-term increases, and only 22 are decreasing strongly.

To understand the changing status of the UK's migratory birds, we must increase our knowledge of the drivers of change across migratory cycles, and understand the interactions between these drivers. Evidence is gathered via tracking studies, demographic research, survival analyses, environmental research and literature reviews. In the following pages, we have attempted to summarise the evidence for the likely factors operating on summer migrants, both overseas on their southern wintering grounds, and in the UK. Factors impacting on the numbers of winter migrants are discussed in the Wintering Waterbirds section (pages 36–43), which also highlights tracking studies of geese and swans that winter in the UK.



These migrants **breed in the north**, returning to the UK for winter

**ARCTIC**
such as Russia, Greenland, Svalbard, Barents Sea

**SUB-ARCTIC**
such as Russia, Scandinavia, Iceland

**TEMPERATE**
such as Netherlands, Germany, Denmark, UK

**S EUROPE N AFRICA**
such as Iberia, Morocco, Algeria

**ARID**
such as N. Senegal, Mali N. Burkina Faso, Niger

**HUMID ZONE**
such as Sierra Leone, Senegal, Gambia, Burkina Faso

Arctic breeding birds show **varied trends**

**40%** of sub-Arctic breeders **increasing**

**One third** of temperate breeders **increasing**

**56%** of N Africa migrants strongly **increasing**

**67%** of arid zone migrants are **stable**

**73%** of humid zone migrants in **decline**

These migrants **winter in the south**, returning to the UK to breed

# Summer migrants: wintering grounds

Improved monitoring and research in the regions used by many of the UK's summer migrants as stop-overs or for overwintering is building our understanding of the varied pressures and threats these birds face when they are not in the UK.

A recent review[1] of studies on Afro-Palearctic migrants suggests that interactions between habitat degradation and climatic conditions appear to be one of the most important factors causing population change. However, significant gaps remain in our basic knowledge of many of our summer migrants during the non-breeding season.

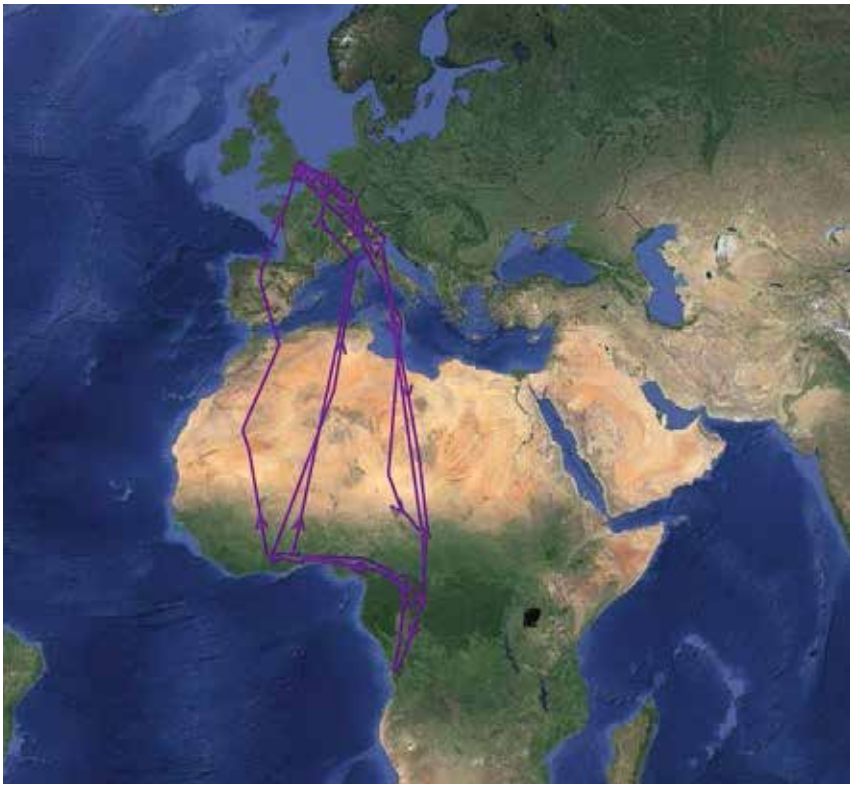
In order to help fill knowledge gaps, a number of migrants are now being tracked using the latest technological advances, such as satellite tags and geolocators, which are now sufficiently small to be used on some passerines. In recent years, information about the migratory pathways and wintering areas of species such as **cuckoos**, **swifts** and **nightingales** has increased exponentially, compared to knowledge based on ring recoveries alone.

## Where do they go?

The BTO's Cuckoo Tracking Project[2] has provided information on the migratory journeys and wintering areas of 31 birds since 2011. In 2014, 12 birds fitted with satellite tags continue to transmit data, one of which has provided data since the tagging started in 2011. These birds have revealed details of their 10,000 mile round trips, along with new routes, timings of departures and responses to changing weather conditions. It will be particularly interesting to know whether there are differences in migration strategy and/or wintering area for **cuckoos** breeding in different regions of the UK, as numbers of **cuckoos** in Scotland are showing increases compared with declines in south-east England. Even these relatively small samples indicate interesting patterns. A previously-unknown westerly route in autumn from the UK through Spain to western Africa has so far only been taken by birds tagged in England. Analyses of these data will help us to identify important stop-over sites and wintering areas in need of protection.

## Pressures and threats

Environmental changes on wintering grounds are known to have impacts on migrant population trends. A prolonged period of drought between the 1960s and 1980s caused near-



Repeated example of annual cycle of cuckoo migratory route: through Italy in autumn, wintering in Congo Basin, and spring return via west Africa, taking western route through Iberia

irreversible changes in habitats south of the Sahara, and led to declines of many Afro-Palearctic migrants birds that are reliant on food-rich, seasonal wetland habitats[3].

The divergent trends shown by migrants that overwinter in the arid and humid zones has been a focus of research for a number of years[1,4,5,6,7]. The severe declines shown by migrants from the humid zone are of particular concern, but current knowledge of the specific drivers of these declines is limited. Widespread environmental change is known to be occurring in Africa. The loss and degradation of wetlands is widely reported as a result of damming of rivers, extraction of water for irrigation, as well as the conversion of floodplains to rice fields, and floodplain woodlands to agricultural land. Wooded savannah habitats have similarly been impacted by clearance for agriculture, wood fuel and grazing. Human-induced habitat changes such as these have all been compounded by climate change altering seasonal weather patterns. These habitats are essential for many birds, as they allow the birds to refuel in the autumn, and fatten up before spring migration. The loss and degradation of these habitats is an erosion of vital stepping stones on the birds' migratory journey.

## Knock-on effects

Poor conditions experienced by migratory birds on their wintering grounds can impact arrival time and breeding success the following season. For example, in years with low rainfall in southern African wintering grounds, **swallows** arrive on the breeding grounds later and have lower breeding success[1].

Hunting and trapping has been reported as impacting migratory birds on passage and on the non-breeding grounds during both spring and autumn migrations. Losses can be enormous. For example, 2–4 million **turtle doves** are shot across a number of southern European countries each year[1]. In Africa, such activities are partly for subsistence. However, birds can be taken in large numbers in certain areas, such as **quails** in Egypt and **swallows** in west and central Africa[3]. Assessing the population-level impact of hunting is difficult, as the relevant data do not exist.

For numbered references, see page 27.

Chris Gomersall (rspb-images.com)

Far more data have been amassed since satellite tags and geolocators have reduced in size and weight, allowing migration routes of passerines such as swifts to be mapped. See **bto.org/swifts** for more information

# Summer migrants: pressures in the UK

The dramatic population declines of a number of species that spend the winter in one particular region may suggest that conditions on the wintering grounds are the primary drivers.

However, there is a large body of research which details how changes on the UK breeding grounds can also influence population trends. These are best documented for farmland and woodland breeding species.

A reduction in the number of breeding attempts is known to be an important factor in the declines of several farmland species. Researchers studying arable-nesting **yellow wagtails**[8] discovered that the annual productivity of this species is heavily dependent on birds finding suitable nesting habitats late in the breeding season, to raise a replacement or second brood. However, later broods seem to be particularly vulnerable to predation in certain crops[9].

For another long-distance migrant, the **turtle dove**, pairs breeding in the late 1990s may have only raised around half the number of clutches and young per season compared to the 1960s. This decline in productivity is sufficient to account for the decline in abundance[10]. Recent research has also revealed that around 96% of the UK's **turtle doves** are carrying parasites which can cause the disease trichomonosis[11]. This disease caused mortality in a number of adults and nestlings during the 2012 breeding season[12]. It is possible that changes in feeding ecology, resulting from changing farmland management, may have resulted in higher densities of birds feeding around limited artificial resources, increasing the potential for disease transmission.

## Woodland birds

A study of **spotted flycatchers** found that nests in gardens produced twice as many chicks as those in woodland and farmland habitats, which suggests that the latter habitats are now sub-optimal for this declining species[13]. An experimental study used radio-tracking to look at the effects of deer browsing on **nightingales** breeding in young woodland[14]. It showed that over the course of several years, **nightingales** became concentrated in areas from which deer were excluded. This suggests that intensified browsing pressure from deer may also have contributed to declines of other birds dependent on dense understory, such as **garden warblers** and **willow warblers**.

## In the uplands

Some upland migrants are struggling too. Declines in **ring ouzels** in Scotland seem most likely to have been caused, in order of importance, by low first-year survival, falling rates of re-nesting and reduced early season productivity[15]. These parameters are influenced by the availability of a suitable mix of habitats on the breeding grounds. A complex mosaic of different types of habitat composition and structure are required to provide safe nest sites, abundant foraging areas and concealment from predators for post-fledging young.

## Trends vary with habitat type

As well as tracking studies detailed on page 24, **cuckoos** have been the focus of breeding season research. **Cuckoos** breed in a broad range of lowland and upland habitats, and population trends differ between these habitats[16]. Between 1994 and 2006, **cuckoos** increased significantly in lowland semi-natural grass, heath and bog habitats, but decreased in almost all other habitat types. It is also possible that adult **cuckoos** are being affected by reduced food availability in lowland farmland habitats. There is mounting evidence that moth abundance has declined across the UK, but particularly so in intensively managed farmland[17,18].

