

The BTO magazine for Garden BirdWatchers

Bird Table

Issue 121 | Spring 2025



***CELEBRATING 30 YEARS
OF CITIZEN SCIENCE***


BTO | Birds
Science
People

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Securing a better future for birds and the natural world

For nearly 30 years Garden BirdWatchers have played a key role in monitoring the ever-changing populations of the UK's birds, helping us to show in our research that the UK has lost 73 million birds since 1970. After remembering loved ones, please consider leaving a gift in your Will to BTO to help us inspire and empower future generations to follow in your footsteps and work with us to influence positive conservation action.

Contact Samantha Rider on legacies@bto.org or call 01842 750050.



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Garden BirdWatch calendar for 2025

Finishing: Q1 2025

2025	Q1
2022	Q2
2023	Q3
2024	Q4

Starting: Q2 2025

2025	Q1
2022	Q2
2023	Q3
2024	Q4

Please use this calendar to work out which Garden BirdWatch week you are entering records for. The dates shown are the **Sunday** on which each count week **STARTS**. A downloadable version of this calendar is available on our website: www.bto.org/gbw

Week Number	1	2	3	4	5	6	7	8	9	10	11	12	13	
2025 Quarter 1	January				February				March					
	29	5	12	19	26	2	9	16	23	2	9	16	23	
2025 Quarter 2	April				May				June					
	30	6	13	20	27	4	11	18	25	1	8	15	22	
2025 Quarter 3	July				August				September					
	29	6	13	20	27	3	10	17	24	31	7	14	21	
2025 Quarter 4	October				November				December					
	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Week Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14



Special 'catch-up' week at the end of 2025

Bird Table

The BTO magazine for **Garden BirdWatchers**

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Kate Plummer

Senior Research Ecologist

I'm sure I'm not alone in welcoming the longer days and first signs of spring. My mid-Cornwall garden is coming back to life –

Daffodils are blooming, Hedgehogs active and there's a buzz in the air. Of course, one of the greatest joys of spring is the cacophony of bird song, and that too has started to build.

But the arrival of spring isn't the only cause for celebration – 2025 marks GBW's 30th anniversary! Across this year's issues, we'll reflect on our scientific achievements, celebrate our community, and look ahead to future developments, including unveiling some brand new GBW trends later in the year.

As a Senior Research Ecologist, I've worked with the GBW Team for many years and was honoured to become its science lead last year. I'm excited to continue enhancing the scheme's scientific value alongside Santiago, Susan, and Mike. GBW science has made an incredible contribution to our understanding of how birds and other wildlife use gardens. A personal highlight for me was using GBW data to show how bird feeders have altered Blackcap migration, drawing them to British gardens in winter instead of the Mediterranean.

We're celebrating the full breadth of GBW scientific advances, from bird arrival patterns at feeders through to the detection of emergent diseases, through two feature articles across the anniversary year.

Disease at feeders remains a critical topic. Through our external partnerships with ZSL, RSPB and others, GBW science continues to inform the bird feeding advice we give, and we always make sure the GBW community is updated with the latest evidence – find an update on Page 23. Enjoy this issue, and thank you from me for helping GBW to deliver 30 years of brilliant, impactful science!



Four-spotted Chaser, by Moss Taylor / BTO

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COVER IMAGE: Wren, by David Tipling / birdphoto.co.uk

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WHAT TO LOOK OUT FOR:

SPRING

GREAT TIT

Great Tits are a common sight in your gardens, but did you know that they are a species that shows sexual dimorphism, where males and females can be told apart based on their plumage? Males sport a solid, glossy, black stripe running from their chins, down through the yellow breast to under their tails. This band is broad, and extends to reach the legs on the belly. Females have a similar band, but this is narrower and not as glossy black in colour.

In a few weeks, it may seem that females have disappeared from your garden, as they busy themselves with incubating their eggs. Males don't usually help with this, but once the chicks hatch, both parents will be very busy foraging for invertebrate prey with which to feed their offspring.

Male Great Tit, by Edmund Fellowes / BTO



Common Newt, by Mike Toms / BTO

NEWT

If you have a pond in your garden, you may be lucky enough to discover that newts have made it their home. We have three species of native newt in the UK: Common Newt (also called Smooth Newt), Great Crested Newt and Palmate Newt. In addition, there are a few non-native introductions that have become established at a few sites. These four-legged amphibians overwinter in damp ground or under log-piles, moving to water in the spring to breed.

Newts lay their eggs on the underside of the leaves of aquatic plants. Each egg is laid singly, one per leaf, and carefully wrapped within the leaf for protection. Once the eggs hatch, the young newts spend the first few weeks feeding on algae before switching to a predatory diet, hunting for invertebrates and other tadpoles. Young and adults leave the water towards the end of the summer and can sometimes be found walking between ponds.



Chiffchaff, by Liz Cutting / BTO

CHIFFCHAFF

With its instantly recognisable onomatopoeic song, the Chiffchaff is a welcome herald of spring. Over recent decades we have charted increasing numbers of Chiffchaffs choosing to winter in the UK – while other individuals continue to winter further south, and into North Africa. This pattern has been driven by climate change, and is also behind the earlier arrival of these birds in our gardens during the spring.

More often heard than seen, if you encounter a “chiff-chaff-chiff-chiff-chiff ...” call this spring, check out scrubby or taller hedgerow cover and tree canopies for a small yellow-olive green bird. Chiffchaffs are active hunters of small insects, and can appear to be quite busy when not perching and singing. So look for a small bird flitting through the canopy, and feeding from the leafy cover at the end of smaller branches. We see an uptick in garden reporting of this species during the springtime weeks.

SPRING BULBS

Adding a splash of colour to our gardens by planting spring bulbs or other early-flowering species can herald the arrival of longer days and warmer weather. However, not all spring bulbs are beneficial for wildlife. If attracting pollinators is a priority, selecting for native species is a useful piece of advice to follow. Another tip is to test the varieties when they flower – if the yellow stamens are visible and pollen dusts off easily when tapped, these are going to provide sustenance for pollinators such as bumblebees, honeybees and hoverflies.

Some varieties of Snowdrops, Daffodils and Tulips have been bred to have more exuberant petals: whilst these may be prettier to look at, they make it difficult for the pollinators to reach the pollen and nectar contained within, so are best avoided. Also avoid bulbs that have been treated with neonicotinoids.



Snowdrops, by Amy Lewis / BTO



SEASONAL REVIEW

October to December 2024

Fieldfare, by Edmund Fellowes / BTO

As **Santiago Cárdenas** reports, the final quarter of the year revealed some interesting patterns within your Garden BirdWatch observations. While some of these relate to the weather that we encountered, others have their origins in longer-term changes.

LONG-TAILED TIT

The last quarter of 2024 saw an unusually sharp and steep reduction in Long-tailed Tit numbers in your gardens. This reduction occurred during the last weeks of November, and was followed by a pronounced rebound that saw numbers peak at the end of December. While minor November declines are normal (as birds focus on the food available in nearby woodland habitats), the unprecedented magnitude of the 2024 trough likely indicates that some additional factors were at play.

Long-tailed Tits, being small-bodied and energy-limited, are highly sensitive to cold weather. An abrupt cold spell (and its accompanying snow over much of the UK), coupled with the effects of Storm Bert, may have forced flocks to abandon gardens temporarily for sheltered woodland, scrub and hedgerow sites, where dense vegetation likely afforded better protection.

Fluctuations in food availability can affect bird movements. Your Garden BirdWatch data suggest that Long-tailed Tits have been increasing their use of gardens over the years, in part a reflection of an upward population trend and in part a response to the fat-based foods now offered at many garden feeding stations. The surge in observations after November 2024's trough could reflect a return to gardens as winter

deepened, driving greater reliance on these fat-based products in their hanging feeders. If the wintry weather had reduced the availability of favoured invertebrate prey, then garden feeding stations may have become increasingly important as these small birds sought the food needed to maintain condition.

REDWING AND BLACKCAP

The smallest of the British thrushes, the Redwing, had a notable start to the 2024/25 winter, with greater numbers being observed in gardens relative to previous years. Redwings are winter visitors to the British Isles, and arrive in varying numbers depending on the severity of the winter weather further north and east. While arrivals typically begin in late autumn, numbers usually peak in December or early January. As is also evident in your Blackbird observations, the arrival of Redwings came earlier this winter, with a peak in the middle of November. This underlines that these cold weather arrivals are more usually seen in the second half of the winter, when we have traditionally tended to see the colder weather. Not so, this winter.

During milder winters, fewer Redwings tend to migrate while harsher winters lead to greater numbers seeking refuge in the British Isles. It is not just the weather itself that plays a role here, but also the

availability of the soil-dwelling invertebrates and berries favoured by these birds. A poor berry crop elsewhere, perhaps coupled with cold weather and lying snow – the latter restricting access to soil-dwelling invertebrates – could increase the numbers arriving in UK gardens.

We also saw increased counts for another winter visitor to UK gardens, in the form of the Blackcap. The average count recorded for Quarter 4 was the second-highest peak in the history of Garden BirdWatch. This adds to a growing trend that has been previously studied by BTO researchers, using Garden BirdWatch data.

BULLFINCH

While the Bullfinch population has experienced a long-term decline, resulting in its placement on the Amber List of Birds of Conservation Concern, we actually saw an upturn in the average counts recorded through Garden BirdWatch in December. Agricultural intensification is suspected to have played a part in the decline but other factors may also have contributed – the species was formerly controlled under licence because of the damage its liking for buds did to the horticultural industry.

The upturn in average counts likely reflects the effects of weather conditions and food availability, and it is the longer-term trend that really matters. As you can see from the plot overleaf, we are seeing fewer Bullfinches in our gardens compared to a decade ago. The plot overleaf also neatly shows the seasonal pattern of garden use in this species, with a (small) late spring peak and an autumn trough underlining how these birds move in and out of gardens in different seasons. This highlights the tremendous value of your weekly recording efforts, delivering a detailed picture of the seasonality of garden use.



