

Wider Countryside Butterfly Survey Annual Newsletter 2015 Season

Compiled by the WCBS team – Zoë Randle, Tom Brereton (BC), Sarah Harris, David Noble (BTO), Marc Botham and David Roy (CEH).

Large Skipper



Welcome to the WCBS

We hope you like the new Wider Countryside Butterfly Survey (WCBS) newsletter format introduced last year, which focusses on the early results from the previous season and encouraging participation to improve coverage. It is important we continue to make the WCBS bigger and better and we really appreciate the efforts of those already taking part - thank you. Butterflies are widely regarded as indicators of the health of environment and the WCBS generates high quality data on the population status of common and widespread butterflies. This is achieved through a sound sampling design, with volunteers counting butterflies across the UK chiefly during the summer in randomly selected 1-km squares.

The WCBS complements transect monitoring of butterfly populations on semi-natural sites and thus forms part of an integrated approach to monitoring butterflies through the UK Butterfly Monitoring (UKBMS). Though we present preliminary results here, the full population trend results, which are Official Statistics, will be published on the [UKBMS website](#) in late March and summarised in the UKBMS Annual Report to recorders available from the same site early in the summer.

The WCBS runs as a partnership between Butterfly Conservation (BC), the British Trust for Ornithology (BTO), the Centre for Ecology and Hydrology (CEH) the Joint Nature Conservation

Committee (JNCC), and is supported and steered by Forestry Commission, Natural England, Natural Resources Wales, Northern Ireland Environment Agency, and Scottish Natural Heritage. Participants include recorders from the BTO/JNCC/RSPB Breeding Bird Survey (BBS) and BC's volunteer network.

Coverage in 2015

Despite lower than average temperatures and higher than average rainfall across much of the UK in the summer of 2015, 802 squares were surveyed (62% by BC, 38% BBS). Overall, there was a net loss of 36 squares (-4%) from 2014, although 93 new squares were established (BC 46 and BBS 47). The greatest drop in participation was in BBS squares, with 17% fewer sampled than in 2014. However, in some areas BBS coverage was boosted, for example; Yorkshire gained five squares compared with 2014. The BC Branches that lost the greatest number of squares were Cambridge and Essex (10 fewer), Devon (7 fewer) and the West Midlands (7 fewer).

In total 1,651 visits were undertaken, equating to over 3,000-km of survey line being walked by 690 recorders. 77% of squares received the required two visits over the core July and August period. From April-June, 188 visits were made to 151 squares targeted at single-brooded early flyers, with for example, Orange-tip being recorded in 48 squares.

'Scarce Copper': The Small Copper was recorded in fewer squares than in any other year of the WCBS, including only 4% of squares in Wales - Tim Melling



2015 SURVEY

Results Round-up

In 2015, 45 butterfly species were seen during WCBS surveys - three fewer than in 2014, the absences being Swallowtail, Purple Emperor and Grizzled Skipper. During the core period 43 species were seen from 1,238 visits to 619 squares. Twenty-three species (one fewer than in 2014) met the target for adequate coverage of being recorded in 30 or more squares, whilst excellent coverage (presence in 100 or more squares) was achieved for 19 species (one more than in 2014).

For the sixth successive year Meadow Brown was the most widespread butterfly being located in 90% of squares. Three 'brown' species; Meadow Brown, Gatekeeper and Ringlet accounted for more than half of all butterflies counted. So how good a year was it for wider countryside species? Early evidence for the 24 species from core WCBS visits suggests the balance was tipped fairly evenly, with 54% of species being more widespread and 46% being less widespread.

Of the 'winners', Holly Blue was more widespread than in any year since 2010, being up by 16 percentage points over 2014 levels and climbing seven places in the rankings to 15th position. In Scotland, Scotch Argus was far more widespread than in 2014, up by 10 percentage points. Three of the 'golden skippers' Small, Large and Essex Skipper were detected in more squares than all other years of the WCBS, with Small Skipper and Large Skipper both being present in over one-third of squares and Essex Skippers in 14% of squares. This is excellent news, given that UKBMS trend data show these species to be in long-term decline. There were some impressive counts of these species including 169 Large Skipper at Playford, Suffolk on 2nd July whilst at Hollowell, Northants the maximum Small Skipper count went from 0 in 2014 to 49 in 2015.

Silver-washed Fritillary, which is by far and away the most frequently seen habitat specialist species on WCBS surveys, experienced its best year in



Holly Blue was up by 16 percentage points in 2015, with the majority being seen during the first three weeks in August

terms of the number of squares occupied, being found in 9% of squares and climbing two places in the rankings. It is interesting to note that Silver-washed Fritillary was only 2 percentage points less widespread than Small Copper at a UK scale and was more widespread than this butterfly in Wales. Of the other habitat specialists, Lulworth Skipper totals were worryingly down by 80% at the only regularly monitored square on which it is recorded near Swanage.