Such habitat-specific differences may reflect regional differences or trends in the main hosts and/or differing trends in **cuckoo** breeding success among those host species. For example, the availability of **dunnocks**' nests – the main host species in lowland farmland – has decreased due to climate change-induced earlier breeding[18].

## Changes in timing?

Climate change-induced alterations in timing of arrival and breeding have implications for a number of species reliant on temporally-limited resources.

Phenological mismatch is a term used to describe a difference in timing between, for example, seasonal peaks of food demand and food availability. This can come about due to a response to climate change by some, but not all, species.

A number of species, including **wood warblers**, have been shown to advance their arrival dates and time of breeding over recent decades. However, the subsequent mismatch in timing with the peak abundance of caterpillars had no measurable impact on the **wood warblers**' productivity or population trends in the UK, probably due to their ability to successfully switch diet to flying insects and spiders[19]. In the Netherlands, however, populations of **pied flycatchers** that now arrive late on breeding grounds in relation to food peaks are declining more than those arriving relatively early. This could be due to the high degree of seasonality of the forest environment in which they breed.[20,21]

The complex interactions between climate change, timing of migration and breeding, prey availability and migration distance for different species continue to be investigated to determine the relative importance of each as drivers of population change.

## Sources


1. **Vickery, JA, *et al.* (2014)**. The decline of Afro-Palaearctic migrants and an assessment of potential causes. *Ibis* 156(1): 1–22.
2. **www.bto.org/science/migration/tracking-studies/cuckoo-tracking**
3. **Zwarts, *et al.* (2009)**. *Living on the edge: Wetlands and birds in a changing Sahel.* KNNV Publishing, Zeist.
4. **Hewson, CM and Noble, DG. (2009)**. Population trends of breeding birds in British woodlands over a 32-year period: relationships with food, habitat use and migratory behaviour. *Ibis* 151(3): 464–486.
5. **Thaxter, CB, *et al.* (2010)**. Hypotheses to explain patterns of population change among breeding bird species in England. *Biological Conservation* 143(9): 2006–2019.
6. **Ockendon, N, *et al.* (2012)**. Declines in British-breeding populations of Afro-Palaearctic migrant birds are linked to bioclimatic wintering zone in Africa, possibly via constraints on arrival time advancement. *Bird Study* 59(2): 111–125.
7. **Morrison, CA, *et al.* (2013)**. Recent population declines in Afro-Palaearctic migratory birds: the influence of breeding and non-breeding seasons. *Diversity and Distributions* 19(8): 1,051–1,058.
8. **Gilroy, JJ, *et al.* (2010)**. Mid-season shifts in the habitat associations of Yellow Wagtails *Motacilla flava* breeding in arable farmland. *Ibis* 152(1): 90–104.
9. **Gilroy, JJ, *et al.* (2011)**. Identifying mismatches between habitat selection and habitat quality in a ground-nesting farmland bird. *Animal Conservation* 14(6): 620–629.
10. **Browne, SJ and Aebischer, N. (2004)**. Temporal changes in the breeding ecology of European Turtle Doves *Streptopelia turtur* in Britain, and implications for conservation. *Ibis* 146: 125–137.
11. **Thomas R, *et al.* (2013)** unpublished data.
12. **Stockdale J, *et al.* (2013)** unpublished data.
13. **Stevens, DK, *et al.* (2007)**. Breeding success of Spotted Flycatchers *Muscicapa striata* in southern England – is woodland a good habitat for this species? *Ibis* 149 s2: 214–223.
14. **Holt CA, *et al.* (2010)**. Experimental evidence that deer browsing reduces habitat suitability for breeding Common Nightingales *Luscinia megarhynchos*. *Ibis* 152: 335–346
15. **Sim, IMW, *et al.* (2011)**. Characterising demographic variation and contributions to population growth rate in a declining population. *Journal of Animal Ecology* 80: 159–170.
16. **Newson, SE, *et al.* (2009)**. Comparison of habitat-specific trends in the abundance of breeding birds in the UK. *Bird Study* 56: 233–243.
17. **Denerley, C. (2014)**. *The impact of land use change on a brood parasite system: cuckoos, their hosts and prey.* A thesis presented for the degree of Doctor of Philosophy in Ecology at the University of Aberdeen. February 2014.
18. **Douglas, DJT, *et al.* (2010)**. How important are climate-induced changes in host availability for population processes in an obligate brood parasite, the European cuckoo? *Oikos* 119: 1,834–1,840.
19. **Mallord, JW, *et al.* in prep**. *Diet flexibility of a declining long-distance migrant allows it to escape the consequences of phenological mismatch.*
20. **Both C, *et al.* (2006).** Climate change and population declines in a long-distance migratory bird. *Nature* 441: 81–83.
21. **Both C, *et al.* (2010).** Avian population consequences of climate change are most severe for long-distance migrants in seasonal habitats. *Proceedings of the Royal Society* B 277: 1,259–1,266.

# Pressures and threats to species in the UK assessed for EU report

A recent national report to the European Commission assessed 106 species or populations – many of which are migrants – for which the UK has classified Special Protection Areas (SPAs).

While the results are not representative of all birds in the UK, the exercise was the largest ever, evidence-based, systematic review to assess factors currently or potentially impacting UK bird populations. Visit **jncc.defra.gov.uk/page-6526** for the full report.

Current pressures from habitat change have a wide range of manifestations. For instance, appropriate moorland management for birds such as **golden plovers** and **curlews** is crucial, and there are implications of future loss or modification of wetlands for species such as **bitterns**. Successional change of vegetation could affect the suitability of wetland habitats for **spotted crakes** and **bitterns**, while **curlews** are currently affected by loss or fragmentation of breeding habitats. The intensity of farmland management is of fundamental importance in determining habitat suitability for birds. For example, a wide range of impacts of grazing was recorded: wading birds such as **dotterels**, **redshanks**, **curlews**, and **golden plovers** are negatively affected by over-intensive grazing. Yet several of these same species, as well as **choughs** and **corncrakes**, depend on habitats being lightly grazed, and so are threatened by abandonment of low-intensity pastoral farming systems.

The devastating impacts of invasive species such as mink, hedgehogs and rats is a significant issue for ground-nesting breeding birds of naturally predator-free islands, not only for seabirds such as **Arctic terns**, **common gulls** and **Manx shearwaters**, but also for breeding wading birds such as **avocets**, **dunlins** and **ringed plovers**.

## Future threats

Climate change was recorded more frequently as a future threat than a current pressure. Issues identified included effects of rising sea levels on wintering waterbirds of estuaries, such as **bar-tailed godwits**, **dunlins**, **grey plovers** and **shelducks**, as well as the additional effects of storminess on shoreline breeding birds such as **little**, **Sandwich** and **roseate terns** and **ringed plovers**. **Pochards**, **wigeons** and **tufted ducks** are already showing changes in winter distribution, with implications for adequate provision of site-based protection.

Impacts from renewable energy were identified as a potential threat for 20 species including **common scoters**, **Arctic skuas**, and **golden plovers**, but there was no evidence of current impacts at national or regional scales. This emphasises the need for continued careful planning of such future developments.

## Drivers outside the UK

Significant numbers of wading birds, such as **black-tailed godwits**, **dunlins** and **redshanks**, breed on agricultural grasslands in sub-Arctic Iceland. The UK holds internationally-important numbers of these birds during the winter. National plans to afforest 12% of Iceland by 2100 could have significant impacts on numbers of such open-ground nesting birds. Agricultural grasslands through much of the sub-Arctic are currently subject to extensive, low-intensity management. However, warmer northern climates will encourage more intensive grassland management, which could have potential impacts on the birds using these areas.

Some migrants from the Arctic such as **Bewick's swans**, **dark-bellied brent geese** and **Greenland white-fronted geese**, and breeding birds that winter further south, such as **dotterels**, face significant pressures and threats occurring entirely outside the EU. This emphasises the value of wider international conservation initiatives, such as those under the Migratory Species Convention.

# The impacts of climate change are seen as serious future threats

Dunlins by Nigel Blake (rspb-images.com)

# Breeding seabirds in the UK

Breeding seabirds in the UK are monitored annually by a number of partner organisations and volunteers. This has been co-ordinated since 1986 by the Seabird Monitoring Programme (SMP).

An extensive sample of seabird colonies is monitored each year, and is supplemented with more intensive monitoring of behavioural and demographic parameters at key sites. This information helps us understand how the main drivers of change are affecting the UK's internationally important seabird populations.

The SMP receives data from between 200 and 250 different sites each year, covering 25 species. Abundance data from these sites is used as a measure of the state of the populations, with the view of making inferences about the wider marine environment. The table shows the differing fortunes of species monitored by the SMP.

## Long-term and severe declines

Between 1986 and 2013, declines greater than or equal to 50% have occurred in **shags**, **Arctic skuas**, **kittiwakes** and **roseate terns**, although the **roseate tern** trend since 2000 shows a slow recovery from the large declines which occurred in the 1980s. In addition, **lesser black-backed** and **herring gulls** have undergone big declines since 2000. Conversely, substantial increases have been recorded between 1986 and 2013 for **gannets** and **great skuas**. **Razorbills** and, to a lesser extent, **guillemots** have also increased overall in the UK, but auks are known to be declining at some Scottish colonies.