Female Bullfinch, by Liz Cutting / BTO

GREY SQUIRREL

Love them or loathe them, there is no denying that Grey Squirrels have taken full advantage of garden feeding stations and the food that these provide. Your weekly Garden BirdWatch records reveal a pronounced seasonal pattern of garden use, with a peak in May/June and an early autumn trough, after which average numbers again increase throughout the final quarter of the year. Your recording efforts also chart a long-term increase in average counts, which in Quarter 4 2024 reached their highest-ever level.

Wider countryside data on Grey Squirrel abundance, collected as an add-on to the BTO/JNCC/RSPB Breeding Bird Survey, reveal a similar long-term increase, with abundance rising by a third between 1995 and 2023. Garden feeding stations probably help to support local Grey Squirrel populations during difficult times of the year, when natural foods are likely to be less readily available.

While the weekly abundance of Grey Squirrels was nearly one per garden at the end of the quarter, the corresponding figure for Red Squirrel (just looking in Scottish gardens) was a tenth of this. Such differences highlight the very different fortunes of these two species. This is why conservation efforts to protect and secure remaining Red Squirrel populations are so important, and why your long-term weekly data can be helpful in understanding how garden use supports these two species. ■



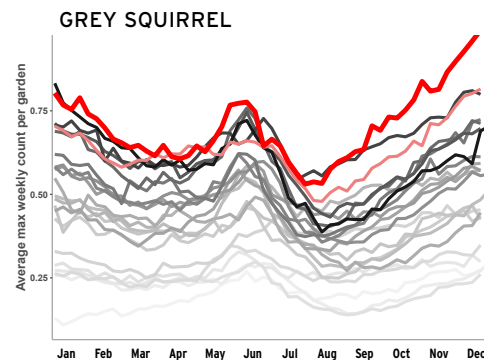
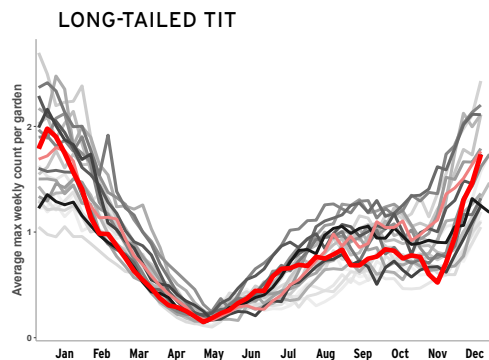
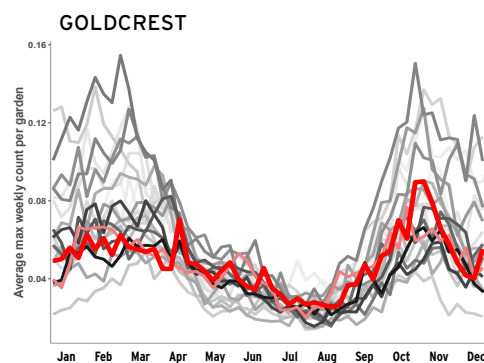
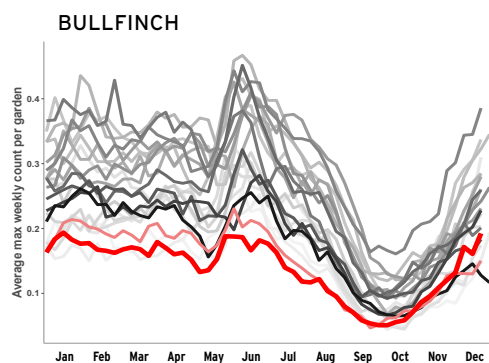
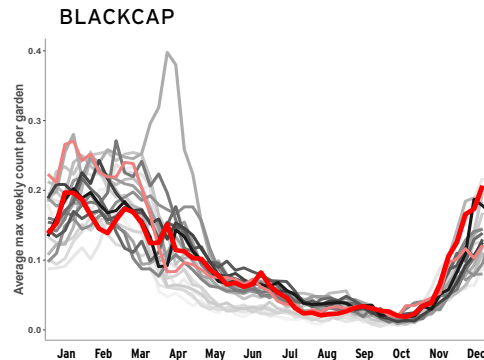
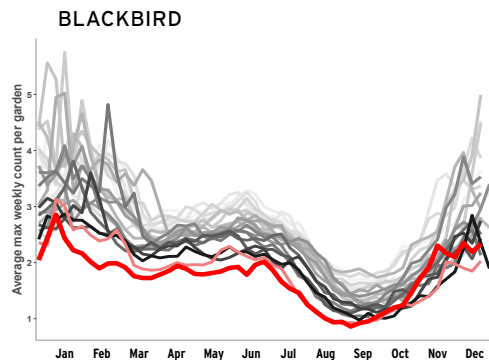
Grey Squirrel, by Tony Howes / BTO

Santiago Cárdenas is the BTO Garden BirdWatch Survey Organiser, responsible for the day-to-day operation of the survey.

RESULTS: Quarter 4 2024 (October–December)

HOW DO GARDEN WILDLIFE COUNTS THIS YEAR COMPARE TO PREVIOUS YEARS?

These graphs show the average maximum weekly count for all GBW gardens, comparing this year so far to previous years. The **bold red** line represents counts for 2024, the **red line** for 2023 and, and previous years are shown in grey; the paler the line, the further back in time the data are. We've chosen six notable species to show you this quarter.

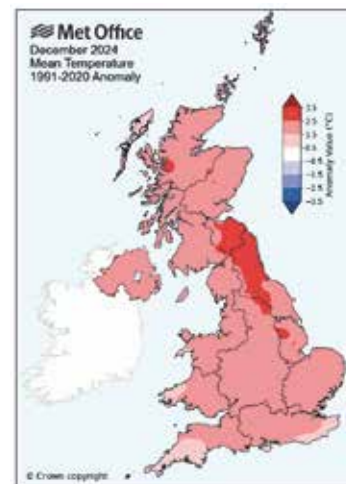
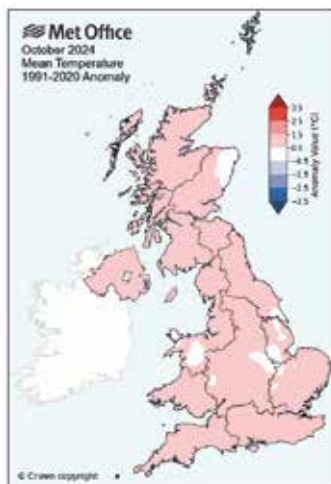


THE WEATHER

October was generally settled, dull and with below-average rainfall until the arrival of Storm Ashley. While the average temperature during the month was 10.4°C (some 0.7°C above the historical average), all nations were consistently warmer than average. Storm Ashley brought strong winds to Northern Ireland, Scotland, and northern parts of England and Wales.

November brought contrasting weather, starting with dry, dull, and mild conditions under high pressure, followed by a shift to colder, wetter days as Arctic air moved in mid-month. The mean UK temperature was 6.6°C, slightly above average, with rainfall below normal at 68%. Towards the end of the month we saw the most significant spell of November snow since 2010.

December delivered mild yet turbulent weather, marked by Storm Darragh. Warmer than usual, average temperatures were 1.5°C above the historical norm. Rainfall was 20% higher than the long-term average, with north-west England and western Scotland particularly affected. Prolonged rain events and storms caused flooding in several regions.



The table shows the average weekly reporting rate for this quarter for each of our 'core' species, ranked highest to lowest, and expressed as a percentage. Also shown are reporting rate comparisons for 1) the same quarter the previous year, 2) the average for this quarter over the last five and 10 years, and 3) the change in long-term average for this quarter, shown as percentage change. All figures are rounded to a whole number, with the percentage changes calculated on the original data.

SPECIES	Reporting Rate (%)				Q4 2024	Q4 2023	Q4 5yr average	Q4 10yr average	Q4 change since 1995
	2024	2023	5-year average	10-year average					
Robin	88	87	87	88	88	-1			
Blue Tit	86	89	88	88	-5				
Woodpigeon	86	82	82	81	29				
Blackbird	79	74	80	82	-8				
Great Tit	75	75	74	75	-3				
Dunnock	67	66	70	72	-9				
Magpie	66	65	63	62	15				
House Sparrow	55	58	60	59	-16				
Goldfinch	51	53	55	55	27				
Coal Tit	50	51	53	55	-9				
Chaffinch	39	42	45	51	-37				
Collared Dove	36	40	43	48	-41				
Starling	35	35	38	40	-29				
Jackdaw	35	34	33	32	39				
Wren	32	29	31	32	-11				
Greenfinch	27	27	27	30	-46				
Carrion Crow	27	27	27	27	5				
Geat Sp. Woodpecker	24	23	24	24	7				
Long-tailed Tit	22	28	27	26	6				
Feral Pigeon	21	20	18	17	56				
Nuthatch	18	16	19	19	8				
Jay	12	9	10	11	-5				
Sparrowhawk	11	13	13	12	-9				
Stock Dove	8	7	6	4	177				
Rook	7	6	6	7	-5				
Blackcap	6	5	5	4	49				
Bullfinch	6	5	7	7	-3				
Song Thrush	6	5	6	8	-49				
Ring-necked Parakeet	6	5	4	3	183				
Goldcrest	5	5	5	5	-9				
Pied Wagtail	5	5	6	6	-36				
Tree Sparrow	4	5	5	5	-7				
Redwing	3	4	5	4	-14				
Tawny Owl	3	4	4	4	-13				
Green Woodpecker	3	2	3	2	27				
Chiffchaff	3	2	2	2	180				
Black-headed Gull	2	2	2	3	-53				
Fieldfare	2	2	2	2	-36				
Mistle Thrush	2	2	3	3	-55				
Siskin	2	2	3	3	-14				



Thirty years of Garden BirdWatch: Science (Part One)

Blue Tit, by Philip Croft / BTO

Mike Toms takes a look some of the science that has only been possible because of Garden BirdWatch. In this, the first of two such features, he discusses research that examines how and why birds use our gardens.

