

The Breeding Bird Survey

2008



The population trends of
the UK's breeding birds



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The cover photograph of a Goldcrest is by Steve Round (www.stevenround-birdphotography.com) and the BBS logo is by Andy Wilson. Report production and design were by Kate Risely.

We are grateful to John Marchant for proofreading this report.

This report can be downloaded, free of charge, from www.bto.org/bbs/results/bbsreport.htm.

Profiles

Kate Risely is the BBS National Organiser, and is responsible for the day-to-day running of the BBS, liaising with BTO Regional Organisers and volunteers, promoting the scheme and providing feedback. Kate previously worked in the Ringing Team at the BTO.

Dr David Noble is Principal Ecologist in the Monitoring Team at the BTO, and oversees the running of bird surveys such as the BBS and the Waterways Breeding Bird Survey (WBBS), as well as associated research on bird populations. Before joining the BTO he worked at Cambridge University on the relationships between cuckoos and their hosts, in the UK and in Africa.

Dr Stephen Baillie is Director of the Modelling and Demography Group at the BTO.

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The 2008 BBS Report

This is the fourteenth annual report of the BTO/JNCC/RSPB Breeding Bird Survey (BBS), containing the population trends of widespread UK bird species during the period 1994–2008. As well as the national trends, specific population trends are presented for birds in England, Scotland, Wales, Northern Ireland, and for the nine English Government Office Regions. We also give details of current research using BBS data, and report on mammal monitoring.

Background and methods.....4

News and Research.....5

New lists of Birds of Conservation Concern, research into the effects of ecological factors on bird trends, full launch of the Wider Countryside Butterfly Survey, and more...

Coverage and online recording.....8

List of all species recorded.....10

UK population trends.....12

Positive stories for three of our smallest breeding birds – Goldcrest, Chiffchaff and Long-tailed Tit – but long-distance migrants still show severe declines. UK trends were produced for 105 species, of which 43 have increased significantly and 29 declined significantly since the start of the survey. The largest overall increases were shown by Greylag Goose, Red Kite, Ring-necked Parakeet and Stonechat, and the greatest declines by Turtle Dove, Yellow Wagtail, Wood Warbler, Pied Flycatcher and Willow Tit.

England population trends.....14

England-specific population trends were produced for 99 species, of which 39 have increased significantly and 23 decreased significantly since the start of the survey. The biggest increases were shown by Red Kite, Ring-necked Parakeet and Stonechat, and the greatest declines by Turtle Dove, Cuckoo, Yellow Wagtail and Willow Tit.

Scotland population trends.....16

Scotland-specific population trends were produced for 59 species, of which 22 have increased significantly and eight decreased significantly since the start of the survey. The biggest increases were shown by Great Spotted Woodpecker, Stonechat and Blackcap, the greatest declines by Kestrel, Curlew and Swift.

Bird population trends in Wales and Northern Ireland, and coverage in Isle of Man and Channel Islands.....18

Wales-specific population trends were produced for 53 species, of which 20 have increased significantly and 11 declined significantly since the start of the survey. The biggest increases were shown by Pheasant, Great Spotted Woodpecker, Stonechat and House Sparrow, and the greatest declines by Curlew, Cuckoo, Swift and Starling. Northern Ireland-specific population trends were produced for 29 species, of which 17 have increased significantly and one, Skylark, decreased significantly since the start of the survey. The biggest increases were shown by Pheasant, Goldcrest, Great Tit and Goldfinch, and the only declines were shown by Skylark, Mistle Thrush and House Sparrow.

Bird population trends in English Government Office Regions.....20

Mammal monitoring.....22

Special thanks.....Back cover

Online Resources

Further information about BBS, including population trend graphs, can be found at www.bto.org/bbs, and a full species-by-species discussion of these results, and those from other surveys, can be found in the Wider Countryside Report, available at www.bto.org/birdtrends.

PHOTO BY MARK COLLIER

Survey Background

The BBS is the main scheme for monitoring the population changes of the UK's common and widespread breeding birds, providing an important indicator of the health of the countryside. BBS trends are produced each year for over 100 species, and the results are increasingly used by government and non-governmental organisations to set conservation priorities.

The BBS was launched in 1994, to provide better habitat coverage than the main survey running at the time, the Common Birds Census (CBC). The CBC ended in 2000, and the overlap period between 1994 and 2000 allowed the BTO to develop methods for calculating long-term trends using information from both schemes. The most recent joint CBC/BBS trends are those for 1966–2007, published in the 2008 Wider Countryside Report, available at www.bto.org/birdtrends.

Methods and Organisation

The BBS is a line-transect survey based on randomly selected 1-km squares. Squares are chosen through stratified random sampling, with more squares in areas with more potential volunteers. The difference in sampling effort is taken into account when calculating trends. BBS volunteers make two early-morning visits to their square during the April–June survey period, recording all birds encountered while walking two 1-km transects across their square. Each 1-km transect is divided into five 200m sections for ease of recording. Birds are recorded in three distance categories, or as 'in flight', in order to assess detectability and work out species density. Observers also record the habitat along the transects, and record any mammals seen during the survey. Surveying a BBS square involves around six hours of fieldwork per year, and the aim is for each volunteer to survey the same square (or squares) each year.

As BBS squares are randomly selected, they can turn up on any area of land in the UK. Some squares can never be surveyed, and these truly 'uncoverable' sites are removed from the system. However, squares that are temporarily inaccessible, or which are not taken up due to their remote location, are retained in order to maintain the integrity of the sampling design, although we recognise that some will seldom be surveyed.

The BBS National Organiser, based at BTO HQ, is responsible for the overall running of the scheme, and is the main point of contact for the network of voluntary Regional Organisers (ROs). ROs are responsible for finding new volunteers and for allocating squares to observers in their region. At the end of the season they collect paper submissions and return them to BTO HQ, and validate submissions made online. The volunteer Regional Organisers and the BTO Wales and Ireland Officers provide invaluable support to the scheme, and we are very grateful for their assistance.

Through its careful design, the BBS provides reliable population trends for a large proportion of our breeding species. Trends can also be produced for specific countries, regions or habitats. For these analyses, we take the higher count from the two visits for each species, summed over all four distance categories and ten transect sections. Only squares that have been surveyed in at least two years are included in the analyses. Population changes are estimated using a log-linear model with Poisson error terms. Counts are modelled as a function of year and site effects, weighted to account for differences in sampling effort across the UK, with standard errors adjusted for overdispersion.

Work has been carried out to assess the precision and reliability of BBS trends for all species, to ensure that reported trends are based on reliable data and sufficient sample sizes. This work has resulted in the following exclusions and caveats:

- We do not report population trends for five species of gull (Black-headed, Common, Lesser Black-backed, Herring and Great Black-backed), as a large proportion of the records are of non-breeding, wintering or migratory individuals.
- Trends for rare breeding species with substantial wintering populations (e.g. Fieldfare) are excluded.
- Trends for Cormorant, Grey Heron and Common Tern are reported with the caveat that counts may contain a high proportion of birds away from breeding sites.
- Trends for Tawny Owl and Barn Owl are reported with the caveat that the BBS monitors nocturnal species poorly.
- Counts for six wader species (Oystercatcher, Golden Plover, Lapwing, Snipe, Curlew and Redshank) are corrected to exclude counts from non-breeding flocks, and observations of Golden Plover in unsuitable breeding habitat are also excluded.

BBS News and Research

In this section you will find details of current research projects using BBS data, and other survey news.

Long-term changes in migrant bird populations linked to wintering areas

It's well known that many woodland and farmland bird species are declining. However, there is currently a lack of information about other factors, aside from habitat, that may be influencing these population changes. In a recent study, BTO and RSPB researchers used BBS and Common Birds Census (CBC) data to investigate whether declining species from different habitats shared other ecological characteristics. Changes in populations over time of a number of woodland and farmland birds were assessed in relation to migration status, diet, nest location, nesting social structure, demographic parameters, adult biometrics, breeding population size and geographical range.

It was found that most species declined over the full period of study (1967–2006), and farmland species declined more than woodland species. However, declines were more pronounced for long-distance Afro–Palaeartic migrants than species wintering in Europe, which showed relatively stable populations.



SEDFE WARBLE BY DAWN BALMER

Afro–Palaeartic migrants showed steepest declines between 1967 and 1976, but patterns were mixed, with species wintering in arid savannah areas south of the Sahel showing steep declines between 1967 and 1976, whereas species wintering in humid zones (West African Guinean forest and savannah) declined more than arid-zone species after 1987. Granivorous and ground-nesting species also showed the steepest declines.

These results have important implications for the conservation and management of these species, as the different population trends among migrants appear to be correlated to known wintering zones, suggesting shared ecological pressures operating outside their breeding range.

For more information, see Thaxter *et al* (submitted) - reference on p7.

The Atlas and BBS

We are now halfway through fieldwork for the 2007–11 Bird Atlas, a partnership between BTO, BirdWatch Ireland and the Scottish Ornithologists' Club to map the distributions of breeding and wintering birds in Britain and Ireland. The Atlas has two complementary fieldwork methods: *Roving Records* for collating species lists and breeding status, and *Timed Tetrad Visits* (TTVs) for calculating relative abundance. Atlas TTVs are similar to BBS visits, and we hope that many new volunteers taking part in the Atlas will be interested in taking on BBS squares at a later date.

We'd like to remind BBS volunteers that the priority for BBS is to record counts of all birds encountered (breeding and non-breeding) in order to calculate BBS population trends. BBS does not collect breeding evidence information, so your BBS returns will not automatically generate dots on Atlas maps. Therefore, if you observe any evidence of breeding while surveying your BBS



LAPWING BY TOMMY HOLDEN

square (or anywhere else!), such as birds singing (possible breeding), or carrying food for young (confirmed breeding), please submit your sightings as Roving Records on the Atlas website. If possible, please identify the tetrad (2x2 km square) when submitting Roving Records.

For further information about the Atlas, including the full list of breeding evidence codes, visit www.birdatlas.net.

New Red and Amber lists of Birds of Conservation Concern



In May 2009 the new red and amber lists of Birds of Conservation Concern were released, following work by the UK's leading bird conservation organisations to review the status of UK birds. The red, amber and green lists provide a tool for guiding conservation action for birds in the UK, and are endorsed by all major bird conservation organisations, both governmental and non-governmental.

The BBS is the main current source of information used to assess the population status of common and widespread breeding birds, and of the 52 red-listed species, 20 are included due to breeding population declines recorded by BBS and CBC. These include farmland specialists such as Grey Partridge, Turtle Dove, Skylark, Yellowhammer and Corn Bunting, and woodland birds such as Tree Pipit, Marsh Tit and Willow Tit.

Six species moved from the amber to the red list in 2009 due to declines identified by BBS – Lapwing, Cuckoo, Tree Pipit, Yellow Wagtail, Wood Warbler and Lesser Redpoll. On the other hand, Bullfinch and Reed Bunting moved from red to amber because their population declines are now classed as moderate rather than severe.

Of the 126 amber-listed species (medium conservation concern), 34 are monitored by BBS, including the newly amber-listed Swift, Whinchat, Whitethroat and Pied Flycatcher, all of which moved from green to amber due to declines identified by the BBS. Goldcrest was moved from amber to green due to the recovery of the breeding population recorded by the BBS.

For more information, see the Birds of Conservation Concern booklet at www.bto.org/images/news/bocc3.pdf, or the full British Birds article at www.britishtbirds.co.uk/BoCC3final.pdf (see p7 for full reference).

Wider Countryside Butterfly Survey

Following two successful pilot years in 2007 and 2008, the Wider Countryside Butterfly Survey (WCBS) will be rolled out in full in 2009. This survey, based on BBS methodology, was developed by Butterfly Conservation (BC) and the Centre for Ecology and Hydrology to monitor butterfly populations in the same way as BBS monitors birds.

BBS volunteers are invited to revisit their BBS squares in July and August (with an optional extra visit in June), and record butterflies along their BBS routes. ID guides and recording forms are provided, and the survey has proved popular among volunteers keen to improve their skills, and collect even more valuable records from their BBS squares.

In parallel to the surveys made by BBS volunteers, BC volunteers are also carrying out surveys on other randomly selected 1-km squares. It is hoped that between BBS and BC volunteers, over 1,000 squares will be surveyed in 2009.

In 2008, the second year of the pilot study, 192 squares were surveyed, and an average of 11 species and 104 individuals were seen per square. In total, 40 species were recorded in 2008, with five species lost from the sample compared to 2007 and three species gained, all of which are habitat specialists recorded in low numbers.

Small Copper and Small Heath, two target WCBS species, both increased in abundance in 2008. The decline in Small Tortoiseshell was detected using the new method, with 17% fewer squares occupied in 2008. From 2009 onwards, the increased number of squares covered in the full survey should allow robust population trends to be produced for more of the target Wider Countryside species.



If you'd like to survey butterflies on your BBS square, please email bbs@bto.org.



