

The Breeding Bird Survey 2009



The population trends of
the UK's breeding birds



The Breeding Bird Survey partnership

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The members of the BBS Steering Committee in 2009 were Dr Stephen Baillie (Chair, BTO), Pierre Tellier (JNCC), Dr Mark Eaton (RSPB) and Dr David Noble (BTO).

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The BBS Team

Kate Risely is the BBS National Organiser, responsible for the day-to-day running of the BBS, liaising with BTO Regional Organisers and volunteers, promoting the scheme, and producing the annual report.

Dr David Noble is the Principal Ecologist for Monitoring at the BTO, responsible for strategic developments in biodiversity monitoring. Dr Andy Musgrove is the Head of the Monitoring Team, which includes the BBS and a number of other surveys. Dr Stephen Baillie is the Director of the Modelling and Demography Group at the BTO, and has overseen the BBS since its inception in 1994. Dr Anna Renwick, in the Population Ecology and Modelling Team, produced the bird population trends in 2009, working closely with her predecessor Dr Andrew Joys. Dr Lucy Wright, in the Wetland and Marine Research Team, produced the mammal population trends in 2009.

The 2009 BBS Report

This is the fifteenth annual report of the BTO/JNCC/RSPB Breeding Bird Survey (BBS), containing the population trends of widespread UK bird species during the period 1994–2009. 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
BBS news and research	5
Coverage and online recording	8
List of all species recorded	10
UK population trends	12
England population trends	14
Scotland population trends	16
Bird population trends in Wales and Northern Ireland, and coverage in Isle of Man and Channel Islands	18
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.

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



PHOTO BY KATE RISELY



YELLOW WAGTAIL BY JILL PAKENHAM



PHOTO BY KATE RISELY



PHOTO BY DAWN BALMER

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 widely used by government and non-governmental organisations to set conservation priorities.

The BBS was launched in 1994, to provide more representative 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 (from the 1960s to the present) using information from both schemes. The most recent joint CBC/BBS trends are published in the Wider Countryside Report, available at www.bto.org/birdtrends.

Methods and Organisation

The BBS is a line-transect survey based on randomly located 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) every 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.

In 2009, additional randomly selected 1-km squares surveyed as part of the Scottish Woodland BBS and the Upland BBS were added to the Scotland and England BBS data respectively. These squares were surveyed using the same methodology as standard BBS squares.

Work has been carried out to assess the reliability of BBS trends, 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

Additional data sets improve BBS trends

In 2009, for the first time, results from additional BBS-style surveys in under-represented habitats have been included in the BBS trends.

Counts made by BBS volunteers provide valuable information about many habitats and species, but remote areas often have lower levels of volunteer coverage. To boost the BBS sample size, a programme has been developed to enhance survey coverage in upland areas of England, and in Scottish woodlands.

Professional fieldworkers have carried out surveys as part of the Upland Breeding Bird Survey (UBBS) in upland areas of England since 2006, funded by Natural England and the RSPB to improve monitoring of upland bird species. Using standard BBS methods, 1-km squares are surveyed in pairs (one randomly located main square plus one adjacent square) in order to make best use of the surveyor's time in the field. The approach of collecting data from adjacent squares has been rolled out to core BBS volunteers in upland areas in 2010, and the statistical methods developed for the UBBS will be used to incorporate this information.



RED GROUSE BY EDMUND FELLOWES

In Scotland, additional 1-km squares in wooded areas have been surveyed using standard BBS methods by mainly professional fieldworkers since 2007, funded by the Forestry Commission Scotland and Scottish Natural Heritage to improve monitoring of some of the less common woodland bird species in Scotland.

For the first time, the data collected by these additional surveys in English uplands and Scottish woodlands have been incorporated into the English and Scottish BBS trends respectively, resulting in improved species coverage, larger sample sizes for all species, and hence more robust trends. The non-random habitat selection of these squares was taken into account during analysis. At this stage, the additional results are not included in the overall UK trends.

Butterfly survey roll-out

Following four years of pilot studies, the Wider Countryside Butterfly Survey was formally launched in 2009.

The survey is a partnership between BTO, Butterfly Conservation (BC) and the Centre for Ecology and Hydrology (CEH), designed to monitor butterfly abundance through random sampling.

In total, 763 1-km squares were surveyed for butterflies in 2009, split almost equally between BBS volunteers surveying their BBS squares (in July and August) and BC volunteers surveying a separate network of randomly selected 1-km squares using the same methodology. A high proportion of the UK's regularly occurring butterfly species were recorded, and continued coverage in future years will allow reliable population trends to be calculated.

We are very grateful to all volunteers who took part in the survey, and the survey is continuing at a similar level in 2010. The 2009 WCBS newsletter can be downloaded from the BBS homepage: www.bto.org/bbs.



COMMA BY JOSIE LATUS

How your BBS counts make a difference

Dr Mark Eaton, Principal Conservation Scientist in Species Monitoring and Research at the RSPB, outlines how BBS results are used in current conservation work.

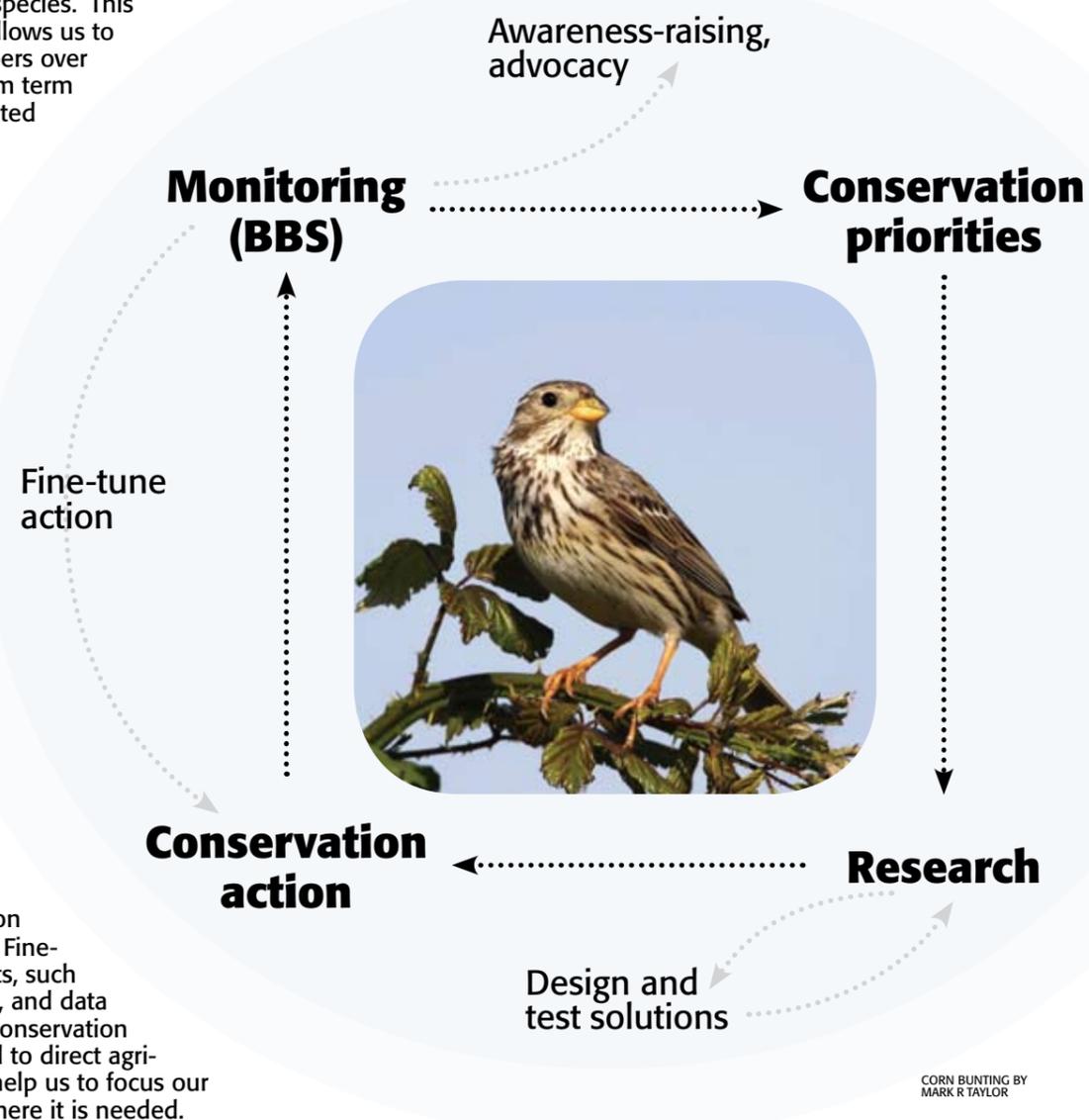
Every year, thousands of BBS surveyors dedicate valuable time to collecting the data from which the trends in this report are derived. Combined with data from the Common Birds Census (CBC), which ran from 1962 to 2000, this has allowed us to track the fortunes of our common breeding birds for over four decades. Here we give an overview of how such monitoring plays a pivotal role in the modern conservation process.

The figure illustrates the ‘conservation loop’ – the process by which conservation organisations both governmental and non-governmental ensure that resources are used in most efficient way. Strong monitoring underpins this loop; the BBS is one of a range of schemes that cover nearly all the regularly occurring species in the UK.

Monitoring. The large sample size of the BBS – over 3,200 squares surveyed in 2009 – means that reliable population trends can be produced for a large number of species. This detailed information allows us to track changes in numbers over the short term, medium term (since the scheme started in 1994), and the long term, when combined with CBC data. These trends, together with data from other monitoring schemes, feed into **setting conservation priorities**...

The planning and delivery of effective **conservation action** ranges from reserve acquisition and management to lobbying government on policy and legislation. Fine-grain monitoring results, such as regional BBS trends, and data collected by the Bird Conservation Targeting Project (used to direct agri-environment action), help us to focus our efforts on the areas where it is needed.

Finally, this leads us back to **monitoring**, which allows us to assess the success, or otherwise, of our conservation action. If we’ve got it right – the right action, in the right places, and enough of it – then future BBS monitoring should reveal positive responses.



Setting conservation priorities. Initiatives such as Birds of Conservation Concern 3 (Eaton *et al.* 2009), which produced new Red, Amber and Green lists for the UK’s birds, rely on good-quality bird trends to make appropriate assessments. These lists, along with the priority list of birds on the UK’s Biodiversity Action Plan (revised in 2006 with the use of BBS trends) are then used by conservation organisations to identify which species should be the target of conservation efforts. In recent years, this has meant a continued focus on declining farmland birds (e.g. Turtle Dove, Corn Bunting and Yellow Wagtail), a growing focus on woodland birds (Lesser Spotted Woodpecker, Willow Tit and Nightingale), and a rising concern for a wide range of trans-Saharan migrants such as Cuckoo, Wood Warbler and Spotted Flycatcher. Not all priorities are species-led, as similarities across trends may lead to a focus on particular habitats, or on issues that cut across many species and habitats, such as climate change.

In addition, monitoring results are invaluable for communicating the state of our bird populations to many different audiences, from the general public to government ministers, and can be used as indicators of environmental health.

