Wider Countryside Butterfly Survey Annual Newsletter 2018 Season

Small Copper (Henk Bosma/Dutch Butterfly Conservation)

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

Welcome to the WCBS

The Wider Countryside Butterfly Survey (WCBS) forms part of an integrated approach to monitoring butterflies through the UK Butterfly Monitoring Scheme (UKBMS). The sampling design of the WCBS involves volunteers counting butterflies along a fixed route within a 1km square. Butterflies are widely regarded as indicators of the health of the environment. The WCBS complements conventional transect recording and generates high quality data on the population status of common and widespread butterflies. Here we present initial results based on the number of WCBS squares that species have been recorded in, but look out for the full population trend results based on abundance data which will be published as Official Statistics, and made available via the UKBMS website, in late March. A full UKBMS Annual Report will be available to recorders early in the summer.

The summer of 2018 was the tenth year of the WCBS. Over the past decade a total of 1,840 WCBS squares have been surveyed, 1,007 (55%) by Butterfly Conservation (BC) volunteers and 833 (45%) by BTO/JNCC/RSPB Breeding Bird Survey volunteers. Altogether, 16,618 visits were made by approximately 1,700 recorders who counted 959,847 butterflies of 51 species. The top five most widespread species over the past 10 years have been Meadow Brown (found in 87% of sampled squares) Large White (85%), Small White (84%), Green-veined White (78%) and Small Tortoiseshell (75%).

Coverage in 2018

Over the 2018 season a total of 790 WCBS squares were surveyed, an increase of 16 (2%) on the 2017 total. This is the most squares surveyed in the scheme since 2015, when 802 squares were covered. However, this is still somewhat short of the record breaking year of 2013 when 857 squares were surveyed. BC and BTO surveyors covered 66% and 34% of squares respectively. The number of BC squares surveyed (520) was higher than in any other year of the series, whilst conversely the number of BBS squares surveyed (270) marked a series low.

At the Country level there were 677 squares in England (+28 compared to 2017), 57 in Scotland (–1), 35 in Wales (–5), 20 in Northern Ireland (–6) and one on the Isle of Man (the same as in 2017).

Looking regionally, for the fourth consecutive year more squares were covered in Dorset than anywhere else (57 BC, 4 BBS) with the BC total higher than in any other Branch. BBS coverage was greatest in Sussex with 25 squares covered, one more than in 2017. Wiltshire experienced the biggest increase in overall survey coverage, with 15 more squares surveyed than in 2017, bringing the county total to 22. This is a fantastic achievement – see the Viewpoint article (page 6) for the full story. Overall participation was also substantially increased in Somerset & Bristol, and Hertfordshire & Middlesex BC Branches, with an additional 10 and seven squares surveyed respectively in 2018. This was a great turnaround for Somerset & Bristol which experienced its lowest participation on record in 2017. On a negative note, two areas, Norfolk and Devon had their lowest overall participation in the WCBS in 2018 since the scheme began, and other notable decreases in participation were experienced in Suffolk and Northern Ireland. Hopefully lessons learned from the expanding participation Branch areas can be applied in the future to reinvigorate both BC and BTO participation in these areas.

Red Admiral (Tim Melling)

2018 SURVEY

Results round-up

During the 2018 survey season 1,804 surveys were completed, with over 3,600km of survey route walked. Approximately 630 recorders counted a total of 115,605 butterflies of 46 species, the same species number as in 2017. This comprised 25 wider countryside species, 18 habitat specialist species and the three regular migrant species; Painted Lady, Red Admiral and Clouded Yellow. Of the specialists Small Blue was recorded in WCBS squares this year but not in 2017, whilst the reverse was true for Grizzled Skipper. There were 268 spring visits to 183 squares with Orange-tip seen in 78 squares and Green Hairstreak seen in six squares.

The most visits to a BC square was nine in Sale, Greater Manchester; whilst two BBS squares, Wargrave, Wokingham and Langley, Hertfordshire, received six visits each.

During the core July and August recording period 665 (84%) squares received the minimum required two visits. The total number of visits during this time was 1,330, with 92,614 butterflies counted. As in 2017, 44 species were recorded.

The busiest survey day was 31 August when 56 visits took place (4% of the total, with 1,149 butterflies of 20 species counted). Twenty-six species (two more than in 2017) were present in more than 30 squares, meeting the target for adequate coverage, and 21 species (the same number as last year) had excellent coverage being present in over 100 squares.

For the first time in the WCBS, Small White was the most widespread butterfly occupying 91% of survey squares, knocking Meadow Brown off the top spot, which it has held since 2011. Of the 24 wider countryside species seen during the core recording period 71% were more widespread than in 2017 on sampled squares over the two summer visits, whilst 29% were less widespread.

Speckled Wood (Josie Latus)

Purple Hairstreak (Tim Melling)

Speckled Wood, Holly Blue and Small Heath were more widespread on summer visits than in any other year of the WCBS. Speckled Wood was found in over three-quarters of squares, rising two places to fourth place in the ranking of most widespread species. Holly Blue was found in over one-third of squares, increasing by 17 percentage points, this being the biggest annual change in occurrence among species. At the Country level, Holly Blue increased in occurrence by 19 percentage points in England, 10 percentage points in Wales, but fell by three percentage points in Northern Ireland compared to 2017. Common Blue was more widespread than in any other year since 2010, being seen in 50% of squares in 2018. However, this increase was not uniform across all countries, with the changes being +11 percentage points in England and -11 percentage points in both Scotland and Wales.

In Wales, Small Heath and Small Tortoiseshell showed the biggest annual changes in occurrence, both increasing by 30 percentage points. At the UK level however, Small Tortoiseshell fell by seven percentage points since 2017 and was less widespread on WCBS squares than in any other year since 2012.

All three regular migrant were less widespread in squares in 2018. Having been more widespread in 2017 than in any other year of the WCBS Red Admiral occurrence dropped by 32 percentage points in 2018. At the Country level, percentage point annual decreases were –34 (England), –20 (Scotland), –33 (Wales) and –28 (Northern Ireland).

For the third consecutive year, Small Copper increased in annual occurrence, by six percentage points from 2017, with presence in one-quarter of squares in 2018. In Scotland, this species fared particularly well occupying 44% of squares, representing a 25 percentage point increase. In Wales, Small Copper occupied 37% of squares, an increase of ten percentage points from 2017.

Holly Blue (Iain H Leach)

The top three butterfly counts on surveys were: 434 Meadow Brown on 15 July in a square near Stonehenge, Wiltshire, 370 Small White on 7 July near Newborough, Peterborough and 344 Meadow Brown on 6 July near Hooley, Surrey.