COMMA BY NEIL CALBRADE

Additional BBS-style surveys

Over the past few years a number of BBS 'bolt-on' surveys have been undertaken, with professional fieldworkers covering additional randomly selected squares. This is because bird population trends can show huge variation across different regions and habitats, and so to examine these effects in small areas, or for scarcer species, we need to boost the BBS sample size.

For this reason, BTO has developed a programme to enhance survey coverage in Scotland, in partnership with Scottish Natural Heritage and the Forestry Commission. The focus of this project is on woodland birds, and the aim is to improve our ability to determine trends in birds of woodlands and adjacent habitats, such as Spotted Flycatcher, Tree Pipit and Redstart. We are also aiming to increase the number of species in the woodland bird indicator for Scotland, to make it more representative. In 2007 and 2008 around 120 Scottish Woodland BBS squares were surveyed by professional fieldworkers, and we hope to slowly phase in uptake of these new BBS squares by BBS volunteers.

This year also sees the fourth field season of the Upland Breeding Bird Survey (UBBS), which is carried out in uplands in England by professional fieldworkers, and funded by Natural England and RSPB. The UBBS should improve our capacity to monitor a range of upland birds, to allow the production of an upland bird indicator, to assess changes in key upland bird populations on designated land in England, and to assess the impact of increased access to upland areas in England as a result of the Countryside and Rights of Way (CROW) Act, introduced in 2005.

Detection rates on UBBS squares were very good for many of the target species, with Curlew present in over 200 squares, Red Grouse, Wheatear and Golden Plover in over 100 squares, and Buzzard, Stonechat, Raven and Oystercatcher in over 50 squares. These surveys will greatly improve the quality and precision of the standard BBS trends and will allow us to generate upland-specific information. The UBBS may also allow us to produce BBS trends for species such as Ring Ouzel and Merlin.

BBS results to be used to investigate loss of set-aside



Recent changes in EU agricultural policy mean that farmers will no longer receive EU subsidies to leave farmland uncultivated. Set-aside was introduced in 1992 to help reduce surplus food production, but has also had the effect of benefiting farmland wildlife and birds.

BTO is undertaking a Defra-funded contract to examine the scale of loss of bird habitat, and any immediate responses in breeding birds, by revisiting around 600 squares that had overlapping coverage of BBS and the Winter Farmland Bird Survey (WFBS). These squares were surveyed in February 2009 to record the habitat present, and the 2008 and 2009 BBS returns for these squares will be analysed to see if bird populations have changed significantly since 2007.

Further reading

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Survey coverage

Results from 3,211 BBS squares were received in 2008, down from the record high in 2007, and slightly lower than 2006, but still the third-highest total (Table 1). The drop in coverage can be attributed to the effort directed to fieldwork for the 2007–11 Bird Atlas. Atlas fieldwork will continue for another three years, but as progress to date has been good, we trust the impact on BBS will be smaller in subsequent years.

Over 2,500 people took part in the survey in 2008, fewer than in 2007 and 2006, but still the third-highest total.

Figure 1 Number of BBS squares surveyed

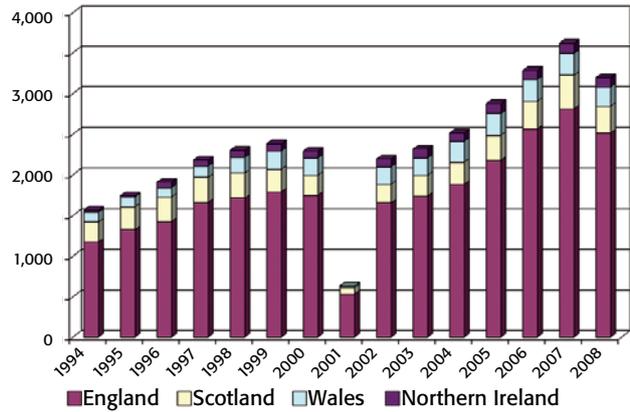


Table 1 Number of BBS squares surveyed

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
England	1,173	1,325	1,420	1,657	1,713	1,792	1,749	532	1,652	1,738	1,885	2,179	2,569	2,813	2,516
Scotland	245	283	308	313	309	275	246	78	231	255	275	306	335	413	330
Wales	122	121	116	138	192	223	213	22	215	214	254	271	270	266	230
Northern Ireland	25	17	65	75	85	95	83	0	97	109	102	120	107	129	119
Channel Islands	1	1	7	6	7	7	7	7	7	7	11	13	19	16	15
Isle of Man	4	4	4	6	6	5	3	0	3	4	6	3	5	4	1
Grand Total	1,570	1,751	1,920	2,195	2,312	2,397	2,301	639	2,205	2,327	2,533	2,892	3,305	3,641	3,211

BBS-Online

The online recording system, BBS-Online, was launched in 2003, and can be accessed via www.bto.org/bbs. Data submitted online can be processed more efficiently than paper forms, and the system is designed to be simple and user-friendly. The application allows users to enter bird, habitat, mammal and colony data online, and to view all historical records from their squares (including those submitted by previous observers).

In 2008, results from 2,232 squares were submitted online, nearly 70% of the total. This is a considerable improvement on 2007, when results

Your options

View all my data

Enter this year's data

Correct data

Regional organiser

from 55% of squares were submitted online. In future, online users will be issued with reduced packs of forms, with the paper summary sheets omitted, in order to reduce the amount of paper used.

Did you know?

BBS-Online is designed for counts to be entered directly from the field recording sheets. Therefore, counts should not be transcribed to the paper summary sheets beforehand. The system will add together counts where necessary, so individual records can be entered exactly as recorded on the field sheets.

Recent improvements to the system include a facility to allow users to link directly to an Ordnance Survey map of their square, and to edit their habitat, mammal and colony counts, as well as bird data. The BTO Information Systems Team continue to develop the system in response to feedback from users, and we welcome all suggestions for improvement.

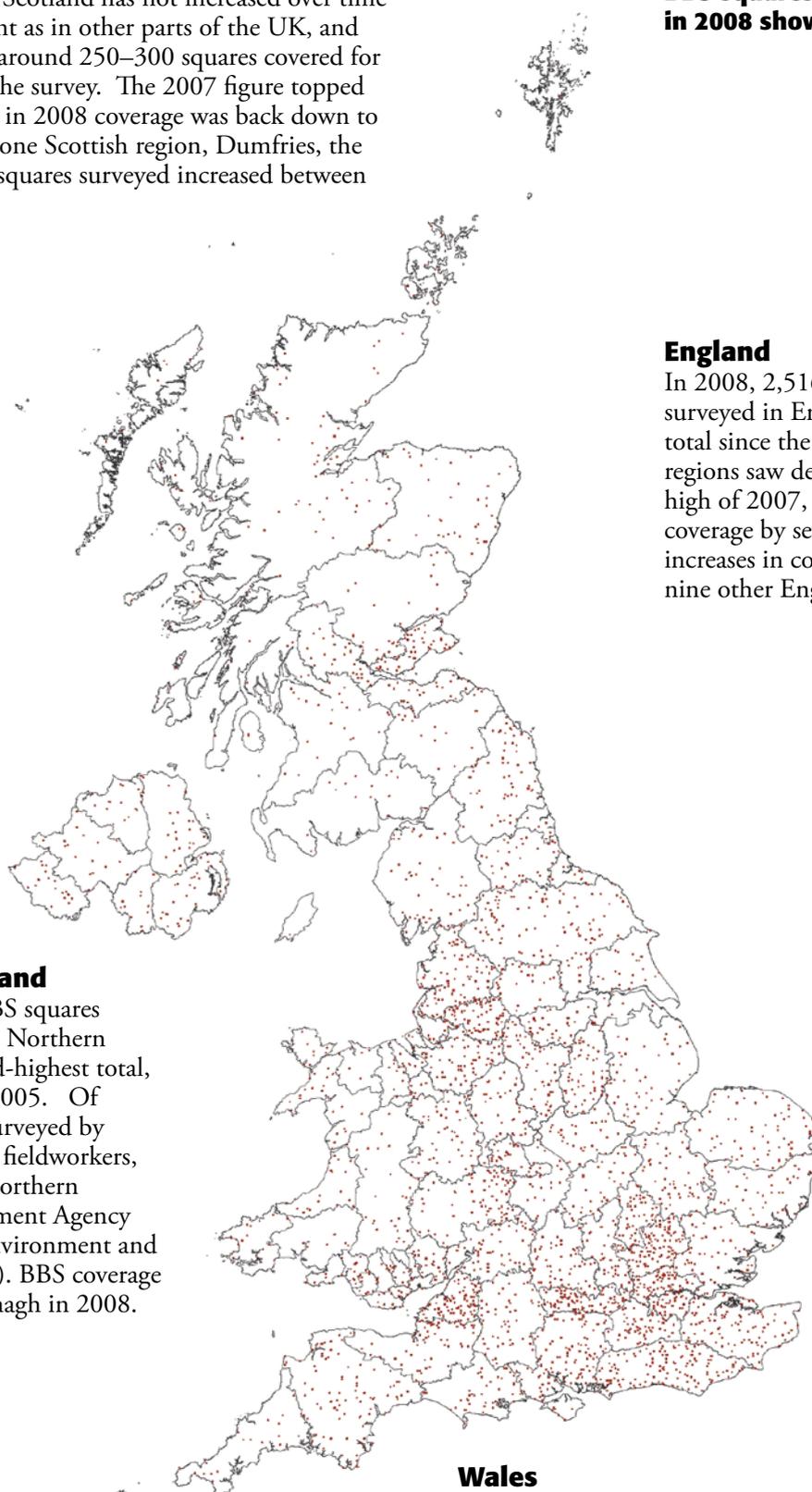
Other BBS web pages, available to all, provide a range of BBS results, including trend graphs for all species, distribution and relative abundance maps, and species lists down to county level. The website also has information on BBS methods, research projects, and how volunteers can get involved.

For more information, see www.bto.org/bbs

Scotland

BBS coverage in Scotland has not increased over time to the same extent as in other parts of the UK, and has remained at around 250–300 squares covered for the duration of the survey. The 2007 figure topped 400 squares, but in 2008 coverage was back down to 330 squares. In one Scottish region, Dumfries, the number of BBS squares surveyed increased between 2007 and 2008.

BBS squares covered in 2008 shown in red



England

In 2008, 2,516 BBS squares were surveyed in England, the third-highest total since the start of the survey. Most regions saw declines since the record high of 2007, but Sussex increased coverage by seven squares, and small increases in coverage were achieved in nine other English regions.

Northern Ireland

In 2008, 119 BBS squares were surveyed in Northern Ireland, the third-highest total, after 2007 and 2005. Of these, 52 were surveyed by two professional fieldworkers, funded by the Northern Ireland Environment Agency (formerly the Environment and Heritage Service). BBS coverage increased in Armagh in 2008.

Wales

BBS coverage in Wales dropped slightly for the third consecutive year, to 230 squares, after the record high in 2005 of 271 squares. Nevertheless, the 2008 total was higher than in any year before 2004. No regions saw an increase in coverage in 2008, but Cardigan, Clwyd (East) and Glamorgan (Mid) all equalled their 2007 totals.

Species recorded

A total of 221 species, including a number of subspecies, domestic breeds and escapees, were recorded on the 3,211 BBS squares surveyed in 2008. Of these, 115 were recorded on 40 or more squares (Table 2), and 106 on fewer than 40 squares (Table 3). Note that trends are produced for those species found on at least 40 squares on average over the whole survey period (1994–2008), rather than just in 2008, so the division here is for ease of interpretation only.

Mandarin Duck, Gadwall, Goosander, Little Egret, Peregrine and Barn Owl were all recorded on 40 or more squares in 2008, but their mean sample sizes over the entire survey period remain under 40 squares, so we are not yet able to report UK population trends for these species.

Though we don't report population trends for all species, some indication of population status can be found on the BBS website (www.bto.org/bbs), where we report the number of squares on which each species is recorded in each year. Full details of the number of individuals counted, for all years, can also be found on the BBS website.