You can see the full SMP report at **jncc.defra.gov.uk/page-3201**

## Trends in breeding seabird numbers in the UK

| Species | 1986 – 2013 trend % | 2000 – 2013 trend % | BOCC |
|---|---|---|---|
| Fulmar | -24 | -13 | |
| Gannet* | 77 | 26 | |
| Cormorant | -8 | -20 | |
| Shag | -51 | -41 | |
| Arctic skua | -82 | -74 | |
| Great skua* | 50 | 19 | |
| Kittiwake | -72 | -61 | |
| Black-headed gull | 32 | 26 | |
| Lesser black-backed gull | -13 | -48 | |
| Herring gull | -21 | -30 | |
| Great black-backed gull | -15 | -24 | |
| Little tern | -22 | -4 | |
| Sandwich tern | -13 | -7 | |
| Common tern | -13 | -17 | |
| Roseate tern | -63 | 155 | |
| Arctic tern | 27 | 6 | |
| Guillemot | 43 | 9 | |
| Razorbill | 56 | 13 | |

*trends derived from census interpolations and extrapolations

# 61%

## fewer kittiwakes since 2000

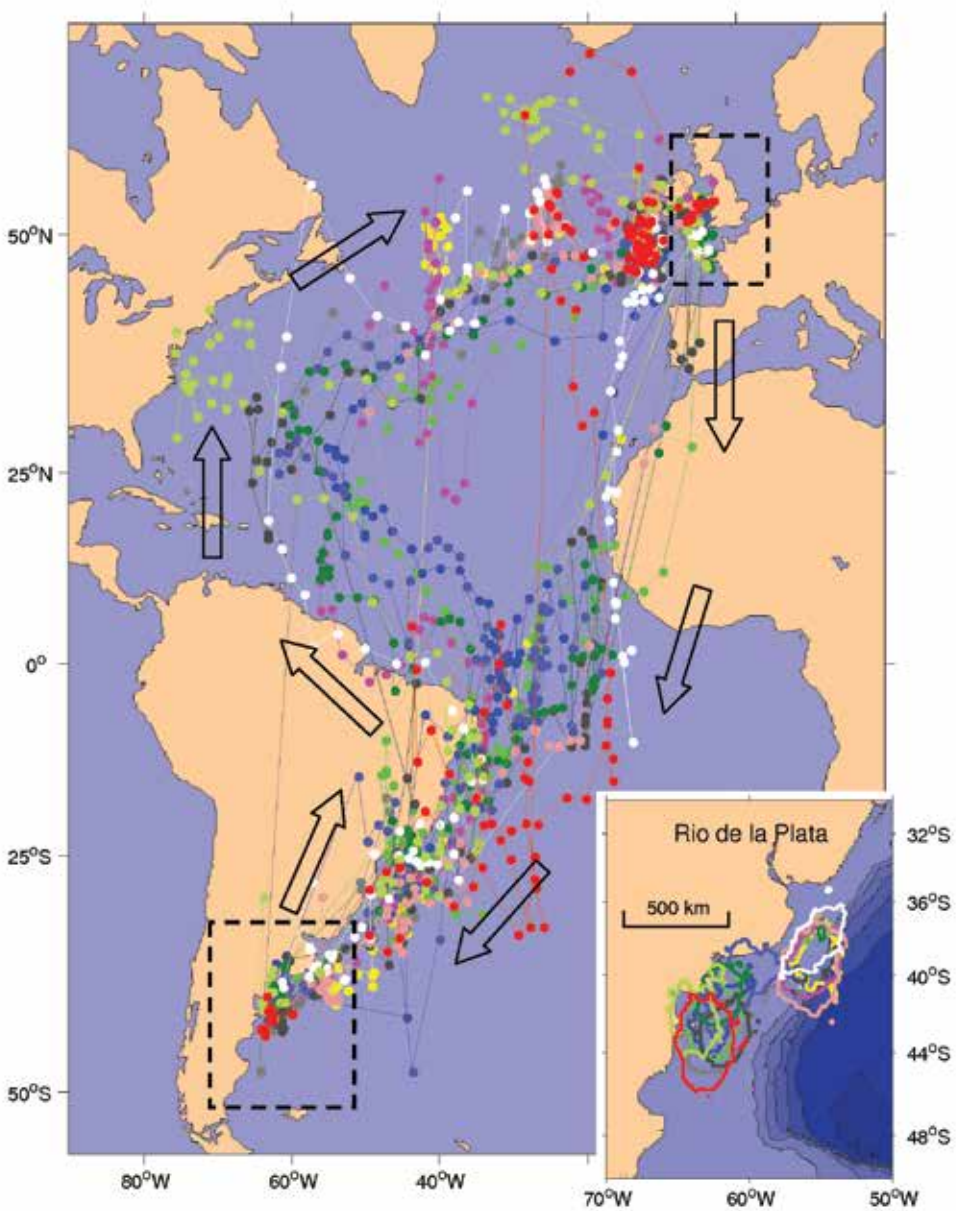
Andrew Parkinson (rspb-images.com)

## Seabird migration

As the breeding season draws to an end, most seabirds depart on annual migrations in search of more favourable feeding conditions and in an attempt to avoid deterioration of weather at their breeding sites.

However, migration routes vary considerably between species, and even among individuals within a population.

**Shags**, for example, are short-distance, partial migrants. Some birds disperse from their colonies, but seldom travel more than 600 km along the British coast. **Puffins** demonstrate a very dispersive migration. Tracked individuals have overwintered in remarkably different areas, including near the British coast, Greenland, the Mediterranean Sea and sections of the North Atlantic – though individual birds show remarkable consistency in their own routes from year to year. It is thought that **puffins** breeding along the east coast of the UK have only relatively recently started to use Atlantic waters. This phenomenon may reflect deteriorating conditions in the North Sea. **Lesser black-backed gulls** breeding in the UK typically migrate to south-west Europe and north-west Africa, although the numbers overwintering in the UK have increased in recent decades. This includes breeding birds from Scandinavia and the UK choosing not to migrate, perhaps due to milder winters and enhanced food availability, such as scraps from




**Migration and stopover**
Manx shearwater migration as revealed by positions of 12 shearwaters tracked with geolocators. Each bird is represented by a different colour. Source: Guilford *et al* (2009) **rspb.royalsocietypublishing.org/content/early/2009/02/06/rspb.2008.1577/F3.expansion.html**

landfill sites. A multi-colony tracking study of **kittiwakes** highlighted a tendency for birds from Atlantic colonies (including western Britain) to overwinter in regions of the North Atlantic that are heavily influenced by human activities. This raises concern about changes to habitat quality and food resources for **kittiwakes**, which have declined in the UK by 61% since 2000.

## True ocean wanderers

The record migration goes to surprisingly small birds, **Arctic terns**, which complete a seasonal polar circuit to the Antarctic. In contrast to what might be expected, these birds do not take the most direct route. Instead, they head south along the coast of western Europe and western Africa, continuing either along the African coast or flying across the Atlantic to continue the journey along the Brazilian coast. Their return journey follows a gigantic "S" pattern across the Atlantic Ocean – a detour of several thousand kilometres. As a result, for individuals breeding in the Arctic, this journey amounts to a staggering 80,000 km round-trip.

**Manx shearwaters** fitted with geolocators show a similar S-shaped migration route. They undertake an incredible 20,000 km trans-Atlantic, trans-equatorial migration to South America during the non-breeding season, to areas of high marine productivity off south-eastern Brazil. However, this S-shaped flight route is the most energy-efficient way of travelling. It makes use of the prevailing wind system, moving in a counter-clockwise direction in the Southern Hemisphere, and clockwise in the Northern Hemisphere.

## Conservation implications

Seabird populations are influenced by environmental factors and human activities during both the breeding and the non-breeding seasons. Indeed, adult mortality peaks in the winter. Environmental conditions experienced during the non-breeding period can have carry-over effects on subsequent breeding performance and long-term population dynamics. Knowledge about the conditions on the wintering grounds for our breeding birds therefore has important management implications, and is essential for effective conservation.

There are many examples demonstrating the influence of conditions outside the breeding season. **Puffins** breeding in the UK have been affected by winter storms that wracked the Bay of Biscay in the past two winters. It is possible that industrial fishing fleets operating off West Africa have been providing UK-breeding gannets with enhanced food opportunities via discards, but there is concern that such large-scale fishing activity, in combination with annual variations in oceanographic conditions, may be impacting on food availability and immature survival rates of **Sandwich** and **common terns**.

Numbers of puffins in the UK have been adversely impacted by recent winter storms in the Bay of Biscay

Chris Gomersall (rspb-images.com)

# Resilience of protected area networks

Climate change is already causing significant shifts in the distribution of species and we expect more species to be affected in the future. It is therefore essential that existing conservation mechanisms can address these challenges.

One of the most important tools for conservation has been the establishment of protected areas, but the long-term effectiveness of such places would be compromised if a species for which a particular site is designated no longer occurred within it.

One of the protected area networks, known to have improved the conservation status of species for which it was created, is the Special Protection Area (SPA) network. This network was established under the EU Birds Directive, and, together with Special Areas of Conservation (SAC) for non-avian species and habitats, forms the Natura 2000 network.

## Assessing impacts

Two recently published reports assessed the potential climate change impacts on current and future distributions of a range of species, and considered the conservation implications. The Marine Climate Change Impacts Partnership (MCCIP) Science Review looked at what is already happening, and what could happen in the future, for overwintering distributions of many coastal wading birds, waterfowl and sea-ducks.

The second project, CHAINSPAN (Climate Change Impacts on

Numbers of knots wintering in the UK are predicted to decline significantly by 2050

Avian Interests of Protected Area Networks) modelled future changes in population size and distribution of some species at individual SPAs in the UK, including waterbirds, seabirds and terrestrial species, the latter mainly heathland specialists.

MCCIP reported that significant warming is projected to reduce the Arctic and sub-Arctic breeding ranges of wintering waterbirds by about 50% by the end of this century. This suggests that, while winter conditions in the UK may not deteriorate for these species, the numbers wintering here may still decline. Coastal wintering waterfowl and sea-ducks are also likely to further decline in abundance in the UK, due to shifting distributions (so-called "short-stopping") as milder winters will enable them to winter in Scandinavia and central Europe. Potential changes in sea level may alter estuarine sediment patterns, with likely impacts on wintering waterbird communities, particularly at sites where coastal defences are maintained.