An incredible total of 114 Purple Hairstreak were counted on 12 July in a square near Langley, Hertfordshire, the previous maximum WCBS count being 12 near Lavenham, Suffolk on 1 August in 2013. Notable habit specialist species counts included 75 Silver-studded Blue near Burley Street, Hampshire on 6 July, and 53 Grayling at Rhunahaorine, Argyll on 14 July.

Moths were recorded in 192 (24% of the total) squares, six percentage points more than in 2017. A total of 899 moths of 37 species (two fewer species than in 2017) were counted. For the tenth consecutive year the migratory Silver Y was the most widespread moth species being found in 72% of these squares (35 percentage points more than in 2017) suggesting that this species had a reasonable migration to the UK in 2017.

Common Carpet, Cinnabar, Shaded Broad-bar and Six-spot Burnet were in joint second place in terms of occurrence with each of these seen in 8% of squares. Humming-bird Hawk-moth was the next most widespread moth species, being found in 6% of squares, the same percentage as in 2017.

Dragonflies were counted in 204 (26%) squares surveyed, representing a three percentage point increase from 2017. In total, 3,351 individuals of 22 species (one fewer than 2017) were seen. For the third year in a row Common Darter was the most widespread dragonfly, occurring in 37% of WCBS squares (3 percentage points fewer than 2017). Southern Hawker was the second most widespread species, occurring in 31% of squares and Brown Hawker was in third place occupying 30% of squares.

Cinnabar Moth (Les Evans-Hill)

Table 1: How widespread were butterflies on WCBS squares in 2018 and comparisons with 2017 (using data from squares sampled twice in July and August).

Species	% squares recorded in 2018	Change in % points from 2017	2018 rank	2017 rank
Small White	90.7	10.8	1	2
Meadow Brown	87.2	0.6	2	1
Large White	86.5	9.8	3	4
Speckled Wood	75.6	5.5	4	6
Green-veined White	71.9	10.8	5	7
Gatekeeper	69.3	–3.6	6	5
Ringlet	65	6.5	7	8
Common Blue	49.8	9.4	8	12
Comma	48.1	–6.4	9	9
Red Admiral	47.4	–31.8	10	3
Small Tortoiseshell	44.5	–7.1	11	10
Peacock	42.3	–2.8	12	11
Holly Blue	33.7	17.1	13	18
Small Skipper	26.5	0.4	14	13
Small Copper	25.1	6.2	15	15
Small Heath	20.2	4.8	16	21
Large Skipper	18	–0.8	17	15
Small/Essex Skipper	17.7	2.1	18	20
Marbled White	17.4	0.9	19	18
Brimstone	17.1	–5.5	20	14
Painted Lady	15.6	–2.2	21	17
Silver-washed Fritillary	12.2	0.3	22	22
Brown Argus	11	4.6	23	25
Essex Skipper	9.5	–0.7	24	23
Wall Brown	8.7	1.7	25	24
Purple Hairstreak	7.7	4.3	26	28
Dark Green Fritillary	3.9	–0.4	27	26
Clouded Yellow	3.3	–0.5	28	27
Grayling	3	0.7	29	29
White Admiral	2	–0.2	30	30
White-letter Hairstreak	1.5	1	31	34
Orange-tip	1.2	0.1	32	31
Scotch Argus	1.2	0.1	32	31
Chalk Hill Blue	0.9	0	34	33
Brown Hairstreak	0.8	0.3	35	34
Small Blue	0.6	0.6	36	46
Adonis Blue	0.5	0.1	37	37
Large Heath	0.3	0	38	37
Purple Emperor	0.3	0	38	37
Silver-studded Blue	0.3	0	38	37
Small Pearl-bordered Fritillary	0.3	0	38	37
Silver-spotted Skipper	0.3	–0.2	38	34
Northern Brown Argus	0.2	0	43	43
Wood White	0.2	0	43	43
Lulworth Skipper	0.2	–0.2	43	37
Dingy Skipper	0	–0.2	46	43

NEWS

Latest from the WCBS

New Discoveries

In 2018 the WCBS generated butterfly records for six 1km squares with no previous butterfly records. There were also 65 new 1km records for 13 habitat specialist species including nine new squares for Dark Green Fritillary (from Sussex to Highland), 24 for Silver-washed Fritillary (from Devon to Cheshire) and seven for White-letter Hairstreak (from Dorset to Lancashire). Large Heath was also discovered in two new squares, one in Trawsfynydd, Gwynedd, where 16 individuals were counted, and a square near to Lower Killeyan, Argyll and Bute.

Grayling was discovered in five new 1km squares, two were in South Wales, one in Northern Ireland, another in Suffolk and one in Lancashire.

Online System

The online system (www.ukbms.org/mydata/) is a fantastic resource for registered BC and BTO recorders. It allows you as a recorder to review and edit your own data and get instant feedback of sightings and results across the network of UKBMS sample locations (WCBS squares and traditional transects). WCBS Champions, County Butterfly Recorders and Transect Co-ordinators also have access to the data and can track progress throughout the season. If you're not yet registered please do so in advance of the 2019 season. Below (in the green box) are some cut out and keep instructions, including how to register, for those of you who have not yet embraced the new technology or who continue to have problems. Comprehensive instructions which detail how to draw your route maps can be found here.

This year 89% of WCBS data was entered online by recorders, this is up two percentage points from 2017. There are 2,765 registered users of the online system, (17% more than this time last year); 694 are WBCS recorders and the rest traditional transect recorders.

Data for other taxa can also be entered via the online system; these data go into the iRecord database for verification and are made available to the relevant national recording schemes. In 2018 WCBS recorders submitted records for around 130 other species including, birds, mammals, grasshoppers, hoverflies, beetles, shield-bugs and bumblebees.

Holiday Squares

Achieving suitable coverage of WCBS squares in the uplands of northern and western Britain represents a major challenge, as it does for other wildlife monitoring schemes, because relatively few recorders live in these areas. However, they remain popular holiday destinations and we hope there is potential for recorders on holiday to help us get some of these squares covered! A new WCBS holiday squares web page is under development and will show the locations of these squares and make them available to recorders. Squares are available in Cumbria, Lancashire, North East England, Scotland, Wales and Yorkshire. If this pilot project is a success we can expand it to include under-recorded lowland areas in other holiday destinations. If you are going on holiday to other counties and you fancy surveying a WCBS square in the vicinity please contact the relevant WCBS Champion – details are on the penultimate page of this newsletter.

All being well, this facility will make the scheme more accessible to a wider audience than the current promotional methods thus potentially increasing the number of participants. The WCBS is unique in that it provides the opportunity to get off the 'beaten track' and take you to new places, where few other recorders have been before.

UK Butterfly Recorders' Meeting

The next UK Butterfly Recorders' Meeting will take place on Saturday 30 March 2019 at the Birmingham and Midland Institute, Birmingham, B3 3BS.