Research. Before we act to slow, halt and finally reverse declines, we need to determine what is causing them, and identify how to tackle the problem. This may include analysing demographic data, such as the information gathered by the BTO’s Nest Record Scheme and Constant Effort Sites Scheme. In some cases, new field research may be required to find out more about the ecology of species, such as the joint BTO–RSPB ‘Out of Africa’ project, which aims to increase our knowledge of migrants on their wintering grounds. Eventually we hope to isolate the factor, or factors, driving the declines of priority species.

The second stage of research may involve testing solutions to the problems using experimental field trials. A typical example would be manipulation of agricultural habitats to increase food resources, or provide nesting cover, which would be tested by comparing the densities and breeding performance in experimentally ‘improved’ areas with unchanged control sites. Once we know what works, we move to **conservation action**...

Studies using BBS data

In 2010, two interesting studies using BBS data were published by BTO, one showing the lack of an impact of avian predators or Grey Squirrels on songbirds, and another showing that Cuckoo declines are not explained by reductions in host availability:

Douglas, D.J.T., Newson, S.E., Leech, D.I., Noble, D.G. & Robinson, R.A. (2010) How important are climate-induced changes in host availability for population processes in an obligate brood parasite, the European Cuckoo? *Oikos*, Early View doi: 10.1111/j.1600-0706.2010.18388.x

Newson, S.E., Rexstad, E.A., Baillie, S.R., Buckland, S.T. & Aebischer, N.J. (2010) Population changes of avian predators and grey squirrels in England: is there evidence for an impact on avian prey populations? *Journal of Applied Ecology* **47**: 244–252.

Further reading

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Battersby, J. (2005) *UK Mammals: Species Status and Population Trends*. JNCC. (www.jncc.gov.uk/page-3311)

BirdLife International (2004) *Birds in Europe: population estimates, trends and conservation status*. Birdlife International, Cambridge. (Birdlife Conservation Series No. 12). (www.birdlife.org/action/science/species/birds_in_europe/index.html)

Eaton, M.A., Balmer, D., Conway, G.J., Gillings, S., Grice, P.V., Hall, C., Hearn, R.D., Musgrove, A.J., Risely, K. & Wotton, S. (2009) *The state of the UK’s birds 2008*. RSPB, BTO, WWT, CCW, NIEA, JNCC, NE and SNH, Sandy, Bedfordshire. (www.bto.org/research/pop_trends/stateofukbirds08.pdf)

Eaton, M.A., Brown, A.F., Noble, D.G., Musgrove, A.J., Hearn, R.D., Aebischer, N.J., Gibbons, D.W., Evans, A. & Gregory, R.D. (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* **102**: 296–341. (www.britishbirds.co.uk/BoCC3final.pdf) or booklet at www.bto.org/psob

Harris, S. & Yalden, D.W. (2008) *Mammals of the British Isles: Handbook, 4th edition*. The Mammal Society, Southampton.

PECBMS (2009) *The State of Europe’s Common Birds 2008*. CSO/RSPB, Prague, Czech Republic. (www.ebcc.info/wpimages/video/SECB2008.pdf)

Risely, K., Noble, D.G. & Baillie, S.R. (2009) *The Breeding Bird Survey 2008*. BTO Research Report 537. BTO, Thetford. (www.bto.org/bbs/results/BBSreport08.pdf)

Seabird Monitoring Programme (2009) *UK Seabirds in 2008*. JNCC. (www.jncc.gov.uk/page-4555)

Tracking Mammals Partnership (2009) *Tracking Mammals Partnership Update 2009*. JNCC. (www.trackingmammals.org)

Survey coverage

Results from 3,243 BBS squares were received in 2009, the third-highest annual total, and a small but welcome increase on 2008, when 3,211 squares were surveyed (Table 1). Of these, 54 squares were covered by professional fieldworkers in order to boost the sample available to an investigation into the loss of set-aside. As in previous years, 52 squares in Northern Ireland were surveyed by professionals. The total number of squares surveyed by volunteers in 2009 was 3,137.

The number of volunteers taking part in the survey remained stable, at 2,545.

This year, for the first time, counts from professional 'add-on' surveys have been incorporated into the BBS trends, in order to increase the accuracy and reliability of the trends in under-represented habitats. These add-on surveys comprised 314 squares (in 157 pairs) in upland areas of England, and 106 squares in Scottish woodlands (42 single and 64 in pairs). These totals are not included in Table 1 or Figure 1.

Figure 1 Number of BBS squares surveyed

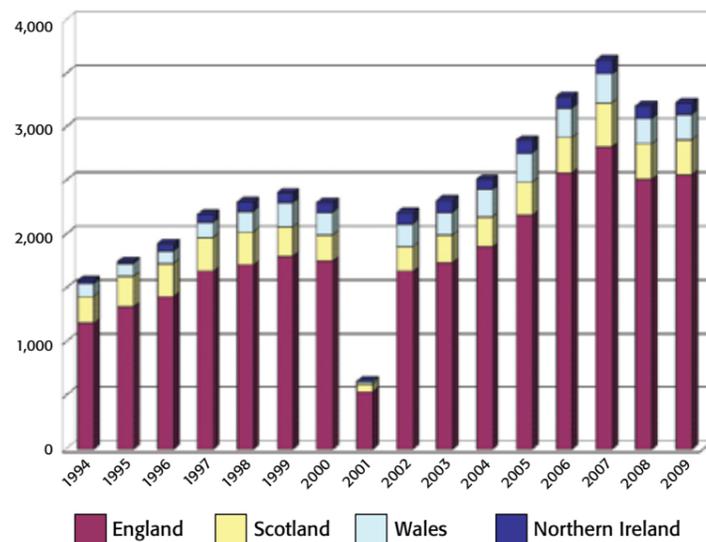


Table 1 Number of BBS squares surveyed

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
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	2,554
Scotland	245	283	308	313	309	275	246	78	231	255	275	306	335	413	330	328
Wales	122	121	116	138	192	223	213	22	215	214	254	271	270	266	230	229
Northern Ireland	25	17	65	75	85	95	83	0	97	109	102	120	107	129	119	116
Channel Islands	1	1	7	6	7	7	7	7	7	7	11	13	19	16	15	16
Isle of Man	4	4	4	6	6	5	3	0	3	4	6	3	5	4	1	0
UK 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	3,243

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).

Your options

- View all my data**
- Enter this year's data**
- Correct data**
- Regional organiser**

In 2009, results from 2,479 squares were submitted online, 76% of the total. Online users are now issued with reduced packs of forms, with the paper summary sheets omitted, in order to reduce the amount of paper used.

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.

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. Online users can link directly to an Ordnance Survey map of their square, and edit their habitat, mammal and colony counts, as well as bird data.

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

Scotland

Volunteer coverage in Scotland in 2009 was very similar to the previous year, at 328 squares, and was the fourth-highest annual total. More squares were surveyed in Lothian (30 squares) than in any previous year.

In addition to the core squares shown here, 106 woodland squares were surveyed by professionals for the Scottish Woodland Breeding Bird Survey, the results of which have been incorporated into the BBS trends for the first time in 2009.

Core BBS squares covered in 2009 are shown in red



England

In 2009, 2,554 BBS squares were surveyed in England, the third-highest annual total. Record levels of coverage (excluding any core squares covered by professionals) were achieved in Cheshire (Mid), Durham, Gloucestershire, Hampshire, Northamptonshire, Norfolk (North-East), Yorkshire (Bradford) and Yorkshire (North-East).

In addition to the core squares shown here, 314 upland squares were surveyed by professionals for the Upland Breeding Bird Survey, the results of which have been incorporated into the BBS trends for the first time in 2009.

Northern Ireland

In 2009, 116 squares were surveyed in Northern Ireland, the fourth-highest annual total. Of these, 52 squares were surveyed by professional fieldworkers, funded by the Northern Ireland Environment Agency.

Wales

Coverage in Wales in 2009 was very similar to 2008, at 229 squares. This is the lowest annual total in recent years, but higher than any year before 2004. No BBS squares in Wales were covered by professional fieldworkers.

Species recorded

A total of 217 species, including a number of domestic breeds and escapees, were recorded on the 3,243 BBS squares surveyed in 2009. Of these, 114 were recorded on 40 or more squares (Table 2), and 103 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 (1994–2009), rather than just in 2009, so the division here is for ease of interpretation only.

Though we don't report population trends for all species, some indication of population status can be found on the BBS website, 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.

The most widespread species in 2009 were Woodpigeon (94% of squares), Blackbird (93%), Chaffinch (92%), Wren (91%) and Robin (90%). As in previous years, Woodpigeon was the most numerous species recorded, with 79,383 individuals counted, followed by Blackbird (38,121) and Rook (37,822).

Little Egret, Mandarin Duck, Gadwall, Peregrine and Cetti's Warbler were all recorded on 40 or more squares in 2009, 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. Conversely, Common Crossbill was recorded on only 36 squares in 2009, but the average sample remains above the threshold.

Interesting species recorded on BBS squares in 2009 included Ptarmigan and Dotterel in Scotland, a Golden Oriole on the Isles of Scilly, and Cranes on a square in Norfolk.

The average number of species recorded on a BBS square in 2009 was 30, but the highest number was 75 species, on a square in Oxfordshire. Species richness varied across the country, with an average of 36 species recorded on squares in the BTO regions of Anglesey, Norfolk (North-West) and Huntington & Peterborough, compared to just 11 species in some areas of Scotland. 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.