Results from the CHAINSPAN project similarly suggest that the species groups most vulnerable to climate change are likely to be northern breeding species, including seabirds and terrestrial species. Southerly-distributed heathland species in the UK were projected to benefit from climate change here, although it is possible that globally-important populations elsewhere in Europe may suffer. Significant latitudinal shifts in species composition were predicted, which means that site managers should consider species present on more southerly sites to identify potential future changes in bird communities that may occur. Both reports conclude that, even in a changing climate, large sites which currently support internationally important bird populations will continue to do so in the future, although the species composition may change. Thus, the continued protection of the SPA network is required in the face of climate change. Adaptation should involve improved SPA management, to balance the needs of species currently supported, and those which may colonise in the future, as a result of changing climate.

**Links:**

CHAINSPAN
**http://bit.ly/chainspanreport**

MCCIP report
**http://bit.ly/mccipreport**

Steve Round (rspb-images.com)

# Wintering waterbirds

## Varying trends of UK wintering waterbirds grouped by breeding region are highlighted on pages 22–23.

The UK's position on the relatively mild Atlantic fringe of northwest Europe means that wetlands here assume even greater conservation importance during cold winters when more birds seek refuge here. The wintering waterbirds indicator (page 8) has been produced with data from the Wetland Bird Survey (WeBS) Core Counts and the Goose & Swan Monitoring Programme (GSMP). The indicator illustrates that the numbers of birds using our wetlands are changing.

From the mid-1970s to the late 1990s, the indicator shows a steady increase in numbers of wintering waterbirds in the UK, likely to be due in part to the establishment of a network of protected wetland sites: Special Protection Areas (SPAs) and Ramsar Sites (wetlands of international importance). For some species, a reduction in hunting pressure also contributed to the increase.

Since the early 2000s, the indicator has shown signs of a decline, and this is particularly noticeable in the numbers of wading birds, at their lowest level for 20 years. The wildfowl indicator shows an increase in the winter of 2010/11, when large influxes of waterbirds were noted in the UK, as a result of the coldest winter across northwest Europe for 35 years. This influx highlights the need to retain the SPA network in the UK as cold weather refuges, even if numbers of designated species are low in most years. Individual species trends vary within the overall indicator, and examining species and populations separately can reveal markedly different patterns. Sustained declines are of particular concern. Eleven species listed on page 38 have declined by more than 25% over the long term, and 19 species by more than 15% in the last 10 years.

**Many birds that breed in more northern latitudes, including whooper swans, overwinter here, due to the relatively mild UK winters and food-rich wetland habitats**

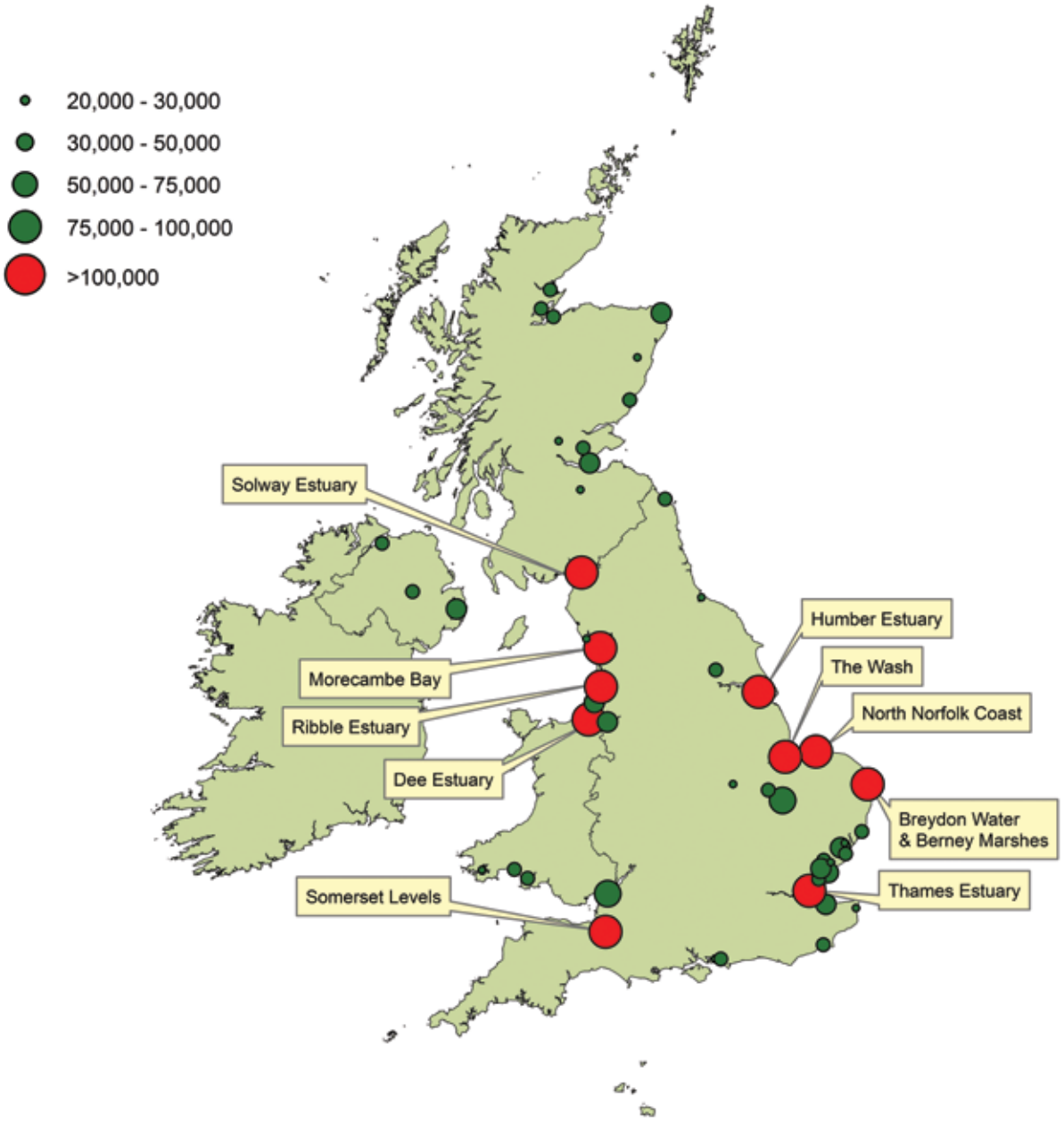
'Steve Round (rspb-images.com)

## Internationally important sites

It is essential for national waterbird monitoring schemes to collaborate across each flyway so waterbird populations can be monitored and conserved. Wetlands International co-ordinates the International Waterbird Census (IWC), and data from WeBS and the GSMP are fed into this scheme. The IWC collates January counts from countries across the globe to facilitate assessments of the size and trends of waterbird populations at a flyway level. In this way, the importance of sites throughout the flyway is assessed. Those deemed as important for the conservation of migratory waterbirds are designated as Ramsar Sites, and those within EU Member States as SPAs. Wetlands in the UK that host the largest aggregations of wintering waterbirds are shown on the map below.

Estuaries represent the most important habitat for wintering waterbirds in the UK, despite only a relatively small number of sites. Protection of these estuaries, to ensure they remain unpolluted and retain plentiful food supplies, is essential, particularly given their international importance within the African-Eurasian Flyway. In terms of numbers, The Wash is the most important site for wintering waterbirds in the UK, regularly supporting peaks of more than 350,000 waterbirds.

**Largest waterbird aggregations in the UK**
Wetlands supporting average annual peaks of 20,000+ waterbirds during 2008/09 – 2012/13. The top 10 wetlands, all averaging 100,000+ birds, are labelled. Numbers are based on summed species peaks in each year.



# Trends in wintering waterbirds in the UK

| Species | Long-term trend %[1] (1985/86–2011/12 | Ten-year trend %[2] (2001/02 – 2011/12) | Breeding zone | BOCC |
|---|---|---|---|---|
| Mute swan | 88 | -3 | Temperate | |
| Bewick's swan | -47 | -35 | Arctic | |
| Whooper swan | 69 | 37 | Sub-Arctic | |
| Pink-footed goose | 113 | 18 | Sub-Arctic | |
| European white-fronted goose | -59 | -26 | Arctic | |
| Greenland white-fronted goose | -1 | -42 | Arctic | |
| Icelandic greylag goose | -7 | 15 | Sub-Arctic | |
| British greylag goose[3] | 425 | 50 | Temperate | |
| Canada goose | 67 | 9 | Non-native resident | |
| Greenland barnacle goose | 165 | 47 | Arctic | |
| Svalbard barnacle goose | 211 | 36 | Arctic | |
| Dark-bellied brent goose | 0 | 21 | Arctic | |
| Canadian light-bellied brent goose | 60 | 56 | Arctic | |
| Svalbard light-bellied brent goose | 146 | 23 | Arctic | |
| Shelduck | -13 | -19 | Temperate | |
| Wigeon | 35 | -15 | Sub-Arctic | |
| Gadwall | 260 | 30 | Temperate/Sub-Arctic | |
| Teal | 76 | -6 | Sub-Arctic | |
| Mallard | -37 | -17 | Temperate/Sub-Arctic | |
| Pintail | -33 | -34 | Sub-Arctic | |
| Shoveler | 62 | -5 | Temperate | |
| Pochard | -55 | -43 | Temperate | |
| Tufted duck | 18 | -2 | Temperate | |
| Scaup | -26 | -44 | Sub-Arctic | |
| Eider (except Shetland) | 2 | -11 | Temperate | |
| Eider (Shetland)[4] | n/a | n/a | Temperate | |
| Goldeneye | -36 | -34 | Sub-Arctic | |
| Red-breasted merganser | -12 | -20 | Temperate/Sub-Arctic | |
| Goosander | 34 | 6 | Temperate/Sub-Arctic | |
| Ruddy duck | -97 | -99 | Non-native resident | |
| Cormorant[5] | n/a | 0 | Temperate | |
| Little grebe[5] | n/a | -8 | Temperate | |
| Great crested grebe | 26 | -25 | Temperate | |
| Coot | 17 | -12 | Temperate | |
| Oystercatcher | -14 | -15 | Temperate/Sub-Arctic | |
| Avocet | >1000 | 57 | Temperate | |
| Ringed plover | -52 | -39 | Sub-Arctic | |
| Golden plover | 153 | -32 | Sub-Arctic | |
| Grey plover | 4 | -21 | Arctic | |
| Lapwing | 55 | -34 | Temperate | |
| Knot | -3 | -7 | Arctic | |
| Sanderling | 31 | 3 | Arctic | |
| Purple sandpiper | -50 | -15 | Arctic | |
| Dunlin | -23 | -23 | Sub-Arctic | |
| Black-tailed godwit | 388 | 48 | Sub-Arctic | |
| Bar-tailed godwit | -8 | -10 | Arctic | |
| Curlew | 3 | -17 | Temperate | |
| Redshank | -16 | -26 | Temperate/Sub-arctic | |
| Turnstone | -41 | -11 | Arctic | |

1 Long-term trends are the percentage changes between the smoothed index values for 1986-87 and 2011-12.

2 Ten-year trends are the percentage changes between the smoothed index values for 2001/02 and 2011/12. Calculation of smoothed indices by use of a generalised additive model is detailed further at **www.bto.org/webs-alerts**.