At this annual event the official 2018 butterfly population trends from the UKBMS network will be revealed. Other confirmed talks include an update from the Butterflies for the New Millennium (BNM) recording scheme, the latest research on climate change impacts on butterflies, how to monitor Purple Hairstreaks and what the public think about butterflies, bees and other insects. The lunch break provides the opportunity to chat and relax with fellow recorders. The meeting is open to anyone interested in butterflies and is a great opportunity to mingle with fellow enthusiasts from around the UK. The subsidised charge for the day is £10.00 per person and includes morning tea/coffee and a buffet lunch. Advance booking is essential for this very popular event; to book your place follow this link.

WCBS online simple instructions for WCBS-BC squares

1. Register at www.ukbms.org/mydata/ (register button is at top right hand side of the screen).

2. WAIT for us to email you to confirm that your account has been linked to your square(s). This can only be done during working hours, so please be patient.

3. Go to 'My Sites' to review the details of your route, change Location Type to WCBS-BC in the drop down menu then press Run Report.

4. Go to 'My Walks' to enter the data from your weekly walks. First change the Site Type to WCBS-BC in the drop down menu then find the date of your walk in the calendar and click on the little green 'plus' sign. You can now enter details of your walk.

WCBS online simple instructions for WCBS-BBS squares

1. Register at www.ukbms.org/mydata/ (register button is at top right hand side of the screen).

2. WAIT for us to email you to confirm that your account has been linked to your square(s). This can only be done during working hours, so please be patient.

3. Go to 'My Sites' to review the details of your route, change Location Type to WCBS-BBS in the drop down menu then press Run Report.

4. Go to 'My Walks' to enter the data from your weekly walks. First change the Site Type to WCBS-BBS in the drop down menu then find the date of your walk in the calendar and click on the little green 'plus' sign. You can now enter details of your walk.

NEWS

Scottish Recorders' Day

The next Scottish Recorders' Gathering will take place on Saturday 16 March 2019 at the Battleby Conference Centre, Redgorton, Perth, PH1 3EW. This event is for everyone interested in recording butterflies and moths in Scotland. The latest butterfly and moth news from across Scotland will be shared along with survey and monitoring opportunities to enable you to get involved in the forthcoming season. The charge for the day is £15.00 per person and includes a light lunch and refreshments. Advance booking is essential for this incredibly popular event; online booking is via this link.

Northern Ireland Recorders' Day

Butterfly Conservation's annual Northern Ireland Recorders' Day will provide an overview of the 2018 recording season in Northern Ireland, looking forward to priorities for 2019, and some of the current research in butterflies and moths, as well as a great opportunity to network with like-minded recorders. It will take place on Saturday 6 April, 9:30am – 4pm at Peatlands Park, 33 Derryhubbert Rd, Dungannon BT71 6NW. For further information and to book a place please contact Catherine Bertrand, cbertrand@butterfly-conservation.org.

Butterfly Conservation Local Events

Below is a selection of BC events that WCBS recorders may find interesting. To find out what is going on in your local BC Branch in terms of identification days, survey training and opportunities please visit the 'In your area' page of the Butterfly Conservation website.

BC East Midlands

Transect training sessions and butterfly ID courses will be held at the Derbyshire Wildlife Trust offices in Middleton-by-Wirksworth on Wednesday 6 March 2019 from 1.30pm to 4pm and Friday 8 March 2019 from 10am to 12.30pm. These events are free and bookings should be made through Derbyshire Wildlife Trust on 01773 881188.

BC Dorset

The Dorset Branch are holding a series of recorders' meetings to feedback on the 2018 season and request volunteers for the 2019 season. The details are as follows;

Thursday 7 March from 7pm at Methodist Hall, North Street, Wareham, BH20 4AG.

Thursday 28 March from 7:30pm at East Stour Village Hall, SP8 5JY.

Dorset butterfly Identification and survey method workshop

Saturday 25 May from 9.30 am to 4.00 pm at Cerne Abbas Village Hall, Kettle Bridge Lane.

Cerne Abbas, Dorchester, Dorset, DT2 7GY. Weather permitting, the workshop will also include an outdoor field visit to nearby butterfly rich Giant Hill in order to put the theoretical skills into practice. To book a place please contact Robin George on 01747 824215 or email rab.george@btinternet.com.

BC Gloucestershire

Gloucestershire Branch are holding two training days suitable for present and potential WCBS recorders and standard transect walkers.

Transect training day

Thursday 16 May 2019 from 10am to 3.30pm at the Ebworth Centre on the B4070 road between Birdlip and Stroud, GL6 7ES and Rough Bank reserve GL6 7HN. The day will consist of an indoor session when the methodology of transect recording will be explained, followed by help with butterfly identification. Afterwards we will go to nearby Rough Bank reserve to practise these skills and identify and record the different species seen on the reserve. There will be a small charge to cover costs of room hire and a morning drink. Participants need to bring a packed lunch. Booking is required, for more info and to book a place, please contact Tricia Atkinson, vice-chair@gloucestershire-butterflies.org.uk.

Butterfly ID day

Sunday 28 July 2019 from 10.15am to 3.30pm at the Royal William Hotel, Cheltenham Rd, Cranham, Stroud GL6 6TT and Painswick Beacon. The day will consist of an indoor session with a presentation of all the butterflies seen in Gloucestershire, followed by a walk on adjacent Painswick Beacon where we can practise our ID skills. There will be a small charge to cover costs of room hire and a morning drink. Participants need to bring a packed lunch. Booking is required, for more info and to book a place, please contact Tricia Atkinson, vice-chair@gloucestershire-butterflies.org.uk.

BTO Norfolk

The BTO are running a Butterfly Identification and Survey Training Workshop on Saturday 15 June 2019, from 11am to 3pm at their HQ, The Nunnery, Thetford, Norfolk IP24 2PU.

This training workshop is for those who are keen to get involved in the Wider Countryside Butterfly Survey (WCBS) or refresh their skills. The workshop will consist of an indoor session explaining how to do the WCBS, why it is important and the common butterfly species likely to be encountered. This will be followed by an outdoor 'hands on' session covering butterfly identification, setting up a route and completing a survey.

There is a £5.00 fee for this event and booking is essential as places are limited. Please bring a packed lunch and wear appropriate clothing. For further details and to book your place, please contact the Supporter Team via membership@bto.org or 01842 750050. The workshop will be led by Zoë Randle, Senior Surveys Officer from BC.

PoMS
UK Pollinator Monitoring Scheme

Pollinator Monitoring: Flower-Insect Timed (FIT) Counts

As partners in the UK Pollinator Monitoring Scheme (PoMS) the WCBS team encourage you to take part in the Flower-Insect Timed Count (FIT Count). This simple survey can be done virtually anywhere that flowers grow. All you are required to do is count the insects that visit a patch of flowers during a ten minute period. It is an ideal activity to do in your WCBS squares.