The structured nature of your weekly Garden BirdWatch recording, repeated across months, seasons and years, provides a measure of garden use for each of the species that you record. The results of these efforts can be seen in the peaks and troughs evident in the graphs that we present, both here in the Quarterly Review and on our website, either showing changes in reporting rate (simply the proportion of gardens from which a species was reported in a given week) or abundance (the average across all gardens of the maximum counts reported for a species).

With some 10.6 million weekly submissions submitted over the past three decades, we now have a very sizeable database that can be used to answer

questions about how, when and why birds – and some other wildlife species – use our gardens. Since we also ask you to provide some information on the location of your garden (both geographically and in relation to local habitats) and on the features that it contains, we can also explore how these influence which species visit.

GARDEN USE IN A WIDER LANDSCAPE

Two pieces of published Garden BirdWatch research neatly illustrate the value of weekly recording in revealing seasonal patterns in garden use by birds. The first of these is work carried out in partnership with colleagues at the universities of Glasgow and Newcastle, which used GBW data alongside information collected

through bird ringing. The study, led by Ailsa McKenzie, examined how garden use by Siskins and Coal Tits was influenced by the size of the Sitka Spruce seed crop. Both of these small birds feed on Sitka Spruce, whose cone crop can vary significantly between years. Both species were found to be influenced by changes in cone abundance, switching to feed on supplementary food at garden feeding stations more often in those years where the cone crop was poor. This finding indicates that garden use can be influenced by what is happening to natural food resources across a much broader area. In this instance, your GBW data helped to demonstrate a degree of synchrony in cone production across the UK, which shaped patterns of garden use by these species.

EXPLAINING NEW BEHAVIOURS

The second piece of research concerns garden use by Blackcaps, a species regarded as a summer visitor to the UK. These warblers have become an increasingly common sight at garden feeding stations during winter, something that is very evident in your GBW data, which we used to understand the reasons for this. As our research revealed, the foods that we provide have had a profound effect on the ecology of these birds, including changing their migration behaviour.

In work led by Kate Plummer, we used your weekly observations to look at the suite of factors (including climate change and food provision) that might be behind the increase in Blackcaps using UK gardens during the winter months. We used Blackcap presence/absence data from GBW sites for 12 winters (1999/00 to 2010/11), capturing the period when wintering Blackcaps are most strongly associated with garden habitats. The final dataset included 3,806 Garden BirdWatch sites. While we had data on which sites provided different foods, we didn't know which foods the Blackcaps were favouring, hence the addition of a food preference question to our study.

The analyses also included a measure of local habitat, derived from the CEH Land Cover Map and used to test for any potential 'heat island effect' – urban areas are warmer than rural areas because of the waste heat escaping from buildings and shops. Also included were mean monthly temperature data extracted from the Met Office UK Climate Projections Dataset, latitude/longitude and year. Statistical models were then used to examine the predictors of variation in Blackcap wintering behaviour.

We found that Blackcaps showed greater occupancy of sites in the south and west of Britain, and we also found strong evidence that the use of garden sites was influenced by both supplementary food and temperature. Blackcaps were recorded more often at sites that provisioned food more frequently and, most interestingly, Blackcap occurrence became more strongly associated with supplementary feeding over time. These warblers showed a preference for wintering sites that had a warmer local climate, with the use of sites reduced in those years when the winter weather was milder.

This work provided the first direct evidence of the underlying mechanisms that have influenced the evolution of migratory behaviour in the Blackcap. Over a 12-year period, Blackcaps became increasingly associated with the provision of supplementary foods in British gardens and the reliability of that provisioning was found to have influenced their distribution at a national scale. The findings suggest that climate change is also likely to have enabled Blackcaps to expand their wintering range into Britain.

The increasing association with supplementary food over time suggests that Blackcaps have adapted their feeding habits to exploit human-provisioned foods, complementing evidence that the Blackcaps migrating to Britain in winter are diverging from those that winter in Spain. Blackcaps wintering in Britain have relatively narrower and longer beaks than those wintering in Spain, suggesting that British migrants have adapted to a more generalist diet. The study provided new and timely evidence of the role that human activities can play in shaping the evolutionary trajectories of wild bird populations.

LOCATION, LOCATION, LOCATION

The effects of human activities are also evident in other aspects of the research carried out using GBW and our network of participants. We have, for example, been able to use the information about your gardens (location, features, etc.) to draw out an understanding of how these influence which birds visit your gardens. Dan Chamberlain, a former BTO colleague, led on this piece of research, which explored the habitat associations of 40 bird species monitored by GBW. This work revealed that, for most of these species, it was the nature of the surrounding local habitat that was important in determining whether or not a garden was used, rather than habitat features within the garden itself.



Blackcap, by Liz Cutting / BTO

Birds are mobile, more so than many of the other species that use gardens, and primarily visit gardens for the supplementary food that we provide. It is perhaps unsurprising then that our efforts to create within-garden habitats for them contribute less than the nature of surrounding habitats. A rural garden, close to mature woodland, is likely to attract more birds, from a wider range of species, than an urban garden. Having said that, the study found that some species were more likely to occur in urban (Magpie, Feral Pigeon, House Sparrow and Starling) or suburban gardens (Nuthatch and Siskin).

UNDERSTANDING URBANISATION

The nature of local habitats is not the only thing that may differ between urban, suburban and rural gardens. Urban sites, for example, may be a few degrees warmer than rural ones during the winter months because of the urban heat island effect. Birds require extra resources during the winter months so that they can cope with the longer nights and lower temperatures. Since small birds only have a limited ability to lay down the fat reserves needed to get them through a winter night, they may be under some pressure to find food as soon as day breaks.

Additionally, urban sites may experience higher levels of night-time illumination because of street and security lighting. The presence of these lights might enable some small birds to start foraging for food earlier than is possible for their rural counterparts, who don't have that extra artificial lighting to help them find their way about. The elevated temperatures of urban sites and their higher levels of illumination could shape bird activity in different ways, and we might see the effects of these in the times at which different species arrive at garden feeding stations.

Garden BirdWatch participants were instrumental in helping us to examine this interesting topic through their participation in the 2004 Shortest Day Survey. The study provides an insight into the ways in which the characteristics of different bird species (notably eye size) and local habitat (the rural or urban location question) shape the ability to quickly replenish fat reserves lost overnight during winter.

Two scientific papers from this work, led by Nancy Ockendon, revealed that species that were first recorded at garden feeding stations earlier in the morning had larger eyes than those that were seen later, supporting the hypothesis that the time that birds start foraging in the morning is limited by their visual capacity in low light levels. Larger eyes allow more light to enter the eye, and so are likely to allow birds to find and handle prey more effectively and also to detect and avoid predators, increasing the benefits and decreasing the costs of being active soon after dawn.

Nine of the 10 most commonly reported species in the study showed a positive relationship between the degree of urbanisation locally and their time of arrival; i.e. these nine species appeared at garden feeding stations later in the morning in urban areas than they did in rural areas. This suggests that the heat lost from our homes, offices and shops may be important. If overnight temperatures are several degrees higher in urban environments, the energetic demands on small birds may be reduced sufficiently to delay the time that they are first seen at feeders in the morning by several minutes.

WHY THIS ALL MATTERS

You may wonder why the knowledge gained through these GBW studies matters and what difference it might make for the birds that we all love? These studies increase our understanding of the role that gardens play within the wider environment, and they also identify the relative importance of the different factors shaping garden use by birds and other species. This understanding can be used to inform and test approaches that benefit biodiversity, from how we plan new housing developments through to the advice that we provide on feeding birds or on gardening with wildlife in mind.

While the papers covered in this article highlight some of the issues and topics that we need to consider, we must also keep in mind that the how and why of garden use is shaped by a broad range of factors, from feeding and nesting opportunities, through predation and disease risk, and on to geographic and climatic features. Many of these interact, so unpicking this complexity isn't straightforward. However, we are very fortunate to have 30 years of structured garden recording from our fantastic network of Garden BirdWatch participants. Thanks to you we have made significant progress in our understanding, but there is still much to do, as we'll see in the articles that follow on from this over the remainder of our anniversary year. Your data and support are empowering us to make a difference for birds and for people, so thank you from making all of this possible. ■



Roosting Pied Wagtails, by David Tipling / birdphoto.co.uk

HOW TO ...

KEEP YOUR BIRDS SAFE FROM CATS

Cats are popular pets and it has been estimated that there may be as many as 11 million individuals in the UK. The impact of Cat predation on birds and other wildlife is largely unknown, but it is thought to be significant, and many garden birdwatchers are concerned about the effects these pets may have on their garden birds.

With this in mind, we take a look at some of the things that you can do to reduce the impact of Cats on the birds visiting your garden feeding stations.

Robin and Cat, by David Tipling / birdphoto.co.uk



KEEP YOUR BIRDS SAFE FROM CATS

FEEDING SAFELY

Position feeding stations in the open, with a good distance between them and any low cover, such as bushes or flowerbeds. Low cover close to feeding stations (see photograph) can conceal a waiting Cat and enable it to get close enough to pounce on potential prey.

Raising feeding platforms off the ground and attaching a wire mesh fence or cage may reduce the risk of attack on ground-feeding birds. Raising feeders and feeding platforms can also improve the field of view available to visiting birds, making it more likely that they will spot an approaching Cat.

FOR CAT OWNERS

If you own a Cat that goes outdoors, and it wears a collar, consider purchasing a specific collar designed to make the Cat more visible to potential prey – research has shown this to be effective to a degree.

You can also attach a bell to its usual collar, which acts as a warning to potential prey. Research studies into the effectiveness of bells in reducing predation suggest that these typically reduce prey captures by between a third and a half. Electronic collar-worn devices (such as battery-powered alarms or lights) that activate when a Cat pounces show a similar level of effectiveness.

Cat 'bibs' are even more effective, but are generally viewed poorly by Cat owners (and others), though they have been shown to be safe for the Cats wearing them.