Table 2 Species recorded on at least 40 squares across the UK in 2009

Species	Scientific name	Squares	%	Species	Scientific name	Squares	%
Mute Swan	<i>Cygnus olor</i>	319	10	Tree Pipit	<i>Anthus trivialis</i>	114	4
Greylag Goose	<i>Anser anser</i>	275	8	Meadow Pipit	<i>Anthus pratensis</i>	847	26
Canada Goose (i)	<i>Branta canadensis</i>	628	19	Yellow Wagtail	<i>Motacilla flava</i>	154	5
Shelduck	<i>Tadorna tadorna</i>	156	5	Grey Wagtail	<i>Motacilla cinerea</i>	288	9
Mandarin Duck (i)	<i>Aix galericulata</i>	45	1	Pied Wagtail	<i>Motacilla alba</i>	1,429	44
Gadwall	<i>Anas strepera</i>	58	2	Dipper	<i>Cinclus cinclus</i>	61	2
Mallard	<i>Anas platyrhynchos</i>	1,571	48	Wren	<i>Troglodytes troglodytes</i>	2,935	91
Mallard (domestic)*	<i>Anas platyrhynchos</i>	40	1	Dunnock	<i>Prunella modularis</i>	2,532	78
Tufted Duck	<i>Aythya fuligula</i>	193	6	Robin	<i>Erithacus rubecula</i>	2,919	90
Red Grouse	<i>Lagopus lagopus</i>	125	4	Redstart	<i>Phoenicurus phoenicurus</i>	158	5
Red-legged Partridge (i)	<i>Alectoris rufa</i>	676	21	Whinchat	<i>Saxicola rubetra</i>	43	1
Grey Partridge	<i>Perdix perdix</i>	169	5	Stonechat	<i>Saxicola torquatus</i>	182	6
Pheasant (i)	<i>Phasianus colchicus</i>	2,276	70	Wheatear	<i>Oenanthe oenanthe</i>	353	11
Little Grebe	<i>Tachybaptus ruficollis</i>	97	3	Blackbird	<i>Turdus merula</i>	3,000	93
Great Crested Grebe	<i>Podiceps cristatus</i>	87	3	Song Thrush	<i>Turdus philomelos</i>	2,477	76
Cormorant	<i>Phalacrocorax carbo</i>	329	10	Mistle Thrush	<i>Turdus viscivorus</i>	1,288	40
Little Egret	<i>Egretta garzetta</i>	73	2	Cetti's Warbler	<i>Cettia cetti</i>	46	1
Grey Heron	<i>Ardea cinerea</i>	784	24	Grasshopper Warbler	<i>Locustella naevia</i>	105	3
Red Kite	<i>Milvus milvus</i>	182	6	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	362	11
Sparrowhawk	<i>Accipiter nisus</i>	356	11	Reed Warbler	<i>Acrocephalus scirpaceus</i>	179	6
Buzzard	<i>Buteo buteo</i>	1,394	43	Blackcap	<i>Sylvia atricapilla</i>	1,989	61
Kestrel	<i>Falco tinnunculus</i>	707	22	Garden Warbler	<i>Sylvia borin</i>	489	15
Hobby	<i>Falco subbuteo</i>	66	2	Lesser Whitethroat	<i>Sylvia curruca</i>	340	10
Peregrine	<i>Falco peregrinus</i>	47	1	Whitethroat	<i>Sylvia communis</i>	1,633	50
Moorhen	<i>Gallinula chloropus</i>	820	25	Wood Warbler	<i>Phylloscopus sibilatrix</i>	41	1
Coot	<i>Fulica atra</i>	338	10	Chiffchaff	<i>Phylloscopus collybita</i>	1,919	59
Oystercatcher	<i>Haematopus ostralegus</i>	400	12	Willow Warbler	<i>Phylloscopus trochilus</i>	1,504	46
Golden Plover	<i>Pluvialis apricaria</i>	90	3	Goldcrest	<i>Regulus regulus</i>	710	22
Lapwing	<i>Vanellus vanellus</i>	799	25	Spotted Flycatcher	<i>Muscicapa striata</i>	149	5
Snipe	<i>Gallinago gallinago</i>	152	5	Long-tailed Tit	<i>Aegithalos caudatus</i>	1,196	37
Curlew	<i>Numenius arquata</i>	509	16	Marsh Tit	<i>Poecile palustris</i>	175	5
Redshank	<i>Tringa totanus</i>	90	3	Willow Tit	<i>Poecile montana</i>	42	1
Common Sandpiper	<i>Actitis hypoleucos</i>	51	2	Coal Tit	<i>Periparus ater</i>	1,026	32
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	684	21	Blue Tit	<i>Cyanistes caeruleus</i>	2,800	86
Common Gull	<i>Larus canus</i>	160	5	Great Tit	<i>Parus major</i>	2,677	83
Lesser Black-backed Gull	<i>Larus fuscus</i>	803	25	Nuthatch	<i>Sitta europaea</i>	618	19
Herring Gull	<i>Larus argentatus</i>	865	27	Treecreeper	<i>Certhia familiaris</i>	333	10
Great Black-backed Gull	<i>Larus marinus</i>	143	4	Jay	<i>Garrulus glandarius</i>	959	30
Common Tern	<i>Sterna hirundo</i>	81	2	Magpie	<i>Pica pica</i>	2,319	72
Feral Pigeon*	<i>Columba livia</i>	824	25	Jackdaw	<i>Corvus monedula</i>	2,174	67
Stock Dove	<i>Columba oenas</i>	952	29	Rook	<i>Corvus frugilegus</i>	1,549	48
Woodpigeon	<i>Columba palumbus</i>	3,039	94	Carrion Crow	<i>Corvus corone</i>	2,896	89
Collared Dove	<i>Streptopelia decaocto</i>	1,672	52	Hooded Crow	<i>Corvus cornix</i>	148	5
Turtle Dove	<i>Streptopelia turtur</i>	121	4	Raven	<i>Corvus corax</i>	340	10
Ring-necked Parakeet (i)	<i>Psittacula krameri</i>	110	3	Starling	<i>Sturnus vulgaris</i>	1,960	60
Cuckoo	<i>Cuculus canorus</i>	594	18	House Sparrow	<i>Passer domesticus</i>	1,899	59
Barn Owl	<i>Tyto alba</i>	99	3	Tree Sparrow	<i>Passer montanus</i>	233	7
Little Owl (i)	<i>Athene noctua</i>	97	3	Chaffinch	<i>Fringilla coelebs</i>	2,993	92
Tawny Owl	<i>Strix aluco</i>	100	3	Greenfinch	<i>Carduelis chloris</i>	2,201	68
Swift	<i>Apus apus</i>	1,195	37	Goldfinch	<i>Carduelis carduelis</i>	2,169	67
Kingfisher	<i>Alcedo atthis</i>	69	2	Siskin	<i>Carduelis spinus</i>	214	7
Green Woodpecker	<i>Picus viridis</i>	1,046	32	Linnet	<i>Carduelis cannabina</i>	1,310	40
Gt Spotted Woodpecker	<i>Dendrocopos major</i>	1,467	45	Lesser Redpoll	<i>Carduelis cabaret</i>	186	6
Skylark	<i>Alauda arvensis</i>	2,009	62	Bullfinch	<i>Pyrrhula pyrrhula</i>	708	22
Sand Martin	<i>Riparia riparia</i>	149	5	Yellowhammer	<i>Emberiza citrinella</i>	1,342	41
Swallow	<i>Hirundo rustica</i>	2,422	75	Reed Bunting	<i>Emberiza schoeniclus</i>	640	20
House Martin	<i>Delichon urbicum</i>	1,044	32	Com Bunting	<i>Emberiza calandra</i>	156	5

Table 3 Species recorded on fewer than 40 squares across the UK in 2009

Species	Scientific name	Squares	Species	Scientific name	Squares
Whooper Swan	<i>Cygnus cygnus</i>	3	Black-tailed Godwit	<i>Limosa limosa</i>	6
Pink-footed Goose	<i>Anser brachyrhynchus</i>	6	Bar-tailed Godwit	<i>Limosa lapponica</i>	4
Greylag Goose (domestic)*	<i>Anser anser</i>	15	Whimbrel	<i>Numenius phaeopus</i>	27
Snow Goose	<i>Anser caerulescens</i>	1	Greenshank	<i>Tringa nebularia</i>	13
Barnacle Goose	<i>Branta leucopsis</i>	1	Green Sandpiper	<i>Tringa ochropus</i>	5
Brent Goose	<i>Branta bernicla</i>	6	Turnstone	<i>Arenaria interpres</i>	6
Egyptian Goose (i)	<i>Alopochen aegyptiaca</i>	26	Arctic Skua	<i>Stercorarius parasiticus</i>	1
Wigeon	<i>Anas penelope</i>	14	Great Skua	<i>Stercorarius skua</i>	4
Teal	<i>Anas crecca</i>	36	Mediterranean Gull	<i>Larus melanocephalus</i>	11
Garganey	<i>Anas querquedula</i>	2	Iceland Gull	<i>Larus glaucoideus</i>	1
Shoveler	<i>Anas clypeata</i>	25	Kittiwake	<i>Rissa tridactyla</i>	2
Pochard	<i>Aythya ferina</i>	24	Sandwich Tern	<i>Sterna sandvicensis</i>	11
Scaup	<i>Aythya marila</i>	1	Arctic Tern	<i>Sterna paradisaea</i>	10
Eider	<i>Somateria mollissima</i>	11	Little Tern	<i>Sternula albifrons</i>	7
Goldeneye	<i>Bucephala clangula</i>	2	Black Tern	<i>Chlidonias niger</i>	1
Red-breasted Merganser	<i>Mergus serrator</i>	9	Guillemot	<i>Uria aalge</i>	1
Goosander	<i>Mergus merganser</i>	38	Razorbill	<i>Alca torda</i>	2
Ruddy Duck (i)	<i>Oxyura jamaicensis</i>	4	Black Guillemot	<i>Cepphus grylle</i>	3
Ptarmigan	<i>Lagopus muta</i>	1	Rock Dove	<i>Columba livia</i>	9
Black Grouse	<i>Tetrao tetrix</i>	9	Long-eared Owl	<i>Asio otus</i>	3
Quail	<i>Coturnix coturnix</i>	12	Short-eared Owl	<i>Asio flammeus</i>	13
Red-throated Diver	<i>Gavia stellata</i>	11	Nightjar	<i>Caprimulgus europaeus</i>	1
Black-throated Diver	<i>Gavia arctica</i>	3	Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>	19
Great Northern Diver	<i>Gavia immer</i>	3	Woodlark	<i>Lullula arborea</i>	23
Black-necked Grebe	<i>Podiceps nigricollis</i>	1	Rock Pipit	<i>Anthus petrosus</i>	20
Fulmar	<i>Fulmarus glacialis</i>	22	Waxwing	<i>Bombycilla garrulus</i>	1
Manx Shearwater	<i>Puffinus puffinus</i>	1	Nightingale	<i>Luscinia megarhynchos</i>	26
Gannet	<i>Morus bassanus</i>	13	Ring Ouzel	<i>Turdus torquatus</i>	23
Shag	<i>Phalacrocorax aristotelis</i>	15	Fieldfare	<i>Turdus pilaris</i>	24
Bittern	<i>Botaurus stellaris</i>	3	Redwing	<i>Turdus iliacus</i>	2
White-tailed Eagle	<i>Haliaeetus albicilla</i>	1	Dartford Warbler	<i>Sylvia undata</i>	10
Marsh Harrier	<i>Circus aeruginosus</i>	33	Firecrest	<i>Regulus ignicapilla</i>	5
Hen Harrier	<i>Circus cyaneus</i>	15	Pied Flycatcher	<i>Ficedula hypoleuca</i>	33
Goshawk	<i>Accipiter gentilis</i>	11	Bearded Tit	<i>Panurus biarmicus</i>	4
Golden Eagle	<i>Aquila chrysaetos</i>	6	Crested Tit	<i>Lophophanes cristatus</i>	2
Osprey	<i>Pandion haliaetus</i>	7	Short-toed Treecreeper	<i>Certhia brachydactyla</i>	1
Merlin	<i>Falco columbarius</i>	19	Golden Oriole	<i>Oriolus oriolus</i>	1
Water Rail	<i>Rallus aquaticus</i>	4	Chough	<i>Pyrrhocorax pyrrhocorax</i>	8
Corncrake	<i>Crex crex</i>	5	Carrion/Hooded Crow hybrid*	<i>Corvus corone x cornix</i>	3
Crane	<i>Grus grus</i>	1	Twite	<i>Carduelis flavirostris</i>	22
Avocet	<i>Recurvirostra avosetta</i>	9	Common Crossbill	<i>Loxia curvirostra</i>	36
Stone-curlew	<i>Burhinus oedicephalus</i>	2	Scottish Crossbill	<i>Loxia scotica</i>	2
Little Ringed Plover	<i>Charadrius dubius</i>	6	Hawfinch	<i>Coccothraustes coccothraustes</i>	2
Ringed Plover	<i>Charadrius hiaticula</i>	24	Girl Bunting	<i>Emberiza cirius</i>	4
Dotterel	<i>Charadrius morinellus</i>	1	[Black Swan]	<i>Cygnus atratus</i>	5
Grey Plover	<i>Pluvialis squatarola</i>	2	[Bar-headed Goose]	<i>Anser indicus</i>	2
Knot	<i>Calidris canutus</i>	1	[Muscovy Duck]	<i>Cairina moschata</i>	1
Sanderling	<i>Calidris alba</i>	1	[Indian Peafowl (Peacock)]	<i>Pavo cristatus</i>	37
Purple Sandpiper	<i>Calidris maritima</i>	1	[Helmeted Guineafowl]	<i>Numida meleagris</i>	15
Dunlin	<i>Calidris alpina</i>	26	[Red-tailed Hawk]	<i>Buteo jamaicensis</i>	1
Jack Snipe	<i>Lymnocyptes minimus</i>	1	[Cockatiel]	<i>Nymphicus hollandicus</i>	1
Woodcock	<i>Scolopax rusticola</i>	14			