A poster explaining how to carry out a FIT Count is on the back page of this newsletter, alternatively you can watch this YouTube video.

To send in your FIT Count data you will need to register with the iRecord online recording system. Go to the PoMS FIT Count page (https://www.brc.ac.uk/irecord/poms-fit-count) where you will find all the information and links that you need. Click here to read the UK Pollinator Monitoring Scheme newsletter.

VIEWPOINT

Blue Peter badge for Butterflies by Joseph Harris (aged 11)

My name is Joseph and I've been taking part in the WCBS since I was four years old. My mum suggested that we should do it. To be honest I was unsure at first. There were lots of rules to follow which at my age took me some learning, but after a while I got the hang of it and it was good fun.

Our area is just outside of Stamford in Lincolnshire. It's good to have the same area, as you get to know where each section starts and ends and become familiar with the butterflies' markings. It's nice to take different family and friends along, stopping half way for a quick picnic. It's also interesting to compare one year to another for example one year we saw lots of Ringlet butterflies but hardly any the next year.

I decided to apply for a green Blue Peter badge as I have a real interest in the environment. There are lots of different coloured Blue Peter badges, but the green badge is awarded if you do something for the environment. I wanted Blue Peter to know about the WCBS and hopefully inspire other children to join in. I was really happy to receive my badge and a nice letter from Blue Peter.

I've learnt lots of observation and identification skills, which are really useful. I'm always looking out for these fascinating creatures, seeing if I can spot a species I haven't seen before.

Spotting butterflies is something for people of all ages. During the summer holidays I visited my 85 year old great grandmother in Malta and we spotted a really rare Maltese Swallowtail and a Crimson Speckled moth. She has never before been interested in butterflies, but I've inspired her to keep an eye out for butterflies in her area. It goes to show that anyone, no matter what your age, can start becoming interested in butterflies and the environment.

Addendum: *children are encouraged to take part in the WCBS when supervised by an adult. Non relatives who accompany children alone need to be CRB checked, which BC can pay for. Children under 13 should not walk transects alone, whilst lone walking is not recommended for 13-16 year olds.*

Joseph and his badge. (Rosina Harris)

Joseph and his clipboard. (Rosina Harris)

VIEWPOINT

Boosting coverage in Wiltshire by Janet Crittenden

When I took on the role of WCBS Branch Champion for Wiltshire I knew that only three squares had been walked and it had not been easy to find new walkers. I could also see from previous records that 18 squares had been walked at some point though not in recent times and some of the records were dated 2010. I needed to reach out to find walkers for the coming year. I started by finding contact details for previous recorders and emailing them. I could not find contact details for some and others declined but suggested other names and one or two agreed to help again.

I talked to other members of the Wiltshire Butterfly Conservation Branch committee about what I could do next and a colleague suggested that I contact our butterfly recorder as he would have an idea of who is active in any given area. I sent him a list of vacant squares and received back a list of people he thought would be likely to assist. It is sometimes said that if you want something done ask a busy person and of these people who were already walking transects, five or six agreed to help.

A view towards Westbury. (Photo © Mary and Angus Hogg (cc-by-sa/2.0))

Next step, advertise for volunteers. I put a 'Flyer' in the Wiltshire bulletin and on web news. It was worded to sound attractive – a walk on a couple of sunny days in summer counting butterflies and this resulted in a large number of enquiries. I also asked our Publicity Officer to advertise vacant squares in our branch e-newsletter, which also generated offers of help.

By June, 21 squares had potential recorders. I sent reminder emails at the end of the month and three people replied to say they were unable to do the survey. Luckily, a volunteer from out of the county agreed to cover one of the squares.

For various reasons, some people were unable to carry out the survey, but by the end of September records had been submitted for 12 squares, which is a big improvement on 2017. By the time the data were analysed for this WCBS newsletter data had been submitted for 14 WCBS squares, an increase of 366% on 2017! Many thanks to all the Wiltshire WCBS recorders for supporting the scheme. I hope you'll all be happy to participate in 2019.

I would not have been able to do this without the assistance of other members of Wiltshire Branch committee and I thank them for their insight and encouragement.

VIEWPOINT

A decade of participation in the WCBS by Steve Corkhill

I have been recording butterflies for the WCBS since 2009, the same year I moved to Dorset after studying for a degree in Plant Science at Bangor University as a mature student. Becoming interested in insects seems to be a natural dichotomy from botany.

My wife and I carry out the surveys together, we record butterflies for many reasons, mainly because we share a love of the British Countryside and the conservation of the flora and fauna within. We record on two squares in Dorset, one near Kingston Lacy and one on Ferndown Common. Kingston Lacy is a bridle path that runs through arable farm land, Ferndown Common is mostly lowland heath.

During the years of recording butterflies I have noticed some changes; there has been a marked reduction in the number of Grayling recorded at Ferndown and a reduction of Marbled Whites at Kingston Lacy, although at nearby Badbury Rings, they remain plentiful.

Over all I would say that the number of species in the squares we record seems to be quite dynamic. On one survey at Kingston Lacy there were so many Ringlets it was challenging to count them all, the next year, none.

We have experienced regular sightings of Common Blue, Gatekeeper, Meadow Brown, Speckled Wood, the Whites and Small Skippers in both squares. Species such as Small Tortoiseshell, Red Admiral, Brimstone, Painted Lady, Orange-tip and Peacock seem to be more variable. Ultimately the weather seems to be the deciding factor as to whether or not butterflies are present to record.

Green Hairstreak. (Iain H Leach)

In July 2018 we went to Ferndown Common to record for the first time that year; we were shocked and upset to find it had been completely burned, nothing of the heath was left alive. I personally enjoy this square as it is a little more diverse than Kingston Lacy. It was here I saw my first ever Green Hairstreak, belligerently guarding its patch.

It will be interesting to see how the heath responds in terms of vegetation as burning can be seen as a benefit. How this will affect future butterfly populations remains to be seen.

Recording butterflies for the WCBS has given my wife and I a great deal of pleasure, it has enabled us to collect valuable scientific data that is used to monitor and conserve Britain's wildlife, it has realised a wider interest in Entomology especially concerning Hymenoptera, Odonata and Coleoptera.

In 2009 neither my wife nor I knew much of Britain's butterflies other than being able to identify a few common species, but that is not the case now.

WCBS square Ferndown burned. (Steve Corkhill)

VIEWPOINT

Great benefits from the WCBS by Eve Tigwell

***Eve** is a dedicated, long-term volunteer for The BTO, who has been taking part in the Breeding Bird Survey since its inception in 1994. With the introduction of the WCBS as an optional extra on BBS squares 10 years ago, it was almost inevitable Eve would step forwards and monitor the butterflies and other invertebrates on her BBS square - providing not one but two long-term datasets from the site. Here, Eve shares her view of the WCBS.*

Silver-washed Fritillary valezina (Eve Tigwell)

As a long-term volunteer for the BBS I was delighted to find that additional visits could produce useful data; this time for butterflies. The WCBS does just that!