The wider countryside species that were the greatest losers this year were Peacock and Small Tortoiseshell, with both being seen in 14% fewer squares than in 2014. Small Tortoiseshell's position in the top three most widespread species in 2014 was short-lived, dropping four places in the ranking to number seven. The annual drop was most noticeable in Wales, where occupancy was down from 76% to 48%. Small Copper was less widespread than in any other year, and was ranked at number 22, only being seen in around a tenth of squares, compared with a third of squares five years ago.

Wall Brown was worryingly scarce again, down six percentage points on 2014 levels and being seen in only 4% of squares – less than in any other year in the series. The greatest loss was in Wales where occupancy was down from 34% in 2014 to 6% in 2015. In England this butterfly was seen in 5% fewer squares in 2015 compared to 2014. Speckled Wood and Small White were also much scarcer than in recent years.



Silver-washed Fritillary, the most frequently seen habitat specialist species, experienced its best year in the WCBS being located in 9% of squares

There were mixed fortunes for the regular migrants. Painted Lady was found in more squares than in any other year since the huge influx of 2009. However, the predicted bumper immigration did not materialise with sightings in less than a fifth of squares. Red Admiral suffered the greatest decline in occupancy of all species recorded this year, being seen in 18% fewer squares than in 2014. Clouded Yellow was also seen in 4% fewer squares than in 2014, though rather exceptionally 28 were reportedly counted over two visits to a square near Walkeringham, Nottinghamshire.

Table 1: How widespread were butterflies on WCBS squares in 2015 and comparisons with 2014

Species	% squares recorded in	Change in % points from 2014	2015 rank	2014 rank
Meadow Brown	89.5	-0.9	1	1
Small White	77.2	-6.7	2	2
Large White	76.1	+4.6	3	5
Gatekeeper	73.0	-1.0	4	4
Ringlet	66.4	2.0	5	9
Green-veined White	65.1	-3.5	6	6
Small Tortoiseshell	63.3	-13.6	7	3
Speckled Wood	56.7	-11.9	8	6
Peacock	52.8	-14.2	9	8
Red Admiral	44.6	-17.6	10	10
Comma	43.0	+3.4	11	11
Common Blue	39.1	+2.2	12	11
Small Skipper	34.9	+0.8	13	13
Large Skipper	33.1	+3.3	14	14
Holly Blue	24.7	+15.6	15	22
Painted Lady	18.9	+10.5	16	23
Small Heath	18.3	+3.4	17	19
Brimstone	18.1	+1.5	18	16
Small/Essex Skipper	17.9	-1.9	19	15
Marbled White	16.6	+0.4	20	17
Essex Skipper	13.6	+2.1	21	20
Small Copper	11.6	-4.1	22	18
Silver-washed Fritillary	9.2	+2.3	23	25
Brown Argus	5.3	-1.1	24	26
Clouded Yellow	4.0	-3.5	25	24
Dark Green Fritillary	3.9	+0.9	26	27
Wall Brown	3.7	-5.6	27	21
Grayling	2.9	-0.1	28	27
Purple Hairstreak	2.3	-0.4	29	29
White Admiral	2.1	+0.7	30	30
Scotch Argus	1.8	+0.8	31	31
Orange-tip	1.5	+0.5	32	31
Small Pearl-bordered Fritillary	1.1	+0.2	33	31
Chalk Hill Blue	0.8	+0.2	34	35
Large Heath	0.6	+0.5	35	42
White-letter Hairstreak	0.6	-0.3	35	31
Small Blue	0.5	+0.2	37	37
Wood White	0.3	+0.3	38	-
Northern Brown Argus	0.3	0.0	38	37
Green Hairstreak	0.2	+0.2	40	-
Adonis Blue	0.2	-0.2	40	37
Brown Hairstreak	0.2	-0.2	40	37
Lulworth Skipper	0.2	-0.2	40	37
Silver-studded Blue	0.2	-0.5	40	35

The best survey day was the 10th July when 4,595 butterflies of 23 species were seen, 40% of which were Meadow Browns. The highest count of an individual species also occurred on this day, when 436 Ringlets were noted in a square in the Cotswolds near Bourton-on-the-Water. This square also boasted the greatest number of butterflies seen (1,383) over the two summer visits.

The most diverse WCBS square was near Littleington in East Sussex where Bob Eade recorded 27 species over two visits, including four habitat specialists (Chalk Hill Blue, Dark Green Fritillary, White Admiral and Silver Washed Fritillary). This square encompasses a small area of Lullington Heath National Nature Reserve.

There were also some significant sightings at a square on the Lizard Peninsula, Cornwall, south of Mullion, with Marsh Fritillary and Small Pearl-bordered Fritillary recorded, as well as totals of 53 Dark Green Fritillary and 83 Common Blue – these two counts being higher than any others in the WCBS for these species.