• 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

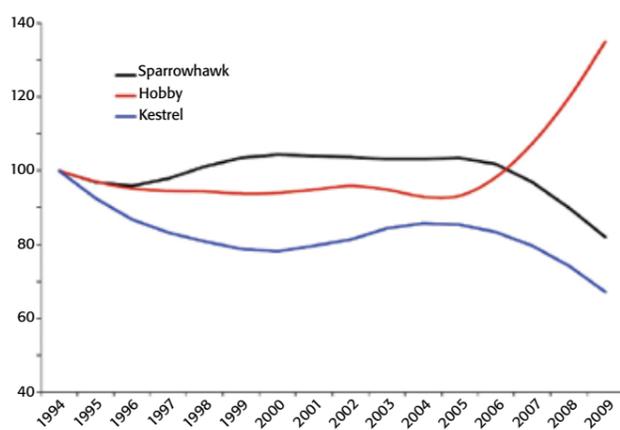
This section presents population trends for the UK's common and widespread birds, and interesting results are highlighted. A full species-by-species discussion of these findings, and those from other surveys, can be found in the 2009 Wider Countryside Report, available at www.bto.org/birdtrends.

Table 4 opposite shows the UK BBS results for 2009. 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. We also continue to report the trend for Pied Flycatcher, as the sample size for this species was previously above the 40-square threshold.

This year, for the first time, we are able to report a UK population trend for Barn Owl, albeit with the caveat that BBS monitors nocturnal species poorly. Gadwall, Goosander and Peregrine 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.

Before the 2008 BBS report, BBS annual reports presented unsmoothed population trends. 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. Since smoothing involves truncation of the end points, the long-term trend shown in this report, which uses data from 1994 to 2009, is labelled 1995–2008. The unsmoothed trend between the two most recent years, 2008 and 2009, is also shown.

Figure 2 Smoothed population trends of Sparrowhawk, Hobby and Kestrel



Of the 106 species for which trends are reported, 25 declined significantly and 39 increased significantly since the start of the survey. The greatest declines since the start of the survey have been shown by Willow Tit, Turtle Dove, Wood Warbler, Whinchat and Nightingale, and the greatest increases by Ring-necked Parakeet, Barn Owl (with the caveat that the BBS monitors nocturnal species poorly), Red Kite, Stonechat and Greylag Goose.

In 2009, a number of declining species were found to have reached their lowest levels since the start of the BBS, including the red-listed Willow Tit (73% decline), Grey Partridge (50% decline), Cuckoo (44% decline) and Starling (38% decline), as well as the amber-listed Whinchat (57% decline), Nightingale (53% decline), Meadow Pipit (20% decline) and Mistle Thrush (13% decline).

Populations of three raptors – Sparrowhawk, Kestrel and Hobby – remained stable from the start of the survey until around 2005. Sparrowhawk and Kestrel then started to decline (now showing declines of 7% and 20% respectively), but Hobby numbers began to increase (now showing an increase of 23% since the start of the survey) (see Figure 2).

The BBS monitors numbers of seven breeding waders: Oystercatcher, Golden Plover, Lapwing, Snipe, Curlew, Redshank and Common Sandpiper. All apart from Snipe have declined since the start of the survey, and Redshank and Curlew have now reached their lowest levels since 1994.

A number of small-bodied resident birds declined significantly between 2008 and 2009, presumably due to the prolonged freezing temperatures in January and February 2009. Goldcrest and Long-tailed Tit, which in 2008 both reached their highest numbers since the start of the survey, declined by 56% and 12% respectively between 2008 and 2009. Significant declines were also shown by Stonechat (38%), Treecreeper (27%), Great Tit (5%) and Blue Tit (4%).

Birds of Conservation Concern

The BBS 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. Four red-listed species (Grey Partridge, Lapwing, Cuckoo and Starling) decreased significantly between 2008 and 2009. One red-listed species, Marsh Tit, increased significantly between 2008 and 2009.

The BBS monitors 36 amber-listed species, of which ten have increased significantly and nine have decreased significantly since the start of the survey.

Table 4 UK population trends during 2008–09 and 1995–2008

Species	Sample	08–09	95–08	LCL	UCL
Mute Swan	229	13	22	-6	82
Greylag Goose	151	25	144*	13	374
Canada Goose	425	-8	106*	56	154
Shelduck	134	-6	6	-36	55
Mallard	1,185	-2	18*	8	31
Tufted Duck	142	-11	39	-4	73
Red Grouse UKBAP	110	-6	-9	-23	11
Red-legged Partridge	503	-9*	29*	15	43
Grey Partridge UKBAP	225	-20*	-50*	-59	-41
Pheasant	1,636	4	33*	26	42
Little Grebe	65	11	22	-14	71
Great Crested Grebe	67	-4	19	-21	75
(Cormorant)	218	12	37*	0	92
(Grey Heron)	624	0	8	-5	22
Red Kite	62	57*	418*	202	1,045
Sparrowhawk	327	-18*	-7	-19	10
Buzzard	777	6	63*	44	81
Kestrel	626	-36*	-20*	-28	-10
Hobby	38	21	23	-19	77
Moorhen	621	-2	18*	9	30
Coot	249	-15	38*	10	75
Oystercatcher	292	9	-11	-23	0
Golden Plover	55	58*	-4	-26	27
Lapwing UKBAP	644	-10*	-13*	-24	-3
Snipe	139	3	39	0	103
Curlew UKBAP	463	-15*	-42*	-49	-34
Redshank	79	-33	-30	-44	2
Common Sandpiper	60	15	-15	-37	6
(Common Tern)	60	-16	-11	-45	110
Feral Pigeon	642	14	-8	-20	6
Stock Dove	714	6	0	-11	13
Woodpigeon	2,280	-7*	35*	27	42
Collared Dove	1,257	0	26*	19	36
Turtle Dove UKBAP	167	4	-70*	-75	-62
Ring-necked Parakeet	47	11	696*	266	3,696
Cuckoo UKBAP	711	-21*	-44*	-49	-38
(Barn Owl)	40	7	464*	271	718
Little Owl	98	-15	-24*	-39	-7
(Tawny Owl)	86	-36	-7	-27	23
Swift	996	8	-29*	-40	-16
Kingfisher	53	12	-2	-30	35
Green Woodpecker	745	-5	47*	35	62
Gt Spotted Woodpecker	916	-2	129*	111	145
Skylark UKBAP	1,616	0	-11*	-18	-3
Sand Martin	117	12	22	-33	129
Swallow	1,791	9*	34*	25	45
House Martin	886	-14*	1	-10	14
Tree Pipit UKBAP	123	-15	-5	-28	27
Meadow Pipit	728	-11*	-20*	-27	-11
Yellow Wagtail UKBAP	154	0	-52*	-60	-41
Grey Wagtail	208	-23*	27*	6	53
Pied Wagtail	1,186	-9*	0	-8	8
Dipper	52	-2	-27	-47	10
Wren	2,242	-14*	23*	16	27
Dunnock UKBAP	1,884	2	21*	15	30
Robin	2,171	-2	23*	19	27
Nightingale	30	-23	-53*	-68	-27
Redstart	144	-1	-2	-17	13
Whinchat	71	-48*	-57*	-72	-37
Stonechat	142	-38*	168*	102	265
Wheatear	282	35*	-5	-25	17
Blackbird	2,263	-5*	26*	22	30
Song Thrush UKBAP	1,813	-2	27*	20	37
Mistle Thrush	1,117	-12*	-13*	-20	-1
Grasshopper Warbler UKBAP	70	8	24	-14	60
Sedge Warbler	281	-6	9	-13	35
Reed Warbler	117	-8	28*	5	57
Blackcap	1,386	10*	61*	52	71
Garden Warbler	417	6	-13	-25	1
Lesser Whitethroat	251	-6	2	-15	16
Whitethroat	1,225	9*	20*	11	29
Wood Warbler UKBAP	52	-8	-61*	-74	-39
Chiffchaff	1,297	-9*	43*	32	53
Willow Warbler	1,302	6	-8*	-16	-2
Goldcrest	709	-56*	8	-3	33
Spotted Flycatcher UKBAP	193	-7	-39*	-55	-20
Pied Flycatcher	39	-1	-50*	-67	-29
Long-tailed Tit	847	-12*	13*	2	25
Marsh Tit UKBAP	140	36*	-18*	-31	-2
Willow Tit UKBAP	52	-31	-73*	-82	-61
Coal Tit	712	-8	5	-7	19
Blue Tit	2,120	-4*	1	-2	5
Great Tit	1,989	-5*	43*	37	50
Nuthatch	417	9	50*	32	67
Treecreeper	313	-27*	-5	-19	14
Jay	684	-5	13*	3	23
Magpie	1,748	-3	-3	-8	3
Jackdaw	1,537	6	36*	25	52
Rook	1,206	4	-8	-18	6
Carrion Crow	2,152	-2	10*	1	17
Hooded Crow	129	-2	-3	-25	23
Raven	239	-11	10	-31	106
Starling UKBAP	1,688	-22*	-38*	-42	-33
House Sparrow UKBAP	1,488	3	-9*	-16	-2
Tree Sparrow UKBAP	158	10	55*	17	112
Chaffinch	2,265	3	9*	5	15
Greenfinch	1,687	-13*	12*	7	22
Goldfinch	1,403	10*	56*	45	70
Siskin	132	-8	18	-15	46
Linnet UKBAP	1,133	9	-23*	-31	-16
Lesser Redpoll UKBAP	137	15	3	-28	42
Common Crossbill	43	-73*	24	-29	82
Bullfinch UKBAP	541	3	-8	-18	1
Yellowhammer UKBAP	1,126	3	-16*	-22	-8
Reed Bunting UKBAP	445	4	33*	17	52
Corn Bunting UKBAP	143	-5	-29*	-44	-11

• Trends are percentage changes, and are marked with an asterisk (*) where the 95% confidence limits of the change do not overlap zero (indicating that there has been a significant change).
 • The trend since the start of the survey, covering the years 1994–2009, has been smoothed, and the end years truncated. This trend is labelled as 1995–2008.
 • The sample is the mean number of squares per year on which the species was recorded during 1994–2009.
 • LCL and UCL are the lower and upper 95% confidence limits for the 1995–2008 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 100 species in 2009, 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 Gadwall, as the average sample size for this species has now reached the threshold. In total, 191 species were recorded on the 2,554 BBS squares covered in England in 2009.