Before WCBS I had already been visiting my BBS square outside of the spring season; just to see what was around! It's a super bit of damp woodland habitat, with some adjacent farmland; it contains some interesting flora and fauna, so there's always something to see or hear. I was able to add extra breeding records for the bird species, find a few more plants and watch plenty of other wildlife.

Over time we've seen that BBS data provide huge benefits in monitoring the changes to our breeding bird populations; how it feeds into habitat management and a whole range of conservation matters. For the last 10 years WCBS has been doing the same for butterflies! With an ever-growing awareness that insect life is in serious trouble such data are invaluable.

The butterflies are amazing! Such a delight to see and to record; some even sit still long enough for photos. It was great to also be able to record other insects; dragonflies, damselflies and even hornets have gone onto my lists. Not only do I have a good excuse for visiting in the summer, but I am happy with the knowledge that my records are adding to another useful database.

The woodland habitat produces lots of Silver-washed Fritillaries; there's plenty of English Oak and a whole range of violet species. I frequently see the valezina form of the Silver-washed Fritillary but, despite the habitat, this is the only fritillary species recorded. I continue to search for any Pearl-bordered species. The most common nectar plant for all species is Bramble.

Speckled Woods are common, as you would expect. There are also plenty of Meadow Browns, Gatekeepers, Ringlets and Marbled Whites, which must be down to the grassy edges to the rides. Most of these rides are edged by ditches full of Cuckooflower resulting in plenty of Orange-tips and other whites; Green-veined are by far the most common.

Blues are rare, but the extensive stands of Holly produce the occasional Holly Blue. High amongst the oaks there are White Admirals, but Red Admirals are rarely recorded. I am still searching for the Purple Emperors, so roll on summer and some more butterfly hunting!

GETTING INVOLVED

Situations vacant

WCBS Branch Champions are vital for the success of the WCBS. They are responsible for the local promotion of the scheme to recruit volunteers; the provision of advice, support and encouragement to volunteers throughout the survey season along with gentle reminders of data submission deadlines and local feedback. The role isn't too onerous and Janet Crittenden, WCBS Champion for Wiltshire, has provided an excellent article on page six of this newsletter describing her experiences and rapid successful impact. WCBS Champions are required for Lincolnshire, South Wales and North East England BC Branch Areas. If you are interested in becoming a WCBS Branch Champion, helping to raise the profile of this important scheme please contact Zoë Randle via survey@butterfly-conservation.org or phone 01929 406006.

There have been several changes to the WCBS Champions line-up this year; Alan Dawson, Ewan Munro, Brian Denham, Dave Ayling and Mike Easterbrook have stepped down. We wish to thank them all for their efforts and support with the WCBS over the years. We welcome the new WCBS Champions, Christian King, Norfolk; Kirstie Ross, Highland; Ross Harley, Somerset & Bristol; Paolo Farina, Kent and Scott Martin and Philip Nunn for the West Midlands.

HURRY! SQUARES UP FOR GRABS

SQUARE VACANT

SP 1169
Tanworth-in-Arden
Warwickshire

Photo © PeterJG1970 (cc-by-sa/2.0)

This square has not been surveyed before in the WCBS. There is easy access via footpaths.

Contact **Keith Warmington**
e keith@warmies.co.uk
T 01827 715873

SQUARE VACANT

NH2603
Munerigie
near Invergarry, Highland

Photo © Sarah McGuire (cc-by-sa/2.0)

This square was last surveyed in 2013 and has a five-year data run. There is easy access along a forest track.

Contact **Kirstie Ross**
e funkyhaywood@yahoo.co.uk

SQUARE VACANT

SM9737
Fishguard/Abergwaun
Pembrokeshire

Photo © Jeremy Owen (cc-by-sa/2.0)

Beautiful coastal square with easy access via footpaths. Previously recorded species include Grayling and Wall.

Contact **Zoë Randle**
e survey@butterfly-conservation.org
T 01929 406006

SQUARE VACANT

NT9935
Doddington Moor
near to Nesbit, Northumberland

Photo © Richard Webb (cc-by-sa/2.0)

No records in the Butterflies for the New Millennium (BNM) database.

Contact **Zoë Randle**
e survey@butterfly-conservation.org
T 01929 406006

SQUARE VACANT

SH4179
near Llynfaes, Bodffordd
Anglesey

Photo © Google

No records in the BNM
Easy access via footpaths.

Contact **Amy Green**
e AmyGreen@wildlifetrustswales.org
T 07961 698437

SQUARE VACANT

SX6153
near Westlake
Devon

Photo © Google

Last surveyed in 2016, this square has a seven-year data run, with 15 species recorded. Access is easy along country lanes.

Contact **Jenny Evans**
e jennifer.evans@lineone.net

Priorities for improving coverage 2019

Though between 750-800 squares are surveyed annually through the WCBS, we would like to increase coverage and geographical representation, especially in upland areas of north and west Britain (see Holiday Squares article on page four).

Coverage achievements in 2018

Six squares that were formally Butterflies for the New Millennium (BNM) 'white-holes', i.e. having no butterfly records, were surveyed in 2018, a total of 86 records for 18 species were generated. The squares were as follows: NY4307 Kentmere, Cumbria; NZ2706 North Cowton, North Yorkshire; SJ5824 near to Booley, Shropshire; SN4236 near to Bancyffordd, Carmarthenshire; SP6124 Stratton Audley, Oxfordshire and TA0946 Burshill, East Riding of Yorkshire.

Five of the six BC squares surveyed in 2017 (NY3425 near to Scales, Cumbria; SP1227 near to Condicote, Gloucestershire; ST8288 near to Oldbury on The Hill, Gloucestershire; SP8254 near to Horton, Northamptonshire and TL0098 near to King's Cliffe, Northamptonshire) which were previously BNM white-holes were also surveyed in 2018, this continuity is of great benefit to the scheme. Many thanks to the recorders who are responsible for this. It would be great to get TM1982 near to Rushall, Norfolk surveyed again in 2019 for continuity.

In the 2017 newsletter we appealed for defunct squares with 10-year data runs (including pilot testing years pre-2009) to be surveyed. I am delighted to say that the four BC squares SS9944 Dunster, Somerset; ST0140 Withycombe, Somerset; ST1340 Bicknoller, Somerset and TF9040 Wells-Next-The-Sea, Norfolk were all covered in 2018. Of the seven defunct BBS squares, one was covered; SU5127 Chilcomb, Hampshire. In addition to this 10 BC squares with data runs of nine or 10 years were covered, which is absolutely fantastic. Many thanks to the individual recorders who embarked upon this. We hope that these will be surveyed again in 2019 to maintain continuity.