Moths were counted in 26% of squares, one percentage point greater than in 2014. As with previous years BC volunteers counted more moths than BBS recorders (65% of BC squares with moth records versus 35% on BBS squares). It would be great to see more BBS volunteers counting moths too. In total 1,461 individuals of 42 species (one more than last year) were counted. For the seventh consecutive year the migratory Silver Y was the most widespread moth occupying 49% of squares, 26 percentage points more than last year, suggesting a decent arrival across the UK. As in 2014, Six-spot Burnet was the second most widespread moth (seen in 14% of squares) and Cinnabar the third most widespread (13%).

Dragonflies were counted in 315 squares (39% of the total), 15 fewer than in 2014, with coverage split evenly between BC and BBS recorders. In total 2,903 individuals of 28 species (one fewer than last year) were seen. Common Blue Damselfly was the most widespread species being counted in 37% of squares, in second place was Common Darter in 9% of squares and in third place Brown Hawker which occurred in 8% of squares.

NEWS

Latest from the WCBS

New discoveries

The WCBS continues to contribute to our knowledge of butterfly distribution and provide new sightings data for the Butterflies for the New Millennium (BNM) database, with over 11,000 records per square generated in 2015.

New colonies for the Large Heath included in Cumbria at Ash Moss, near Gilsland; near Loch Cluanie west of Fort Augustus and at the remote Cairn of Finglenny in Aberdeenshire, with the latter square involving 4-km of hard walking from the nearest road! On the Mull of Oa, Islay, Large Heath was recorded for the first time since 1941, whilst at the same locality a thriving colony of Marsh Fritillary was seen during a visit in June, these being the first records for this particular part of the Oa for more than 20 years. There were also a scattering of new sites detected for Grayling and Dark Green Fritillary, chiefly in Scotland.

There were further exciting discoveries in a remote valley near the historic market town of Kirkby Steven, Cumbria in the North Pennines AONB. The area had never been surveyed prior to the WCBS but has yielded new localities for several important butterfly species including Dingy Skipper in 2015, whilst the largest 2015 WCBS Green Hairstreak count (30 on 23rd May) was recorded here.

New online data entry system

A new online data entry system for the WCBS is now ready for the 2016 season www.ukbms.org/mydata/. Data entry for the WCBS is now fully integrated with the online UKBMS system. The new system has improved functionality which enables recorders to edit and review their entries which was not possible with the previous system and is a feature that many recorders have desired. This should help to reduce errors and speed up the validation process. Instant feedback of sightings and results across the network of UKBMS sites (WCBS squares as well as traditional transects) is another enhancement. This will be particularly useful for [@WCBSLive](https://twitter.com/WCBSLive) tweets. Recorders can also record other species along their routes including moths, birds, beetles and dragonflies. Branch Champions will be able to view data and track recording progress throughout the survey season. There is also a mapping component for recorders to plot their survey routes; we have taken the opportunity to digitise many of the routes and these are on the system already.

In order to use the new system you will need to register, this is very straight forward and full details can be found in the guidance notes on the UKBMS Transect Walker Online website (www.ukbms.org/mydata/). Users will need to register to use the system and their squares will be assigned to them by either the local Branch Champion or National Co-ordinators Zoë Randle for Butterfly Conservation volunteers and Sarah Harris for BBS volunteers. Contact details can be found on the back page of this newsletter.

UK Butterfly Recorders' Meeting

Our annual National Butterfly Recorders' Meeting will be held on Saturday 19th March 2016 at the [Birmingham and Midland Institute](http://www.birmingham.ac.uk/midland-institute), central Birmingham. This popular event is open to anyone interested in butterflies, their recording, monitoring and conservation. There is a very exciting programme of talks for the day, with local, national and international perspectives on butterfly recording and conservation. We are honoured that Professor Camille Parmesan, a world authority on butterflies and climate change has agreed to give a talk this year. She contributed to the reports of the Intergovernmental Panel on Climate Change, which was awarded the Nobel Peace Prize in 2007. In addition, there will be the latest evidence on the decline of the Wall from Belgium scientist Dirk Maes, the first view of the WCBS and UK Butterfly Monitoring Scheme results for 2015, and much more besides. As always, there will be plenty of time to mingle and chat with fellow butterfly enthusiasts. The full programme can be found at www.butterfly-conservation.org/files/national-butterfly-recorders-meeting-2016-programme.pdf.

The day will start with a meeting of BNM Local Co-ordinators / County Butterfly Recorders at 10.00, with the main programme starting at 11.00. The day costs just £7.50 per person (payable on the day), including lunch and refreshments, but you must book your place in advance via info@butterfly-conservation.org or 01929 400209.

Northern Brown Argus, Dark Green Fritillary and Dingy Skipper have been discovered at this beautiful Pennine valley near Kirkby Steven through WCBS surveys - Anette Watt



NEWS

Dutch Butterfly Conservation Conference

The fourth international symposium on the Future of Butterflies in Europe is being organised by Dutch Butterfly Conservation (De Vlinderstichting). This event will run from 31st of March to April 2nd 2016 and will be held in Wageningen, the Netherlands. Butterfly Conservation's Chief Executive Martin Warren will be presenting a Keynote lecture on Managing the Future of Butterflies. Several other members of Butterfly Conservation staff will be presenting work on species trends, distribution and conservation using data collected by volunteers who participate in the UKBMS, WCBS and Butterflies for the New Millennium.