Consider keeping your Cat indoors overnight, as this is when most predation occurs, and also reduce outdoor access during the bird breeding season. If you are willing to go further, consider keeping your Cat indoors full-time. As well as halting its impact on garden wildlife, keeping your Cat indoors can bring other benefits – including for the Cat itself.

Research suggests that non-invasive interventions can also help. Cat owners who introduced 10 minutes of daily object play with their pet, recorded a 25% decrease in the number of prey items brought home, while those owners providing a high meat protein, grain-free food, saw a 39% decrease.

CATS AND NEST BOXES

Place nest boxes in positions that are difficult for a Cat to reach; for example, do not position a nest box near the roof of a shed or fence where it could be within easy reach.

Ensure that a hole-fronted nest box is sufficiently deep, so as to prevent the Cat reaching into the box to grab the sitting bird or its chicks.



Images: Fledgling Blackbird, by Philip Croft / BTO; Garden feeders, by Edmund Fellowes / BTO; Cat, by David Tipling / birdphoto.co.uk.



COMMON DRAGONFLIES

Identifying visiting dragonflies can be challenging, though their habit of perching on vegetation can provide you with an opportunity to secure a photograph that can then be identified 'at leisure' later. Although the Garden BirdWatch dragonfly list contains a good number of species, only a small number of these are regular garden visitors, with some of these happily breeding in garden ponds. Be aware that colouration often differs between males and females, and that the strength of colour will also vary with age/maturity. Here we cover five of the most common visitors. See *Bird Table 117* for common garden-visiting damselflies.

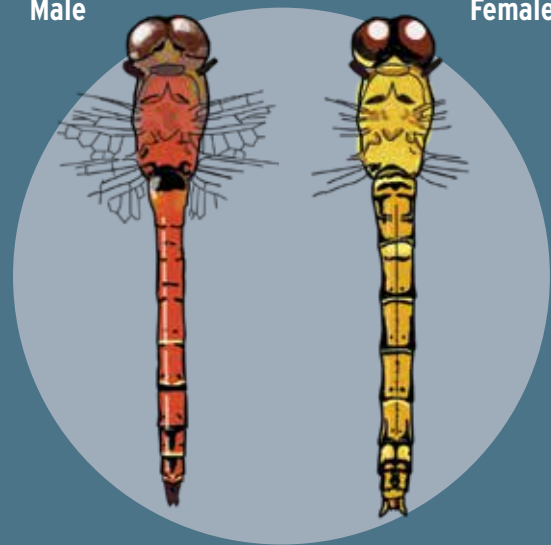
Vertical bars show the average total body length at life size.

COMMON DARTER

With its long flight season and wide distribution, this species is commonly encountered in gardens, where it will often perch with its wings forward and allowing close observation. Males have red-brown eyes and an orange-brown abdomen. Females are straw coloured. Both sexes show brown legs, sometimes with an indistinct thin yellow line running down them. The main confusion species, Ruddy Darter, has black legs and a 'pinched' abdomen.

Flight period: May to the end of November. Most abundant across England and Wales, but recent range expansion has seen colonisation of upland sites and increasing occurrence across the whole of lowland Scotland. Widespread in Ireland.

Male Female

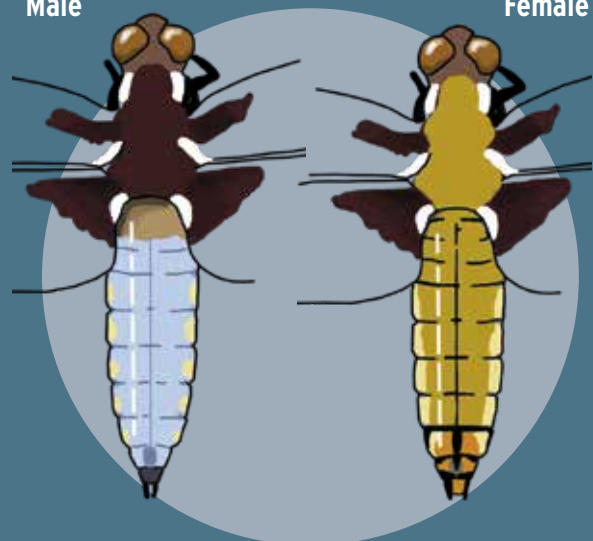


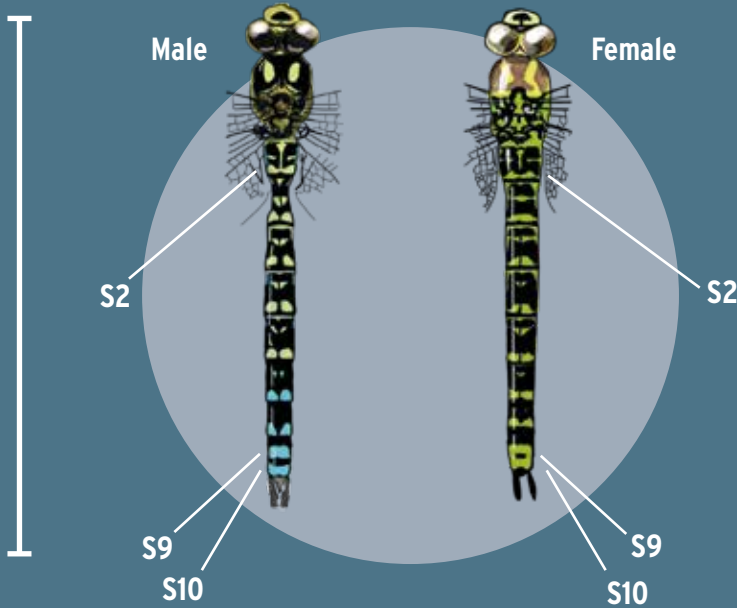
BROAD-BODIED CHASER

Both sexes readily identified by the very broad and flat abdomen, also having brown eyes and a dark patch at the base of each wing. Male is powder-blue. Female is yellow-brown and has an even broader abdomen. Main confusion species is male Black-tailed Skimmer, but this has a slender abdomen and lacks the dark patches at the wing bases. Confusion species for female is Four-spotted Chaser (see Page 2), but again this has a slender abdomen.

Flight period: April to the end of August. Widespread across southern and central England and Wales, becoming rarer as you move north. A few recent records from southern Scotland but absent from Ireland.

Male Female

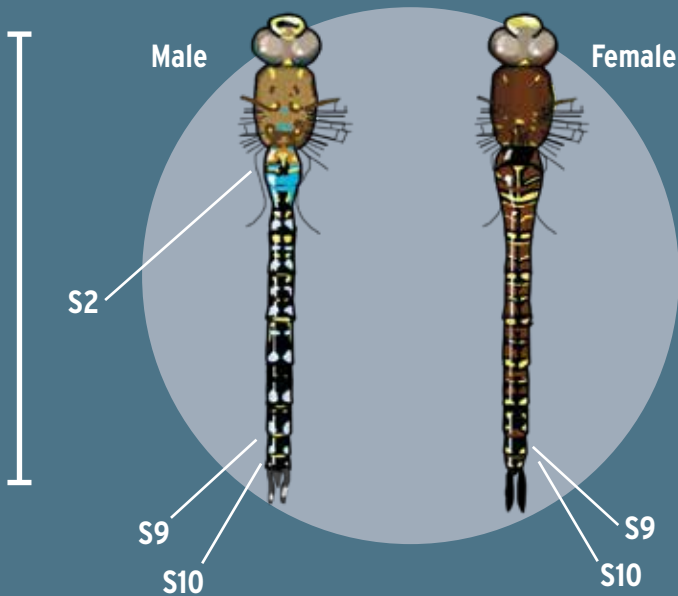




SOUTHERN HAWKER

Both sexes identified by the coloured bands across segments S9 and S10; in other hawkers these are paired spots. Look for the narrow yellow triangle on S2 and very broad coloured stripes on the sides of the thorax. Migrant Hawker (below), the main confusion species, is smaller and less robust, being about 80% of the size of Southern Hawker. Inquisitive and will approach the observer. One of the first species to colonise new garden ponds. Note rare male colour form where all markings on abdomen are blue.

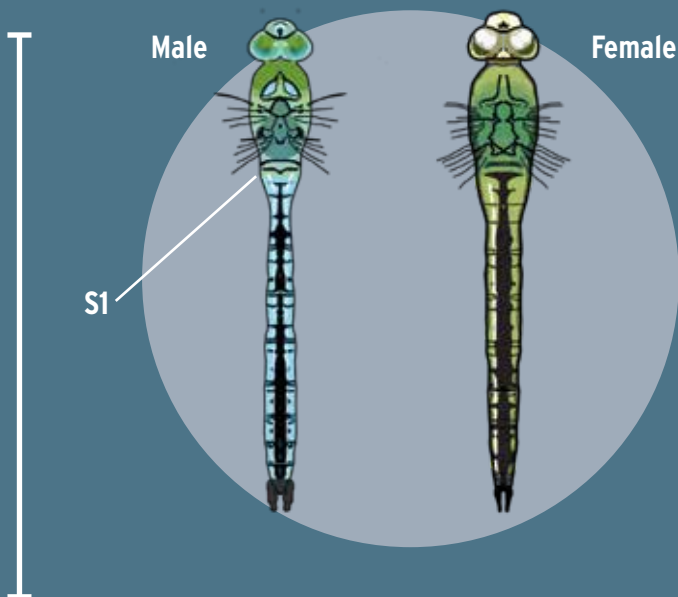
Flight period: June to end of October. Widespread across England and Wales, becoming scarcer in the north and Scotland. Very rare vagrant to Ireland.



MIGRANT HAWKER

Smaller and less robust than Southern Hawker. Similar to Common Hawker in colour and pattern, but latter is uncommon in gardens and has a more northerly distribution. The vein on the leading edge of the wing is brown (yellow in Common Hawker). Look for the paired spots on S9 and S10, the up-tilted abdomen (with drooping-end) in flight, and a small yellow triangle on S2.