3 **British greylag goose**: this relates to the previously cited "re-established" and "North-west Scotland" populations. As these populations have spread towards each other in Scotland, it is no longer possible to make a clear distinction between the two, and they are combined from now on as this single population.

4 British **eiders** are now considered as comprising of two populations, with birds in Shetland best treated as *faeroeensis*.

5 National indices of **little grebe** and **cormorant** started later than for other species, so only 10-year trends are shown.

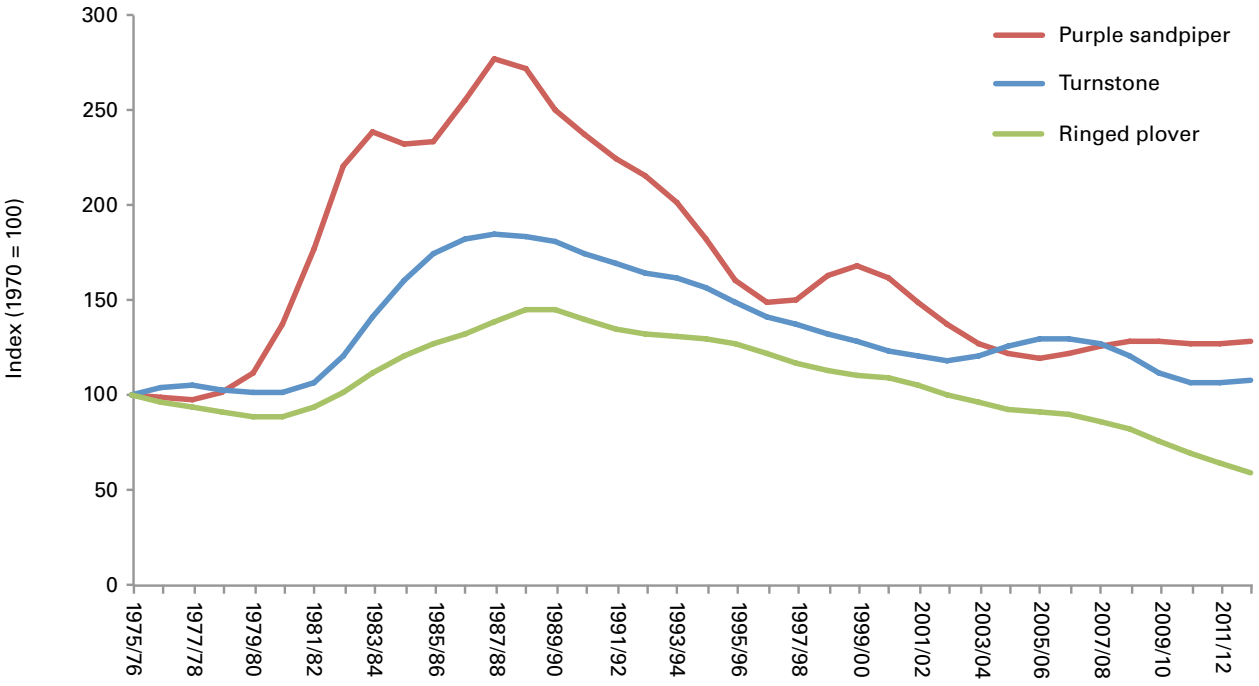
## Wading birds

In previous *SUKB* reports, the continued declines of a number of familiar estuarine wading birds were reported. These are ongoing for **dunlins**, **redshanks** and **curlews**. Worryingly, the previously relatively stable populations of **oystercatchers** and **knots** are now also showing decreases, although more encouragingly, the rate of decrease exhibited by **grey plovers** and **bar-tailed godwits** has halted in recent years. The numbers of wintering **black-tailed godwits** have risen in line with breeding population increases in Iceland. Although there is evidence from WeBS that the rate of increase slowed from the mid 2000s to 2011/12, the annual index jumped to its highest ever point in winter 2012/13.

The UK's non-estuarine habitats provide an important refuge for **turnstones**, **purple sandpipers** and **ringed plovers**, all species that have declined in recent years. Numbers of **ringed plovers** offer particular cause for concern, as the UK non-breeding population has declined by 52% in the last 25 years. In addition, there has been a steady decline in the UK breeding population over this period. It is thought that this, combined with lower winter immigration to the UK from continental Europe, could be the cause of this decline.

The most recent Non-Estuarine Waterbird Survey (NEWS) was undertaken in the UK in 2006/07. There are plans to repeat this in the near future, in order to boost knowledge of the status of birds of non-estuarine coasts, a habitat that is relatively poorly monitored by standard WeBS counts.

Arctic breeding turnstones, purple sandpipers and sub-Arctic breeding ringed plovers are all showing declines over recent years



## Wildfowl

Wintering numbers of several dabbling ducks, such as **shelducks**, which are largely resident in the UK, as well as the sub-Arctic breeding **wigeons** and **pintails**, have declined in the UK in recent years.

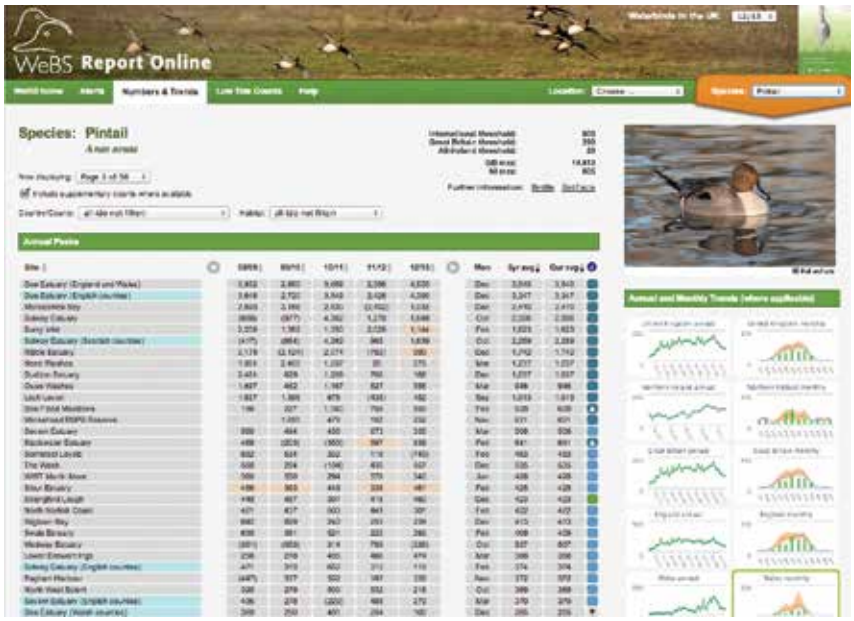
Troublingly, **pintail** populations are are at their lowest for 35 years. Data from across northwest Europe suggests that dabbling ducks are less affected by winter temperatures than diving ducks, so the degree to which these trends are a direct response to climate change may vary.

Almost a third of the world's population of **dark-bellied brent geese** winter on UK estuaries after breeding in the Arctic, and numbers have been increasing gradually since the early 2000s. 2011/12 saw a marked rise, with the index reaching its highest value for over 15 years. Reports from the breeding grounds indicate that rodent abundance was relatively high in 2011, providing alternative prey for the geese's main egg predator, the Arctic fox. Large numbers of young **dark-bellied brent geese** fledged as a consequence, and this was reflected in the relatively high proportion of young (16.2%) recorded in UK wintering flocks in 2011/12.

### Inland waterbirds

In contrast to estuarine waterbirds, a number of dabbling ducks that typically occupy freshwater sites, namely **shovelers**, **teals** and **gadwalls**, have all shown long-term increases in the UK. Similarly, the long-term increases for freshwater diving species such as **tufted ducks**, **great crested grebes**, **little grebes**, **goosanders** and **coots** are indicative of the benefit they have gained from the increase in the number of flooded gravel pits and reservoirs in the UK during the last half-century. However, both **great crested grebes** and **little grebes** are showing recent declines, the reasons for which are unclear. The declines in **pochards** and **goldeneyes** are more complex to interpret. Both species appear to be short-stopping (see page 35) to the east in large numbers, but there is evidence of a population-scale decline in **pochards** across the northwest European population (-2.2% per year 1983–2007), and furthermore, a decline has also been detected in the central Europe, Black Sea and Mediterranean population.

Unlike most other wading birds, many **lapwings**, which are largely resident, and **golden plovers**, returning from sub-Arctic breeding grounds, use inland sites extensively during the winter, often frequenting agricultural fields and river valleys. This dispersal makes them difficult to monitor accurately. There will be a co-ordinated pan-European count of **golden plovers** in October 2014, which aims to gather important information that will enable the size of the population to be reassessed.