Research news Statistical support at Butterfly Conservation

In April 2015, Dr Emily Dennis joined the monitoring team at Butterfly Conservation as a Post-Doctoral Research Associate from the University of Kent. Emily will be working on a variety of statistical analyses. She is currently working with Zoë to investigate trends in common and widespread butterflies in relation to habitat and regions.

We are extremely grateful to our volunteers for contributing data to the scheme which makes the science possible.

State of the UK's Butterflies

In December last year Butterfly Conservation launched the [State of the UK's Butterflies 2015](#) report. This is the fourth State of the UK's Butterflies report and for the first time Wider Countryside Butterfly Survey data were used in it along with data from the UKBMS and Butterflies for the New Millennium (BNM) recording scheme. It is a rather sobering read with new data analyses confirming significant declines of UK butterflies since 1976. Combined multi-species indicators show that wider countryside species decreased in abundance by 25% from 1976 to 2014 and by 24% in occurrence over the same time period. Of serious concern is that several wider countryside species now rank among the most severely declining UK butterflies.



The new SOBUK report shows that Gatekeeper abundance has almost halved since 1976

One example is the Gatekeeper, over the past decade numbers of this species have declined by 44% and by 41% since 1976.

It is not all doom and gloom, some species have been responding well in some areas as a result of targeted habitat management at a landscape scale. The trends over the past decade show that the long-term declines of these species have been halted and small recoveries are evident, for example, Duke of Burgundy, Pearl-bordered Fritillary and Dingy Skipper.

Butterfly events for WCBS news

Below we give a selection of events that WCBS recorders may find of interest, either by providing feedback on local butterfly trends or training opportunities. To find out what is going on in your local Branch and for details of other training and identification events please visit the 'In your area' [page](#) of the Butterfly Conservation website.

Cornwall

Butterfly Transect training day including Day-flying Moths, Wednesday 20th April 2016 at Cornwall Wildlife Trust Headquarters, Allet, Truro. Learn how to set up a butterfly transect and join in with the UK Butterfly Monitoring Scheme. Suitable for beginners to intermediate. Contact the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) via 01872 273939 or WIS@Cornwallwildlifetrust.org.uk for

booking details. This course costs £40 for recorders, students and people working for a charitable NGO or £72 for people working for a commercial or government organisation.

Derbyshire

Derbyshire Branch and Derbyshire Wildlife Trust are holding their annual transect training and butterfly Identification course. This will be held in March 2016-date tbc. For further details please contact Ken Orpe (ken@malaga.plus.com)

Dorset

Butterfly Trends for East Dorset, Friday 4th March 2016 at 7.30pm, St. Catherine's Church Hall, Wimborne, BH21 1LE. For further details please contact Bill Shreeves on 01747 852587 or records@dorsetbutterflies.com

Butterfly Trends in South Dorset, Thursday 10th March, 7.30pm. Methodist Hall, North Street, Wareham, BH20 4AB. For further details please contact Jon Bellamy on 01929 450182

North Dorset Walkers' and Regional Surveyors' Meeting, Friday 1 April, 7.30pm. East Stour Village Hall, East Stour, near Gillingham, SP8 5JY. For further details please contact Bill Shreeves on 01747 852587 or records@dorsetbutterflies.com

Gloucestershire

Gloucestershire Branch Indoor Meeting, Thursday 25th February 2016, 8pm. Century Hall at Shurdington Social Centre, Bishop Rd, Shurdington, Cheltenham, Gloucestershire, GL51 4TBA. The WCBS will be promoted at this meeting. Entrance fee £3.00

BBS Training Events

Interested in taking on a BTO/RSPB/JNCC BBS square to survey the birds, and, of course, carrying out WCBS on it too? Visit www.bto.org/training to find out more about the BBS and training events.

VIEWPOINT

Clare Topping BC WCBS Branch Champion for Bedfordshire and Northamptonshire shares her experiences with regard to recruiting new volunteers

In 2012 I saw a request for someone to take over as Branch Champion for the WCBS in Bedfordshire and Northamptonshire. I knew nothing about surveys, but co-ordinating is something I can do. The previous incumbent had moved to Norfolk (I believe that they have some nice butterflies and birds there) and the numbers of squares surveyed locally for BC had dropped to just ten.

In the last four years I have tried a number of ways to increase coverage in the two counties; some have worked, others have drawn a blank. Until this year, my most successful tactic has been to put an appeal in the local Wildlife Trust's email newsletter that goes out in the springtime. This has given me a couple more surveyors every year. Lisa at the Trust is also kind enough to put an advert up in their main office. I make an appeal each year at the local AGM - this gets me one or two more squares each year as well. I pitch it as an excuse to go for a walk on a sunny afternoon and, in many cases, to carry out a useful, but relatively easy first survey.