Flight period: July to the end of October. Widespread across south-east England, becoming scarcer as you move north and west, though range increasing.



EMPEROR DRAGONFLY

Our largest dragonfly is brightly coloured and robust, and the only species matching this description likely to be on the wing before July. Male has an apple-green thorax and segment S1 of the abdomen, but is otherwise bright blue. Female is usually dull green, but may sometimes be blue. Males have blue-green eyes and clear wings, while females have green eyes and their wings darken with age. Will breed in larger garden ponds, including those that are newly established.

Flight period: May to September. Widespread in England and Wales, though favouring lower altitudes. Big increase in range, and now colonising southern Scotland and Ireland.

Changing times: a view from Scotland



We are extremely fortunate to have such wonderful and dedicated participants, contributing records from their gardens over weeks, months and years. We asked **Norman Elkins**, one of the 446 GBW participants to have submitted weekly counts in both 1995 and 2024, to share his Garden BirdWatch story.

Since moving south to eastern Scotland in 1985, our garden (then 10 years old) has been a focus of recording for various BTO garden monitoring schemes. Two of these ran intermittently from 1987, before morphing into the current Garden BirdWatch (GBW) in 1994. We have monitored the wildlife continuously for these surveys except during holiday absences in pre-Covid years. Since Covid, my other BTO survey participation has gradually diminished, mainly due to age constraints, so that my primary focus nowadays is on the garden. My own digitised records now allow me to look back at the changes that have occurred.

Our medium-sized garden is well vegetated and situated on a south-east-facing slope. Adjacent houses with gardens lie in all directions but there is arable farmland nearby, while the nearest mixed woodland is not far away. Changes to our garden over the years have included the felling of some small conifers, while other bushes and trees have grown – the largest now being a 12 m tall Ash. Natural food available at the appropriate season includes Ash keys, plums, apples, rose hips and berries of Holly and Cotoneaster. Hedges and shrubs provide ample cover for small birds, while flowerbeds and various flowering shrubs provide food for a range of pollinating insects. Bare earth and lawns hold soil invertebrates. No chemicals are used and vegetables are fed mainly with our own garden compost.

The amount of bird food provided has varied, but in recent years has included the usual sunflower hearts, mixed seed and Nyjer seed and fat balls, most of it contained in feeders hanging from a Lilac tree or scattered on the lawn. There are two bird baths and two nest boxes – one for Blue Tits, used most years, and an open-fronted box occupied in some years by Robins. Song Thrushes, Blackbirds and Woodpigeons have nested within shrubs and hedges, with the proverbial (Carrion) ‘crow’s nest’ in the crown of the Ash tree.

Both Starlings and Swifts used to breed in our roof cavities, but Swifts ceased to do so in 2012 and have since become very rare in the neighbourhood. Most nesting activity has been submitted to the Nest Record Scheme and we participate in the Garden Bird Feeding Survey (GBFS). In the past, BTO has organised mid-winter surveys to detect the earliest times at which species come to feeders. Our own results were in line with those nationally, with Blackbird, Robin and Dunnock among the first.

The number of individual birds recorded each week naturally fluctuates with the seasons, the most being in the coldest spells and the lowest in midsummer and late autumn. Such fluctuations doubtless relate to the amount of natural food available. There is a secondary peak in late summer as fledglings augment those present. The total number of species recorded to date is 54, the most unusual being Woodcock, Buzzard, Treecreeper, Tree Pipit and Spotted Flycatcher. Other



Goldfinch, by Edmund Fellowes / BTO; Garden images by Norman Elkins

highlights have been visiting Waxwings and Great Spotted Woodpeckers.

Changes over the years have not always been positive. For example, although Woodpigeons are common, Collared Doves were numerous until 2018, since when they have become very infrequent. This contrasts with Magpies, almost unknown at first until their spread across the region brought them regularly into our area after 2018. Wrens, Robins and Dunnocks are routine while Blackbirds become more abundant in winter, with other migrant thrushes on occasions.

Warblers are scarce. Blackcaps and Chiffchaffs sing occasionally in spring but the former are most frequent in late winter. The three common tits are regular visitors but there has been a definite increase in Long-tailed Tits in late summer and winter. Starlings reach a maximum in mid-summer boosted by noisy juveniles, while House Sparrows are most abundant a few weeks later, although both have declined significantly this century. Tree Sparrows occasionally visit, mostly in midsummer and early winter.

Finches are most frequent in winter, but Chaffinches have declined since 2018 and Greenfinches took a hammering after 2007, with some recovery from 2014. Goldfinches were very scarce prior to 2005 after which a remarkable increase brought a winter maximum of 52 in early 2017. Siskins have fluctuated enormously over the years with flocks of over 30 in March 2018 and 2024. Bullfinches have always been scarce but have become more regular in recent years, bringing their young into the garden. Surprisingly, Yellowhammers have become more frequent since 2018. Almost unrecorded until 2007, a remarkable flock of 26 fed

on ground seed on the lawn in February 2021, perhaps linked to scarcer farmland seed stocks. Sparrowhawks regularly visit – our garden being the most productive in the neighbourhood!

We also monitor other wildlife. Butterflies have shown significant annual changes, and one notable event was the arrival in summer 2020 of Tree Bumblebees. Sadly, numbers of insects are declining. Domestic Cats often pass through but cause few problems. One or more Hedgehogs were once regular but are now rarely seen, as there is limited access from adjacent gardens. Rare unwelcome visitors have been Brown Rat and Grey Squirrel but Wood Mice are common. They are occasionally seen below the feeders but also in our garage. With full feeders on a work bench ready for use, I became aware that, on several occasions, a nearby lollipop stick was being placed as a 'ladder' to the lowest ports, from which seed was being extracted. Seed fragments were scattered across the bench with mouse droppings present on each occasion. Lacking a remote camera facility, I spread a smooth layer of fine sand beneath the feeders allowing the detection of mouse tracks until this food source was removed. Similar instances of tool-using mice were recently shown on TV.

Over the years, garden birdwatching has been a joy and I am sure this view will resonate with others in similar circumstances. ■

Norman Elkins is a retired meteorologist and 'amateur' ornithologist, acknowledged as an authority on the effects of weather on birds.



Female Blackbird, by Philip Croft / BTO

Blackbirds in Gardens

Hugh Hanmer takes a look at the initial findings from the Blackbirds in Gardens Survey, which is now being extended for a second season.

Thank you to everyone who took part in the Blackbirds in Gardens survey in 2024. This survey was part of the wider Vector-borne RADAR project (www.vb-radar.com), which is helping us to understand, and potentially mitigate, the impacts of Usutu virus on the UK's Blackbird population. Between June and October around 2,250 participants submitted almost 20,000 15-minute surveys from across the UK, with a small number of individuals also taking part in the Republic of Ireland, Isle of Man and Channel Islands. On average, participants submitted five weeks of recording, with one in 10 participants submitting surveys every week across the recording period. Thank you so much for your efforts.

BLACKBIRD REPORTING

Blackbirds were reported at least once from the majority (93%) of participating gardens, but this reporting rate changed over the survey season with over 90% of gardens reporting Blackbirds at the start of the

survey in early June, compared to only around 50% in late August/early September. Similarly the average maximum count per survey was two individuals at the start of the survey, dropping to zero in early September before recovering to one individual later in September.

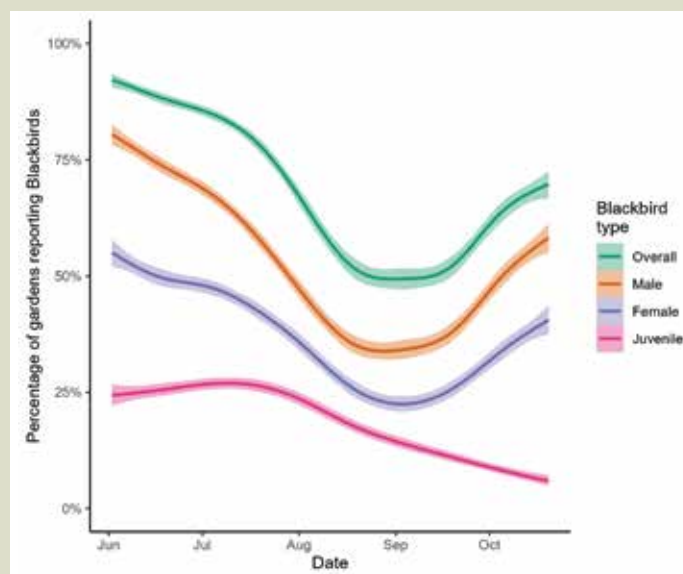
This dip in recording during the late summer/early autumn is common amongst garden birds, including Blackbirds, and coincides with the post-breeding moults of adults and the post-juvenile moult and dispersal of juvenile birds. Adults replace all their feathers during this period, while young birds replace all but the main flight feathers on the wing, so they tend to hunker down out of sight where they are safer from predators. Birds start to move back into gardens later in the autumn as the weather gets colder and invertebrates become scarcer.

Understanding these patterns will help us provide better advice on what you can do for Blackbirds breeding in and around your garden. This natural behaviour, alongside the arrival of migrant Blackbirds from elsewhere in Europe in late autumn/winter, is why many of you will have seen more Blackbirds in your gardens since the end of the survey. We'd like to especially thank those who took the trouble to record 'no Blackbirds', as we understand how much harder it can be to submit a zero result compared to a positive count, especially over multiple weeks. It is all valuable data though, knowing what Blackbirds avoid is as important as knowing what they favour.

Preening male Blackbird, by Philip Croft / BTO



Change in percentage of gardens from which Blackbirds were reported over the survey. Each line represents a different age or sex class, with the green line showing records of any Blackbird, shaded areas indicate how confident we are in each trend.



REGIONAL PATTERNS IN REPORTING

This overall pattern of garden use masks considerable regional and habitat differences in reporting and counts. Blackbirds were rarer in more southern and more urban gardens, with the effect being most obvious in London – where Blackbirds were only reported from two-thirds (60%) of participating gardens overall.