Table 2 Species recorded on at least 40 squares across the UK in 2008

Species	Scientific name	Squares	%	Species	Scientific name	Squares	%
Mute Swan	<i>Cygnus olor</i>	326	10	Meadow Pipit	<i>Anthus pratensis</i>	861	27
Greylag Goose	<i>Anser anser</i>	255	8	Yellow Wagtail	<i>Motacilla flava</i>	146	5
Canada Goose (i)	<i>Branta canadensis</i>	567	18	Grey Wagtail	<i>Motacilla cinerea</i>	293	9
Shelduck	<i>Tadorna tadorna</i>	150	5	Pied Wagtail	<i>Motacilla alba</i>	1,479	46
Mandarin Duck (i)	<i>Aix galericulata</i>	44	1	Dipper	<i>Cinclus cinclus</i>	59	2
Gadwall	<i>Anas strepera</i>	44	1	Wren	<i>Troglodytes troglodytes</i>	2,965	92
Mallard	<i>Anas platyrhynchos</i>	1,573	49	Duncock	<i>Prunella modularis</i>	2,482	77
Tufted Duck	<i>Aythya fuligula</i>	166	5	Robin	<i>Erithacus rubecula</i>	2,884	90
Goosander	<i>Mergus merganser</i>	40	1	Redstart	<i>Phoenicurus phoenicurus</i>	160	5
Red Grouse	<i>Lagopus lagopus</i>	140	4	Whinchat	<i>Saxicola rubetra</i>	56	2
Red-legged Partridge (i)	<i>Alectoris rufa</i>	703	22	Stonechat	<i>Saxicola torquatus</i>	251	8
Grey Partridge	<i>Perdix perdix</i>	230	7	Wheatear	<i>Oenanthe oenanthe</i>	317	10
Pheasant (i)	<i>Phasianus colchicus</i>	2,243	70	Blackbird	<i>Turdus merula</i>	2,968	92
Little Grebe	<i>Tachybaptus ruficollis</i>	88	3	Fieldfare	<i>Turdus pilaris</i>	63	2
Great Crested Grebe	<i>Podiceps cristatus</i>	80	2	Song Thrush	<i>Turdus philomelos</i>	2,499	78
Cormorant	<i>Phalacrocorax carbo</i>	315	10	Mistle Thrush	<i>Turdus viscivorus</i>	1,337	42
Little Egret	<i>Egretta garzetta</i>	60	2	Grasshopper Warbler	<i>Locustella naevia</i>	87	3
Grey Heron	<i>Ardea cinerea</i>	822	26	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	353	11
Red Kite	<i>Milvus milvus</i>	146	5	Reed Warbler	<i>Acrocephalus scirpaceus</i>	161	5
Sparrowhawk	<i>Accipiter nisus</i>	429	13	Blackcap	<i>Sylvia atricapilla</i>	1,867	58
Buzzard	<i>Buteo buteo</i>	1,319	41	Garden Warbler	<i>Sylvia borin</i>	516	16
Kestrel	<i>Falco tinnunculus</i>	940	29	Lesser Whitethroat	<i>Sylvia curruca</i>	323	10
Hobby	<i>Falco subbuteo</i>	52	2	Whitethroat	<i>Sylvia communis</i>	1,606	50
Peregrine	<i>Falco peregrinus</i>	73	2	Wood Warbler	<i>Phylloscopus sibilatrix</i>	43	1
Moorhen	<i>Gallinula chloropus</i>	800	25	Chiffchaff	<i>Phylloscopus collybita</i>	1,955	61
Coot	<i>Fulca atra</i>	341	11	Willow Warbler	<i>Phylloscopus trochilus</i>	1,415	44
Oystercatcher	<i>Haematopus ostralegus</i>	377	12	Goldcrest	<i>Regulus regulus</i>	1,036	32
Golden Plover	<i>Pluvialis apricaria</i>	99	3	Spotted Flycatcher	<i>Muscicapa striata</i>	170	5
Lapwing	<i>Vanellus vanellus</i>	811	25	Long-tailed Tit	<i>Aegithalos caudatus</i>	1,293	40
Snipe	<i>Gallinago gallinago</i>	171	5	Blue Tit	<i>Cyanistes caeruleus</i>	2,789	87
Curlew	<i>Numenius arquata</i>	539	17	Great Tit	<i>Parus major</i>	2,700	84
Common Sandpiper	<i>Actitis hypoleucos</i>	54	2	Coal Tit	<i>Periparus ater</i>	976	30
Redshank	<i>Tringa totanus</i>	93	3	Willow Tit	<i>Poecile montana</i>	42	1
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	664	21	Marsh Tit	<i>Poecile palustris</i>	139	4
Common Gull	<i>Larus canus</i>	184	6	Nuthatch	<i>Sitta europaea</i>	600	19
Lesser Black-backed Gull	<i>Larus fuscus</i>	781	24	Treecreeper	<i>Certhia familiaris</i>	381	12
Herring Gull	<i>Larus argentatus</i>	841	26	Jay	<i>Garrulus glandarius</i>	981	31
Great Black-backed Gull	<i>Larus marinus</i>	134	4	Magpie	<i>Pica pica</i>	2,299	72
Common Tern	<i>Sterna hirundo</i>	79	2	Jackdaw	<i>Corvus monedula</i>	2,127	66
Feral Pigeon*	<i>Columba livia</i>	790	25	Rook	<i>Corvus frugilegus</i>	1,555	48
Stock Dove	<i>Columba oenas</i>	848	26	Carrion Crow	<i>Corvus corone</i>	2,845	89
Woodpigeon	<i>Columba palumbus</i>	2,984	93	Hooded Crow	<i>Corvus cornix</i>	150	5
Collared Dove	<i>Streptopelia decaocto</i>	1,689	53	Raven	<i>Corvus corax</i>	348	11
Turtle Dove	<i>Streptopelia turtur</i>	108	3	Starling	<i>Sturnus vulgaris</i>	2,024	63
Ring-necked Parakeet (i)	<i>Psittacula krameri</i>	110	3	House Sparrow	<i>Passer domesticus</i>	1,879	59
Cuckoo	<i>Cuculus canorus</i>	638	20	Tree Sparrow	<i>Passer montanus</i>	212	7
Barn Owl	<i>Tyto alba</i>	92	3	Chaffinch	<i>Fringilla coelebs</i>	2,971	93
Little Owl (i)	<i>Athene noctua</i>	111	3	Greenfinch	<i>Carduelis chloris</i>	2,202	69
Tawny Owl	<i>Strix aluco</i>	96	3	Goldfinch	<i>Carduelis carduelis</i>	2,067	64
Swift	<i>Apus apus</i>	1,273	40	Siskin	<i>Carduelis spinus</i>	183	6
Kingfisher	<i>Alcedo atthis</i>	66	2	Linnet	<i>Carduelis cannabina</i>	1,239	39
Green Woodpecker	<i>Picus viridis</i>	1,108	35	Lesser Redpoll	<i>Carduelis cabaret</i>	160	5
Gt Spotted Woodpecker	<i>Dendrocopos major</i>	1,463	46	Common Crossbill	<i>Loxia curvirostra</i>	71	2
Skylark	<i>Alauda arvensis</i>	2,000	62	Bullfinch	<i>Pyrrhula pyrrhula</i>	664	21
Sand Martin	<i>Riparia riparia</i>	152	5	Yellowhammer	<i>Emberiza citrinella</i>	1,330	41
Swallow	<i>Hirundo rustica</i>	2,381	74	Reed Bunting	<i>Emberiza schoeniclus</i>	613	19
House Martin	<i>Delichon urbicum</i>	1,135	35	Corn Bunting	<i>Emberiza calandra</i>	155	5
Tree Pipit	<i>Anthus trivialis</i>	121	4				

Woodpigeon and Chaffinch were the most widespread species, each found on 93% of BBS squares, closely followed by Blackbird and Wren, found on 92% of squares. As in previous years, Woodpigeon was the most numerous species recorded, with 83,612 individuals counted, followed by Blackbird (39,438) and Rook (38,737). Starling was the second most numerous species in 2007, but in 2008 dropped to the fourth most numerous, with 38,608 individuals counted.

Cattle Egret was recorded on BBS for the first time in 2008, which also saw the second BBS record of Spoonbill.

The average number of species recorded on a BBS square in 2008 was 31, but the highest number was 73 species, on a square in north Kent. Species richness varied across the country, with an average of 36 species recorded on squares in Anglesey, compared to 16 species in the Western Isles and the Scottish Highlands. However, the value of the results does not depend on the number of species recorded, and we are particularly grateful to observers who survey species-poor, remote or urban areas, as it is just as important to know where there are few birds as where there are many. Remote upland squares, in particular, may contain important populations of a small number of specialist birds.

Table 3 Species recorded on fewer than 40 squares across the UK in 2008

Species	Scientific name	Squares	Species	Scientific name	Squares
Whooper Swan	<i>Cygnus cygnus</i>	3	Woodcock	<i>Scolopax rusticola</i>	7
Pink-footed Goose	<i>Anser brachyrhynchus</i>	10	Black-tailed Godwit	<i>Limosa limosa</i>	9
White-fronted Goose	<i>Anser albifrons</i>	1	Bar-tailed Godwit	<i>Limosa lapponica</i>	2
Greylag Goose (domestic)*	<i>Anser anser</i>	22	Whimbrel	<i>Numenius phaeopus</i>	32
Snow Goose	<i>Anser caerulescens</i>	1	Green Sandpiper	<i>Tringa ochropus</i>	7
Barnacle Goose	<i>Branta leucopsis</i>	4	Greenshank	<i>Tringa nebularia</i>	9
Brent Goose	<i>Branta bernicla</i>	5	Turnstone	<i>Arenaria interpres</i>	8
Egyptian Goose (i)	<i>Alopochen aegyptiaca</i>	25	Arctic Skua	<i>Stercorarius parasiticus</i>	3
Wigeon	<i>Anas penelope</i>	10	Great Skua	<i>Stercorarius skua</i>	3
Teal	<i>Anas crecca</i>	31	Kittiwake	<i>Rissa tridactyla</i>	4
Mallard (domestic)*	<i>Anas platyrhynchos</i>	29	Little Gull	<i>Hydrocoloeus minutus</i>	1
Pintail	<i>Anas acuta</i>	1	Mediterranean Gull	<i>Larus melanocephalus</i>	12
Garganey	<i>Anas querquedula</i>	2	Little Tern	<i>Sternula albifrons</i>	3
Shoveler	<i>Anas clypeata</i>	17	Black Tern	<i>Chlidonias niger</i>	2
Red-crested Pochard	<i>Netta rufina</i>	1	Sandwich Tern	<i>Sterna sandvicensis</i>	12
Pochard	<i>Aythya ferina</i>	21	Arctic Tern	<i>Sterna paradisaea</i>	11
Eider	<i>Somateria mollissima</i>	12	Guillemot	<i>Uria aalge</i>	2
Goldeneye	<i>Bucephala clangula</i>	3	Razorbill	<i>Alca torda</i>	3
Red-breasted Merganser	<i>Mergus serrator</i>	11	Black Guillemot	<i>Cepphus grylle</i>	3
Ruddy Duck (i)	<i>Oxyura jamaicensis</i>	12	Puffin	<i>Fratercula arctica</i>	1
Ptarmigan	<i>Lagopus muta</i>	1	Rock Dove	<i>Columba livia</i>	9
Black Grouse	<i>Tetrao tetrix</i>	14	Long-eared Owl	<i>Asio otus</i>	3
Quail	<i>Coturnix coturnix</i>	8	Short-eared Owl	<i>Asio flammeus</i>	16
Red-throated Diver	<i>Gavia stellata</i>	10	Nightjar	<i>Caprimulgus europaeus</i>	3
Black-throated Diver	<i>Gavia arctica</i>	1	Hoopoe	<i>Upupa epops</i>	1
Great Northern Diver	<i>Gavia immer</i>	2	Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>	29
Slavonian Grebe	<i>Podiceps auritus</i>	1	Woodlark	<i>Lullula arborea</i>	24
Black-necked Grebe	<i>Podiceps nigricollis</i>	2	Rock Pipit	<i>Anthus petrosus</i>	18
Fulmar	<i>Fulmarus glacialis</i>	19	Water Pipit	<i>Anthus spinoletta</i>	1
Gannet	<i>Morus bassanus</i>	10	Nightingale	<i>Luscinia megarhynchos</i>	38
Shag	<i>Phalacrocorax aristotelis</i>	12	Black Redstart	<i>Phoenicurus ochruros</i>	1
Bittern	<i>Botaurus stellaris</i>	2	Ring Ouzel	<i>Turdus torquatus</i>	28
Cattle Egret	<i>Bubulcus ibis</i>	1	Redwing	<i>Turdus iliacus</i>	12
Spoonbill	<i>Platalea leucorodia</i>	1	Cetti's Warbler	<i>Cettia cetti</i>	38
Honey-buzzard	<i>Pernis apivorus</i>	1	Dartford Warbler	<i>Sylvia undata</i>	17
White-tailed Eagle	<i>Haliaeetus albicilla</i>	1	Firecrest	<i>Regulus ignicapilla</i>	8
Marsh Harrier	<i>Circus aeruginosus</i>	37	Pied Flycatcher	<i>Ficedula hypoleuca</i>	33
Hen Harrier	<i>Circus cyaneus</i>	17	Bearded Tit	<i>Panurus biarmicus</i>	2
Montagu's Harrier	<i>Circus pygargus</i>	1	Crested Tit	<i>Lophophanes cristatus</i>	3
Goshawk	<i>Accipiter gentilis</i>	9	Short-toed Treecreeper	<i>Certhia brachydactyla</i>	1
Golden Eagle	<i>Aquila chrysaetos</i>	8	Chough	<i>Pyrrhocorax pyrrhocorax</i>	3
Osprey	<i>Pandion haliaetus</i>	9	Carion/Hooded Crow hybrid*	<i>Corvus corone x cornix</i>	2
Merlin	<i>Falco columbarius</i>	15	Brambling	<i>Fringilla montifringilla</i>	7
Water Rail	<i>Rallus aquaticus</i>	7	Twite	<i>Carduelis flavirostris</i>	12
Corncrake	<i>Crex crex</i>	4	Scottish Crossbill	<i>Loxia scotica</i>	3
Crane	<i>Grus grus</i>	1	Hawfinch	<i>Coccothraustes coccothraustes</i>	1
Avocet	<i>Recurvirostra avosetta</i>	8	Snow Bunting	<i>Plectrophenax nivalis</i>	1
Stone-curlew	<i>Burhinus oedicnemus</i>	2	Cirl Bunting	<i>Emberiza cirlus</i>	4
Little Ringed Plover	<i>Charadrius dubius</i>	10	[Wood Duck]	<i>Aix sponsa</i>	1
Ringed Plover	<i>Charadrius hiaticula</i>	28	[Black Swan]	<i>Cygnus atratus</i>	6
Grey Plover	<i>Pluvialis squatarola</i>	3	[Helmeted Guineafowl]	<i>Numida meleagris</i>	17
Knot	<i>Calidris canutus</i>	1	[Indian Peafowl (Peacock)]	<i>Pavo cristatus</i>	38
Sanderling	<i>Calidris alba</i>	1			
Dunlin	<i>Calidris alpina</i>	21			