I've tried Twitter, on my own account and that of the branch - that didn't work, I tried standing up and asking for volunteers at a local wildlife trust group, that didn't work very well either. Facebook didn't bring any success, but putting the empty squares onto the local

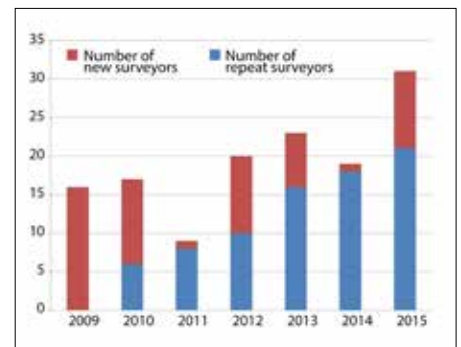
branch website did get me a couple of new volunteers this year. I also tried the ecology group at the local university, the local natural history societies for the two counties, the Head Office of the RSPB and the local bird group - none of these got me any volunteers at all but they were worth a try.

Word of mouth and the national website tend to bring me one or two new members a year, but the biggest success so far that I've had came in 2015. I decided to write an article about the WCBS for the local newsletter. I included information about the survey, how it has contributed to citizen science and also added in a summary of the results for Bedfordshire and Northamptonshire and how they compared with national results. Within two days of the newsletter being delivered I was fortunate to have another 4 people come forward wanting to help. This has put my potential total at 36 squares covered for BC. However, past experience has shown that there are always some squares that are not completed due to lack of access, ill health, relocation, other pressing family matters taking up the time, or just bad weather. But, I am hopeful of getting somewhere in the region of 30 squares covered this year, which will be a big improvement on my previous best of 23 squares.

I have had some fantastic feedback from our volunteers, most of whom really love doing the survey and I think they miss it in the winter (or maybe it's just the butterflies they miss!). Fortunately this means that the majority sign up each year to continue surveying their squares and some come back even if they miss a year.



Clare Topping BC WCBS Beds & Northants Branch Champion



New and repeat surveyors for WCBS Beds and Northants 2009-2015



WCBS Beds and Northants 2011



WCBS Beds and Northants 2015



Common Blue - Tim Melling

25 species of butterfly were seen in Beds and Northants in 2015. Large and Small White were the most widespread. Two blues had a good year in this area in 2015 in terms of occupancy. Holly Blue up by 38 percentage points and Common Blue up by 21 percentage points compared to 2014 levels.

VIEWPOINT

Spotlight on a square - Knowlton, east Dorset by John Parr

Our involvement with the scheme began in 2009 when Carol and I were living in North Norfolk. We were allocated a square near our home village of Little Snoring, and thoroughly enjoyed setting up the route and performing the surveys in 2009 and 2010. In late 2010 we relocated to Verwood in east Dorset. DIY intervened for a while, but we were keen to continue our WCBS activities and were offered square SU0210. This square is in a beautiful area of farmland just off the B3078 north of Wimborne Minster. The ruins of Knowlton Church sit roughly in the middle of the square.

In 2014, our third year of surveying this square, we decided to pay our first visit of the year on 3rd of July. The weather was excellent with clear blue skies and temperature in the mid-twenties. Section one of our route follows a country lane down a gentle incline, with high banks on both sides. We were soon recording Meadow Browns, Ringlets, Large Skippers and a couple of Small Tortoiseshells. Of particular note were a couple of Commas – a species we had not previously seen in the square. Variation in land use and ground conditions between surveys has obviously had an effect on the butterflies seen. In 2015 butterflies in this area were rather thin on the ground only 4 individuals of three species were seen Large White (2), Gatekeeper (1) and Small Tortoiseshell (1).

Section two in 2012 was being grazed by cattle, and in 2013 was completely waterlogged and almost impassable. In 2014 it was different again – reasonably dry but with the grass cut short, so few flowers and very few butterflies. Sections three to five run NE along a fence line close to a small stream. This area was occupied by a very inquisitive herd of young cattle which made surveying a little tricky and potentially hazardous in 2013! This year we recorded a smattering of Large

White, Meadow Brown, Comma, Small White, our first Red Admiral, Green-veined White and Gatekeeper, the latter two species have not been recorded in the square since 2013.

To reach the second kilometre stretch of our survey route we have to cross over a small stream. In previous years we have searched in vain for a way to cross this but always ended up with wet feet. We have since been prepared with wellies! Sections six to eight cross an area of well grazed pasture in a fairly straight line. In July this area has usually been good for Meadow Browns, with 24 recorded in July 2012, 58 in 2013 and only 8 in 2014. This year 30 were recorded, along with a couple of Whites, two Skippers, one Peacock, the first one since 2013, and a single Small Tortoiseshell. Section nine runs along the edge of a cultivated field and is our favourite part of the route. The field margin always seems to have plenty of wild flowers, on one occasion attracting 13 Small Tortoiseshells, two Small Skippers, plus Large White, Red Admiral and Meadow Brown.