Blackbirds were more common in gardens in the north, with weekly reporting from North West England, in particular, not dropping below 50% at any point. Although we expect Blackbirds, along with most other garden birds, to be naturally scarcer in more urban areas, this strong pattern around London is believed to be related to the spread of Usutu virus, which was first detected in London and mirrors patterns observed in your long-term Garden BirdWatch observations. Blackbirds were also more common in larger, greener, wilder gardens, especially those with ponds, underlining the importance of more wildlife-friendly approaches to gardening.

We will be using data from both the Blackbirds in Gardens Survey and Garden BirdWatch to help us untangle how Usutu virus, the weather, habitat and other factors potentially drive the observed regional patterns in garden use by this familiar species.

BLACKBIRD ACTIVITY AND BEHAVIOUR

Alongside counts designed to aid comparisons with the longer-running BTO Garden BirdWatch dataset, participants in the Blackbirds in Gardens Survey also recorded the timing of their surveys and maximum counts of males, females and juveniles, together with documenting some behaviours and activities to get a better understanding of how they actually use gardens, and what resources are important to them.

Blackbirds were seen throughout the daylight hours but most people did their surveys and saw Blackbirds in the morning, between 06:00 and 11:00. Interestingly, but not unexpectedly, adult males were recorded more often than females or juveniles. This may be because male Blackbirds are behaviourally bolder than females and juveniles, leading to them being more obvious and active earlier and so recorded more often. It may also be because the adult male is the more readily identifiable of the age and sex classes.

Juvenile Blackbirds were reported from only around a quarter of gardens, with reporting rates highest in June and July before dropping off as these young birds moulted into adult type plumage and dispersed into other sites and habitats. This low reporting of juveniles, even at the peak of fledging in the early summer, may reflect a poor breeding season, or it could simply be that gardens represent poor foraging habitat for young birds, which are taken elsewhere, such as urban greenspaces to learn how to find food. Juveniles were more commonly recorded in rural gardens, from the countryside into large villages/small towns, and more generally in the Midlands, Northern England and Scotland, which might suggest a better breeding season in some areas compared to others. To help us understand better how juvenile Blackbirds use gardens we plan to start the survey earlier in the 2025 breeding season than was the case in 2024.

Of the recorded behaviours, territorial chasing was commonest in early morning and in the first half of the survey, but could happen at any time of day or

across the survey period. Afternoons tended to be quieter, with most birds recorded as looking for food. Interestingly, while Blackbirds commonly foraged for natural food throughout the day, their use of supplementary food, while starting at a similar level in the morning, tended to drop off through the day, perhaps suggesting that birds were using it as an initial 'top-up' but found enough natural food through the rest of the day.

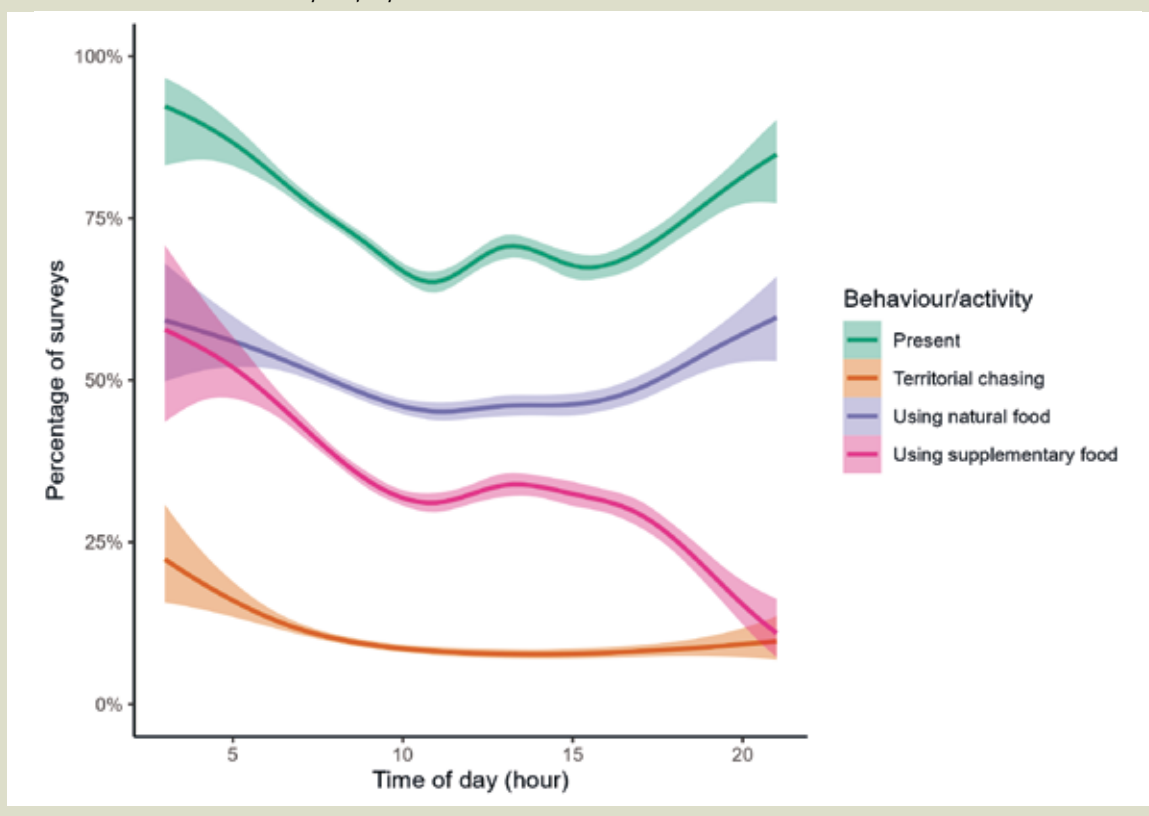
TAKING PART IN 2025

We are repeating the survey in 2025, starting earlier in the spring (April) and ending in September. We are especially interested in recruiting more participants from in and around major urban areas across the country to see how these compare to both London – where the decline started – and the wider countryside. Please note due to limited staffing capacity we are unable to process data submitted to us on paper.

We look forward to both returning and new people taking part and helping us learn more about how our Blackbirds are doing! ■

Hugh Hanmer is a Senior Research Ecologist at BTO, working primarily on urban birds and the factors that shape their populations. He previously organised the Tawny Owl Calling Survey, to which many of you contributed.

Pattern in Blackbird reporting by time of day. Green line shows recording of any Blackbird, while the other colours show the main behaviours they displayed.



Feeding birds: advice update



Greenfinches, by Jill Pakenham / BTO

The advice that we give on feeding birds is based on the best available evidence, and has evolved as new research is published and reviewed. Here we update you on an ongoing piece of work to which we are contributing.

If you watched the recent series of *WinterWatch* on the BBC, then you will likely have seen the news that the RSPB has commissioned a study to look at the impacts of bird feeding and its potential contribution to the transmission of diseases between the birds visiting garden feeding stations. This is an area where BTO research – typically delivered in partnership with RSPB and the Institute of Zoology in London – has been bringing vital evidence to the fore, most notably in relation to the emergence and spread of finch trichomonosis.

BTO is contributing to the RSPB's Supplementary Feeding Evidence Review, which is due to report later in 2025. BTO Senior Research Ecologist Dr Kate Plummer is part of the expert group reviewing the scientific evidence around the pros and cons of feeding of birds in gardens. By bringing together the available evidence, it will be possible to both inform best-practice advice for those feeding wild birds and to identify those gaps in our understanding that need to be addressed by future research.

Although the review is ongoing, there is some suggestion from wider work that some birds – notably Greenfinches – may be more exposed to finch trichomonosis when fed from flat surfaces, such as

bird tables and window feeders. This is because these surfaces are likely to increase the opportunity for feeding birds to pick-up food contaminated by the saliva of infected individuals. As a precaution, RSPB has withdrawn a number of bird feeding products from sale, and both BTO and RSPB have reviewed the advice they give to those of us who feed garden birds – which is estimated to be over half of UK households.

Understanding disease risks

The relationship between the provision of food at garden feeding stations and the occurrence of disease can be more complex than it initially might appear. The number of birds attracted to feeding stations is very likely to increase opportunities for disease transmission, just as human mixing at social events increases opportunities for colds and other bugs to be passed between individuals. Feeding stations can also attract a broader range of species to feed alongside one another than might typically happen in natural habitats. Such mixing may increase opportunities for a disease to move from one species (where perhaps it is having little obvious effect) to another which has not experienced it previously. Our work on finch trichomonosis, for example, suggests that the disease originated in

Woodpigeons, effectively ‘spilling over’ into the finch populations alongside which these birds were feeding.

In some cases, however, feeding stations have been shown to mitigate disease impacts. In North America, for example, research shows that feeding stations can support House Finches suffering from mycoplasmal conjunctivitis. This bacterial disease results in impaired vision, making it more difficult for individuals to find food. Feeding stations appear to offer infected individuals a reliable and accessible food supply, allowing them the time and opportunity to recover. There is also some – albeit limited – evidence that individuals infected with conjunctivitis at feeding stations may develop less severe symptoms than those infected elsewhere.

Having said this, BTO-led work on finch trichomonosis does indicate a clear link between the provisioning of wild birds at garden feeding stations and the impacts of the disease on Greenfinch and Chaffinch populations. Hugh Hanmer’s work revealed that the survival rates for both of these familiar species, declined more strongly in human-associated habitats than in other habitats over the period of the recent population declines that we have witnessed. This link underlines the need to better understand the pathways by which this and other diseases may be transmitted between individuals.

Understanding transmission pathways

Although the protozoan parasite behind finch trichomonosis quickly desiccates outside of the host organism, a North American study shows that it can survive for up to 48 hours in moist bird food. It can also persist for long periods of time in water, which

makes bird baths another potential pathway for disease transmission. Because of this ability to survive outside of the host, finch trichomonosis may be passed between individuals via faeces and saliva. Infected individuals often find it difficult to swallow food, and this results in contaminated seed being dropped; this seed may then be eaten by a healthy bird.