Challenges for 2019

The WCBS provides an opportunity for butterflies to be counted in places with no previous butterfly records – there are 120 such 'white-hole' square locations. If you want to survey one of these unrecorded squares please contact Zoë at BC via survey@butterfly-conservation.org who will let you know of the nearest squares to you.

Defunct squares with good data runs

There are 10 squares with a run of 10 years of data (including pilot testing years pre-2000) that have not been surveyed for the last two years or more; all of these being BBS squares. It would be fantastic to have these squares resurveyed in the 2019 season. For details about these squares please contact from Sarah Harris (bbs@bto.org) at the BTO. There are 45 squares with data runs of nine years that haven't been surveyed for two or more years, 27 of these are BBS squares and 18 are BC squares. The BC squares are listed in Table 2, if you are interested in surveying any of the BC squares please contact the relevant WCBS Champion – a list of them is on page 15 of this newsletter. For details of the BBS squares please contact Sarah Harris. If you are an existing BBS volunteer and would like to carry out the WCBS on your square or if you have a BBS square and would be keen for someone else to carry out the WCBS on the square please contact Sarah Harris for more details.

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

Priority status

- high priority regions where there were <20 squares sampled in 2018.
- medium priority, where there were <30 sampled squares in 2018, and/or where the number of BC allocated squares sampled was <20% of the total.
- good coverage.

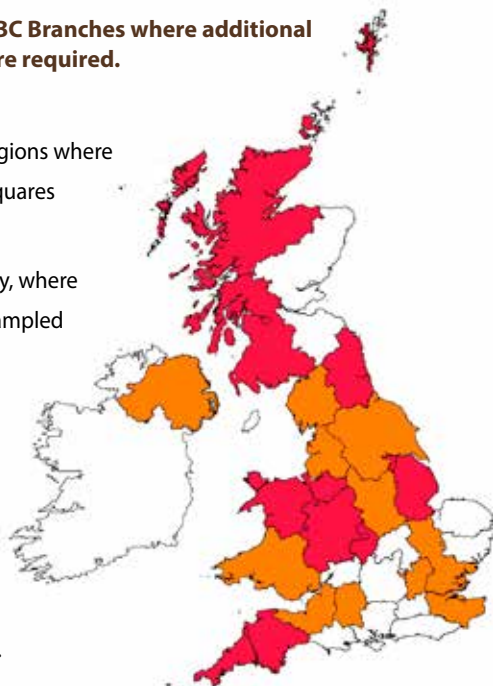


Table 2: Available BC WCBS squares with long data runs

Square	Location	BC Branch
TL3962	Dry Drayton, Cambridgeshire	Cambridgeshire and Essex
NY7906	Nateby, Cumbria	Cumbria
SX3783	Tinhay, Devon	Devon
ST9707	Manswood, Dorset	Dorset
ST8105	Winterborne Houghton, Dorset	Dorset
SU0210	Wimborne St Giles, Dorset	Dorset
NS6546	Carnduff, Lanarkshire	Glasgow and South West Scotland
ST9198	Cherington, Gloucestershire	Gloucestershire
NH5537	Abriachan, Highland	Highland
SD7224	Belthorn, Lancashire	Lancashire
TG3033	Knapton, Norfolk	Norfolk
TF5016	Walpole St Peter, Norfolk	Norfolk
TF7429	Anmer, Norfolk	Norfolk
TG1206	Wramplingham, Norfolk	Norfolk
TM1599	Wreningham, Norfolk	Norfolk
TQ7611	Crowhurst, East Sussex	Sussex
SZ8299	Birdham, West Sussex	Sussex
SK5280	Thorpe Salvin, South Yorkshire	Yorkshire

Table 3: Number of BC and BBS WCBS squares covered by Branch areas in 2018 and comparison with 2017.

	BC 2018	BC net change from 2017	BBS 2018	BBS net change from 2017	Total 2018	Total net change from 2017	% of total	Rank 2018	Rank 2017
Dorset	57	1	4	–1	61	0	7.7	1	1
Gloucestershire	43	4	6	0	49	4	6.2	2	2
Bedfordshire and Northants	40	5	8	–1	48	4	6.1	3	3
Sussex	20	0	25	1	45	1	5.7	4	3
Hampshire and Isle of Wight	27	–2	10	–1	37	–3	4.7	5	5
Surrey and SW London	24	1	9	–3	33	–2	4.2	6	8
Suffolk	25	–6	8	0	33	–6	4.2	6	6
Norfolk	24	–9	7	1	31	–8	3.9	8	6
Upper Thames	11	1	19	2	30	3	3.8	9	12
East Scotland	21	1	9	–2	30	–1	3.8	9	10
Yorkshire	9	5	20	–8	29	–3	3.7	11	9
Cumbria	26	4	3	–2	29	2	3.7	11	12
Cambridgeshire and Essex	14	–1	15	1	29	0	3.7	11	11
East Midlands	15	2	11	2	26	4	3.3	14	17
Herts and Middlesex	14	5	11	2	25	7	3.2	15	20
Kent	5	–2	19	1	24	–1	3.0	16	15
Somerset and Bristol	12	8	11	2	23	10	2.9	17	25
Lancashire	13	2	10	–1	23	1	2.9	17	17
Wiltshire	14	11	8	4	22	15	2.8	19	28
South Wales	8	1	13	–5	21	–4	2.7	20	15
Northern Ireland	15	–5	5	–1	20	–6	2.5	21	14
West Midlands	9	2	9	2	18	4	2.3	22	24
Cheshire and Peak	10	–1	6	–1	16	–2	2.0	23	20
Highlands and Islands	12	3	2	–1	14	2	1.8	24	26
North Wales	9	–1	5	0	14	–1	1.8	24	22
Devon	5	–2	9	–4	14	–6	1.8	24	19
Glasgow and South West Scotland	9	–1	4	–1	13	–2	1.6	27	22
Cornwall	10	2	1	–2	11	0	1.4	28	27
North East England	9	3	1	1	10	4	1.3	29	30
Lincolnshire	4	3	2	–1	6	2	0.8	30	31
Warwickshire	5	–1	0	–1	5	–2	0.6	31	28
Isle of Man	1	0	0	0	1	0	0.1	32	32

BC Branches with high availability of unsurveyed squares

In total there are 10 BC Branches that are high priority areas (figure 1), this is two fewer than in 2017. As a result of increased coverage in 2018 three BC Branches are no longer high priority and are now medium priority areas, these are Hertfordshire and Middlesex with gains of seven squares (5 BC and 2 BBS); Somerset and Bristol with gains of 10 squares (8 BC and 2 BBS) and Wiltshire with gains of 15 squares (11 BC and 4 BBS). This is fabulous progress and all being well these squares will be retained in future years. However, due to a fall in coverage in 2018, Devon Branch has been elevated to a high priority area having lost a total of six squares (–2 BC and –4 BBS). We are keen to get the lost squares reinstated for the 2019 season. Improved coverage in the Upper Thames Branch area (+3 squares, 1 BC and 2 BBS) meant that it has been removed from the priority lists. In total there are 10 BC Branch areas where coverage is considered to be good. Table 3 shows the number of BC and BBS WCBS squares covered by the different BC Branch areas in 2018 and a comparison with 2017.