To complete the route, section ten runs along a hedgerow where another Red Admiral was recorded, along with Brimstone, the first one since 2012, Large White, Small White and

Meadow Brown. The weather in August was terrible and at one point it seemed that we may not get a suitable day before the month ended, but finally the weather improved and we managed a visit on the 22nd. The temperature was 27 degrees with clear blue skies! Numbers of butterflies for the August visit were up on 2014 with 34 individuals of 8 species seen compared to only 10 individuals of 2 species. The records were entered online through the simple interface provided by the scheme and that was it for 2015. After a year or two you begin to feel an 'ownership' for the square. It is interesting to watch the variation in species seen and numbers across the various sections of the route – an area which was full of wild flowers and butterflies in July had no flowers and no butterflies in August. An area devoid of nectar sources on one survey had thistles in flower on another, attracting species such as Small Tortoiseshell. The best year for butterflies in this square was 2013 when we saw 253 butterflies of 12 species. The worst year was 2014 when we only saw 89 individuals of 8 species. We look forward to surveying 'our square' in future years to continue to see how the butterflies fare!



The ruins of Knowlton Church sit roughly in the middle of this picturesque square in deepest Dorset - John Parr

GETTING INVOLVED

Situations Vacant

We currently have vacancies for volunteer WCBS Branch Champions in the following areas:

Glasgow and South West Scotland, Lancashire, Lincolnshire, South Wales and West Midlands.

The role of BC Champions is crucial in finding volunteers to take part in the survey. Champions may be involved in range of other activities that make the difference in having a well-run scheme including being on hand to offer advice, providing training if needed, giving

gentle reminders of data deadlines and providing local feedback.

Zoë Randle (national WCBS co-ordinator for Butterfly Conservation volunteers) can provide help and support with the undertaking of this role including: Providing Branch Champions with a PowerPoint presentation that has a national WCBS perspective and a local Branch perspective which can be used at meetings and training events. Provision of a written syndicate article giving the national perspective and local perspective. This can be submitted to Branch newsletters, local Wildlife Trust

magazines, parish magazines etc. In addition to this Zoë is available to answer queries and questions that relate to WCBS routes, access to private land and the like.

Butterfly Conservation Branches can also help by advertising the WCBS on Branch websites with interactive maps of the WCBS squares (using google maps or similar) and by keeping information on websites up to date. Some Branch websites already have WCBS pages with links to the latest newsletter and the [WCBS website](#). Twitter and Facebook are also great places for raising the profile of the WCBS.

Priorities for improving coverage in 2016

The number of WCBS squares surveyed varies from year to year, 2013 was our peak year when 878 squares were surveyed. We are still some way off our target of 1,000 squares but we are hopeful that we will make this in the next couple of years.

Gains in 2015

It seems that our appeal for re-surveying squares with long data runs in last year's newsletter was successful. In 2015, four squares with seven or more years of data and six squares with five or more year's data were re-surveyed. Many thanks to those of you who rose to this challenge and took these squares on, we hope that this is a long-term commitment and that these squares will continue to be surveyed in future years. This is really valuable data and is important for comparing trends from WCBS data with conventional transects and validating the WCBS.

In 2015, 10 WCBS squares that formerly had no butterfly records associated with them were surveyed, one of these was the square near Werrington (TF1704) that was featured in last year's squares up for grabs. This square produced nine species of butterfly; Small Tortoiseshell, Ringlet, Holly Blue, Meadow Brown, Gatekeeper, Peacock, Large White, Small White and Common Blue. NH1910 Bun Loyne, in the Highlands is another square that was previously a 'white hole' for butterflies, this year Small Pearl-bordered Fritillary, Large Heath, Scotch Argus and Common Blue were seen. In 2015 there has been growth in coverage of WCBS squares in several branch areas resulting in them coming off of the medium priority area list, these are; South Wales where 28 squares were covered (+5 on 2014 levels); Northern Ireland 28 (+3); Suffolk 27 (+6); Kent 25 (+6) and Yorkshire 42 (+8). WCBS square coverage continues to be low in Lincolnshire (7), Warwickshire (7) and Cornwall (8) and additional squares are desperately required. Other priority areas are listed below and can be seen in figure 1.

Challenges for 2016

Squares with no historical butterfly records

There are still 124 randomly selected WCBS squares yet to be surveyed for which we have no historical records, it would be great to get these squares surveyed which in addition will improve our knowledge of butterfly distribution.