It then follows that any features of a feeder, bird table or feeding location that increase the chances of food being contaminated and made more readily available to other individuals, will increase the risk of disease transmission within the population. If we can identify these features then we can potentially break the transmission pathways that they provide.

Adopting a rigorous approach to feeder hygiene can help. However, it only takes one infected individual to drop a contaminated seed, or for spilt seed to come into contact with faeces and a transmission pathway is created. This suggests that as well as following good hygiene practice, you also need to think about how you feed.

While our current advice is to maintain regular feeder and bird bath hygiene, withdrawing feeding only if there are signs of illness, you might choose to adopt a precautionary approach and avoid using flat surfaces for feeding birds. Similarly, you might brush up any food spilt on the ground below your feeders and also move your feeders around more regularly to prevent a build up below them. We will update our advice once the relevant research has been completed and the results published through peer-review. ■



Cleaning feeders, by Michelle Reeve / BTO

BEST PRACTICE ADVICE ON FEEDING GARDEN BIRDS

You will find the latest advice on how to reduce the risks from disease on our Garden Wildlife Health project website, together with a useful symptom identifier and more detail on the main diseases affecting garden birds. Garden Wildlife Health is a collaborative project between the Zoological Society of London, BTO, Froglife and RSPB which aims to monitor the health of, and identify disease threats to, British wildlife.

Actions that you can take:

1. Keep feeding stations and bird baths clean.

- Bird feeders, tables and bird baths should be regularly cleaned and disinfected (e.g. weekly) to avoid any build-up of food waste and bird droppings.
- Suitable disinfectants that can be used include a weak solution of domestic bleach (5% sodium hypochlorite) and other specially designed commercial products, diluted according to the instructions on the bottle.
- Before disinfecting feeders, dampen surfaces with water to reduce the chance of breathing in dry dust and wash off any dirt or debris as this will neutralise the disinfectant and reduce its effectiveness.
- After disinfecting feeders, etc., rinse thoroughly with fresh water and allow them to air dry before re-filling.
- Regularly sweep/clean areas beneath feeders to prevent waste food and/or droppings from accumulating.
- Brushes and cleaning equipment for bird feeders, tables and baths should not be used for other purposes and should be kept and used outside only, away from food preparation areas.
- Wear rubber gloves when cleaning feeders and thoroughly wash hands and forearms afterwards with soap and water, especially before eating or drinking.

2. Provide good quality, fresh food.

- Wherever possible, try to provide natural food sources through wildlife gardening.
- Buy fresh food from reputable sources and in quantities which will be used within a relatively short period.
- Store food in a sealed container in a cool, dry place with minimal temperature variation to avoid condensation which can encourage mould growth and mycotoxins.
- Remove any uneaten food after 24–48 hours and do not repeatedly re-fill feeders on top of old food.
- Dispose of uneaten food as waste, not into parts of the garden where wildlife may still access it.
- Vary food types provided according to season e.g. fat products in autumn/winter.

3. Rotate the position of your feeders around the garden.

- If your garden size and design allow, have several sites where feeders can be positioned and rotate feeder locations between these regularly to reduce build-up of waste material in any one area.
- Offer different food types (e.g. seed and nuts, fruit, mealworms) at separate sites to reduce birds with different diets (e.g. seed-feeding, insectivorous) feeding together in close contact.

4. If you see a sick or dead bird, report it to Garden Wildlife Health.

- Report any sightings of sick or dead garden birds to the Garden Wildlife Health project by visiting www.gardenwildlifehealth.org and clicking on the 'Report Online' tab. If you do not have access to the internet, you can call the project team on 0207-4496685.
- The Garden Wildlife Health online Symptom Identifier is a useful tool to help identify signs of sickness in birds. Different diseases have contrasting routes of transmission (e.g. via saliva, droppings, insect bites and physical contact between birds) and the project team vets will offer tailored guidance where possible.
- If you are seeing signs of disease at your garden feeding station, please consider stopping feeding for a period of at least two to four weeks to encourage birds to disperse and reduce disease transmission.

HOW DO BIRDS KNOW IT'S SPRING?



Top: Robin, by Philip Croft / BTO; Insert: Wren, by Allan Drewitt / BTO

The seasonality of our northern temperate environment, with its succession from spring to summer to autumn and then winter, brings with it changes in the availability of the key resources and environmental conditions that shape avian life. The timing of core events – such as moult, migration and reproduction – in a bird's annual cycle is therefore dependent on its ability to monitor and respond to these changing environmental conditions over time. Just how birds do this is something that has long-fascinated researchers, prompting ingenious experiments and some guesswork. Today, however, the technologies to which we have access provide us with a much clearer picture.

Research has shown that seasonal rhythms in bird physiology can occur in the absence of external cues, and it is known that birds possess an internal seasonal clock – the 'circannual clock' – that generates a nearly annual rhythm. This clock may be of particular importance to a bird living under constant environmental conditions, such as at the equator, where there are little or no external seasonal cues. For those species living in more dynamic environments (such as those at higher latitudes) external cues can be used, with annual change in day-length the dominant predictive cue used by birds to time their seasonal rhythms. 'Photoperiod' is the term used to describe this seasonal change in day-length.

In contrast to mammals, birds are not dependent upon their eyes to perceive seasonal changes in day-length. While pigeons and chickens do use their eyes, most birds use a combination of the pineal gland (located on top of the brain and containing light receptors) and deep-brain photoreceptors. The latter have been found across a very broad range of bird species, and utilise a family of light-sensitive proteins, called opsins. In each case, the bird can monitor changing conditions and, alongside their internal clock, this then triggers an appropriate physiological response. Experiments have revealed that birds show a heightened response to stimulatory photoperiods during particular phases of their annual cycle, which then triggers relevant physiological changes, such as those linked to breeding. Photoperiod is a reliable external cue, hence its use, but birds may also need to be able to respond to other factors; something that is particularly important for migrant species that have to make very long and dangerous journeys and face changing weather conditions.

Mike Toms is BTO's Head of Communications, and writes widely about birds, gardens and the science of ornithology.

YOUR GARDENS



Woodpigeon, by Philip Croft / BTO

BETTER THAN THE WIRELESS?

My local Woodpigeons sit in the trees by my house and there's no hope of having a lie-in as they start chanting "It's 5.25, it's 5.25" and it nearly always is or thereabouts! So I get up and make a cup of tea, take it back to bed and listen to the news – I sometimes think it's better to just listen to the pigeons!

Pat B.

CLEVER CORVID

Thought it might be of interest, but I have observed that a Magpie has learnt to use our six-hole hanging feeder proficiently. The Magpie can stay on the feeder without falling off and gets the sunflower hearts out of it. **Helen Perry**



FIT FOR A KING (FISHER) ...

Our family has a large pond instead of a lawn and obviously someone else (above) enjoys it! **Lyn Sales (photo by grandson Ted)**

it could not get back out. The moral of this sad incident is to replace the lids on fat ball feeders (or anything else similar) so that they firmly cover the top. **Anne Grimshaw**

A CAUTIONARY TALE

Yesterday, when I went to replenish the fat balls in their wire feeder, I was dismayed to find a dead Blackbird inside the feeder. There were two pieces of a fat ball at the bottom and, being unable to cling on like a Blue Tit, the Blackbird had tried to access them from above.

The plastic 'lid' was broken on one side so that it had slipped making a space into which the Blackbird dived, head-first, to reach the fat ball pieces at the bottom. Having done that, it was well and truly stuck, as its wings were trapped by the wires of the feeder and



Magpie, by Tom Streeter / BTO

YOUR QUESTIONS



Feral Pigeon, by Moss Taylor / BTO; Song Thrush anvil, by Patrick Roper

SMASH AND GRAB

A Song Thrush regularly visits my garden, often accompanied by up to five Blackbirds. As I watched them foraging, I pondered on whether there is any knowledge of whether Blackbirds have ever copied a Song Thrush's habit of smashing snails on stones or paving slabs? Or are they too focussed on their own foraging behaviour to notice what the Song Thrush does?

Jeremy Peters

Blackbirds have been seen to copy the anvil technique used by Song Thrushes to access the 'meat' of a snail. However, this is a rare observation and they are not as adept at this technique. They are more likely to steal the deshelled snail from a Song Thrush.

Susan Jones

FINDING A GOOD THING

Living in rural Northamptonshire, I am lucky enough to see quite a few less common visitors to garden feeders, including Redpoll (most winters), Siskin, and even Brambling. My question is this: how do they know I put food out? Do they simply find it by chance or do they see other bird activity in the garden, and take that as visual clue?

Robert Phipps

This is a fascinating question, for which there is no straight answer. Birds have very good eyesight, so it is generally thought that they either see

a replenished feeder or are attracted to activity from other birds. This does, of course, pose a risk, as the activity can also attract potential predators, such as Sparrowhawks. If you refill your feeders at the same time every day/week, your local birds will establish a routine to check in with your garden around the time that you refill your feeders; I know mine are always sitting in the hedge waiting for a top up!

Susan Jones



ROCK DOVE OR FERAL PIGEON?

I've been a Garden Bird Watcher in Hertfordshire for many years now. However, I have always been confused by Feral Pigeons and Rock Doves. According to my books Rock Doves are only found in the far north of the British isles and so the birds I see visiting my garden will be Feral Pigeons, even though they look like

the Rock Dove illustrations in my bird books. I have recorded them as such in my weekly reports, along with the other Feral Pigeons that go from pure white to a multitude of colours. But am I reporting them correctly?

Brian Worrell

In short, 'yes' you are reporting them correctly. Truly wild Rock Doves are still present in the UK, though restricted to the coastlines of Northern Ireland and the extreme north and west of Scotland. It is unlikely you will see a genuine wild Rock Dove in your garden unless you live in these areas, and even then, Feral Pigeon is by far the more likely garden visitor.