- Squares: number of squares on which the species was recorded, also shown in Table 2 as a percentage of the total number of squares.
- Entirely non-native species with self-sustaining populations in the UK (BOU category C, if not also BOU category A) are followed by (i).
- Non-native species that are not thought to have self-sustaining populations in the UK (BOU category E) are shown in square brackets.
- Species with an asterisk are usually recognised as races or forms, rather than full species.

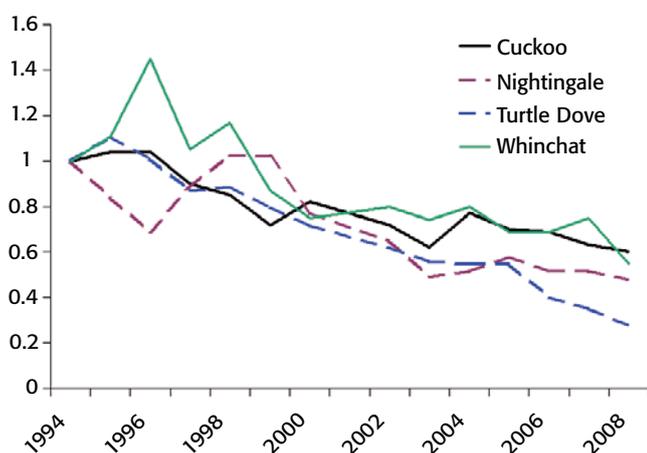
United Kingdom

This section presents population trends for the UK's common and widespread birds, and interesting results are highlighted. A full species-by-species discussion of these findings, and those from other surveys, can be found in the 2008 Wider Countryside Report, available at www.bto.org/birdtrends.

The trends discussed here are for the period 1994–2007 unless stated. Table 4 opposite shows the UK BBS results for 2008. We can produce reliable population trends only for species recorded on an average of at least 40 squares per year, so trends are not reported for species that do not reach the minimum sample size. However, we do report UK trends for Hobby and Nightingale, as these species meet the criteria for reporting trends in England, to which the populations of these species are mainly confined.

Of the 105 species for which trends are reported, 43 have increased significantly and 29 declined significantly since the start of the survey. Gadwall, Goosander, Peregrine and Barn Owl were all recorded on an average of 30–39 squares over the survey period, and a future increase in BBS coverage, or species range, may enable us to produce reliable UK trends in future.

Figure 2 Declines in summer migrants (unsmoothed trends)



This year's trends reveal a positive story for three of our smallest breeding birds – Goldcrest, Chiffchaff and Long-tailed Tit. Goldcrest and Long-tailed Tit have reached their highest levels since the start of the survey, possibly due to milder winters in the years leading up to 2008, and Goldcrest and Chiffchaff also increased significantly between 2007 and 2008.

While some medium-distance migrants such as Chiffchaff and Blackcap are increasing, the declines in many of our long-distance summer migrants remain apparent, with Turtle Dove, Cuckoo, Swift, Yellow Wagtail, Nightingale, Whinchat, Spotted Flycatcher, Pied Flycatcher and Wood Warbler all showing serious declines since the start of the survey. Of these, Turtle Dove, Cuckoo, Nightingale and Whinchat declined further between 2007 and 2008, each of them reaching their lowest levels since 1994 (see Figure 2 – unsmoothed trends). The other migrants mentioned above remained stable between 2007 and 2008, with the exception of Spotted Flycatcher and Pied Flycatcher, both of which increased.

The picture is more positive for many garden birds, including Great Spotted Woodpecker and Goldfinch, which increased between 2007 and 2008, both reaching their highest level since the start of the BBS. The largest overall increases were shown by Ring-necked Parakeet, Red Kite, Stonechat and Greylag Goose.

Birds of Conservation Concern

Due to the changes in the red and amber lists reported on p6, the BBS now monitors 20 red-listed species, of which 15 have decreased significantly since the start of the survey, and two, Song Thrush and Tree Sparrow, have increased significantly.

No red-listed species decreased significantly between 2007 and 2008, but Spotted Flycatcher and Tree Sparrow increased significantly.

The BBS monitors 34 amber-listed species, of which 12 have increased significantly and 12 have decreased significantly since the start of the survey.

Smoothed population trends

Previous BBS annual reports have presented unsmoothed population trends, but we now have a sufficiently long run of data to calculate smoothed trends for population changes since the start of the survey in 1994, and these smoothed trends are presented here. This gives a clearer picture of the overall trend, and is consistent with other reports.

Since smoothing the trends involves truncation of the end points, the long-term trend shown in this report is labelled 1995–2007. The unsmoothed trend between the two most recent years, 2007 and 2008, is also shown.

Table 4 UK population trends during 2007–08 and 1995–2007

Species	Sample	07–08	95–07	LCL	UCL
Mute Swan	222	18	14	-7	38
Greylag Goose	142	2	118*	27	275
Canada Goose	410	2	116*	77	152
Shelduck	133	11	5	-27	40
Mallard	1,156	1	19*	12	29
Tufted Duck	139	-1	46*	17	75
Red Grouse <small>UKBAP</small>	110	15	-10	-24	2
Red-legged Partridge	490	4	32*	22	45
Grey Partridge <small>UKBAP</small>	228	-15	-45*	-51	-38
Pheasant	1,589	-7	34*	28	41
Little Grebe	63	17	21	-6	55
Great Crested Grebe	65	8	28	-22	73
(Cormorant)	210	21	27	0	59
(Grey Heron)	612	-12	12*	2	22
Red Kite	54	-7	333*	197	550
Sparrowhawk	325	-3	1	-8	11
Buzzard	734	12	53*	42	64
Kestrel	619	20	-10*	-18	-3
Hobby	36	2	12	-15	44
Moorhen	606	7	16*	8	24
Coot	243	33*	37*	14	65
Oystercatcher	285	8	-14*	-21	-6
Golden Plover	55	-29	-8	-23	11
Lapwing <small>UKBAP</small>	634	11	-14*	-22	-7
Snipe	138	1	35*	14	58
Curlew <small>UKBAP</small>	460	-5	-38*	-43	-33
Common Sandpiper	61	2	-18*	-33	-7
Redshank	78	-12	-26*	-39	-13
(Common Tern)	59	-54*	3	-21	52
Feral Pigeon	629	-2	-9	-19	3
Stock Dove	697	0	-2	-10	6
Woodpigeon	2,225	11*	34*	28	39
Collared Dove	1,226	6	27*	21	34
Turtle Dove <small>UKBAP</small>	171	-20	-66*	-71	-61
Ring-necked Parakeet	42	2	600*	233	1,803
Cuckoo <small>UKBAP</small>	719	-5	-37*	-41	-32
Little Owl	98	5	-18*	-30	-7
(Tawny Owl)	85	13	1	-18	25
Swift	982	5	-29*	-37	-20
Kingfisher	52	-17	0	-23	25
Green Woodpecker	723	9	47*	38	57
Gt Spotted Woodpecker	877	4	123*	112	136
Skylark <small>UKBAP</small>	1,587	-2	-11*	-16	-7
Sand Martin	115	26	20	-25	94
Swallow	1,746	1	33*	26	40
House Martin	874	0	9*	0	18
Tree Pipit <small>UKBAP</small>	124	18	-4	-22	15
Meadow Pipit	719	2	-16*	-22	-11
Yellow Wagtail <small>UKBAP</small>	154	4	-49*	-57	-41
Grey Wagtail	203	10	38*	19	56
Pied Wagtail	1,168	4	4	-2	9
Dipper	51	-29	-12	-29	15
Wren	2,191	2	26*	21	30

Species	Sample	07–08	95–07	LCL	UCL
Dunnoek <small>UKBAP</small>	1,836	-4	21*	16	27
Robin	2,117	7	20*	17	23
Nightingale	31	-8	-41*	-58	-17
Redstart	143	-1	1	-12	11
Whinchat	73	-27	-43*	-57	-27
Stonechat	139	-2	209*	154	264
Wheatear	277	-8	-11	-25	4
Blackbird	2,209	4	25*	22	28
Song Thrush <small>UKBAP</small>	1,765	8	25*	19	31
Mistle Thrush	1,104	-2	-8	-15	0
Grasshopper Warbler <small>UKBAP</small>	68	-3	22	-9	46
Sedge Warbler	275	15	4	-12	22
Reed Warbler	112	14	29*	12	52
Blackcap	1,342	-1	57*	50	64
Garden Warbler	411	-2	-16*	-25	-7
Lesser Whitethroat	244	2	-1	-15	12
Whitethroat	1,195	-2	18*	11	24
Wood Warbler <small>UKBAP</small>	53	3	-60*	-69	-49
Chiffchaff	1,251	14*	36*	32	45
Willow Warbler	1,288	1	-12*	-17	-7
Goldcrest	708	28*	33*	18	47
Spotted Flycatcher <small>UKBAP</small>	196	40*	-38*	-47	-26
Pied Flycatcher	40	15	-51*	-62	-39
Long-tailed Tit	821	17	10*	3	19
Blue Tit	2,071	-5	6*	3	9
Great Tit	1,939	-3	46*	42	51
Coal Tit	690	3	7	-4	16
Willow Tit <small>UKBAP</small>	53	22	-67*	-74	-58
Marsh Tit <small>UKBAP</small>	137	-16	-22*	-32	-7
Nuthatch	403	-5	47*	33	59
Treecreeper	312	10	4	-7	15
Jay	664	11	13*	5	20
Magpie	1,707	1	-2	-5	2
Jackdaw	1,491	0	31*	24	42
Rook	1,181	-7	-8	-16	0
Carrion Crow	2,098	-6	13*	7	20
Hooded Crow	128	-3	-4	-21	15
Raven	232	-40*	34	5	101
Starling <small>UKBAP</small>	1,667	-7	-31*	-35	-27
House Sparrow <small>UKBAP</small>	1,459	1	-8*	-13	-4
Tree Sparrow <small>UKBAP</small>	153	50*	44*	18	79
Chaffinch	2,212	-7*	11*	7	15
Greenfinch	1,650	-9	24*	18	30
Goldfinch	1,348	14	42*	34	52
Siskin	126	17	8	-12	24
Linnet <small>UKBAP</small>	1,120	9	-24*	-30	-18
Lesser Redpoll <small>UKBAP</small>	134	-15	1	-20	27
Common Crossbill	43	144*	43	-4	96
Bullfinch <small>UKBAP</small>	530	2	-11*	-18	-4
Yellowhammer <small>UKBAP</small>	1,110	-5	-15*	-21	-10
Reed Bunting <small>UKBAP</small>	431	2	30*	17	45
Corn Bunting <small>UKBAP</small>	142	3	-30*	-42	-18

- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The trend since the start of the survey, covering the years 1994–2008, has been smoothed, and the end years truncated. This trend is therefore labelled as 1995–2007.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2008.
- LCL and UCL are the lower and upper confidence limits for the 1995–2007 trend.
- Red-listed and Amber-listed species from 'Birds of Conservation Concern 3' are shown in the relevant colour.
- UK Biodiversity Action Plan species are marked with UKBAP.
- Trends for species in brackets are reported with caveats (see p4).