Nine 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 in future. These species are Goosander, Mandarin, Little Egret, Peregrine, Common Sandpiper, Lesser Spotted Woodpecker, Dipper, Wood Warbler and Common Crossbill.

In 2009, results from the Upland BBS (additional randomly selected 1-km squares in uplands, surveyed by professional fieldworkers) were added to the English BBS data (but not, this year, to the UK trends). These squares were surveyed using the same methodology as standard BBS squares, and the different sampling strategy was accounted for in the trend calculations. Improved trends for 17 species with substantial populations in upland areas were calculated using the additional data: Red Grouse, Buzzard, Oystercatcher, Snipe, Curlew, Redshank, Tree Pipit, Meadow Pipit, Grey Wagtail, Pied Wagtail, Redstart, Whinchat, Stonechat, Wheatear, Raven, Siskin and Lesser Redpoll.

Of the 100 species for which trends are presented, 24 decreased significantly and 39 increased significantly since the start of the survey.

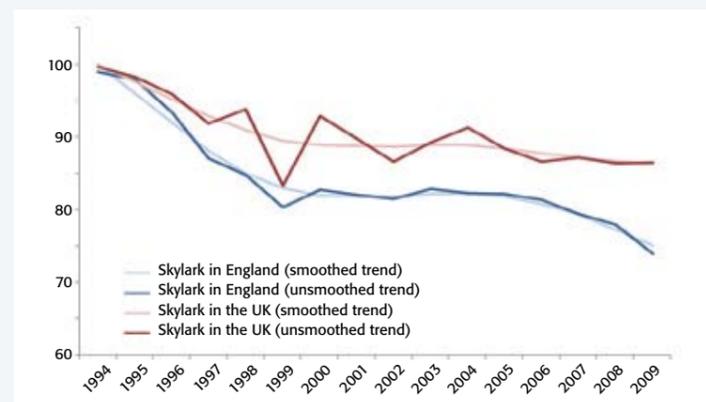
The greatest declines since the start of the survey have been shown by Willow Tit, Turtle Dove, Cuckoo, Yellow Wagtail and Nightingale. The species that declined the most in England between 2008 and 2009 are Goldcrest, Redshank, Stonechat, Kestrel and Grey Partridge.

The biggest increases since the start of the survey have been shown by Red Kite, Ring-necked Parakeet, Barn Owl (with the caveat that the BBS monitors nocturnal species poorly), Greylag Goose and Buzzard. The species that increased the most in England between 2008 and 2009 are Lesser Redpoll, Whinchat, Siskin, Greylag Goose and Marsh Tit, though not all increases were significant.

As the greater part of most bird UK populations are in England, the England-specific trends are generally similar to the overall UK trends. However, a number of species are showing different population trends in England than in the UK as a whole. These include the waders Oystercatcher, Lapwing and Curlew, which are all doing better in England than in the UK as a whole since 1994 (either increasing more, or declining less). Numbers of Snipe, on the other hand, have remained stable in England since the start of the survey, despite increasing by 39% in the UK as a whole. The England and UK trends for Redshank since the start of the survey are similar, but the decline between 2008 and 2009 was significant only for the England trend.

Looking at the changes between the two most recent years, Skylark declined significantly in England between 2008 and 2009 (5% decline), but showed no change in the UK as a whole (see Figure 3). Conversely, Lesser Redpoll increased significantly by 110% in England between 2008 and 2009, but increased only by 15% in the UK as a whole. Whinchat increased by 46% in England between 2008 and 2009, a trend which includes data from the additional upland squares, but showed a significant decline of 48% in the UK as a whole over the same period. Similarly, Meadow Pipit numbers increased significantly by 12% in England between 2008 and 2009, but declined significantly by 11% in the UK as a whole.

Figure 3 Skylark trends in England and the UK (smoothed and unsmoothed trends)



SKYLARK BY CHRIS GOMERSALL (RSPB-IMAGES.COM)

Table 5 Trends in England during 2008–09 and 1995–2008

Species	Sample	08–09	95–08	LCL	UCL
Mute Swan	196	-1	8	-13	40
Greylag Goose	124	35*	188*	77	401
Canada Goose	396	-10	94*	46	149
Shelduck	111	5	38	-14	84
Gadwall	31	-3	49	-11	136
Mallard	997	-1	33*	23	46
Tufted Duck	124	-13	27	-10	69
Red Grouse UKBAP	68	12	-18	-38	4
Red-legged Partridge	490	-8	24*	12	39
Grey Partridge UKBAP	200	-27*	-44*	-51	-33
Pheasant	1,382	5*	35*	27	43
Little Grebe	53	-2	7	-26	53
Great Crested Grebe	61	-12	-7	-27	18
(Cormorant)	182	-2	27*	4	55
(Grey Heron)	514	-1	3	-9	18
Red Kite	41	17	6,522*	2,883	7,009
Sparrowhawk	273	-17*	-4	-16	11
Buzzard	506	4	132*	100	167
Kestrel	546	-29*	-3	-13	6
Hobby	37	25	25	-11	87
Moorhen	574	0	16*	4	28
Coot	226	-13	41*	16	82
Oystercatcher	161	11	46*	18	75
Lapwing UKBAP	532	-13*	2	-12	15
Snipe	80	8	1	-25	32
Curlew UKBAP	307	5	-27*	-35	-19
Redshank	57	-41*	-27	-47	1
(Common Tern)	55	-9	41	-6	141
Feral Pigeon	535	1	-13	-26	1
Stock Dove	658	10	-1	-13	10
Woodpigeon	1,829	-6	43*	34	51
Collared Dove	1,107	-4	27*	15	36
Turtle Dove UKBAP	165	4	-70*	-75	-63
Ring-necked Parakeet	47	11	696*	212	2,914
Cuckoo UKBAP	569	-9	-60*	-63	-55
(Barn Owl)	38	-2	421*	276	650
Little Owl	95	-16	-22*	-38	-4
(Tawny Owl)	73	28	-13	-31	8
Swift	862	0	-29*	-41	-13
Kingfisher	47	2	7	-25	47
Green Woodpecker	693	-5	57*	44	69
Gt Spotted Woodpecker	812	4	115*	99	137
Skylark UKBAP	1,281	-5*	-19*	-23	-14
Sand Martin	77	-6	11	-34	56
Swallow	1,380	6	29*	20	39
House Martin	701	-19*	-8	-16	4
Tree Pipit UKBAP	72	-7	-47*	-66	-19
Meadow Pipit	409	12*	-16*	-28	-3
Yellow Wagtail UKBAP	151	-4	-52*	-62	-40
Grey Wagtail	143	-4	29*	6	59
Pied Wagtail	919	-10*	3	-4	10
Wren	1,751	-10*	14*	8	17
Duncock UKBAP	1,543	1	15*	10	23
Robin	1,719	-4*	27*	23	32
Nightingale	30	-23	-49*	-68	-21
Redstart	83	-13	0	-21	23
Whinchat	32	46	-47*	-72	-17
Stonechat	68	-31*	105*	34	217
Wheatear	161	14	-7	-24	21
Blackbird	1,809	-5*	23*	19	28
Song Thrush UKBAP	1,418	-5*	25*	17	32
Mistle Thrush	893	-17*	-25*	-31	-19
Grasshopper Warbler UKBAP	31	-9	-23	-48	10
Sedge Warbler	180	6	-7	-24	10
Reed Warbler	111	-5	22	0	46
Blackcap	1,200	10*	51*	40	59
Garden Warbler	342	-6	-19*	-29	-5
Lesser Whitethroat	239	-2	-3	-20	12
Whitethroat	1,059	7*	18*	10	25
Chiffchaff	1,098	-9*	45*	36	56
Willow Warbler	884	8*	-30*	-37	-24
Goldcrest	504	-50*	14*	3	38
Spotted Flycatcher UKBAP	139	-21	-48*	-59	-35
Long-tailed Tit	749	-9*	10*	1	21
Marsh Tit UKBAP	126	34*	-21*	-34	-5
Willow Tit UKBAP	46	-25	-73*	-81	-63
Coal Tit	476	5	17*	0	44
Blue Tit	1,725	-5*	0	-4	4
Great Tit	1,621	-7*	39*	33	44
Nuthatch	351	7	56*	39	76
Treecreeper	235	-13	-13	-25	1
Jay	595	-4	4	-5	14
Magpie	1,464	-2	-3	-8	2
Jackdaw	1,225	3	43*	32	56
Rook	954	-5	-3	-13	9
Carrion Crow	1,772	0	18*	9	26
Raven	99	8	-26	-67	232
Starling UKBAP	1,385	-21*	-46*	-49	-40
House Sparrow UKBAP	1,230	0	-20*	-26	-14
Tree Sparrow UKBAP	129	-14	28	0	70
Chaffinch	1,768	-1	14*	9	18
Greenfinch	1,421	-7*	13*	5	20
Goldfinch	1,157	11*	46*	36	59
Siskin	49	39	34	-32	150
Linnet UKBAP	916	-4	-34*	-40	-27
Lesser Redpoll UKBAP	58	110*	-30	-58	23
Bullfinch UKBAP	420	-1	-11*	-21	-1
Yellowhammer UKBAP	983	1	-22*	-27	-18
Reed Bunting UKBAP	334	10	29*	13	48
Corn Bunting UKBAP	137	-4	-25*	-48	-6

- Trends are percentage changes, and are marked with an asterisk (*) where the 95% confidence limits of the change do not overlap zero (indicating that there has been a significant change).
- The trend since the start of the survey, covering the years 1994–2009, has been smoothed, and the end years truncated. This trend is labelled as 1995–2008.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2009.
- LCL and UCL are the lower and upper 95% confidence limits for the 1995–2008 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, 162 species were recorded on the 328 squares covered in Scotland in 2009. The most widespread species were Chaffinch, Wren and Woodpigeon, all found on over 75% of squares. A number of late winter visitors and passage migrants, some of which occasionally breed in Scotland, were noted, including Pink-footed Goose, Sanderling, Purple Sandpiper, Turnstone and Fieldfare.

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 a Scottish trend for Tree Pipit for the first time. This brings the total number of species for which we can calculate Scottish trends to 60, shown in Table 6 opposite.

Eleven species were recorded on an average of 20–29 squares in Scotland during the survey period, and an increase in survey coverage or species range may enable reliable trends to be calculated in future. These species are Greylag Goose, Grey Partridge, Sparrowhawk, Redshank, Stock Dove, Sand Martin, Whinchat, Garden Warbler, Spotted Flycatcher, Long-tailed Tit and Common Crossbill.