Several BC Branches experienced their most successful year in the WCBS in 2018, in terms of coverage. These were: Beds and Northants, Cumbria, Gloucestershire, Lancashire and Wiltshire. Cornwall had its best years since 2011 and Dorset had its best year since 2017. Coverage of BBS squares in Suffolk was also the best it has been since the start of the scheme. These improvements in coverage are welcomed, particularly in Lincolnshire where participation continues to be low and thus a priority. On the flip side, five BC Branches had their least successful year in terms of coverage. These were: Cheshire, Devon, Glasgow and South West Scotland, Norfolk and South Wales. The reduction in squares covered in these areas was due to reduced participation by both BC and BBS volunteers. We are keen to reverse this trend in the coming survey season.

ID FEATURE

Discover Dragonflies and Damselflies

Dave Smallshire & Andy Swash *– authors of the Princeton WILDGuides field guide Britain's Dragonflies, now in its 4th edition.*

Dragonflies are stunning and amazing insects! They are often very brightly coloured, kill for a living and have phenomenal powers of sight, flight and manoeuvrability. There are 46 breeding species in Great Britain plus one more in Ireland. Dragonflies are characterized by having an aquatic larval stage, incomplete metamorphosis (i.e. they don't pupate), two pairs of wings and large, compound eyes. Powerful muscles in the thorax enable them to fly at up to 36km/h. Multi-faceted eyes provide excellent colour vision and acuity. Add to this a deathtrap of a food-collecting 'basket' of legs and razor-sharp mandibles, and you have quite a fearsome beast! Fortunately, despite appearances, they are completely harmless to humans. Dragonfly populations are highly dynamic and these are exciting times for the dragonfly watcher, as several species have colonized Britain in recent years.

Here we deal with some of the common and mobile species that are most likely to be seen along transects. They include those often found well away from water, as well as common species that could be encountered when a transect passes a water body. Species that breed in running water tend to wander more freely than those from standing waters.

As with birds, females and immatures can present problems, being duller than mature males, which are generally more brightly coloured, easier to identify and comprise the majority of individuals seen at water bodies. Photographs can be very helpful with identification, so consider taking a camera with you.

Damselflies

- Typically small size and dainty proportions
- Flight usually weak and brief
- Wings usually held together over back
- Front and hind wings identical in shape

Dragonflies

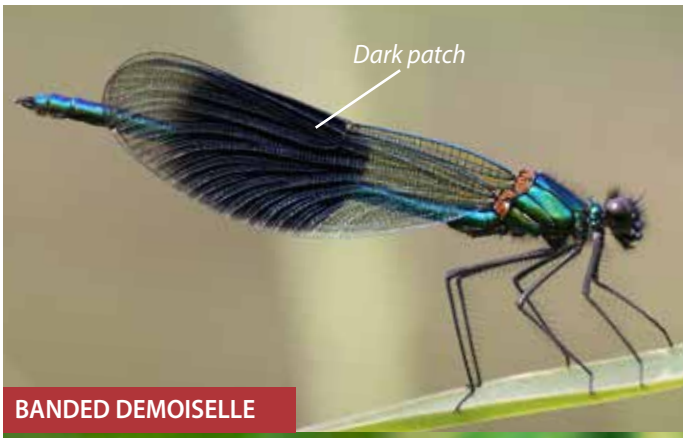
- Robust form
- Flight powerful, often persistent and hovering
- Wings held at right angles to the body at rest
- Front and hind wings have different shapes

BANDED AND BEAUTIFUL DEMOISELLES

Large damselflies with a metallic blue or green body and dark (male) or tinted (female) wings; distinctive fluttering wingbeats; usually at running waters, but often wander. **Banded Demoiselle** breeds in slow-flowing, muddy-bottomed waters, **Beautiful Demoiselle** in fast-flowing, gravelly-bottomed waters.

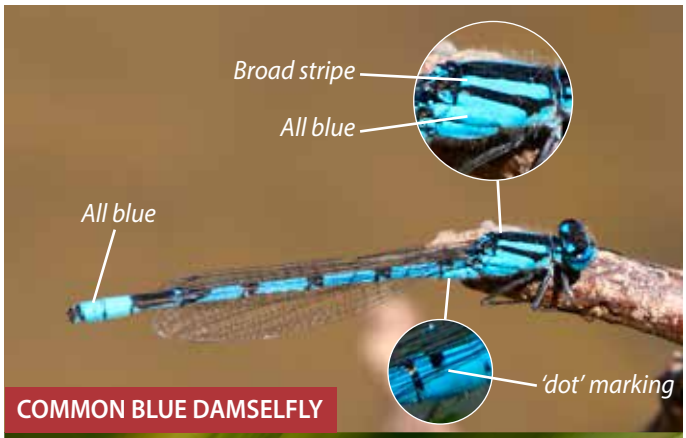
COMMON BLUE and AZURE DAMSELFLIES

Common, widespread, medium-sized blue (male) damselflies with pale 'shoulder' stripes and complex black abdominal markings; female abdomen more extensively patterned black on variable base colour (blue or green). **Common Blue Damselfly** breeds at large ponds and lakes, where males patrol well out low over the surface, but often found well away from water. **Azure Damselfly** breeds in small ponds and ditches, less mobile.