Rock Doves lack the variability in pattern and colour seen in Feral Pigeons, a relic of the domestication process, which can help to narrow down the options when you encounter an unfamiliar pigeon. However, do note that some Feral Pigeons are identical to their Rock Dove ancestors, as without human interference, they may express some of their ancestral traits.

We try to validate these records using the most up-to-date distribution maps, and this is something we are hoping to improve going forwards.

Susan Jones

Email us at gbw@bto.org with your question for a chance to be featured in the next issue of *Bird Table*.

SPOTLIGHT



Garden, by Marion Jackson

Marion Jackson lives in Norfolk. Here she shares some wildlife highlights from her garden, and some advice on how you can help create a refuge for wildlife.

TELL US ABOUT YOUR GARDEN ...

Our house is 57 years old, the back garden slightly larger than a tennis court and surrounded by the gardens of other properties. It has a wildlife pond with newts, and a raised ornamental pond with fish. We rearranged the garden 25 years ago, when we moved in, introducing lots of plants attractive to bees, butterflies and other wildlife, including lavender,

buddleia, valerian and salvia. There are mature fruit trees and various deciduous and evergreen shrubs, flower borders, areas of lawn, and gravel paths. The front garden is half the size with a single tree, flower borders, lawn, bushes and shrubs.

HOW HAVE YOU HELPED WILDLIFE?

Wildlife is very important to us, so we've added various features to

encourage visitors, including the two ponds and a woodstore. We also have three bird boxes for tits and one for Robins, and a Hedgehog house for hibernating Hedgehogs. We have made gaps under our fences to enable Hedgehogs to travel between gardens. Red Mason bees have nested in the bee house that is on our fence.

ANY UNUSUAL SIGHTINGS?

We live in a rural area with arable fields located about 100 meters away. The River Bure isn't far from us either, so we see waterbirds occasionally. Given their restricted distribution in the UK, it is a huge pleasure and privilege to have Swallowtail butterflies visit our garden. We have also had visits from Grass Snakes, Nuthatch, Goldcrest, Common Gull and Stock Doves. We are also lucky enough to have dragonflies and damselflies visit, some of which lay eggs in our ponds.

ANY TOP TIPS?

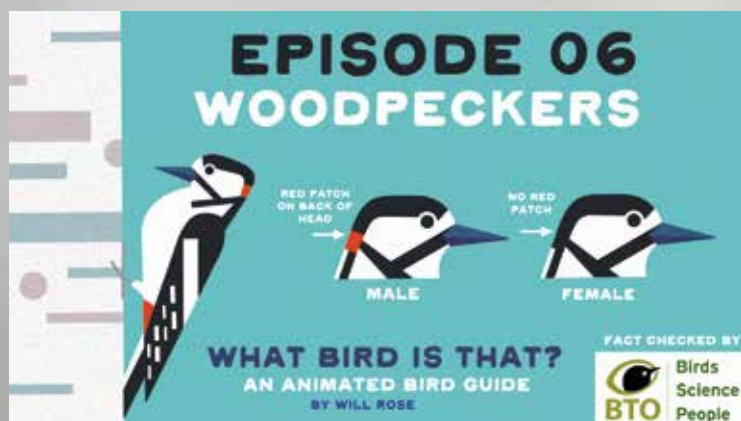
Ensure your garden includes flowering plants that are enjoyed by bees, butterflies and other insects. Supplement the birds' diet by planting bushes with berries that they can enjoy along with a bird table with additional bird food. Feed the Hedgehogs and make sure there is always clean water available for all the animals. ■



Garden pond and Grass Snake, by Marion Jackson

BIRDWATCHING BASICS

HOW AN INNOVATIVE APPROACH TO BIRD IDENTIFICATION IS WORKING WONDERS



Great Spotted Woodpecker, by Sarah Kelman / BTO

Getting to grips with bird identification can be challenging, especially for those new to the birdwatching hobby. Even for those who have been watching birds for many years, there is invariably something new to learn. Some of us will have been lucky enough to have had a birdwatching mentor, someone prepared to share their knowledge and to ease us over the various hurdles of learning what, for example, makes a Marsh Tit a Marsh Tit and a Willow Tit a Willow Tit. Many more of us will have had to learn on our own, growing our knowledge from books and magazine articles.

Learning from books isn't necessarily straightforward, the information you need often buried deep within paragraphs of additional detail. And, to complicate things further, the popular field guides typically contain many more species than you really need to consider. A popular field guide to the birds of Britain and Europe, for example, can be daunting because of the vast array of species presented, covering all of those to be found across a wide geographic area. There is also a tendency for us, as birdwatchers, to imagine that the unrecognised bird that has just dropped into our garden will be something rare, rather than the similar-looking and much more common species that it actually is.

Over the years, BTO has worked in various ways, and with various partners, to help individuals to develop their birdwatching skills, from the bird identification spreads in *Bird Table* that feature the work of CrowArtist to the photographic guides that we

published in partnership with William Collins Books. In addition, we now have a growing programme of training courses, most of which are delivered virtually by our knowledgeable (and fun) Training Team. Watch our website for details of upcoming courses, and do drop us a line if there are ideas of future training events that you'd like the team to consider.

Another area where we have been working to provide more accessible training is via the Internet, where our YouTube Channel (@BTOvideo) hosts a series of 'Bird ID Workshops' and 'Bird Song Basics' videos. These have been hugely popular, with the most-watched of these attracting nearly one million views.

Another YouTube Channel (@what_bird_is_that), a recent initiative by Will Rose, delivers a really accessible approach to bird identification. Will is an animator and designer with over 20 years of experience in the animation industry, working on popular children's shows such as Peppa Pig and Hey Duggee. A self-proclaimed bird-nerd, Will has created his own animated bird guide for beginners, with input from BTO's Training Manager Nick Moran. These videos open up the basics of bird identification to a broad audience and, as you might expect given Will's background in children's shows, they are also really entertaining. There's no excuse now not to brush up on your bird ID or to learn something new. ■

You can find out more about the BTO Training Events on our website: www.bto.org/training

BEYOND THE BIRD TABLE

NEWS FROM BTO AND BEYOND

HEATHLAND BIRDS SURVEY

The UK's heathlands are incredibly special places. These, and other similar open habitats, support a wide variety of rare plants, insects, birds, and animals. Now, for the first time in two decades, we are asking birdwatchers to help survey these extraordinary landscapes.

The main focus of the survey, which has just been launched in partnership with the RSPB and Natural England, is to determine the current status of three scarce bird species: Woodlark, Nightjar and Dartford Warbler. It will also record a number of other important heathland bird species, including Hobby, Grasshopper Warbler, Cuckoo, Curlew and Stonechat.

The previous population estimates made for the three core target species are now almost 20 years old, based on data from surveys undertaken at a time during which all three species had undergone a substantial increase, in both population size and distribution. At that time, both Woodlark and Dartford Warbler were at their most northerly recorded UK breeding ranges, while Nightjar was regaining ground in northern England and even into Scotland.

It is hoped that the new survey will indicate how these birds are faring and where we may need to look at habitat protection to safeguard potential future expansion in range and population. All three species are highly reliant on protected sites, including Sites of Special Scientific Interest and Special Protection Areas, which can be vulnerable to habitat change and damage, such as that caused by fires and extreme weather events.



Dartford Warbler, by Philip Croft / BTO



Atlas volunteer, by Jill Tardivel / BTO

NEW ATLAS ON THE HORIZON

Work has just started on preparations for the next Bird Atlas, which will run from 2027 to 2031. The previous atlas involved over 40,000 volunteers submitting records of over 216 million birds from over 3,870 10-km squares over four years. Effective bird conservation in the face of growing environmental challenges requires accurate and up-to-date information about how bird populations are faring in order to target effort towards species, sites and issues where it is most needed. Periodic atlases support this vital work, providing an extraordinary, complete stock-take of the birds of Britain and Ireland. In addition, many county bird atlases will also be delivered, generating important information at local scales. This atlas will create opportunities to engage a much wider diversity of people than previously, broadening 'ownership' to deliver a stronger voice for our birds and their conservation.

REVAMPED WEBSITE LAUNCHING

All being well, by the time that *Bird Table* 122 reaches you in June, our revamped website will have been up and running for a couple of months. While the site will still contain the breadth and depth of information on all things birds, we have given it a major overhaul to improve the ease with which you can navigate to and search for the information that you need. In addition, we have greatly simplified the way in which the site has been put together, shifting the focus so that it works much better on mobile devices like smart-phones. Something like 60% of the people visiting and using our website do so from smart-phones, and this trend away from desktops is growing all the time. The new site looks visually simpler and contains a suite of features to help with accessibility. You can check it out at www.bto.org, and please do share your feedback with us.



Buy bird food direct from a conservation award-winning farm



Our partnership brings together BTO's ornithological expertise with Vine House Farm's commitment to local and sustainably produced bird food, and is motivated by a shared ambition to make a positive impact for birds, science and people. Together, we are continuing to engage with more people about the enjoyment of bringing birds into gardens through feeding and to assist them in understanding more about the various species, their behaviours and threats to population levels.



With so much choice on who to buy the food and feeders from, it's hard to find the perfect supplier. At Vine House Farm Bird Foods, we grow much of the bird seed we sell on our 3,000 acre farm. So you can be sure you are buying high-quality bird food, direct from the farm with free delivery on all orders. Place your order using this link:

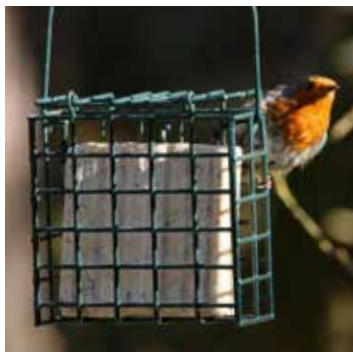


www.vinehousefarm.co.uk/partner/bto

and we will donate £5 per BTO member or follower, who becomes a new Vine House Farm customer.

Use discount code BTO225 for a 10% discount on your first order

Nicholas Watts, here with his daughter Lucy, has been associated with BTO since 1960, contributing to many BTO surveys and monitoring schemes.



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