In 2009, results from the Scottish Woodland BBS (additional randomly selected 1-km squares in woodland areas, surveyed by professional fieldworkers) were added to the Scottish BBS data (but not, this year, to the UK trends). These squares were surveyed using the same methodology as standard BBS squares, and the different sampling strategy was accounted for in the trend calculations. Improved trends for 22 species with substantial populations in woodland areas were calculated using the additional data: Buzzard, Cuckoo, Great Spotted Woodpecker, Tree Pipit, Wren, Dunnock, Robin, Blackbird, Song Thrush, Mistle Thrush, Blackcap, Chiffchaff, Willow Warbler, Goldcrest, Coal Tit, Blue Tit, Great Tit, Treecreeper, Chaffinch, Siskin, Lesser Redpoll and Bullfinch.

Of the 60 species for which trends are presented, 18 have increased significantly and six decreased significantly since the start of the survey.

The greatest declines in Scotland since the start of the survey have been shown by Kestrel, Curlew, Hooded Crow, Swift and Meadow Pipit, though not all are significant. The species that declined the most in Scotland between 2008 and 2009 are Kestrel, Goldcrest, Grey Wagtail, Treecreeper and Stonechat.

The biggest increases since the start of the survey have been shown by Great Spotted Woodpecker, Chiffchaff, Stonechat, Blackcap and House Martin. The species that increased the most in Scotland between 2008 and 2009 are Wheatear, Swift, Feral Pigeon, Golden Plover and Rook, though not all are significant.

While some waders have declined more in Scotland than the rest of the UK, a number of species fared better in Scotland than in the UK as a whole. Numbers of Chiffchaff, Blackcap and Whitethroat increased in Scotland by 289%, 178% and 86% since the start of the survey, compared to smaller increases of 43%, 61% and 20% respectively in the UK as a whole (see Figure 4 for Chiffchaff trend). Tree Pipit increased by 47% in Scotland, while declining by 5% in the UK. Mistle Thrush increased by 38% in Scotland since the start of the survey, and by 23% between 2008 and 2009, but declined by 13% since the start of the survey, and by 12% between 2008 and 2009, in the UK overall. Cuckoo numbers have shown a 6% increase in Scotland since the start of the survey, despite declining by 44% in the UK as a whole. Swift numbers increased by 78% in Scotland between 2008 and 2009, causing an upturn in the previously downward trend (see Figure 5).

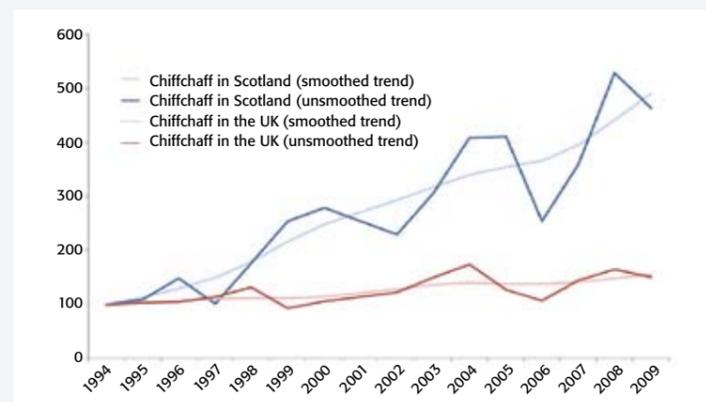
Table 6 Trends in Scotland during 2008–09 and 1995–2008

Species	Sample	08–09	95–08	LCL	UCL
Mallard	94	-13	-21	-39	8
Red Grouse <small>UKBAP</small>	52	-6	-3	-27	26
Pheasant	122	3	12	-9	37
(Grey Heron)	47	-21	18	-14	68
Buzzard	134	4	38*	10	76
Kestrel	42	-64*	-54*	-69	-26
Oystercatcher	125	8	-21*	-35	-8
Golden Plover	41	43	-12	-37	25
Lapwing <small>UKBAP</small>	88	-9	-27*	-46	-13
Snipe	56	5	60*	10	149
Curlew <small>UKBAP</small>	120	-21	-53*	-64	-44
Common Sandpiper	31	19	-8	-33	15
Feral Pigeon	58	46	-2	-44	61
Woodpigeon	185	-8	-2	-23	23
Collared Dove	46	31	-8	-40	33
Cuckoo <small>UKBAP</small>	73	-16	6	-19	28
Swift	48	78	-29	-59	5
Gt Spotted Woodpecker	41	-18	300*	177	500
Skylark <small>UKBAP</small>	201	7	8	-11	34
Swallow	159	16	53*	25	85
House Martin	57	7	103*	38	188
Tree Pipit <small>UKBAP</small>	32	-3	47*	3	111
Meadow Pipit	199	-13*	-28*	-40	-18
Grey Wagtail	30	-54*	28	-14	91
Pied Wagtail	126	-3	-8	-25	6
Wren	221	-28*	69*	43	97
Dunnock <small>UKBAP</small>	132	-10	54*	24	87
Robin	190	-9	25*	10	39
Stonechat	36	-43*	208*	83	369
Wheatear	77	80*	-4	-35	42

Species	Sample	08–09	95–08	LCL	UCL
Blackbird	186	-2	32*	10	57
Song Thrush <small>UKBAP</small>	169	-3	32*	11	57
Mistle Thrush	76	23	38	-5	100
Sedge Warbler	52	-14	35	-10	108
Blackcap	48	-2	178*	75	321
Whitethroat	71	17	86*	32	159
Chiffchaff	40	-12	289*	134	596
Willow Warbler	203	5	16	-1	31
Goldcrest	92	-61*	16	-8	65
Coal Tit	123	-24*	-1	-21	24
Blue Tit	156	-4	3	-10	17
Great Tit	141	-12	53*	27	88
Treecreeper	35	-45*	-2	-39	53
Magpie	42	5	5	-23	53
Jackdaw	106	22	19	-10	60
Rook	106	35	-17	-45	11
Carrion Crow	175	-4	-11	-33	10
Hooded Crow	51	-10	-31*	-50	-6
Raven	42	-17	52	-11	142
Starling <small>UKBAP</small>	140	-30*	-16	-32	4
House Sparrow <small>UKBAP</small>	86	7	40	-10	83
Chaffinch	229	7	10	0	24
Greenfinch	99	-40*	5	-17	38
Goldfinch	80	-1	97*	35	176
Siskin	71	-30*	20	-14	66
Linnet <small>UKBAP</small>	88	30	16	-19	55
Lesser Redpoll <small>UKBAP</small>	44	-9	-6	-51	49
Bullfinch <small>UKBAP</small>	37	-10	23	-20	68
Yellowhammer <small>UKBAP</small>	98	9	13	-13	40
Reed Bunting <small>UKBAP</small>	54	-14	58*	1	126

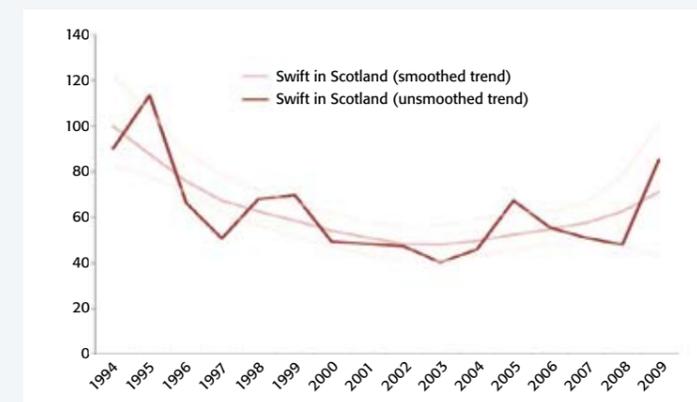
- Trends are percentage changes, and are marked with an asterisk (*) where the 95% confidence limits of the change do not overlap zero (indicating that there has been a significant change).
- The trend since the start of the survey, covering the years 1994–2009, has been smoothed, and the end years truncated. This trend is labelled as 1995–2008.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2009.
- LCL and UCL are the lower and upper 95% confidence limits for the 1995–2008 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).

Figure 4 Chiffchaff trends in Scotland and the UK (smoothed and unsmoothed trends)



CHIFFCHAFF BY STEVEN ROUND

Figure 5 Swift trend in Scotland (smoothed and unsmoothed trend)



SWIFT BY DAVE HARRIS

Wales

In total, 132 species were recorded on the 229 BBS squares surveyed in 2009. Carrion Crow, Blackbird and Chaffinch were the most widespread species, all occurring on over 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 2009 was 53 species, shown in Table 7 opposite.

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

Of the 53 species for which trends are presented, 15 have increased significantly and seven decreased significantly since the start of the survey. The greatest declines in Wales since the start of the survey have been shown by Starling, Swift, Curlew, Goldcrest and Yellowhammer, though not all are significant. The species that declined the most in Wales between 2008 and 2009 are Goldcrest, Tree Pipit, Rook, Curlew and Cuckoo, though not all are significant.

The biggest increases since the start of the survey have been shown by Stonechat, Great Spotted Woodpecker, House Sparrow, Blackcap and Goldfinch. The species that increased the most in Wales between 2008 and 2009 are Feral Pigeon, Coal Tit, Long-tailed Tit, Swift and Buzzard, though not all are significant.

The House Sparrow increase in Wales since 1994 is in contrast with the overall UK decline. However, a number of other species have declined more in Wales than the UK as a whole, including Tree Pipit, which has declined by 29% in Wales compared to 5% in the UK, and Whitethroat, which has declined by 13% in Wales while increasing significantly in the UK overall by 20%. Green Woodpecker declined by 9% in Wales since the start of the survey, despite increasing significantly in the UK by 47%.

Looking at the changes between 2008 and 2009, Rook, Wheatear and Curlew all showed greater declines than were seen in the UK overall. Coal Tit and Long-tailed Tit increased in Wales by 36% and 26% respectively between 2008 and 2009, despite declining in the UK overall.

Northern Ireland

Trends specific to Northern Ireland were produced for 29 species in 2009, shown in Table 8 opposite. Of these, 15 have increased significantly since the start of the survey, and one, Skylark, has decreased significantly. 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.

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.

The biggest increases since the start of the survey have been shown by Goldfinch, Great Tit, Pheasant, Hooded Crow and Linnet. The species that increased the most in Northern Ireland between 2008 and 2009 are Linnet, Rook, Reed Bunting, Willow Warbler and Pheasant, though not all are significant. The species that declined most in Northern Ireland between 2008 and 2009 are Goldcrest, Skylark, Pied Wagtail, Meadow Pipit and Greenfinch, though not all are significant.

Of the changes that occurred between 2008 and 2009, Skylark showed a significant decline in Northern Ireland of 23%, a decline not shown in the UK as a whole (0% change). Goldcrest showed a larger significant decline in Northern Ireland (75% decline) than in the UK overall (56% decline).

Willow Warbler and Linnet showed significant increases of 22% and 68% respectively, much larger increases than in the UK overall (6% and 9%). Mistle Thrush increased by 8%, despite decreasing significantly by 12% in the UK overall.