Defunct squares with good data runs

There are a further 17 squares with data runs of 5 years which were last surveyed in 2013. It would be great to get these re-surveyed in 2016. These squares are in the following areas; Bulmer, South West of Sudbuy, Essex; Crays Hill, near Basildon, Essex; Outskirts of Altringham,

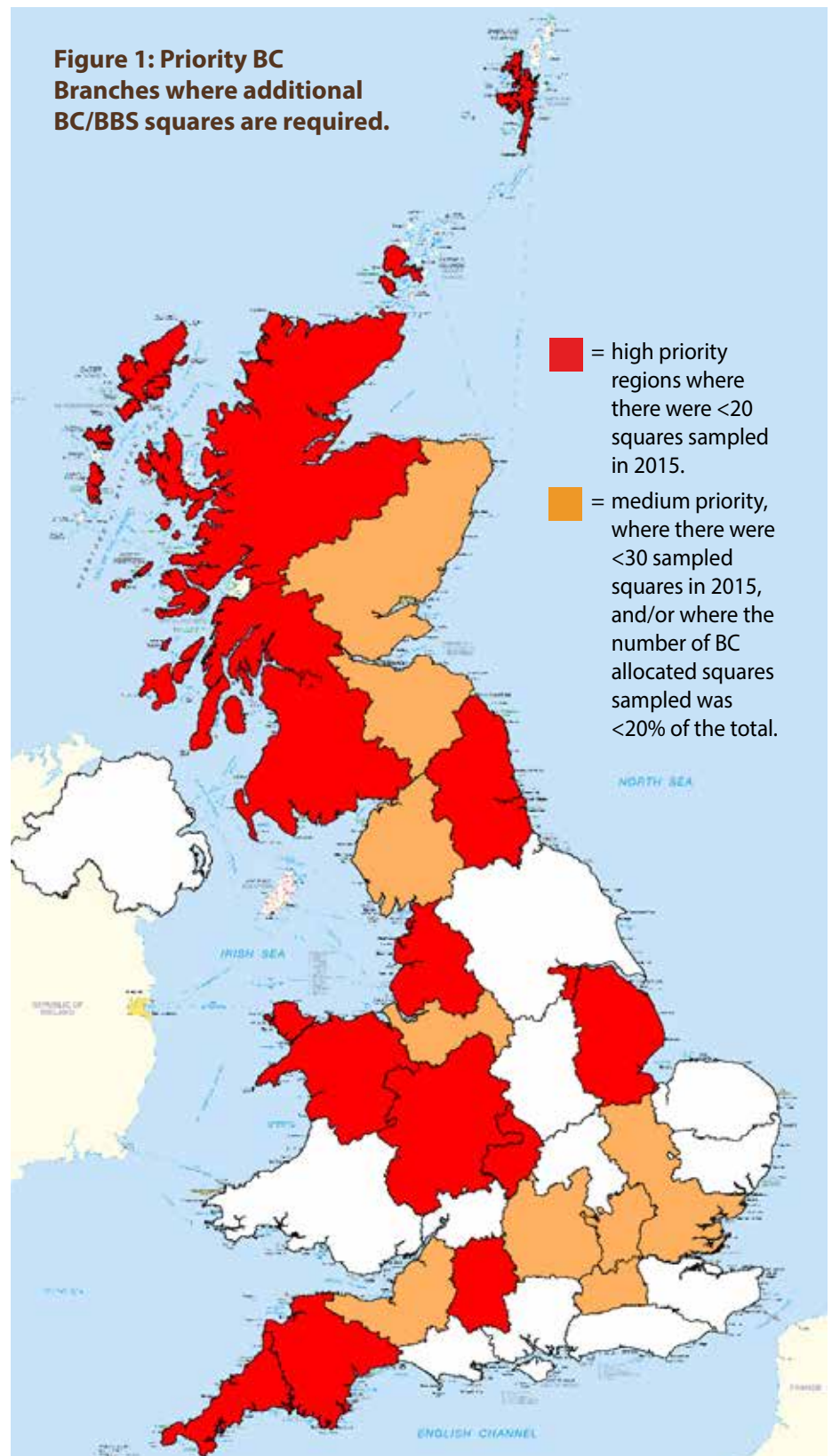
along Trans Pennine Way; High Legh, Warrington; Worleston, Crewe; Barnston, Cheshire; Exmouth, Devon; Near Dolton, Devon; Ottery St Mary, Devon; Near Clola, Aberdeenshire; Uckington, Cheltenham; Near Edge, Gloucestershire; Munerigie, near Invergarry, Highland; North West of Fishguard, Pembrokeshire; Near Shrewton, Wiltshire and Near Warminster, Wiltshire.

Squares in BC Branches with substantial coverage gaps

Four BC Branch areas have joined the (Red shaded) list requiring substantial coverage improvements due to reduced coverage in

2015; West Midlands (19 squares covered in 2015 down by 4); Glasgow and South West Scotland (16 down by 4); Devon (16 down by 6); North Wales (12 down by 8). As in 2014, Cornwall, Lancashire, Lincolnshire, Warwickshire and the Highlands of Scotland remain high priority BC Branches for improved coverage (Figure 1). In addition to this three branches had been added to the medium priority list due to there being less than 30 squares surveyed in 2015, these are Cambridgeshire and Essex (28 down by 8); Upper Thames (27 down by 3) and East Scotland (27 down by 7).

Figure 1: Priority BC Branches where additional BC/BBS squares are required.



HURRY! SQUARES UP FOR GRABS

SQUARE VACANT

Greatworth
Northamptonshire



No records in BNM.
Accessible via footpaths.