England

England-specific BBS trends were produced for 99 species in 2008, shown in Table 5 opposite. Trends can be calculated for species that are found on an average of at least 30 squares per year in England, and we can now produce England-specific trends for Red Kite, Barn Owl and Grasshopper Warbler for the first time. In total, 199 species were recorded on BBS squares in England in 2008, and the most widespread were Woodpigeon, Blackbird, Carrion Crow and Chaffinch, all of which were found on over 95% of squares.

Of the 99 species for which trends were produced, 39 have increased significantly and 23 decreased significantly since the start of the survey. The biggest increases over this period have been shown by Red Kite, Ring-necked Parakeet and Stonechat, all of which are increasing in the UK overall. Red Kite and Tree Sparrow (Figure 3) also increased between 2007 and 2008, reaching their highest levels in England since the start of the survey. Goldfinch numbers also reached a new high, following a significant 20% increase between 2007 and 2008.

The greatest declines have been those of Turtle Dove, Cuckoo, Yellow Wagtail and Willow Tit, of which Turtle Dove and Cuckoo also declined between 2007 and 2008, by 20% and 16% respectively.

Numbers of Whinchat declined significantly between 2007 and 2008, taking numbers of this species in England to their lowest level since the start of the survey. Starling also declined significantly in England between 2007 and 2008, although the overall UK decline during this period was not significant. This takes the English Starling population to its lowest level since the start of the survey (Figure 4). Siskin numbers declined by 39% between 2007 and 2008, following several years of increases, whereas Linnet showed a significant increase of 19% – the first such increase since 2002.

Eight species were recorded on an average of 20–29 squares in England during the survey period, and an increase in survey coverage or species range may enable reliable trends to be calculated. These species are Gadwall, Goosander, Peregrine, Common Sandpiper, Lesser Spotted Woodpecker, Dipper, Wood Warbler and Crossbill.

Figure 3 Tree Sparrows increase in England (unsmoothed trend)

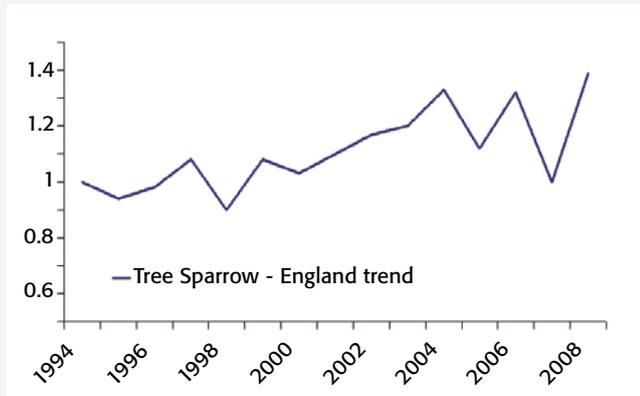


Figure 4 Starling numbers in England reach lowest level (unsmoothed trend)

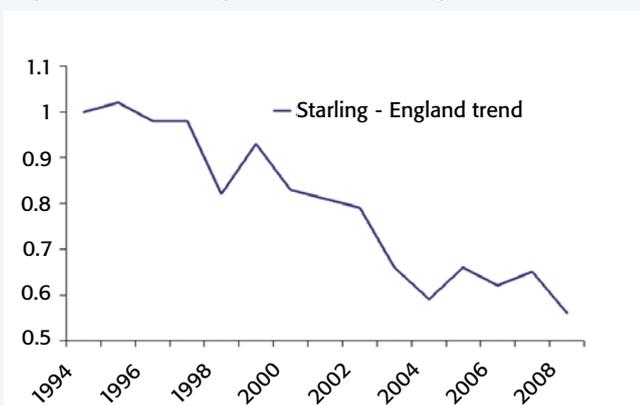


Table 5 Trends in England during 2007–08 and 1995–2007

Species	Sample	07–08	95–07	LCL	UCL	Species	Sample	07–08	95–07	LCL	UCL
Mute Swan	191	14	4	-15	24	Wren	1,707	-1	16*	12	18
Greylag Goose	116	9	155*	89	293	Duncock UKBAP	1,502	-6	15*	12	20
Canada Goose	383	3	105*	64	142	Robin	1,673	8*	24*	22	28
Shelduck	109	20	29	-5	58	Nightingale	30	-9	-37*	-56	-7
Mallard	972	1	32*	25	42	Redstart	78	4	0	-14	12
Tufted Duck	120	7	30	-1	54	Whinchat	30	-56*	-36*	-53	-11
Red Grouse UKBAP	52	19	-17	-32	-1	Stonechat	57	-3	170*	91	256
Red-legged Partridge	479	5	27*	18	37	Wheatear	140	3	-5	-23	17
Grey Partridge UKBAP	203	-5	-38*	-45	-30	Blackbird	1,763	5	23*	20	26
Pheasant	1,341	-9	36*	31	42	Song Thrush UKBAP	1,376	6	24*	19	29
Little Grebe	51	29	9	-19	43	Mistle Thrush	883	-1	-20*	-25	-15
Great Crested Grebe	60	4	-6	-23	12	Grasshopper Warbler UKBAP	30	-16	-17	-41	4
(Cormorant)	174	15	24*	9	46	Sedge Warbler	175	14	-12	-25	1
(Grey Heron)	502	-10	7	-3	16	Reed Warbler	107	9	24*	9	47
Red Kite	34	34	5,068*	2,238	4,524	Blackcap	1,162	-2	48*	42	56
Sparrowhawk	270	18	0	-8	9	Garden Warbler	337	3	-17*	-26	-8
Buzzard	455	20	109*	90	136	Lesser Whitethroat	233	-1	-6	-20	7
Kestrel	539	18	4	-3	10	Whitethroat	1,032	1	16*	10	20
Hobby	35	8	11	-16	49	Chiffchaff	1,058	13*	39*	34	48
Moorhen	558	9	13*	4	20	Willow Warbler	875	-5	-32*	-36	-27
Coot	219	34	39*	16	64	Goldcrest	502	13	35*	21	52
Oystercatcher	145	-1	44*	27	68	Spotted Flycatcher UKBAP	141	0	-41*	-51	-31
Lapwing UKBAP	522	3	6	-5	14	Long-tailed Tit	724	13	6	-1	14
Snipe	66	-15	14	-5	35	Blue Tit	1,683	-5	4*	0	7
Curlew UKBAP	279	-11	-21*	-28	-15	Great Tit	1,577	-1	43*	39	48
Redshank	53	27	-19	-33	-3	Coal Tit	458	5	13	-1	34
(Common Tern)	53	16	38	4	91	Willow Tit UKBAP	47	18	-68*	-74	-61
Feral Pigeon	524	-5	-10	-19	-1	Marsh Tit UKBAP	124	-20	-23*	-34	-12
Stock Dove	643	-2	-3	-11	7	Nuthatch	338	-1	51*	35	63
Woodpigeon	1,782	12*	41*	36	47	Treecreeper	232	8	-8	-18	0
Collared Dove	1,081	7	28*	21	36	Jay	576	7	4	-3	12
Turtle Dove UKBAP	168	-20	-66*	-70	-60	Magpie	1,427	0	-2	-5	1
Ring-necked Parakeet	42	2	600*	261	1,590	Jackdaw	1,185	5	37*	30	47
Cuckoo UKBAP	575	-16	-55*	-58	-51	Rook	931	-6	0	-10	8
(Barn Owl)	34	39	364*	240	515	Carrion Crow	1,724	-2	18*	12	25
Little Owl	95	6	-14	-29	-1	Raven	84	-63*	21	-11	188
(Tawny Owl)	72	-28	-13	-28	7	Starling UKBAP	1,368	-14*	-39*	-43	-36
Swift	848	8	-30*	-38	-20	House Sparrow UKBAP	1,207	0	-18*	-23	-13
Kingfisher	46	-4	8	-16	38	Tree Sparrow UKBAP	125	39	24	2	52
Green Woodpecker	671	12	56*	47	66	Chaffinch	1,722	-5	16*	13	20
Gt Spotted Woodpecker	777	-2	111*	97	124	Greenfinch	1,388	-12*	24*	20	31
Skylark UKBAP	1,255	-3	-17*	-20	-14	Goldfinch	1,109	20*	31*	25	39
Sand Martin	77	3	19	-16	50	Siskin	40	-39	22	-28	107
Swallow	1,342	-3	30*	22	38	Linnet UKBAP	907	19*	-34*	-38	-28
House Martin	693	1	1	-8	10	Lesser Redpoll UKBAP	53	-22	-33	-55	-5
Tree Pipit UKBAP	67	-3	-38*	-53	-18	Bullfinch UKBAP	410	3	-13*	-21	-7
Meadow Pipit	374	-1	-10*	-20	-1	Yellowhammer UKBAP	969	-3	-21*	-24	-17
Yellow Wagtail UKBAP	151	8	-48*	-56	-42	Reed Bunting UKBAP	323	-3	25*	14	38
Grey Wagtail	133	-8	34*	14	56	Corn Bunting UKBAP	135	7	-27*	-40	-18
Pied Wagtail	891	-3	6	-1	12						

- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The trend since the start of the survey, covering the years 1994–2008, has been smoothed, and the end years truncated. This trend is therefore labelled as 1995–2007.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2008.
- LCL and UCL are the lower and upper confidence limits for the 1995–2007 trend.
- Red-listed and Amber-listed species from 'Birds of Conservation Concern 3' are shown in the relevant colour.
- UK Biodiversity Action Plan species are marked with UKBAP.
- Trends for species in brackets are reported with caveats (see p4).

Scotland

In total, 160 species were recorded on the 330 squares covered in Scotland in 2008. The most widespread species were Wren, Chaffinch, Woodpigeon and Skylark, all found on over 70% of squares. A number of late winter visitors and passage migrants, some of which occasionally breed in Scotland, were also noted. These included Pink-footed Goose, Brent Goose, Sanderling, Turnstone, Fieldfare, Redwing and Brambling.

Scotland-specific trends can be calculated for species that are found on an average of at least 30 squares in Scotland per year, and we can now produce Scottish trends for Great Spotted Woodpecker and Grey Wagtail for the first time. This brings the total number of species for which we can produce Scottish trends to 59, of which 22 have increased significantly and eight decreased significantly since the start of the survey.

The greatest declines in Scotland since the start of the BBS have been shown by Kestrel, Curlew and Swift. However, Kestrel increased by 35% between 2007 and 2008, following a smaller increase the previous year. Numbers of Golden Plover had been increasing, but have fallen sharply in the last two years, contrasting with Lapwing populations, which have increased after many years of declines (see Figure 5 – unsmoothed trend). Three corvid species declined in Scotland between 2007 and 2008 – Rook by 16%, Carrion Crow by 22% and Raven by 30%, taking the populations of Rook and Carrion Crow to their lowest levels in Scotland since the start of the BBS.

The species that have increased most in Scotland since the start of the BBS are Great Spotted Woodpecker, Stonechat, Blackcap and Chiffchaff. Chiffchaff numbers increased by 40% between 2007 and 2008, and Reed Bunting, Swallow and Treecreeper all reached their highest levels in Scotland since the start of the survey.

Blackcap, House Martin and Cuckoo are among a number of summer migrants that have been doing better in Scotland than in the UK as a whole. Siskin numbers in Scotland continue to rise, in contrast to the drop in numbers in England in 2008. Grey Wagtail, Swallow and Bullfinch all showed larger increases in Scotland between 2007 and 2008 than in the UK as a whole.

Ten species were recorded on an average of 20–29 squares per year in Scotland, and an increase in survey coverage or species range may enable reliable trends to be calculated. These species are Grey Partridge, Redshank, Stock Dove, Sand Martin, Tree Pipit, Dipper, Whinchat, Garden Warbler, Spotted Flycatcher and Long-tailed Tit.