**WeBS report**
An online resource that will prove invaluable for waterbird conservation

## New WeBS annual report

As well as a summary paper report, WeBS now also publishes data via an interactive online interface at **www.bto.org/webs-reporting**. The online report features a section on "Numbers and Trends" (including species trends for different countries and regions within the UK, as well as the facility to filter tables by country, county and habitat), and separate sections on WeBS Low Tide Counts and WeBS Alerts. In combination, these different elements of the WeBS annual report provide an invaluable resource for anyone interested in the status of waterbirds in the UK and beyond.

Pintail numbers have dropped to their

# lowest level

for 35 years

Chris Knights (rspb-images.com)

# Goose & Swan Monitoring Programme

## Greenland barnacle geese numbers reach all time high

In 1959, the first international **Greenland barnacle goose** census was carried out, which covered all wintering sites in Britain and Ireland.

It counted 8,321 individuals. A further 12 censuses have taken place since showing an almost ten-fold increase in the population. The latest census in March 2013 produced an estimated population size of 80,670 – the highest recorded to date.

In 2013 the majority of geese were found at a small number of key sites: half the population was found on Islay, with the remainder on the isles of Tiree, Coll, Oronsay and Colonsay off the west coast of Scotland, South Walls on Orkney, and Ballintemple and Lissadell in northwest Ireland. Until recently, the population increase was largely accommodated at these key sites. However, numbers there have stabilised, while continuing to increase at outlying sites, particularly in Ireland. There are a number of possible reasons for this stabilisation; key sites may have reached maximum carrying capacity, or the licensed shooting and associated disturbance of **Greenland barnacle geese** on Islay, as part of a goose management scheme, is leading to some geese wintering elsewhere.

More research is needed to better understand this possible redistribution within the wintering range. Find out more at: **monitoring.wwt.org.uk/our-work/goose-swan-monitoring-programme/reports-newsletter**

## Tracking the movements of the UK's goose and swan populations

Tracking the migration of the UK's goose and swan populations has been carried out since the early 1990s, and ongoing research promises to reveal more fascinating insights into staging areas, breeding behaviour and collision risk from wind farms.

## Assessing risk from proposed wind farms

Large birds, such as swans, are considered to be at greater risk of collision with wind turbines than other species. It is thought that their large size makes them less manoeuvrable. Since 2009, **whooper swans** have been tracked by a series of projects, in an attempt to map their migration routes. Swans were caught and tagged in northwest and east England, and in southwest Scotland. The transmitters attached provided data on precise flight paths. For **whooper swans** migrating down the west coast of Britain, results suggested that there was greater potential for overlap with proposed offshore wind farm sites than those migrating down the east coast. Swan flight heights were shown to be within or below turbine height. Data such as these will be essential in informing decisions regarding the potential impact of wind farm developments, both terrestrial and offshore.

A bonus output from a study looking at the impact of proposed wind farms on the **Taiga bean geese** flock wintering on the Slamannan Plateau (central Scotland), was the discovery of two previously unknown spring staging areas, in west Denmark and northeast of Oslo in Norway. The study also determined that their summer quarters are in central Sweden. **Taiga bean geese** are declining at the global population level. Knowing the network of sites used throughout the year will provide essential data to feed into the international Action Plan that is currently being developed, under the auspices of the African-Eurasian Waterbirds Agreement, for this declining population.

## More on staging sites

A small but increasing population of **Svalbard barnacle geese** winters in Scotland. Satellite tracking of the population wintering on the Solway Firth has revealed individual birds' fidelity to specific fields, and the reliance of the whole population on four or five key roost sites. Results have also confirmed that the spring migration involves island hopping along the Norwegian coast, before taking a direct flight to Arctic breeding areas in Svalbard.

## Failed breeding or not breeding at all?

**Greenland white-fronted geese** are of greater concern than any other geese in the UK. Their decline is linked to falling productivity since the mid-1990s and associated with changes in climate in west Greenland where they breed, competition from increasing numbers of **Canada geese** there, or a combination of these two factors.

As part of a current study to understand the causes of the decline, **Greenland white-fronted geese** have been tracked from their wintering sites in Ireland and Scotland using GPS tags. In combination with "accelerometers", these tags

have measured the birds' movements in three dimensions. These data will allow researchers to construct time-energy budgets over the breeding season, from which it will be possible to identify what proportion of birds attempt to breed, and how many fail in their attempts.

Mike Lane (rspb-images.com)

A small but growing group of Svalbard barnacle geese overwinter in Scotland

# UK Overseas Territories update

The 14 UK Overseas Territories (OTs) encompass some of the world's most remarkable environments. While small in area, they hold bird populations of extremely high value on a global scale.

Despite this global importance, we are unable to report on birds in the OTs in the same way as we do for metropolitan UK. We lack basic knowledge on population sizes and trends for the vast majority of species, even for some of the species that are known to be threatened with extinction. We do, at least, have a good knowledge of which bird species occur within each Territory, which is more than can be said for most other taxonomic groups.

## 77% OT endemics threatened

A recent report, *The UK's wildlife overseas: A stocktake of nature in our Overseas Territories*, documented more than 28,000 naturally-occurring species, ranging from mammals to fungi. It is estimated that there may be another 50,000 species yet to be recorded.

Of the species discovered to date, 1,547 are endemic to a single Territory, which is around 94% of the UK's endemic species. Although less than 10% of these OT endemics have been assessed against IUCN Red List criteria, 77% of those that have been assessed are considered threatened with extinction. The report found records for 674 bird species occurring in the OTs, of which 22 are endemic. Of these endemics, 19 are Globally Threatened, with four being assessed as Critically Endangered, namely **St Helena plovers**, **Tristan albatrosses**, **Montserrat orioles** and **Gough buntings**. In total, 56 Globally Threatened bird species are recorded as occurring in the OTs, with a further 38 that are considered Near Threatened. Despite this great wealth of birds, and the high level of threat faced by many, our knowledge remains poor; there are only around 50 species, including those featured in this report, where populations are monitored regularly to enable population trends to be estimated.


This ground-breaking report highlighted how little is known about the Overseas Territories' precious and unique wildlife

David Osborn (rspb-images.com)

The Overseas Territories are home to some spectacular wildlife, such as black-browed albatrosses

## Ups and downs for OT albatrosses

The 2013 update of the IUCN's Red List changed the status of two albatross species, both of which have their main breeding strongholds in the Overseas Territories.

**Black-browed albatrosses**, which were categorised as Endangered, are no longer considered Globally Threatened and have been downlisted to Near Threatened. In contrast, **grey-headed albatrosses** have been uplisted from Vulnerable to Endangered.

More than 70% of the global population of **black-browed albatrosses** breed in the Falkland Islands. There are major colonies in Important Bird Areas including Steeple Jason and New Island. Monitoring data showed population increases at key sites during the 2000s, and possibly since the 1980s. Increases in the Falklands population outweigh decreases observed in other populations (for example, on South Georgia), and so the global population is no longer thought to be declining rapidly. A slower decline is still possible, however, as there is a lack of knowledge of population trends from the Chilean breeding sites which account for 15–20% of the global population, and high levels of mortality have been reported from longline and trawl fisheries in the South Atlantic.

### Endangered

**Grey-headed albatrosses** are now listed as Endangered in response to data from major colonies at South Georgia. These sites hold around 50% of the global population and the data suggest that overall declines are taking place at a very rapid rate over three generations (90 years), even if colonies lacking trend information are assumed to be stable. The major driver of the population decline is likely to be bycatch mortality in longline fisheries.

October 2014 will see a census of the Endangered **Atlantic yellow-nosed albatross** population on Tristan da Cunha, which is thought to comprise two-thirds of the global population. This population has not been assessed accurately since the 1970s, and the new data will allow a more robust global population estimate to be made – possibly leading to change in the conservation status of another OT albatross.

# Montserrat orioles

Montserrat orioles are charismatic forest birds, endemic to the volcanic island of Montserrat in the eastern Caribbean.

The species declined dramatically after a volcanic eruption in 1997, when more than half the forest on the island was lost. In the remaining forest, the Centre Hills, **Montserrat oriole** numbers continued to dwindle rapidly. Since about 2003, the population has stabilised, and despite annual fluctuations, no negative trend has been reported in 10 years.