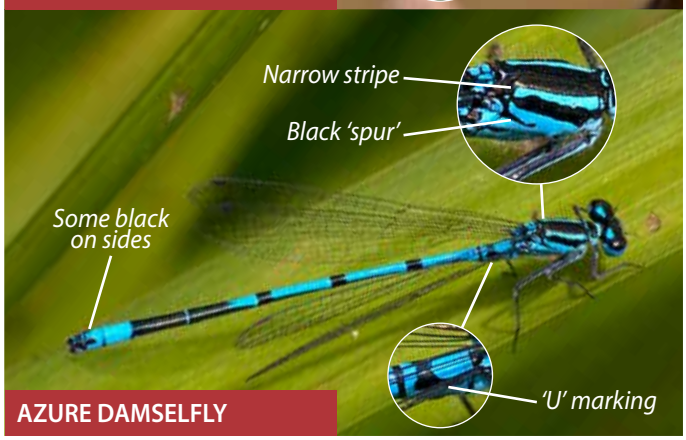


BANDED DEMOISELLE

BEAUTIFUL DEMOISELLE



COMMON BLUE DAMSELFLY

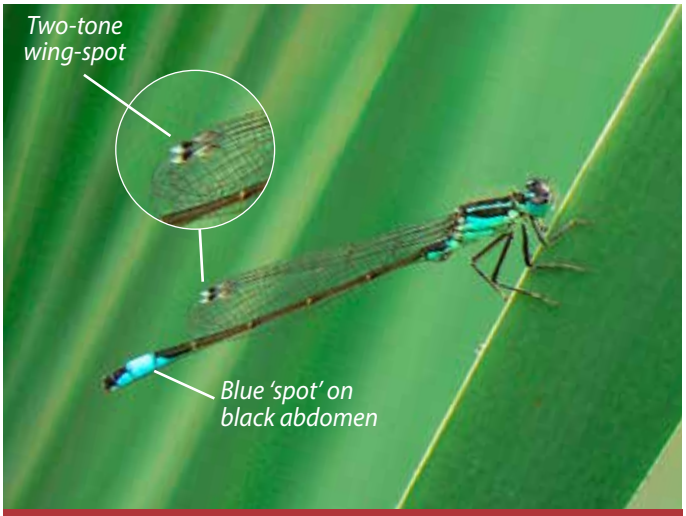


AZURE DAMSELFLY

All dragonfly records gathered along WCBS transects are collated and sent to the British Dragonfly Society for validation.

BLUE-TAILED DAMSELFLY

Small damselflies with two-tone wing-spots; top of abdomen of both sexes largely black, males and most females having blue spot near tip; more likely to be seen mating than other damselflies.



BLUE-TAILED DAMSELFLY (male)

LARGE RED DAMSELFLY

Medium-sized with mainly red eyes and abdomen; bronzy-black patches on tip of abdomen (hard to see in strong sunlight); females have variable amounts of black and red on abdomen; first species to fly in spring.

LARGE RED DAMSELFLY

COMMON DARTER

Small dragonfly with orange-red (mature male) or yellowish-brown (female/immature) abdomen; typically sit on bare surfaces or prominent perches, from which they dart to catch prey, often returning to the same spot; very common from summer well into autumn.

COMMON DARTER (male)

BROAD-BODIED CHASER

Squat, medium-sized blue or brownish dragonflies with dark markings at the base of the hindwings (not always easy to see); males have broad, pale blue abdomen; females brown with yellow spots on sides of abdomen. Readily colonizes new ponds. Often seen away from water on prominent perches, from which they sally forth to catch food before returning to the same spot.

BROAD–BODIED CHASER (male)

See next page for more dragonflies to look out for!

LARGE DRAGONFLIES

Large, robust dragonflies with long abdomen; powerful, persistent flight; perch vertically.

Emperor Dragonfly Green eyes and thorax, which is virtually unmarked; abdomen blue with irregular black marking down centre. Territorial males patrol over water for long periods above waist height, from May onwards.

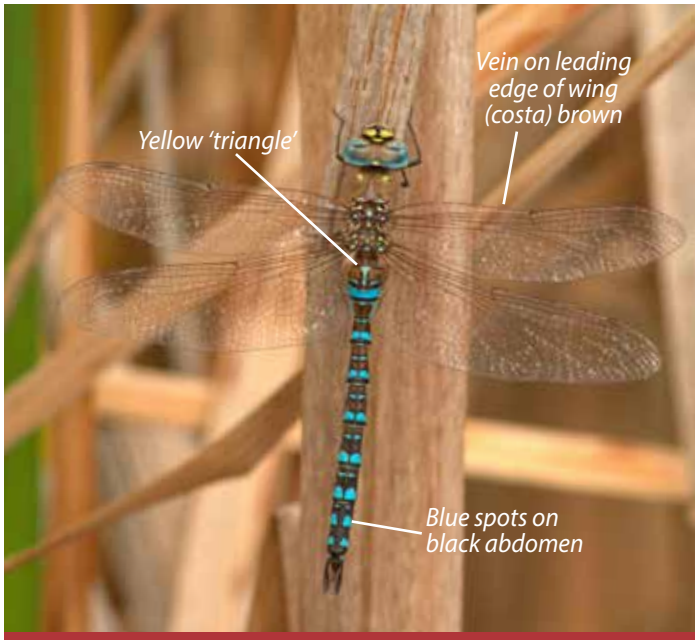
Southern and Migrant Hawkers Colourful with complex patterning; widespread in late summer–autumn. (Note that Common Hawker is similar, but despite its name is not common, being found mainly found on moorland and heathland.)

Brown Hawker Mainly brown body and golden wings.

Golden-ringed Dragonfly Black with bold yellow markings: broad stripes on top and sides of thorax, and alternate broad and narrow bands ('rings') on the abdomen; green eyes; breeds in flowing waters, where males patrol just above the surface.

EMPEROR DRAGONFLY (male)

SOUTHERN HAWKER (male)



MIGRANT HAWKER (male)

BROWN HAWKER (male)

GOLDEN-RINGED DRAGONFLY (male)

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Butterfly Conservation · Centre for Ecology & Hydrology · BTO · JNCC · United Kingdom Butterfly Monitoring Scheme

How to do a FIT Count

UK Pollinator Monitoring Scheme

As partners in the UK Pollinator Monitoring Scheme, the WCBS team encourage you to take part in the "Flower-Insect Timed Count" or FIT Count survey in your WCBS squares. The FIT Count is a simple survey to collect data on pollinator numbers. It works equally well in rural or urban locations. All the materials and guidance you need are available on the PoMS website including: FIT Count Survey Guidance, Flower Guide, Insect Guide, and Recording Form, plus video how-to guides.

Find a location containing a target flower species.
There are 14 common flower species that we recommend you use, as listed in the Flower Guide, but you can use a different flower if there isn't a main target nearby.

Designate a 50 x 50 cm² patch.
Instructions on how to make a quadrat are given in the Survey Guidance. Take a picture of your patch.

Count how many target flowers are in your patch.
Use the Survey Guidance and Flower Guide for information on how to count different flowers.

Set a timer for 10 minutes and watch that spot!
Stand close enough to the flowers to see visiting insects easily, but try not to lean right over the flowers as this can prevent insects from visiting.

Record all the pollinators you see using the PoMS Recording Form. You only need to identify groups, not species. Only count insects that land on your target flower
species, and try to count each insect only once. Please refer to the Survey Guidance for more advice.

Add your results to the PoMS form on the iRecord website (www.brc.ac.uk/irecord/poms-fit-count). All counts – even just one – are useful to the project, but if you are able to return and count again during the year, that's fantastic!

Please visit the website for full details on how to complete your FIT Count:
www.ceh.ac.uk/pollinator-monitoring