Figure 5 Golden Plover numbers fall in Scotland as Lapwing shows signs of recovery (unsmoothed trends)

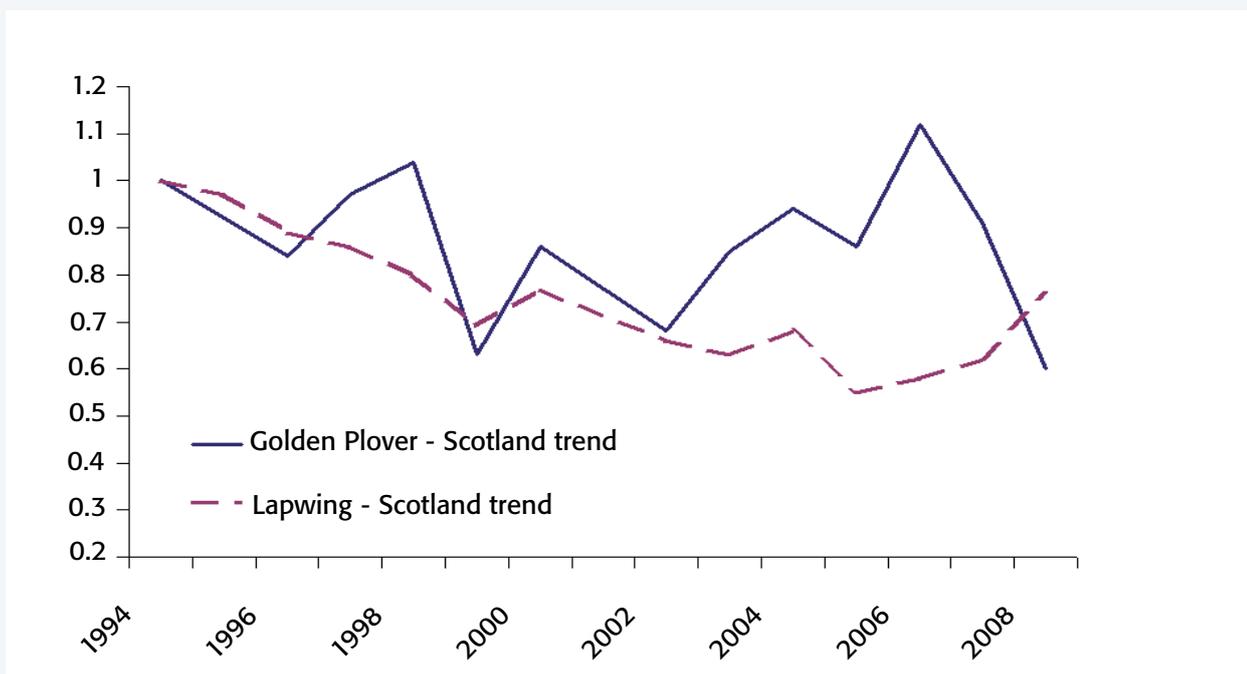


Table 6 Trends in Scotland during 2007–08 and 1995–2007

Species	Sample	07–08	95–07	LCL	UCL
Mallard	93	1	-12	-27	8
Red Grouse <small>UKBAP</small>	53	14	-7	-23	14
Pheasant	120	4	8	-8	26
(Grey Heron)	47	-11	32	3	62
Buzzard	122	14	25*	10	47
Kestrel	43	36	-38*	-55	-17
Oystercatcher	125	7	-24*	-32	-16
Golden Plover	42	-34	-12	-27	10
Lapwing <small>UKBAP</small>	88	23	-33*	-46	-19
Snipe	56	8	48*	17	87
Curlew <small>UKBAP</small>	120	0	-51*	-58	-45
Common Sandpiper	31	5	-14	-29	1
Feral Pigeon	57	20	-11	-38	33
Woodpigeon	181	12	-1	-16	16
Collared Dove	45	-10	-9	-31	22
Cuckoo <small>UKBAP</small>	67	1	14	-3	32
Swift	47	-4	-42*	-56	-30
Gt Spotted Woodpecker	33	46	254*	153	346
Skylark <small>UKBAP</small>	198	2	3	-11	19
Swallow	155	22	39*	23	59
House Martin	55	-5	102*	49	157
Meadow Pipit	199	5	-25*	-33	-18
Grey Wagtail	30	36	58*	18	105
Pied Wagtail	125	2	-3	-20	9
Wren	203	9	76*	57	90
Dunnock <small>UKBAP</small>	119	9	45*	17	67
Robin	172	5	17*	3	28
Stonechat	35	2	259*	157	371
Wheatear	76	-20	-14	-33	17
Blackbird	172	1	29*	15	44

Species	Sample	07–08	95–07	LCL	UCL
Song Thrush <small>UKBAP</small>	153	11	22*	4	41
Mistle Thrush	68	4	47*	20	92
Sedge Warbler	50	22	29	-7	76
Blackcap	40	5	168*	107	257
Whitethroat	70	-11	85*	46	149
Chiffchaff	33	40	197*	107	364
Willow Warbler	187	3	8	-4	19
Goldcrest	80	26	54*	24	76
Blue Tit	143	-7	6	-5	17
Great Tit	129	-7	48*	28	68
Coal Tit	109	12	1	-14	16
Treecreeper	31	21	20	-13	46
Magpie	41	7	6	-15	34
Jackdaw	103	-8	11	-11	32
Rook	105	-16	-25*	-41	-3
Carrion Crow	171	-22	-2	-18	16
Hooded Crow	51	9	-29*	-45	-11
Raven	42	-30	67*	8	142
Starling <small>UKBAP</small>	138	28	-8	-24	7
House Sparrow <small>UKBAP</small>	84	10	37*	11	68
Chaffinch	212	-11	4	-4	13
Greenfinch	97	28	17	-4	43
Goldfinch	77	22	76*	39	132
Siskin	57	40	-2	-21	24
Linnet <small>UKBAP</small>	86	-6	11	-14	37
Lesser Redpoll <small>UKBAP</small>	36	-21	-14	-43	26
Bullfinch <small>UKBAP</small>	32	21	2	-27	24
Yellowhammer <small>UKBAP</small>	96	-10	10	-9	31
Reed Bunting <small>UKBAP</small>	52	20	57*	22	103

- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The trend since the start of the survey, covering the years 1994–2008, has been smoothed, and the end years truncated. This trend is therefore labelled as 1995–2007.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2008.
- LCL and UCL are the lower and upper confidence limits for the 1995–2007 trend.
- Red-listed and Amber-listed species from 'Birds of Conservation Concern 3' are shown in the relevant colour.
- UK Biodiversity Action Plan species are marked with UKBAP.
- Trends for species in brackets are reported with caveats (see p4).



GOLDEN PLOVER BY TOMMY HOLDEN



LAPWING BY JILL PAKENHAM

Wales

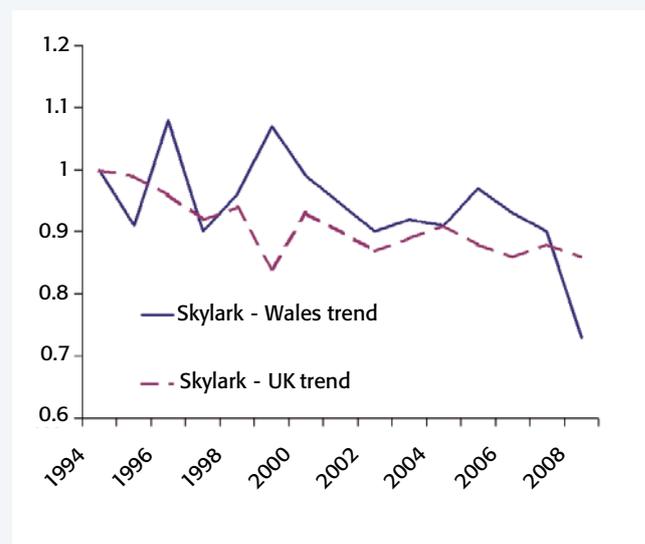
Table 7 opposite shows Wales-specific BBS trends for 2008. In total, 137 species were recorded on BBS squares in Wales in 2008, including the third BBS record of Dartford Warbler in Wales. Carrion Crow, Blackbird, Robin, Chaffinch and Wren were the most widespread, all occurring on at least 90% of squares. Wales-specific trends can be calculated for species that are found on an average of at least 30 squares in Wales per year, which in 2008 was 53 species, the same as in 2007.

Of the 53 species for which trends are reported, 20 have increased significantly and 11 decreased significantly since the start of the BBS. Pheasant, Great Spotted Woodpecker, Stonechat and House Sparrow have shown the greatest increases in Wales since the start of the survey, while Curlew, Cuckoo, Swift, Starling and Yellowhammer have declined the most, although Cuckoo increased by 35% between 2007 and 2008, although declining in the UK as a whole.

Skylarks, which had seemed to be doing better in Wales than in the UK as a whole, declined by 19% in Wales between 2007 and 2008, dropping to their lowest level since the start of the survey (see Figure 6 – unsmoothed trend). Similarly, Linnets also fell to their lowest level, and their overall decline in Wales is now very similar to that in the UK as a whole. Rooks increased by 66% in Wales between 2007 and 2008.

Twelve species were recorded on an average of 20–29 squares per year in Wales, and an increase in survey coverage or species range may enable reliable trends to be calculated. These species are Canada Goose, Sparrowhawk, Kestrel, Moorhen, Stock Dove, Grey Wagtail, Sedge Warbler, Wood Warbler, Spotted Flycatcher, Pied Flycatcher, Siskin and Reed Bunting.

Figure 6 Skylark numbers fall in Wales (unsmoothed trends)



Northern Ireland

We are now able to calculate population trends of Reed Bunting in Northern Ireland, bringing the number of species monitored in the Province to 29, of which 17 have increased significantly and one, Skylark, has decreased significantly since the start of the BBS. Because of the relatively small number of squares surveyed in Northern Ireland, we can produce trends only for the most widespread and numerous species – therefore, many declining species cannot be monitored by BBS in Northern Ireland.

The biggest increases have been shown by Pheasant, Goldcrest, Great Tit and Goldfinch. Goldcrest showed a 73% increase in Northern Ireland between 2007 and 2008, even greater than the overall UK increase. Pied Wagtail also reached its highest level since the start of the survey. Greenfinch, Starling and Coal Tit all declined between 2007 and 2008.

Eleven species were recorded on an average of 20–29 squares per year in Northern Ireland, and an increase in survey coverage or species range may enable reliable trends to be calculated. These species are Mallard, Buzzard, Curlew, Collared Dove, Cuckoo, Sedge Warbler, Blackcap, Chiffchaff, Raven, Lesser Redpoll and Bullfinch.

Isle of Man and the Channel Islands

Just one square was surveyed on the Isle of Man in 2008. On the Channel Islands, 15 squares were surveyed (10 on Jersey, four on Guernsey and one on Alderney), and 67 species were recorded, including the first BBS record of Reed Bunting on the Channel Islands.

Table 7 Trends in Wales during 2007–08 and 1995–2007

Species	Sample	07–08	95–07	LCL	UCL	Species	Sample	07–08	95–07	LCL	UCL
Mallard	62	-6	-17	-43	28	Blackcap	109	-11	54*	31	78
Pheasant	85	-10	55*	24	86	Garden Warbler	54	8	-26*	-47	-4
(Grey Heron)	42	-21	-2	-20	22	Whitethroat	75	-6	-19*	-33	-3
Buzzard	134	-2	5	-7	21	Chiffchaff	125	15	17*	8	33
Curlew UKBAP	38	10	-39*	-51	-25	Willow Warbler	151	9	-21*	-31	-10
Feral Pigeon	31	-20	30	-10	76	Goldcrest	80	33	-30	-48	2
Woodpigeon	176	-2	35*	21	47	Long-tailed Tit	56	-15	7	-15	29
Collared Dove	66	5	51*	10	82	Blue Tit	166	2	15*	5	28
Cuckoo UKBAP	56	35	-32*	-46	-21	Great Tit	159	-10	46*	31	61
Swift	64	-37	-43*	-56	-16	Coal Tit	67	-13	-25*	-42	-3
Green Woodpecker	45	-28	-2	-20	19	Nuthatch	64	-20	24*	3	48
Gt Spotted Woodpecker	65	3	128*	92	187	Treecreeper	39	-9	7	-20	35
Skylark UKBAP	100	-19	-13	-26	-2	Jay	66	20	27*	5	47
Swallow	161	-6	41*	18	67	Magpie	153	9	-13*	-22	-4
House Martin	84	-4	16	-8	51	Jackdaw	131	-4	25	-13	82
Tree Pipit UKBAP	31	24	-11	-44	29	Rook	75	66	-12	-32	17
Meadow Pipit	83	0	-4	-15	5	Carrion Crow	190	-1	12	-1	28
Pied Wagtail	110	26	10	-7	30	Raven	83	-1	39	-2	105
Wren	186	-2	16*	6	23	Starling UKBAP	81	-24	-51*	-67	-35
Dunnock UKBAP	141	-10	36*	21	57	House Sparrow UKBAP	113	2	71*	44	101
Robin	182	11	14*	7	22	Chaffinch	187	-2	-6	-15	5
Redstart	54	10	-4	-23	14	Greenfinch	106	5	23*	6	44
Stonechat	34	3	201*	93	349	Goldfinch	117	-13	48*	22	84
Wheatear	50	36	-24*	-39	-10	Linnet UKBAP	88	-10	-25	-41	-5
Blackbird	185	3	44*	34	55	Bullfinch UKBAP	60	-6	-13	-28	10
Song Thrush UKBAP	158	16	38*	25	53	Yellowhammer UKBAP	37	-4	-39*	-52	-26
Mistle Thrush	96	5	6	-15	30						

Table 8 Trends in Northern Ireland during 2007–08 and 1995–2007

Species	Sample	07–08	95–07	LCL	UCL	Species	Sample	07–08	95–07	LCL	UCL
Pheasant	33	-10	158*	49	233	Blue Tit	69	-10	26	-3	52
Woodpigeon	74	6	68*	32	110	Great Tit	63	6	159*	97	190
Skylark UKBAP	33	29	-29*	-41	-22	Coal Tit	55	-31	80*	29	114
Swallow	76	-17	29*	3	61	Magpie	75	-5	29	1	56
House Martin	36	22	54	-4	134	Jackdaw	67	-14	68*	22	96
Meadow Pipit	60	-14	38*	13	78	Rook	67	-21	8	-16	39
Pied Wagtail	38	19	39	Sample too small		Hooded Crow	72	-18	105*	61	143
Wren	83	7	76*	39	109	Starling UKBAP	70	-45	59*	22	105
Dunnock UKBAP	63	7	85*	23	124	House Sparrow UKBAP	45	10	42	-13	79
Robin	78	-5	16	-2	31	Chaffinch	80	-15	38*	8	55
Blackbird	77	6	45*	16	61	Greenfinch	47	-47	78*	27	176
Song Thrush UKBAP	68	20	58*	26	92	Goldfinch	37	-11	645	Sample too small	
Mistle Thrush	54	-19	14	-42	105	Linnet UKBAP	32	14	57	3	98
Willow Warbler	71	4	47*	18	62	Reed Bunting UKBAP	30	5	11	-16	60
Goldcrest	41	73	149*	64	203						

- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The trend since the start of the survey, covering the years 1994–2008, has been smoothed, and the end years truncated. This trend is therefore labelled as 1995–2007.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2008.
- LCL and UCL are the lower and upper confidence limits for the 1995–2007 trend.
- Red-listed and Amber-listed species from 'Birds of Conservation Concern 3' are shown in the relevant colour.
- UK Biodiversity Action Plan species are marked with UKBAP.
- Trends for species in brackets are reported with caveats (see p4).