To survey contact: **Clare Topping**,
BC Beds & Northants
✉ ctopping@ratfox.net



SQUARE VACANT

Sandy
Bedfordshire



Never before surveyed - no BNM records. Easy access from Sandy, near RSPB HQ.

To survey contact: **Clare Topping**,
BC Beds & Northants
✉ ctopping@ratfox.net



SQUARE VACANT

Outskirts of Altringham
Cheshire



5 year run of data.
Easy public access along Trans Pennine Way and canal tow path.

To survey contact: **Alan Chadwick**,
BC Cheshire & Peak
✉ alankchadwick@btinternet.com
☎ 07920 878747



SQUARE VACANT

Cremyll
Torpoint Cornwall



Never surveyed before. Square within Mount Edgcumbe House & Country Park and along South-West Coastal Path.

To survey contact: **Jim Barker**,
BC Cornwall
✉ jimfrances@talktalk.net
☎ 01736 794134



SQUARE VACANT

Covenham St Bartholomew
Lincolnshire



Easy access across footpaths.
Not surveyed in WCBS before.

To survey contact: **Zoë Randle**,
BC Head Office
✉ survey@butterfly-conservation.org
☎ 01929 406006



SQUARE VACANT

Near Tanworth-in-Arden
Warwickshire



Square not surveyed before in WCBS. Access possible via footpaths.

To survey contact: **Keith Warmington**,
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Wily Whites

The common 'whites' pose an identification challenge to some recorders because apart from the male Orange-tip which is distinguishable by its bright orange forewing tips all other individuals can be easily confused. In addition to Orange-tip the other three species of white butterfly that are frequently seen whilst undertaking WCBS surveys are Large White, Small White and Green-veined White. Female Brimstones may also be easily confused with the whites from a distance too as they appear white though their large size scalloped wing edges and lack black patches makes them highly distinguishable.



Brimstone female

The identification of white butterflies is not straightforward, and this article aims to familiarise you with the distinguishing features of each so that you can accurately identify them.

Differences

Size is not always a good characteristic to use for identification, butterflies vary in size, so although most Large White individuals are bigger than Small Whites, they can occasionally be smaller. Black/grey spots on the wings are also not very helpful, as these vary between males and females as well as between species.

Examination of the underside of the hindwing is one way to be certain of the identification of Green-veined White and Orange-tip.



Green-veined White has greeny-grey lines following the wing veins radiating out from the shoulder towards the outer edge of the wing.



Orange-tip has greeny-grey camouflage pattern all over the wing.

If the underwing is a plain creamy-white colour but with no obvious markings, the butterfly could be a **Large White** or **Small White**. To distinguish Large White from Small White butterflies, you also need to see the wing tips on the upper side of the forewing.



Large White has extensive black marks at the wing tips, with black colour continuing a long way along the outer edge of the wing.



Small White has less-extensive grey or black marks at the wing tips, with colouration only extending slightly along the outer edge of the wing. Green-veined White looks similar to Small White when looking at the upper wing. However this marking on the wing tip is broken in Green-veined White whereas it is absent in Small White. See this link: <http://www.ukbutterflies.co.uk/images/similarspecies/images/Green-veined%20White%20-%20Small%20White%20-%20upperside.jpg>

Survey tips

If large numbers of whites are flying it may not be practical to identify every individual counted. You can identify a sample, by netting them or by getting a good look when a sample of individuals are perching or feeding, and the results can be used to determine the proportion of each species present. For example, if from 45 butterflies seen, 5 Large Whites and 8 Small Whites were confirmed, the remaining 32 unconfirmed individuals can be divided up proportionately to give an estimated 13 Large Whites and 19 Small Whites, thus giving totals of 18 Large and 27 Small Whites.

E.g.

45 WHITES SEEN

5 ARE LARGE WHITE,

8 ARE SMALL WHITE,

THUS 13 ARE IDENTIFIED.

THE PROPORTION OF THESE ARE WORKED OUT BY DOING THE FOLLOWING:

$5/13 = 0.4$ LARGE WHITE

$8/13 = 0.6$ SMALL WHITE

TO WORK OUT THE 32 UNIDENTIFIED THE FOLLOWING CALCULATIONS ARE PERFORMED:

$32 * 0.4 = 13$ LARGE WHITE

$32 * 0.6 = 19$ SMALL WHITE

THEREFORE, IN TOTAL 18 LARGE WHITES ARE RECORDED AND 27 SMALL WHITES.

Rarer white butterflies

If none of these fit, it is possible you have been lucky enough to see one of the rarer white butterflies, such as Wood White and Cryptic Wood White (Northern Ireland only) or even a vagrant migratory species such as Black-veined White and Bath White. In this case, take plenty of photos or write a detailed description and consult a good identification guide such as those published by Collins or Wild Guides.

The illustrations used in this article are from the **Guide to Garden Wildlife** by Richard Lewington and are used with his kind permission. www.richardlewington.co.uk.

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