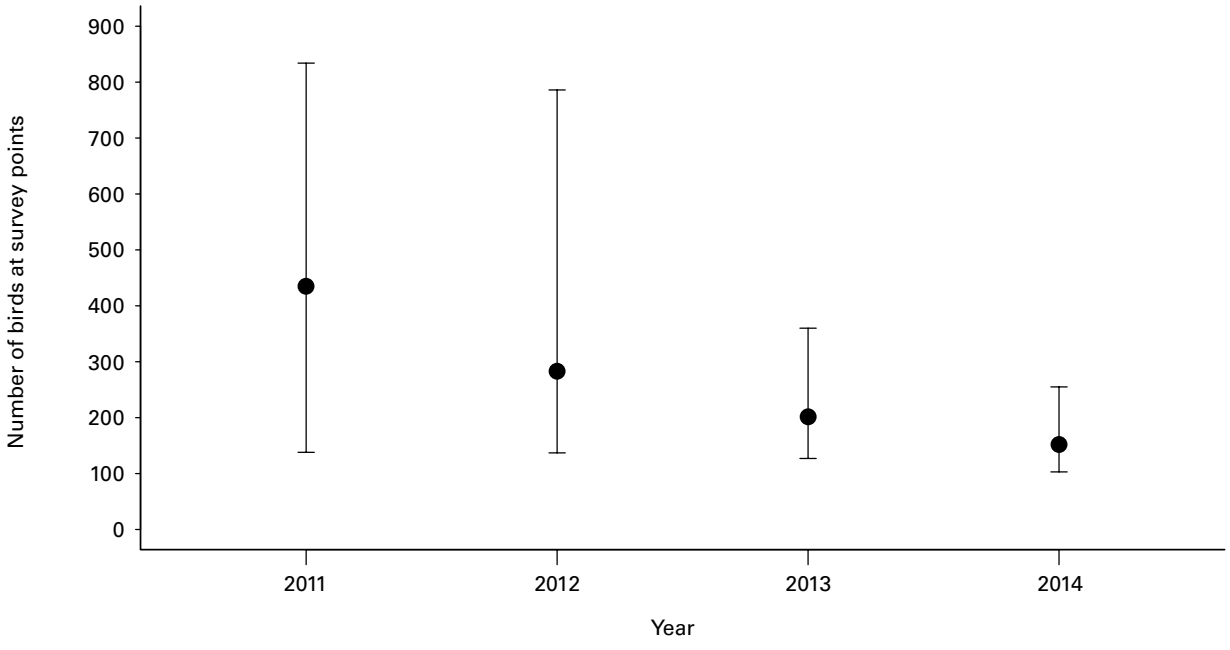
## Population fluctuations

Recent research has revealed some underlying factors for these fluctuations. In years with high amounts of rainfall, the forest environment is wetter, and there may be more *Heliconia* flowers in the forest. These flowers are important resources for feeding and drinking, enabling **Montserrat orioles** to lay larger clutches and re-nest sooner after losing a nest. Volcanic dome collapses can occasionally cover the entire island in layers of fine volcanic ash, which is very acidic and causes invertebrate mortality, leading to food shortages. These volcanic incidents can reduce annual survival of **Montserrat orioles** by about 25%. With the Centre Hills forest remaining at its current size, the extinction risk for the **Montserrat oriole** is relatively low. The latest census in 2014 indicated that the population has been relatively stable over the last three years (see figure below). The greatest concern for the **oriole** now is forest loss due to agricultural and housing development, and the detrimental effects of invasive species.

## Benefits of forest protection

Protecting the forests on Montserrat will also benefit another Globally Threatened species – the **forest thrush**, which occurs also on Dominica, Guadeloupe, and St Lucia. A study in 2013 revealed that the species prefers tall forest with dense canopies at intermediate elevations. The **forest thrush** is one of the most abundant forest birds on Montserrat and the island may hold a globally important population.

Estimated abundance of Montserrat orioles in the Centre Hills forest of Montserrat between 2011 and 2014. A robust forest bird monitoring programme was established on Montserrat in 1999 and improved in 2011. Bird counts are made at 83 survey points.



## Island prioritisation

Most of the threatened bird species on the UK's OTs suffer from the impacts of invasive non-native vertebrates such as rats, cats, pigs or mice.

Eradicating these invasive species from islands is a common conservation approach to benefit native biodiversity, but with limited amounts of money available the question is: where do we start? In a recent study the RSPB collated information on over 2,000 islands in the OTs. Each of the islands was assessed to determine where the greatest conservation gains would be found if a non-native vertebrate eradication programme was undertaken. The assessment also looked at where it would be practically feasible to carry out such a programme.

The five highest priority islands included two World Heritage islands: Gough in the South Atlantic and Henderson in the South Pacific. These two islands feature unique seabird colonies. The top five also included three Caribbean islands that support unique reptile populations: Anegada, Little Cayman, and Guana Island. On other islands, including Montserrat, Cayman Brac and Grand Cayman, eradication of vertebrates would be highly valuable, but is currently unrealistic due to large human populations. Islands such as these will have to wait for improved eradication techniques and greater societal support for restoring biodiversity.

Brown boobies and other ground-nesting birds are at risk

Richard Revels (rspb-images.com)

# Testing times for mice on Gough

**In April 2014, the Australian government announced the success of their ground-breaking operation to remove rats, mice and rabbits from Macquarie Island.**

At 13,000 hectares, Macquarie is the largest island in the world to have its non-native rodents eradicated. This increases confidence that the same can be done on Gough Island, where predation by mice continues to impact many species including the Critically Endangered **Tristan albatross** and **Gough bunting**.

Although Gough is around 6,500 hectares, so smaller than Macquarie, it has large areas of steep, vegetated cliffs. These were thought to present a particular challenge for aerial baiting using helicopters. For this reason, the RSPB and Tristan da Cunha Conservation Department carried out a baiting trial in September 2013, to determine whether it was possible to deliver bait onto these cliffs at sufficient density to eradicate all mice living there.

The trial involved dropping non-toxic bait pellets from a helicopter. Trained climbers then abseiled down the cliffs, and counted the density of bait pellets on the ground. The results were encouraging. Although some pellets bounced off and fell to the bottom of the cliffs, more than 70 per cent were trapped in the vegetation. With some adjustments to the planned distribution of bait, there seems to be no reason why an eradication attempt on Gough, using current technology, would not be feasible.

## Logistical challenges

It is worth noting that the first attempt at the Macquarie operation had to be called off, due to extremely bad weather, and the same could happen at Gough. At a predicted cost of more than £5 million, this operation will be one of the most logistically challenging and expensive to be undertaken anywhere in the world. However, the potential conservation gains are immense, with two endemic species saved from extinction, and one of the world's most significant seabird colonies preserved.

Peter Ryan

Using large-scale strategies, such as dispersing rodenticides via helicopters (in this case, on Gough), appears to be the most effective way forward

Ross Wanless

Several species on Gough Island, such as the Tristan albatross, are threatened by rodents

# St Helena plovers

Critically Endangered **St Helena plovers**, also known as wirebirds, have featured in *The state of the UK's birds* in previous years.

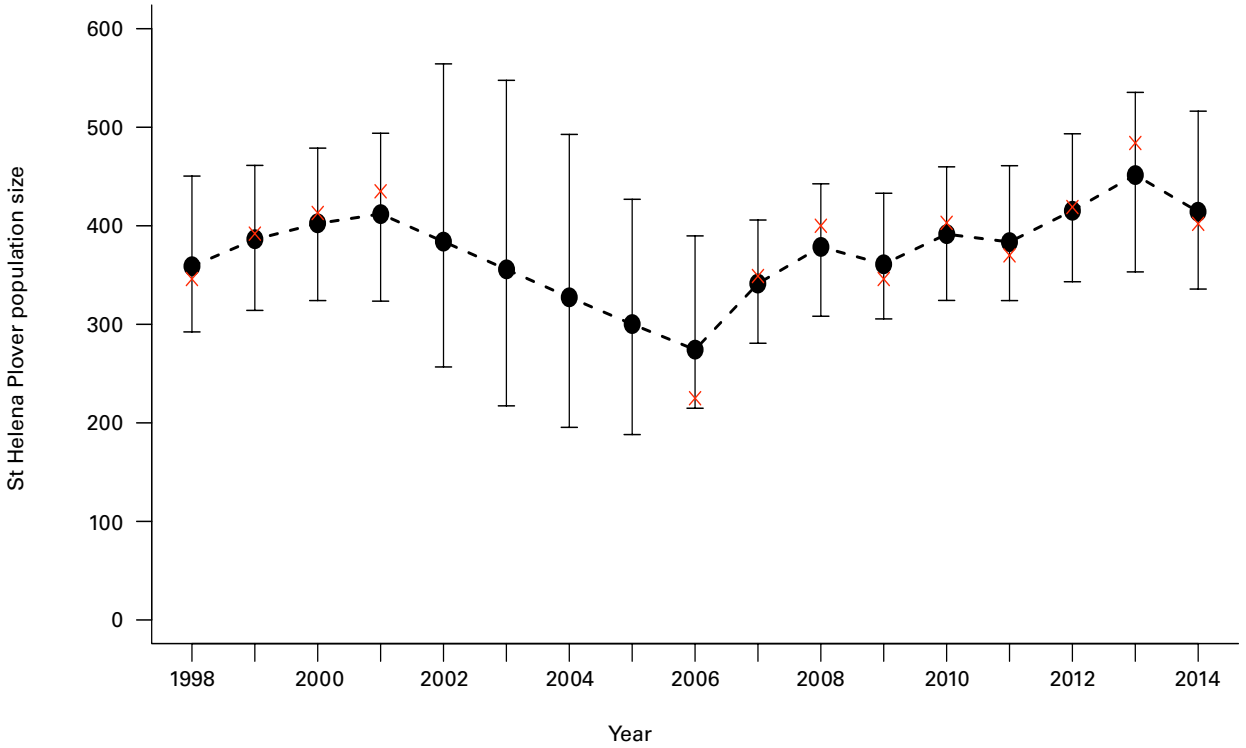
The previous coverage related to the development of an airport that is currently being constructed in the semi-desert area in the east of the island, which is prime habitat for the **St Helena plover**. With mitigation measures in place, the small endemic population has risen, and in 2013 exceeded 400 adult birds for the first time in more than two decades, before dropping in 2014.

As there is only one area of semi-desert on St Helena, mitigation sites were created in pasture habitat. The pastures are only suitable for **St Helena plovers** if they are well maintained, with sufficiently high livestock densities to keep vegetation short. This is in contrast to the semi-desert habitat which requires virtually no management to remain suitable. So far, this scheme has buffered the devastating effects of airport construction, but the numbers of **St Helena plovers** counted by the St Helena National Trust in 2014 were 17% lower than those in 2013.