English Government Office Regions

As the number of BBS squares covered in England increases, we are able to calculate separate trends for each of the English Government Office Regions for many species. Because climate, agriculture and habitats vary throughout England, major regional differences in population trends could lead us to possible explanations for changes in bird numbers.

Coverage varies considerably from one region to another, with the number of squares surveyed dependent on the number of BBS observers available in the area. We only report regional trends for species found on an average of at least 30 squares per year in that region during the survey period, as our research has shown that this is the minimum sample size needed to produce reliable trends. In 2008, we were able to produce the first regional trends for Grey Wagtail (in the South West) and Tree Sparrow (in the East Midlands).

Region	Counties
GOR1 North West	Cheshire, Cumbria, Lancashire, Greater Manchester, Merseyside
GOR2 North East	Cleveland, County Durham, Northumberland
GOR3 Yorkshire and the Humber	East Yorkshire, North Lincolnshire, North Yorkshire, South Yorkshire, West Yorkshire
GOR4 East Midlands	Derbyshire, Northamptonshire, Leicestershire & Rutland, Lincolnshire, Nottinghamshire
GOR5 East of England	Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk, Suffolk
GOR6 West Midlands	Birmingham, Herefordshire, Shropshire, Staffordshire, Warwickshire, Worcestershire
GOR7 South East	Berkshire, Buckinghamshire, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey, Sussex
GOR8 South West	Avon, Cornwall, Devon, Dorset, Gloucestershire, Somerset, Wiltshire
GOR9 London	Greater London

Yellowhammer declined more in the **North East** than in any other English region, and it is the only region in which Jackdaw has declined. Great Tit increased by 75% in the region since the start of the BBS.

The **North West** is the only region in which Mistle Thrush has shown an increase, and Blackcap, Chiffchaff, Dunnock, House Martin, Linnets, Song Thrush, Wren and Willow Warbler have all done better than in other English regions. Sparrowhawk has declined the most in this region.

Goldcrest and Kestrel have increased in the **West Midlands** more than in any other region. Curlew and Jay have declined more than in any other region.

The **South West** is the only English region in which Garden Warbler and Meadow Pipit have increased. Swallow and Canada Goose have increased more than in other regions, but Starling and Swift declined more.

Buzzard and Whitethroat have increased more in the **South East** than in any other English region. House Martin, Lapwing, Long-tailed Tit, Mistle Thrush, Robin and Willow Warbler have all fared worse than in other regions, and it is the only region in which Reed Bunting and Wren have declined.

Yorkshire and the Humber is the only region in which Skylark has increased in numbers. Blackbird, Carrion Crow, Long-tailed Tit, Moorhen and Reed Bunting have increased more than in other regions. Kestrel and Magpie have declined the most in this region, and it is the only one in which Whitethroat has declined.

Bullfinch, House Sparrow and Lapwing have all increased more in the **East Midlands** than in any other English region, and the declines of Starling and Yellowhammer have been less severe than in other regions. It is the only region in which Swift has shown an increase. Linnets, Meadow Pipit, Pied Wagtail, Skylark and Stock Dove have all declined more than in other regions.

The **East of England** is the only region in which Coal Tit has declined. Collared Dove, Green Woodpecker, Jay, Jackdaw and Rook have all increased more than in other regions.

Garden birds such as Blue Tit, Chaffinch, Goldfinch, Greenfinch, Great Tit and Robin have all increased more in **London** than in the rest of England. However, House Sparrow and Song Thrush have shown greater declines.

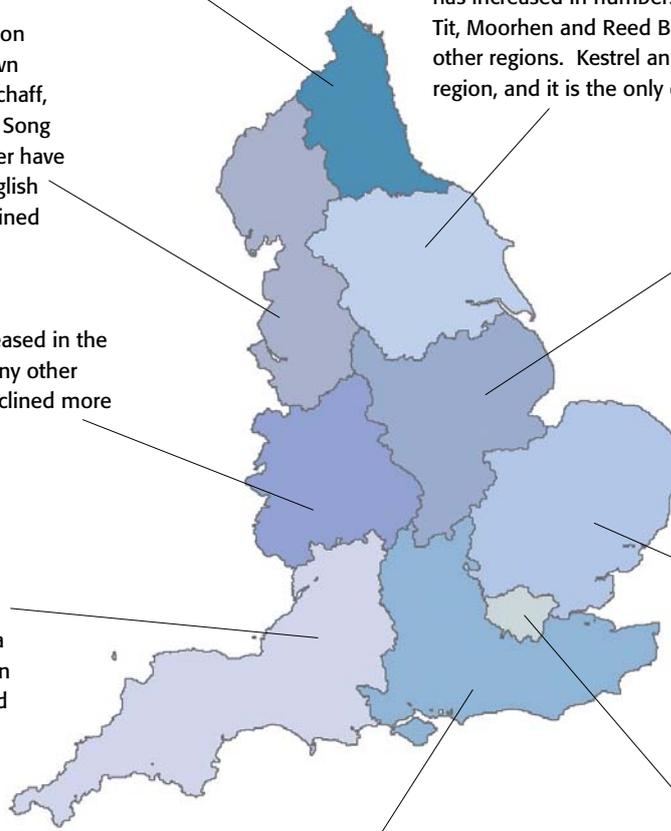


Table 9 Trends in English Government Office Regions during 1995–2007

Species	North West	North East	Yorkshire	East Midlands	East of England	West Midlands	South East	South West	London									
Mute Swan					24	39	-18	49	7	30								
Greylag Goose					29	32												
Canada Goose	200*	57		72	35	84	50	30*	57	45*	97	229*	40					
Shelduck					15	34												
Mallard	31*	139		28*	76	17	89	77*	99	23*	199	66*	135	-19	36			
Red-legged Partridge				47*	40	-18	70	-1	169	86*	32	101*	103	97*	45			
Grey Partridge UKBAP					-47*	30				-39*	44	-54*	36					
Pheasant (Cormorant)	103*	114	48*	51	78*	104	31	125	5	252	59*	121	33*	333	58*	233		
(Grey Heron)	30*	75		21	31	19	46		-12	78	32*	54	0	108	-3	74		
Sparrowhawk	-29	31							7	44			62*	38	22	31		
Buzzard	111*	46							4	44			6	64	7	45		
Kestrel	16	64		-23	45	4	53		-1	101	24	41	-4	125	-15	74		
Moorhen	-8	68		56*	35	-8	53		20	119	-6	57	7	131	23	61		
Coot									6	37			8	55				
Oystercatcher	14	48																
Lapwing UKBAP	2	106	5	35	41*	82	76*	58	18	71	-1	38	-28*	103				
Curlew UKBAP	-29*	82	-37*	36	-19	76			-49*	30								
Feral Pigeon	-16	70			-9	51	-25	45	-23	71	-32	41	6	100	2	65	-20*	62
Stock Dove	57	44			53*	40	-39*	63	-17	126	18	73	3	167	4	107		
Woodpigeon	39*	188	22	63	76*	128	25*	162	60*	292	21*	162	33*	416	37*	303	77*	69
Collared Dove	54*	117		-4	65	52*	96		80*	193	-12	110	27*	262	18*	171	53*	45
Turtle Dove UKBAP									-68*	80			-66*	56				
Cuckoo UKBAP	-37*	35		-57*	39	-63*	55		-58*	118	-57*	59	-52*	167	-66*	82		
Swift	-35*	104		-36*	69	4	78		-3	144	-9	74	-41*	162	-42*	136	-28*	53
Green Woodpecker						129*	32		159*	143	35*	56	45*	263	25*	117		
Gt Spotted Woodpecker	158*	70		83*	32	104*	44		93*	127	112*	84	95*	245	133*	126		
Skyllark UKBAP	-4	111	-21*	53	4	109	-30*	134	-26*	253	-14*	107	-22*	281	-17*	197		
Swallow	32*	172	32*	56	10	118	28*	124	9	204	18	128	16*	273	65*	254		
House Martin	32	93			-7	55	21	50	-8	98	1	75	-31*	143	4	137		
Meadow Pipit	-16	74	-8	40	-22	73	-28*	38	-24	42			-18	47	5	43		
Yellow Wagtail UKBAP						-75*	34		-41*	47								
Grey Wagtail															-1	30		
Pied Wagtail	-15	116	8	38	-22	81	-30	85	28*	145	28*	82	8	185	12	140		
Wren	60*	186	31*	58	54*	131	22*	153	17*	269	20*	155	-7*	396	4	297	50*	63
Dunnock UKBAP	44*	155	34*	44	4	99	15	140	16*	239	33*	146	10*	363	11	268	28*	50
Robin	46*	177	28*	54	57*	112	24*	149	28*	265	39*	159	8*	400	16*	292	77*	65
Wheatear	-15	39																
Blackbird	46*	187	35*	55	57*	127	25*	159	12*	285	34*	162	2	415	26*	304	-13*	69
Song Thrush UKBAP	97*	141	8	48	54*	85	31*	110	-9	209	86*	131	-3	361	29*	249	-26*	44
Mistle Thrush	26*	112	0	33	-33	68	-5	78	-41*	138	-1	82	-42*	222	-26*	121	-38*	30
Sedge Warbler									-16	45			19	31				
Reed Warbler									6	39								
Blackcap	140*	93	26*	31	68*	60	36*	90	35*	204	53*	113	40*	314	53*	225	79*	33
Garden Warbler									-24*	57	-8	42	-21*	89	15	59		
Lesser Whitethroat									8	64			-23*	51	-3	36		
Whitethroat	2	75	20	30	-3	62	16	111	6	219	9	90	43*	250	27*	176		
Chiffchaff	116*	73			89*	44	83*	64	63*	167	59*	115	15*	297	21*	247		
Willow Warbler	19	130	-30*	53	6	90	-47*	83	-60*	123	-45*	88	-64*	152	-47*	147		
Goldcrest	92*	37							51*	65	111*	38	36*	166	6	118		
Spotted Flycatcher UKBAP													-55*	32	-4	31		
Long-tailed Tit	43*	69			64*	36	31	62	15	125	-8	75	-15*	201	6	118		
Blue Tit	1	180	2	49	17*	116	26*	148	13*	268	-2	159	5	405	-2	290	56*	68
Great Tit	48*	164	75*	44	77*	98	62*	134	28*	253	35*	154	31*	393	51*	276	120*	62
Coal Tit	15	53	32	31			2	30	-12	52	30*	40	5	126	8	87		
Marsh Tit UKBAP													-9	47				
Nuthatch											92*	39	19*	141	63*	70		
Treecreeper													-12	77	-20	45		
Jay	45*	59							48*	96	-29*	53	-5	193	3	93	16	34
Magpie	-8	165			-19*	80	15	119	24*	215	-17*	144	3	357	-2	254	27*	67
Jackdaw	57*	114	-5	47	67	86	60*	89	99*	188	49*	120	37*	299	20*	231		
Rook	-45*	78	1	40	-60*	85	33	79	37*	165	9	78	16	210	-2	194		
Carrion Crow	35*	194	11	61	96*	132	17*	149	77*	266	5	159	15*	398	1	296	57*	69
Raven													-4	44				
Starling UKBAP	-40*	164	-38*	48	-47*	104	-17	120	-19*	227	-44*	128	-49*	316	-56*	193	-33*	68
House Sparrow UKBAP	-11	141	-20	31	-14	79	21	104	-34*	191	-4	129	-37*	269	9	201	-66*	61
Tree Sparrow UKBAP							23	30										
Chaffinch	29*	185	23	61	45*	128	31*	157	38*	283	-7	159	10*	406	0	301	162*	43
Greenfinch	53*	139	21	37	27*	88	17	122	46*	235	26*	129	-5	337	20*	250	131*	52
Goldfinch	78*	131	44*	37	69*	81	10	94	5	170	90*	99	4	252	25*	212	158*	33
Linnet UKBAP	-8	86	-14	38	-26*	77	-51*	99	-39*	159	-37*	69	-50*	209	-22*	161		
Bullfinch UKBAP	-7	32					19	33	-33*	56	4	46	-39*	121	-16	92		
Yellowhammer UKBAP	-21*	55	-34*	36	-13	70	-5	118	-21*	203	-31*	103	-26*	229	-11	150		
Reed Bunting UKBAP	19	53			57*	31	8	46	17	72			-14	54				
Corn Bunting UKBAP									-29*	40								

- This table shows trends (in bold) and sample sizes (normal font).
- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2008.
- Red-listed and Amber-listed species from 'Birds of Conservation Concern 3' are shown in the relevant colour.
- UK Biodiversity Action Plan species are marked with UKBAP.
- Trends for species in brackets are reported with caveats (see p4).