Isle of Man and the Channel Islands

No BBS squares were surveyed in the Isle of Man in 2009. Sixteen squares were covered on the Channel Islands, the joint second-highest total, including 10 on Jersey, five on Guernsey and one on Alderney, and 68 species were recorded, including the first BBS records of Canada Goose and Shelduck on the Channel Islands.

Table 7 Trends in Wales during 2008–09 and 1995–2008

Species	Sample	08–09	95–08	LCL	UCL
Mallard	63	15	-19	-54	44
Pheasant	86	-4	51*	14	102
(Grey Heron)	42	8	3	-31	50
Buzzard	135	20	11	-10	34
Curlew ^{UKBAP}	37	-41*	-46*	-60	-28
Feral Pigeon	32	56	41	-20	105
Woodpigeon	178	-14	32*	17	52
Collared Dove	67	2	51*	8	112
Cuckoo ^{UKBAP}	56	-29	-37*	-55	-20
Swift	64	21	-52*	-65	-30
Green Woodpecker	46	1	-9	-36	25
Gt Spotted Woodpecker	68	4	159*	100	243
Skylark ^{UKBAP}	100	9	-15	-32	5
Swallow	163	4	35*	12	63
House Martin	84	-22	2	-24	36
Tree Pipit ^{UKBAP}	31	-56	-29	-59	17
Meadow Pipit	84	-8	-11	-23	4
Pied Wagtail	111	-22	5	-15	27
Wren	187	-16*	9	-7	18
Dunnock ^{UKBAP}	143	3	33*	8	56
Robin	184	-10*	13*	2	25
Redstart	54	-2	-4	-27	22
Stonechat	35	-29	168*	75	363
Wheatear	50	-21	-23	-43	6
Blackbird	187	-6	44*	29	58
Song Thrush ^{UKBAP}	160	-10	39*	21	57
Mistle Thrush	96	-18	1	-28	36

Species	Sample	08–09	95–08	LCL	UCL
Blackcap	110	12	60*	29	96
Garden Warbler	54	-1	-21	-46	15
Whitethroat	76	17	-13	-36	11
Chiffchaff	127	-10	23*	7	46
Willow Warbler	152	10	-15	-31	1
Goldcrest	79	-57*	-41	-61	1
Long-tailed Tit	56	26	13	-14	53
Coal Tit	68	36	-19	-45	13
Blue Tit	169	-6	10	-5	26
Great Tit	161	4	47*	25	72
Nuthatch	66	17	23	-5	56
Treecreeper	39	-1	4	-38	42
Jay	67	0	31	-1	64
Maggie	155	-6	-12*	-23	0
Jackdaw	132	8	23	-19	101
Rook	75	-46*	-19	-40	16
Carrion Crow	193	-9	4	-14	24
Raven	83	-20	28	-21	108
Starling ^{UKBAP}	80	-9	-58*	-71	-35
House Sparrow ^{UKBAP}	115	6	74*	33	122
Chaffinch	189	-3	-10	-22	3
Greenfinch	108	-12	13	-9	48
Goldfinch	118	19	52*	17	94
Linnet ^{UKBAP}	88	-5	-32*	-53	-9
Bullfinch ^{UKBAP}	60	11	-14	-38	15
Yellowhammer ^{UKBAP}	36	3	-40*	-58	-20

Table 8 Trends in Northern Ireland during 2008–09 and 1995–2008

Species	Sample	08–09	95–08	LCL	UCL
Pheasant	35	17	167*	31	323
Woodpigeon	76	2	71*	26	116
Skylark ^{UKBAP}	33	-23*	-33*	-47	-18
Swallow	78	4	19	-11	63
House Martin	38	9	51	-11	165
Meadow Pipit	61	-17	22	-6	66
Pied Wagtail	40	-19*	34*	Sample too small	
Wren	84	-10*	77*	21	122
Dunnock ^{UKBAP}	64	14*	93*	26	143
Robin	80	4	22	-7	42
Blackbird	79	-14*	43*	7	67
Song Thrush ^{UKBAP}	70	7	74*	30	127
Mistle Thrush	55	8	10	-61	111
Willow Warbler	72	22*	66*	27	112
Goldcrest	42	-75*	94*	33	175

Species	Sample	08–09	95–08	LCL	UCL
Coal Tit	56	-6	71*	14	119
Blue Tit	70	-7	20	-19	54
Great Tit	65	-7	176*	85	217
Maggie	76	-7	21	-12	52
Jackdaw	69	0	67*	12	119
Rook	69	28	4	-26	48
Hooded Crow	74	11	113*	41	172
Starling ^{UKBAP}	72	7	32	-4	81
House Sparrow ^{UKBAP}	47	16	46	-14	119
Chaffinch	82	-1	34	-1	59
Greenfinch	47	-15	45	-7	138
Goldfinch	40	16*	674*	Sample too small	
Linnet ^{UKBAP}	33	68*	99*	24	238
Reed Bunting ^{UKBAP}	31	23	12	-27	95

- Trends are percentage changes, and are marked with an asterisk (*) where the 95% confidence limits of the change do not overlap zero (indicating that there has been a significant change).
- The trend since the start of the survey, covering the years 1994–2009, has been smoothed, and the end years truncated. This trend is labelled as 1995–2008.
- The sample is the mean number of squares per year on which the species was recorded during 1994–2009.
- LCL and UCL are the lower and upper 95% confidence limits for the 1995–2008 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 report regional trends only 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.

Trends discussed here are the population changes since the start of the BBS. Comparisons between regions are made below only if trends have been calculated in at least four regions.

Blackcap has shown the smallest increase in the **North East** of all the English regions, and it is the only region in which Jackdaw has shown a decline. Linnets are holding up better than in any other region, with just a 7% decline. Of the 30 species for which trends can be calculated, Starling has shown the greatest decline, and Goldfinch the greatest increase.

Cuckoo has declined the least in the **North West** of all the English regions, and it is the only region in which Mistle Thrush has increased. Pheasant, Stock Dove, Great Spotted Woodpecker, House Martin, Wren, Dunnock, Song Thrush, Blackcap, Chiffchaff, Willow Warbler and Goldcrest have all increased more than in any other English region. Of the 54 species for which trends can be calculated, Starling has shown the greatest decline, and Canada Goose the greatest increase.

Mallard, Grey Heron and Kestrel have increased more in the **West Midlands** than any other region. Curlew, Feral Pigeon, Collared Dove, Long-tailed Tit, Blue Tit, Jay, Chaffinch and Yellowhammer have all declined more than in any other region, and Canada Goose has shown a smaller increase than in other regions. Of the 52 species for which trends can be calculated, Cuckoo has shown the greatest decline, and Buzzard the greatest increase.

Meadow Pipit numbers have declined by a smaller amount in the **South West** than in any other English region, and Canada Goose and Swallow have shown greater increases than in other regions. It is the only English region in which Garden Warbler numbers have increased. Kestrel, Cuckoo, Swift and Starling have declined more than in other regions, and it is the only region in which Goldcrest numbers have declined. Of the 60 species for which trends can be calculated, Cuckoo has shown the greatest decline, and Canada Goose the greatest increase.

Red-legged Partridge, Buzzard and Whitethroat have all increased more in the **South East** than in any other English region, and it is the only region in which Feral Pigeon has increased. Lapwing, House Martin, Willow Warbler, Linnets and Bullfinch have shown greater declines than in other English regions, and it is the only region in which Wren, Lesser Whitethroat, Greenfinch and Reed Bunting have declined. Of the 65 species for which trends can be calculated, Turtle Dove has shown the greatest decline, and Red Kite the greatest increase.

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

Moorhen, Woodpigeon, Blackbird, Long-tailed Tit, Coal Tit, Carrion Crow and Reed Bunting have all shown greater increases in **Yorkshire and the Humber** than in any other English region, and it is the only region in which Skylark has increased. Curlew numbers have declined by a smaller amount than any other region. Pied Wagtail, Whitethroat, Magpie and Rook have all declined more than in other regions. Of the 46 species for which trends can be calculated, Cuckoo has shown the greatest decline, and Goldfinch the greatest increase.

Lapwing, Green Woodpecker, House Sparrow and Bullfinch have all increased more in the **East Midlands** than any other English region, and it is the only region in which Yellowhammer has increased. Red-legged Partridge, Stock Dove, Skylark and Meadow Pipit have shown more severe declines than in any other region. Of the 52 species for which trends are calculated, Yellow Wagtail has shown the greatest decline, and Green Woodpecker the greatest increase.

Starling numbers have declined by 26% in the **East of England**, a smaller decline than in other regions. Sparrowhawk, Collared Dove, Pied Wagtail, Lesser Whitethroat, Jay, Jackdaw and Rook have increased more than in any other English region, and it is the only region in which Swift numbers have increased. Grey Heron, Mistle Thrush and Garden Warbler have declined more than in other regions. It is the only region in which Pheasant and Coal Tit numbers have declined. Of the 64 species for which trends are calculated, Turtle Dove has shown the greatest decline, and Green Woodpecker the greatest increase.

Robin, Blue Tit, Great Tit, Magpie, Chaffinch, Greenfinch and Goldfinch have all increased more in **London** than in other English regions. Song Thrush and House Sparrow have declined more than in other regions, and it is the only region in which Mallard and Blackbird have declined. Of the 23 species for which trends are calculated, House Sparrow has shown the greatest decline, and Goldfinch the greatest increase.