## Alien invasives – a conservation headache

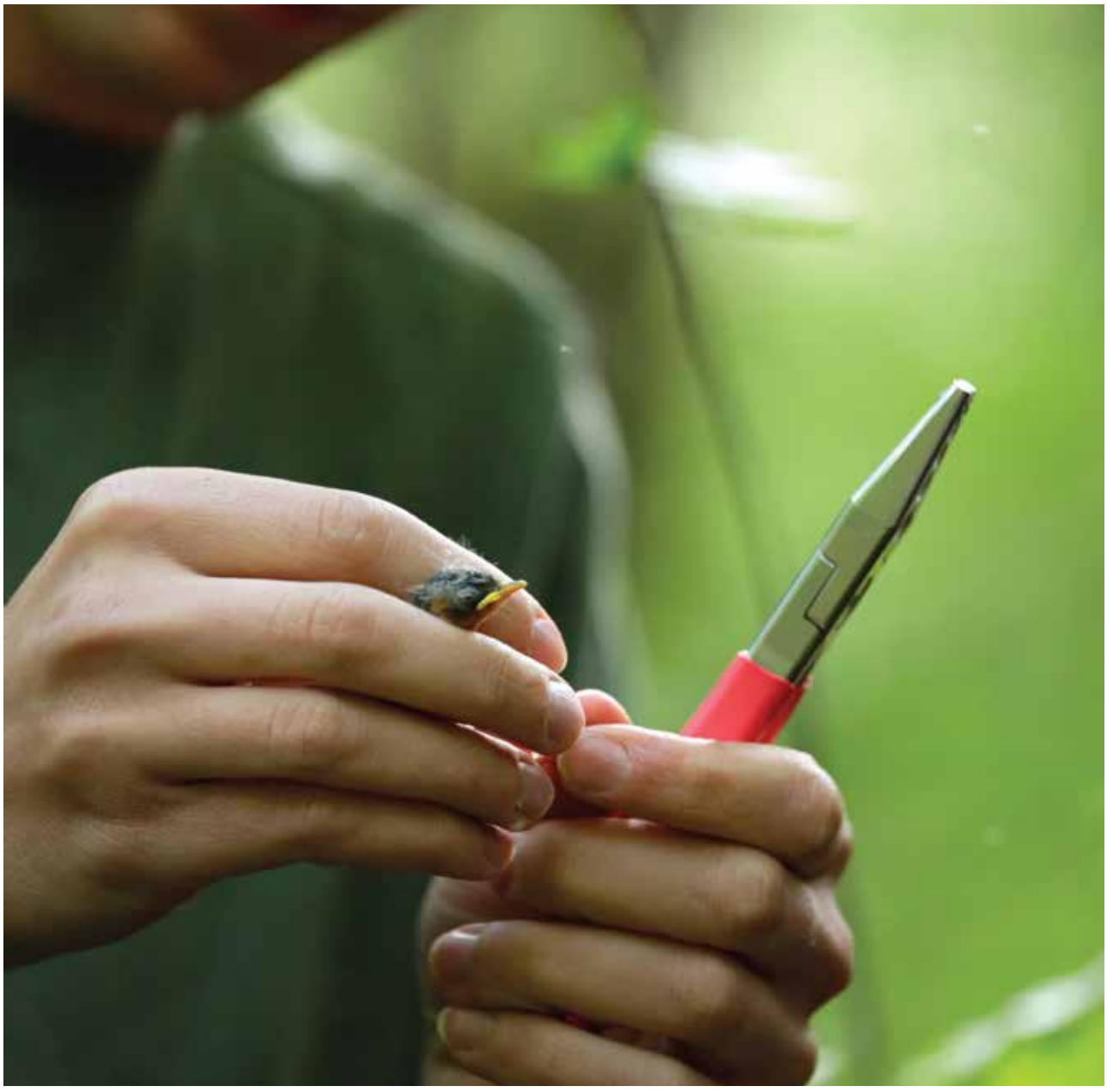
Invasive species are likely to have caused several extinctions on St Helena. So far, the **St Helena plover** has managed to survive the onslaught, but cats are a frequent nest predator and could be responsible for recent population declines. From 2011 to 2013, the RSPB and the St Helena National Trust researched the viability of feral cat control to increase nesting success of **St Helena plovers**. The results showed that controlling feral cats was highly successful in increasing nesting success in the semi-desert, but yielded only marginal benefits in pasture habitat. The most likely reason for the difference is that cats in pastures seem to suppress rat numbers. Once the cats had been controlled, rat numbers increased, and rats may have predated the plovers' nests and partially reduced the benefit of having fewer cats. Invasive species management in pastures will therefore require control, not only of feral cats, but also of rats. This would add to the overall cost and complexity of maintaining suitable pasture habitat for **St Helena plovers**.

**St Helena plover population trend**
The fluctuation of the population of **St Helena plovers** suggests a recovery for this species – but the new areas to which they have been translocated will need a great deal of management in years to come. If this is not mantained, the population is unlikely to continue to grow. Red crosses are actual counts, while black dots are modelled population size with confidence limits.



# Current and planned surveys

The information summarised in *The state of the UK's birds 2014* is drawn from the annual and periodic monitoring programmes described opposite, as well as from the work of individual ornithologists. Anyone interested or wishing to take part in these surveys should contact the relevant organisations at the addresses given on page 54.



Andy Hay (rspb-images.com)

The more data we gather, the greater the potential for effective conservation strategies

**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 population 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 Council for Conservation and the Countryside [CNCC], Natural England [NE], Natural Resources Wales [NRW] and Scottish Natural Heritage [SNH]) and the RSPB.

**Contact BTO.**

**The Wetland Bird Survey (WeBS)** is the monitoring scheme for non-breeding waterbirds in the UK. It aims to provide the principal data for the conservation of non-breeding waterbird populations and wetland habitats. It is a partnership between the BTO, JNCC (on behalf of Department of the Environment Northern Ireland [DOENI], NE, NRW and SNH) and the RSPB, in association with The Wildfowl & Wetlands Trust (WWT).

**Contact BTO.**

**The Goose & Swan Monitoring Programme (GSMP)** comprises a suite of surveys, funded under the WWT/JNCC/SNH partnership, designed to accurately assess the abundance and breeding success of geese and migratory swans during the non-breeding season.

**Contact WWT.**

**The Waterways Breeding Bird Survey (WBBS)** has been running since 1998. This scheme and its predecessor, the Waterways Bird Survey (WBS), which ran from 1974 to 2007, aim to monitor riverside breeding birds, particularly waterway specialists, across the UK.

**Contact BTO.**

**The Heronries Census** collects counts of apparently occupied nests each year from as many heronries as possible throughout the UK. It also aims to monitor populations of colonial waterbirds, especially **grey herons**, **little egrets** and **cormorants**.

**Contact BTO.**

**The Seabird Monitoring Programme** gathers information about breeding numbers, breeding success and other parameters, to help us understand drivers of change and to target conservation action. Co-ordinated by the JNCC, it is a partnership between the statutory nature conservation agencies, research and conservation organisations.

**Contact JNCC.**

**The Big Garden Birdwatch** is the largest wildlife survey in the world. Its simple design (one hour watching birds in the garden each January) attracts around half a million people every year. The data provide an excellent snapshot of garden bird numbers across the UK.

**Contact the RSPB.**

**Garden Bird Watch** is a year-round scheme, recording the weekly occurrence and numbers of birds in participants' gardens. The data collected provides valuable information on changes in bird use of rural and urban habitats. These 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, BirdWatch Ireland, the Scottish Ornithologists' Club (SOC) and the Welsh Ornithological Society. 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 visit birdtrack.net.**

**The Ringing Scheme** is run by the BTO and covers Britain and Ireland. It is funded by a partnership of the BTO, the JNCC (on behalf of DOENI, NE, NRW and SNH), The National Parks and Wildlife Service (Ireland) and the ringers themselves. Volunteer bird ringers collect data on the survival, productivity, movements and condition of birds. Project ringing, such as the Constant Effort Sites Scheme, the Ringing Adults for Survival project, and other targeted ringing, forms an important part of the Scheme.

**Contact BTO.**

**The BTO Nest Record Scheme (NRS)** gathers vital information on the breeding success of Britain's birds by asking volunteer nest recorders to find and follow the progress of individual birds' nests. The scheme is funded by a partnership of the BTO and the JNCC (on behalf of DOENI, NE, NRW and SNH).

**Contact BTO.**

**An advance programme of UK-wide surveys** of other priority breeding species has been established under the Statutory Conservation Agencies and the RSPB Breeding Bird Scheme (SCARABBS) Programme. **Choughs** were surveyed in 2014, and species to be surveyed in 2015 may include **golden eagles**, **capercaillie** and **cirl buntings**.

**Contact the RSPB.**

# Acknowledgements

Monitoring of birds in the UK and the Overseas Territories, such as that covered in this report, involves a broad partnership of government agencies, NGOs, sponsors and independent ornithologists, including:

Anglian Water, BirdLife International, BirdWatch Ireland, *British Birds*, British Trust for Ornithology, British Waterways, Centre for Ecology & Hydrology, CJ WildBird Foods, Department of the Environment Northern Ireland, Department for Environment, Food and Rural Affairs (Defra), Environment Agency, Environment Wales, European Bird Census Council, European Social Fund, European Union Life Programme, Falklands Conservation, Forestry Commission, Forest Enterprise, Game & Wildlife Conservation Trust, Greenland White-fronted Goose Study, Hawk and Owl Trust, Irish Brent Goose Research Group, Joint Nature Conservation Committee, Manx BirdLife, Ministry of Defence, Montserrat Environment Programme, National Trust, National Trust for Scotland, Natural England, Natural Resources Wales, Northern England Raptor Forum, 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, St Helena National Trust, Scottish Raptor Study Groups, Seabird Group, Severn Trent Water, Shetland Oil Terminal Environmental Advisory Group, Thames Water, Tristan da Cunha Conservation Department, University of Cambridge, University of Exeter Centre for Ecology and Conservation, University of Oxford, Wales Raptor Study Group, Welsh Kite Trust, Welsh Ornithological Society, the Wildfowl & Wetlands Trust, the Wildlife Trusts, and the 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.**

# By joining forces, we can work more effectively for nature

Kingfisher by Ben Andrew (rspb-images.com)

# Who we are

*The state of the UK's birds 2014* is also available online on the websites of the BTO, the RSPB and WWT (see addresses below).

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**doeni.gov.uk/niea** @nieaevents

**Scottish Natural Heritage (SNH)**
Great Glen House, Leachkin Road, Inverness,
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Monkstone House, City Road, Peterborough
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Slimbridge, Gloucestershire GL2 7BT.
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**monitoring.wwt.org.uk** @WWTconservation
Registered charity no. 1030884 in England and Wales,
SC039410 in Scotland

Blackcap by Steve Knell (rspb-images.com)

# Thank you to all our partner organisations and volunteers

Working together to give nature a home









Front cover image: whinchat by Mike Lane (rspb-images.com)

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