Mammal monitoring

Mammal records were received from 2,516 squares, 78% of the total number of squares surveyed. Table 10 shows the 15 most widespread species in 2008. For easily detectable diurnal species, such as Brown Hare, Rabbit, Grey Squirrel and some deer, the vast majority of records were of individuals seen and counted during the two BBS visits. However, a large proportion of the records for other mammals were based on field signs, dead animals, and local knowledge. These include those for mainly nocturnal or crepuscular species, such as Red Fox, Hedgehog, Mole, Badger, Stoat and Weasel. In addition to those listed in Table 10, a further 26 species were recorded during BBS visits in 2008 – these are listed in Table 11. The order of species within the tables has been changed since the 2007 report, to follow Harris & Yalden (2008).

On the most species-rich square, in Lancashire, 15 mammal species were recorded, including counts, local knowledge and field signs. Live mammals were seen and counted during at least one bird-recording visit on 2,246 squares (89% of the mammal returns). On 120 squares (5%) the only mammal records were from extra visits, field signs, dead animals or local knowledge, leaving 150 squares (6%) on which the observer looked out for mammals, but encountered none. It is important that we continue to receive counts of zero mammals, to ensure that our records remain unbiased.



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Table 10 Common mammal species in 2008

Species	Scientific name	Squares recorded	Squares seen	Individuals
Grey Squirrel	<i>Sciurus carolinensis</i>	982	851	1,919
Common Rat	<i>Rattus norvegicus</i>	174	28	58
Rabbit	<i>Oryctolagus cuniculus</i>	1,750	1,595	15,937
Brown Hare	<i>Lepus europaeus</i>	815	762	2,474
Hedgehog	<i>Erinaceus europaeus</i>	156	14	16
Mole	<i>Talpa europaea</i>	687	5	7
Domestic Cat	<i>Felis catus</i>	424	331	586
Red Fox	<i>Vulpes vulpes</i>	725	327	419
Badger	<i>Meles meles</i>	359	9	8
Stoat	<i>Mustela erminea</i>	135	46	50
Weasel	<i>Mustela nivalis</i>	98	29	33
Muntjac	<i>Muntiacus reevesi</i>	182	111	165
Red Deer	<i>Cervus elaphus</i>	98	69	1,066
Fallow Deer	<i>Dama dama</i>	100	55	588
Roe Deer	<i>Capreolus capreolus</i>	617	490	1,131

Table 11 All other mammal species in 2008

Species	Scientific name	Squares recorded
Red Squirrel	<i>Sciurus vulgaris</i>	48
Bank Vole	<i>Myodes glareolus</i>	14
Short-tailed Vole	<i>Microtus agrestis</i>	24
Water Vole	<i>Arvicola terrestris</i>	11
Wood Mouse	<i>Apodemus sylvaticus</i>	20
House Mouse	<i>Mus domesticus</i>	4
Mountain/Irish Hare	<i>Lepus timidus</i>	68
Common Shrew	<i>Sorex araneus</i>	30
Pygmy Shrew	<i>Sorex minutus</i>	2
Lesser White-toothed Shrew	<i>Crocidura suaveolens</i>	1
Daubenton's Bat	<i>Myotis daubentonii</i>	2
Natterer's Bat	<i>Myotis nattereri</i>	1
Noctule	<i>Nyctalus noctula</i>	1
Pipistrelle Bat sp	<i>Pipistrellus pipistrellus/ pygmaeus</i>	12
Brown Long-eared Bat	<i>Plecotus auritus</i>	2
Otter	<i>Lutra lutra</i>	32
Pine Marten	<i>Martes martes</i>	3
Polecat	<i>Mustela putorius</i>	5
Feral Ferret	<i>Mustela furo</i>	1
Mink	<i>Mustela vison</i>	28
Common Seal	<i>Phoca vitulina</i>	1
Grey Seal	<i>Halichoerus grypus</i>	5
Wild Boar	<i>Sus scrofa</i>	3
Sika Deer	<i>Cervus nippon</i>	17
Chinese Water Deer	<i>Hydropotes inermis</i>	7
Feral Goat	<i>Capra hircus</i>	2

- Squares recorded – number of squares on which a species was recorded, including counts, field signs, dead animals and local knowledge.
- Squares seen – number of squares on which a species was seen and counted during BBS visits.
- Individuals – total number of individuals counted, taking the maximum count from the two visits to each square.

Mammal population trends

Table 12 UK mammal trends during 1995–2007

	Grey Squirrel	Rabbit	Brown Hare	Mountain/ Irish Hare	Red Fox	Muntjac	Red Deer	Fallow Deer	Roe Deer
UNITED KINGDOM	563 99*	1,139 -24*	572 -2	41 -59*	242 -27*	61 46*	52 26	44 57	285 44*
England	497 86*	919 2	493 8		194 -16*	61 43*		42 42	217 46*
Scotland		100 -64*	56 -31*				37 -14		66 37*
Wales	46 173*	77 21*							
Northern Ireland		37 -13							
North West	44 211*	95 -16	55 -39*						
Yorkshire & the Humber		80 3	50 9						
East Midlands		81 -93*	67 90*						
East of England	77 42*	166 74*	124 22*						
West Midlands	62 22	93 -38*	35 -40*						
South East	149 67*	225 -9	84 -14		55 38*				78 69*
South West	73 133*	141 65*	55 29		41 -18*				72 65*
London	37 112*								

- This table shows trends (in bold) and sample sizes (normal font).
- Population changes are shown for mammal species for which the sample size is at least 40 squares (35 for regional trends).
- Trends are percentage changes, and are marked with an asterisk (*) where significant.
- The sample is the mean number of squares on which the species was recorded each year during the survey period 1995–2007.

The BTO is a member of the Tracking Mammals Partnership (TMP), a collaborative initiative involving 25 organisations with a variety of interests in UK mammals.

The TMP aims to provide good-quality trend data to guide conservation and wildlife management policy for mammals. The BBS is an important component of the TMP surveillance programme, and BBS count data are used to calculate population trends for several mammal species. The latest year for which these trends are available is 2007, when we were able to produce reliable trends for nine mammal species.

Of these, Rabbit, Mountain/ Irish Hare and Red Fox declined significantly between 1995 and 2007, and Grey Squirrel, Muntjac and Roe Deer increased significantly (Table 12). Both Rabbit and Brown Hare declined significantly in Scotland.



BROWN HARE BY JOHN HARDING

Special thanks

We would like to thank all BBS volunteers and Regional Organisers for making the BBS the success it is today. Space does not permit all observers to be acknowledged individually here, but we would especially like to thank the ROs for their efforts.

BBS Regional Organisers in 2008:

ENGLAND

Avon John Tully
Bedfordshire Judith Knight
Berkshire Chris Robinson
Birmingham & West Midlands Steve Davies
Buckinghamshire David Lee
Cambridgeshire Tony Fulford (now Graham Uney)
Cheshire (Mid) Paul Miller
Cheshire (North-East) Mark Eddowes
Cheshire (South) Charles Hull
Cleveland Vic Fairbrother
Cornwall Stephen Jackson
Cumbria Clive Hartley
Derbyshire (North, South) Dave Budworth
Devon John Woodland (now VACANT)
Dorset Mike Pleasants
Durham David Sowerbutts
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Essex (South) Lynn Parr
Gloucestershire Mike Smart
Hampshire Glynne Evans
Herefordshire Steve Coney
Hertfordshire Chris Dee
Huntingdon & Peterborough Mick Twinn
Isle of Wight James Gloyn
Isles of Scilly Will Wagstaff
Kent Sally Hunter
Lancashire (East) Tony Cooper
Lancashire (North-West) Jean Roberts
Lancashire (South) Vacant (now Paul Whittaker)
Leicestershire & Rutland Tim Grove
Lincolnshire (East) VACANT
Lincolnshire (North) Vacant (now Chris Gunn)
Lincolnshire (South) Richard Heath
Lincolnshire (West) Peter Overton
London (North) Ian Woodward
London (South) Richard Arnold
Manchester Judith Smith
Merseyside Bob Harris
Norfolk (North-East) Chris Hudson
Norfolk (North-West) Allan Hale
Norfolk (South-East) Rachel Warren
Norfolk (South-West) Vince Matthews
Northamptonshire Barrie Galpin
Northumberland Muriel Cadwallender

Nottinghamshire
Oxfordshire (North)
Oxfordshire (South)
Shropshire
Somerset
Staffordshire (North, South, West)
Suffolk
Surrey
Sussex
The Wirral
Warwickshire
Wiltshire (North, South)
Worcestershire
Yorkshire (Bradford)
Yorkshire (East)
Yorkshire (Harrogate)
Yorkshire (Hull)
Yorkshire (Leeds & Wakefield)
Yorkshire (North-East)
Yorkshire (North-West)
Yorkshire (Richmond)
Yorkshire (South-East, South-West)
Yorkshire (York)

Lynda Milner
Frances Buckel
John Melling
Allan Dawes
Penny Allwright
Gerald Gittens
Mick Wright
Vacant (now David Allcock)
Helen Crabtree
Paul Miller
Mark Smith
Bill Quantrill
Harry Green
Mike Denton
VACANT
Mike Brown
VACANT
VACANT
Mick Carroll
Gerald Light
John Edwards
David Gains
Rob Chapman

Orkney
Perthshire
Ross-shire
Rum, Eigg, Canna & Muck
Shetland
Skye
Sutherland
Wigtown

Colin Corse
Richard Paul
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Glamorgan (West) Rob Nottage (now Wayne Morris)
Gwent Rhian Evans
Merioneth Jerry Lewis
Montgomery Dave Anning
Pembroke Jane Kelsall
Radnor Annie Haycock
Brian Jones

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Argyll North, Mull, Coll, Tiree & Morvern
Argyll South, Bute & Gigha
Ayrshire
Benbecula & The Uists
Borders
Caithness
Central
Dumfries
Fife & Kinross
Inverness (East & Speyside, West)
Islay, Jura & Colonsay
Kincardine & Deeside
Kirkcudbright
Lanark, Renfrew & Dunbarton
Lewis & Harris
Lothian
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Graham Pyatt
Donald Omand
Neil Bielby
Edmund Fellowes
Norman Elkins
Hugh Inasley
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Graham Cooper
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Armagh Ruth Wilson
Down David Knight
Fermanagh Alastair McIlwain
Londonderry Philip Grosse
Tyrone Charles Stewart
Philip Grosse

CHANNEL ISLANDS

Alderney Vacant (now Melanie Broadhurst)
Channel Islands (excl. Jersey) Phil Alexander
Jersey Tony Paintin

ISLE OF MAN

Isle of Man Pat Cullen

Many thanks are due to Tony Fulford and Rob Nottage who retired during the last year, having developed the BBS in their respective regions. We also remember John Woodland, who sadly passed away in December 2008 after fifteen years as the BTO Regional Representative for Devon. John was an outstanding RR, and significantly developed the BTO's work in Devon.

We would also like to thank and welcome David Allcock, Melanie Broadhurst, Chris Gunn, Wayne Morris, Paul Whittaker and Graham Uney, who have taken over as ROs since the 2008 season. There are still seven BTO regions with no Regional Organiser in post, and we'd be very grateful for volunteers to fill these positions.

Finally, we would like to express our thanks and appreciation to all the landowners and farmers who kindly allow volunteers to carry out BBS surveys on their land.

The success of the BBS is dependent on volunteer support throughout the UK. Please spread the word to other birdwatchers you may know, or consider taking on another square, if you have time. Thanks again for all your hard work!

If you do not already take part in the BBS, and would like to take on a square, we would be very happy to hear from you.



www.bto.org/bbs