Table 9 Trends in English Government Office Regions during 1995–2008

Species	North West	North East	Yorkshire	East Midlands	East of England	West Midlands	South East	South West	London
Mute Swan					31	40			
Greylag Goose					42	34			
Canada Goose	163*	58		45	35	18	59	37	99
Shelduck					48	34			
Mallard	28*	142	36*	79	17	91	67*	102	26*
Red-legged Partridge			49*	41	-15	72	-3	170	83*
Grey Partridge UKBAP					-47*	30	-42*	42	-61*
Pheasant (Cormorant) (Grey Heron)	103*	118	53*	54	79*	109	32	128	-2
Red Kite					19	45	63*	124	33*
Sparrowhawk	-33*	31			16	45			6,320*
Buzzard	118*	50							-1
Kestrel	-3	65	-11	46	5	55	-5	103	190*
Moorhen	-10	69	74*	36	1	55	23	122	772*
Coot	36	30					-9	58	9
Oystercatcher	9	50					10	38	-7
Lapwing UKBAP	-10	107	1	37	37*	85	85	60	20
Curlew UKBAP	-40*	82	-38*	37	-14	79	-50*	30	-2
Feral Pigeon	-24	72	-9	52	-30	46	-17	72	-34
Stock Dove	78*	46	55*	41	-43*	64	-9	128	20
Woodpigeon	44*	192	84*	132	34*	166	57*	298	24*
Collared Dove	56*	120	-1	67	52*	98	77*	197	37*
Turtle Dove UKBAP							-73*	78	-69*
Cuckoo UKBAP	-42*	35	-64*	39	-69*	54	-64*	116	-63*
Swift	-39*	106	-25	71	-22	78	8	147	-8
Green Woodpecker					159*	33	158*	148	39
Gt Spotted Woodpecker	157*	74	61*	33	107*	46	86*	132	123*
Skylark UKBAP	-18*	112	9	113	-31*	137	-27*	257	102*
Swallow	24*	176	36*	58	16	123	30	127	-14
House Martin	20	94	-18	56	8	50	-23	99	21*
Meadow Pipit	-18	75	-8	42	-30	39	-25	43	21*
Yellow Wagtail UKBAP					-79*	34	-41*	47	-39*
Grey Wagtail									-18
Pied Wagtail	-19	118	14	39	-29	82	-16	87	5
Wren	49*	190	27*	61	47*	135	17	157	18
Dunnock UKBAP	33*	158	31*	46	4	102	15	144	15*
Robin	46*	182	36*	56	65*	116	29*	153	32*
Wheatear	-11	39							44*
Blackbird	45*	191	38*	57	60*	131	30*	164	31*
Song Thrush UKBAP	96*	146	4	50	56*	88	33*	114	10*
Mistle Thrush	14	114	-7	34	-37	69	-11	79	-46*
Sedge Warbler							-13	46	-10
Reed Warbler							3	40	83
Blackcap	123*	95	31	32	50*	62	43*	93	44*
Garden Warbler							40*	209	61*
Lesser Whitethroat							-23*	57	45*
Whitethroat	-1	76	34	31	-6	64	25*	114	-15
Chiffchaff	128*	77	101*	47	115*	68	71*	172	44*
Willow Warbler	20	132	-24*	55	8	92	-45*	84	19*
Goldcrest	77	37					25	65	63*
Spotted Flycatcher UKBAP									19*
Long-tailed Tit	39*	71			40	37	30	63	61*
Marsh Tit UKBAP									-7
Coal Tit	18	56	40	32	104*	30	7	30	-10
Blue Tit	-8	184	-2	52	4	119	16	152	7
Great Tit	39*	168	68*	46	67*	101	60*	138	8
Nuthatch									27
Treecreeper									129
Jay	37	60							-11
Magpie	-11	169	-25*	82	7	121	55*	100	37*
Jackdaw	69*	118	-3	48	58	89	23*	219	-8
Rook	-40*	79	-4	41	-61*	86	24	81	58*
Carrion Crow	32*	199	16	64	82*	136	20	153	45*
Raven									3
Starling UKBAP	-47*	166	-40*	49	-54*	105	-29*	123	15
House Sparrow UKBAP	-10	144	-17	33	-13	80	11	106	-48*
Tree Sparrow UKBAP							32	31	-53*
Chaffinch	21*	189	24	64	34*	132	30*	161	-48*
Greenfinch	34*	142	21	38	9	90	14	124	129
Goldfinch	97*	136	74*	40	116*	85	35	99	58*
Linnets UKBAP	-12	87	-7	40	-24	77	-50*	100	45*
Bullfinch UKBAP	1	33					14	34	31
Yellowhammer UKBAP	-29*	55	-31*	38	-15	72	4	121	37*
Reed Bunting UKBAP	16	54	65*	32	12	48	20	74	-11
Corn Bunting UKBAP							-25*	40	162

• This table shows the 1995–2008 trends (in bold) and sample sizes (normal font).
 • Trends are percentage changes, and are marked with an asterisk (*) where the 95% confidence limits of the change do not overlap zero (indicating that there has been a significant change).
 • The sample is the mean number of squares per year on which the species was recorded during 1994–2009.
 • 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 2,420 squares, 75% of the total number of squares surveyed. Table 10 shows the 15 most widespread species in 2009. 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 29 species were recorded during BBS visits in 2009 – these are listed in Table 11. The order of species within the tables follows Harris & Yalden (2008).

On the most species-rich square, in Berkshire, 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 2,171 squares (90% of the mammal returns). On 83 squares (3%) the only mammal records were from extra visits, field signs, dead animals or local knowledge, leaving 166 squares (7%) 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.

Table 10 Common mammal species in 2009

Species	Scientific name	Squares recorded	Squares seen	Individuals
Grey Squirrel	<i>Sciurus carolinensis</i>	862	766	1,631
Common Rat	<i>Rattus norvegicus</i>	137	30	48
Rabbit	<i>Oryctolagus cuniculus</i>	1,668	1,561	14,636
Brown Hare	<i>Lepus europaeus</i>	787	748	2,508
Mountain/ Irish Hare	<i>Lepus timidus</i>	60	50	139
Hedgehog	<i>Erinaceus europaeus</i>	113	16	17
Mole	<i>Talpa europaea</i>	582	5	10
Domestic Cat	<i>Felis catus</i>	375	312	558
Red Fox	<i>Vulpes vulpes</i>	630	352	458
Badger	<i>Meles meles</i>	298	18	20
Stoat	<i>Mustela erminea</i>	103	44	51
Muntjac	<i>Muntiacus reevesi</i>	168	126	191
Red Deer	<i>Cervus elaphus</i>	70	53	983
Fallow Deer	<i>Dama dama</i>	121	75	741
Roe Deer	<i>Capreolus capreolus</i>	574	483	977

Table 11 All other mammal species in 2009

Species	Scientific name	Squares recorded
Red Squirrel	<i>Sciurus vulgaris</i>	35
Common Dormouse	<i>Muscardinus avellanarius</i>	1
Bank Vole	<i>Myodes glareolus</i>	16
Short-tailed Vole	<i>Microtus agrestis</i>	11
Water Vole	<i>Arvicola terrestris</i>	15
Harvest Mouse	<i>Micromys minutus</i>	2
Wood Mouse	<i>Apodemus sylvaticus</i>	18
Yellow-necked Mouse	<i>Apodemus flavicollis</i>	1
House Mouse	<i>Mus domesticus</i>	5
Common Shrew	<i>Sorex araneus</i>	23
Pygmy Shrew	<i>Sorex minutus</i>	9
Lesser White-toothed Shrew	<i>Crocidura suaveolens</i>	1
Daubenton's Bat	<i>Myotis daubentonii</i>	1
Pipistrelle sp.	<i>Pipistrellus pipistrellus/ pygmaeus</i>	28
Serotine	<i>Eptesicus serotinus</i>	1
Brown Long-eared Bat	<i>Plecotus auritus</i>	1
Otter	<i>Lutra lutra</i>	27
Pine Marten	<i>Martes martes</i>	4
Weasel	<i>Mustela nivalis</i>	48
Polecat	<i>Mustela putorius</i>	5
Feral Ferret	<i>Mustela furo</i>	1
Mink	<i>Mustela vison</i>	19
Common Seal	<i>Phoca vitulina</i>	4
Grey Seal	<i>Halichoerus grypus</i>	2
Wild Boar	<i>Sus scrofa</i>	2
Sika Deer	<i>Cervus nippon</i>	12
Chinese Water Deer	<i>Hydropotes inermis</i>	7
Feral Goat	<i>Capra hircus</i>	5
Park Cattle	<i>Bos taurus</i>	1

• Squares recorded: number of squares on which the species was recorded, including counts, field signs, dead animals and local knowledge.
 • Squares seen: number of squares on which the 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.



MOUNTAIN HARE BY TOM MARSHALL (RSPB-IMAGES.COM)

Mammal population trends

Table 12 UK mammal trends during 1995–2008

	Grey Squirrel	Rabbit	Brown Hare	Mountain/ Irish Hare	Red Fox	Muntjac	Red Deer	Fallow Deer	Roe Deer
UNITED KINGDOM	588 46*	1,179 -31*	589 -2	43 -29	249 -8	65 69*	54 65	45 3	301 68*
England	522 38*	955 -8*	508 6		200 -6	65 68*		43 -18	232 58*
Scotland		102 -67*	58 -20				37 3		69 77*
Wales	47 51*	79 20*							
Northern Ireland		39 -13							
North West	47 119*	97 -35*	56 -38*						
Yorkshire and the Humber		84 -5	52 23						
East Midlands		85 -96*	71 52*						
East of England	80 36*	171 79*	127 14						
West Midlands	64 -5	95 -38*	36 -34*						
South East	157 20	235 -31	87 -31*		56 9				84 95*
South West	76 64*	147 35*	58 48*		42 3				76 68*
London	39 77*								

• This table shows unsmoothed 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 country and regional trends).
 • Trends are percentage changes, and are marked with an asterisk (*) where significant at the 95% level or more.
 • The sample is the mean number of squares on which the species was recorded each year during the survey period 1995–2008.

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 2008, when we were able to produce reliable trends for nine, relatively widespread, mammal species. Of these, only Rabbit has shown a significant decline since the start of the survey in 1995 whereas Grey Squirrel, Muntjac and Roe Deer increased significantly (Table 12). The information on species detected more often by signs of their presence than by sightings (e.g. Badger, Hedgehog and Mole) can also be used to estimate trends, although these require more careful interpretation. For more information, see the BBS website.



ROE DEER BY BEN HALL (RSPB-IMAGES.COM)

Special thanks

We would like to thank all BBS volunteers and ROs 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 2009:

ENGLAND

Avon	John Tully
Bedfordshire	Judith Knight
Berkshire	Chris Robinson (now Sarah Priest & Ken White)
Birmingham & West Midlands	Steve Davies
Buckinghamshire	David Lee (now VACANT)
Cambridgeshire	Graham Uney (now Mark Welch)
Cheshire (Mid)	Paul Miller
Cheshire (North-East)	Mark Eddowes
Cheshire (South)	Charles Hull
Cleveland	Vic Fairbrother
Cornwall	Stephen Jackson
Cumbria	Clive Hartley
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Dorset	Michael Pleasants (now Ieuan Evans)
Durham	David Sowerbutts
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Essex (South)	Lynn Parr (now VACANT)
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Hampshire	Glynne Evans
Herefordshire	Steve Coney
Hertfordshire	Chris Dee
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Lancashire (South)	Paul Whittaker (now Stephen Dunstan)
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Lincolnshire (East)	Vacant (now Phil Espin)
Lincolnshire (North)	Chris Gunn
Lincolnshire (South)	Richard Heath
Lincolnshire (West)	Peter Overton
London (North)	Ian Woodward
London (South)	Richard Arnold
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Merseyside	Bob Harris
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Norfolk (South-East)	Rachel Warren
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Suffolk	Mick Wright
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Sussex	Helen Crabtree
The Wirral	Paul Miller
Warwickshire	Mark Smith
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Worcestershire	Harry Green
Yorkshire (Bradford)	Mike Denton
Yorkshire (East)	VACANT
Yorkshire (Harrogate)	Mike Brown
Yorkshire (Hull)	Vacant (now Geoff Dobbs)
Yorkshire (Leeds & Wakefield)	Vacant (now Colin Bonnington)
Yorkshire (North-East)	Mick Carroll
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Yorkshire (Richmond)	John Edwards
Yorkshire (South-East, South-West)	David Gains
Yorkshire (York)	Rob Chapman

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Ross-shire	Simon Cohen
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Channel Islands (excl. Jersey)	Phil Alexander
Jersey	Tony Paintin

ISLE OF MAN

Isle of Man	Pat Cullen
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Finally, we would like to thank all the farmers and landowners 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 know, or even 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

