

# Wider Countryside Butterfly Survey Annual Newsletter 2017 Season

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

*Comma (Henk Bosma/Dutch  
Butterfly Conservation)*



## Welcome to the WCBS

The Wider Countryside Butterfly Survey (WCBS) complements the conventional transect recording undertaken for the UK Butterfly Monitoring Scheme (UKBMS). The sampling design of the WCBS involves volunteers counting butterflies during the peak butterfly flight period along a fixed route within a 1km square. 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. These data feed into the UKBMS which produces annual population trends for butterflies in the UK. The results in this newsletter are preliminary analyses of occurrence. Full population trend results using both WCBS and transect data, 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.

Over the past nine years a total of 1,755 WCBS squares have been surveyed, 952 (54%) by Butterfly Conservation (BC) volunteers and 803 (46%) by British Trust for Ornithology (BTO) volunteers. A total of 14,510 visits have been made by approximately 1,650 recorders who have counted 844,244 butterflies of 51 species. The top six most widespread butterflies over this period have been Meadow Brown (found in 87% of sampled squares), Large White (84% of squares), Small White (84%), Green-veined White (77%), Small Tortoiseshell (76%) and Red Admiral (74%).

The UK Butterfly Monitoring Scheme is organised and funded by Butterfly Conservation, the Centre for Ecology and Hydrology, British Trust for Ornithology, and the Joint Nature Conservation Committee. The UKBMS is indebted to all volunteers who contribute data to the scheme.

*Common Blue (Tim Melling)*



## Coverage in 2017

A total of 774 WCBS squares were surveyed in 2017. This represents an increase of three from 2016 indicating that participation in the scheme is currently stable. Across the 774 squares BC volunteers covered (63%) of squares and BTO/Breeding Bird Survey (BBS) volunteers covered 37% of squares.

Involvement in the WCBS varied at the county level across the UK, with Dorset covering the greatest number of squares compared to Lincolnshire, which covered the fewest squares. The greatest gains in coverage were in the following BC Branch areas: Bedfordshire and Northamptonshire, Suffolk, and Gloucestershire which gained 13, 11 and 10 squares respectively, compared with 2016. In Bedfordshire and Northamptonshire this gain was primarily a result of increased uptake of BC squares (+10). The same was true for Suffolk (+10) and Gloucestershire (+9). BTO/BBS gains were greatest in Devon where 7 squares were added to 2016 totals.

The greatest losses occurred in the following BC Branch areas: North East England (-9), Yorkshire (-8) and Somerset and Bristol (-8). This was a result of a drop in participation by both BC and BTO/BBS volunteers. Two of these areas - North East England, and Somerset and Bristol had their poorest participation in the WCBS since the scheme began.

When considering coverage at the country level, the majority of squares surveyed were in England with 649 (83.9%), followed by Scotland 58 squares (7.5%), Wales 40 (5.2%), Northern Ireland 26 (3.4%), and the Isle of Man one square (0.1%).

Over 3,000km of line transects were walked by nearly 650 recorders with 1,733 visits carried out. During the core July and August recording period 85% of squares received the minimum requirement of two visits. An additional 220 spring visits to 149 squares were made from April to June, with Orange-tip being seen in 55 squares. The two squares that received the greatest number of visits over the season were a BTO/BBS square in Norfolk receiving eight visits and a BC square in Gloucestershire which received seven visits. Many thanks to everyone who takes part and supports the WCBS, your involvement is much appreciated.

## 2017 SURVEY

# Results round-up

During the 2017 WCBS season a total of 86,032 butterflies of 46 species were counted; this is one more species than last year. Silver-spotted Skipper and Grizzled Skipper were recorded in WCBS squares this year but not in 2016, whilst Marsh Fritillary was absent from the WCBS in 2017. Eighteen habitat specialist species were seen along with 25 common and widespread species and three regular migrants.

During the core recording period (July-August) 657 squares received the required two summer visits. The number of visits in this period was 1,314 and 70,922 butterflies of 44 species were counted, one more than last year, with Silver-spotted Skipper being the addition, with records in Hampshire and Sussex. The busiest survey day was 17 July 2017 when 89 visits took place, with 31 species seen and 7,880 butterflies counted. Twenty four species (one more than 2016) were present in more than 30 squares, meeting the target for 'adequate' coverage, and 21 species (3 more than 2016) had excellent coverage being present in over 100 squares.

For the eighth consecutive year Meadow Brown was the most widespread butterfly, occupying 86.6% of squares. Of the 24 wider countryside species seen during the core recording period, 50% of species became more widespread and 50% less widespread than in 2016. Five species were found more widely than in any other year in the WCBS, these being:



Red Admiral (Tim Melling)



Green-veined White (Iain H Leach)

Red Admiral, Comma, Brimstone, Silver-washed Fritillary and Dark Green Fritillary.

Red Admiral increased in occurrence by 16 percentage points from 2016 levels, rising to third place in the rankings. This increase was seen in all UK countries, with the greatest increases occurring in Scotland (+34 percentage points) and Northern Ireland (+30 percentage points). In fact Red Admiral was the species that showed the greatest increase in Scotland, Wales and Northern Ireland compared to 2016 figures. The other two regular migrant species Clouded Yellow and Painted Lady remained at similar occurrence levels to 2016. Comma increased by 17 percentage points on the previous year being present in 54% of squares. Comma fared particularly well in England, (+20 percentage points) and Wales (+14). Changes in occurrence were more modest for Brimstone, Silver-washed Fritillary and Dark Green Fritillary. Common Blue experienced the biggest increase in occurrence between 2016 and 2017, increasing by 17 percentage points overall (England, +20 percentage points and Wales, +17 percentage points). This is a welcome recovery for this species because in 2016 the butterfly had its worst year in the WCBS since the cold wet summer of 2012. Small Copper was more widespread than in any year since 2013; increasing seven percentage points over 2016 levels. The increase occurred in England (+9 percentage points), Scotland (+10), Wales (+4), whilst occurrence in Northern Ireland fell by 11 percentage points. Speckled Wood fared particularly well in Scotland and Northern Ireland,

with occurrence up from 2016 levels by 15 and eight percentage points respectively.

Green-veined White suffered the most substantial annual decrease in 2017, down 11 percentage points from 2016, and being less widespread than in any other year of the WCBS. Ringlet was less widespread by nine percentage points in 2017 compared with 2016. At the country level, Meadow Brown fared worst in Northern Ireland, being down by 22 percentage points; Small Skipper fared poorly in Wales suffering a 12 percentage point drop; and in Scotland Small Tortoiseshell fell by 5 percentage points.

Maximum day counts included 407 Meadow Brown (recorded on the 2 July at a square near to Stunts Green, East Sussex), 321 Meadow Brown (on 13 July near Biddenden, Kent), and 318 Ringlet (13 July near Church Westcote, Gloucestershire). Maximum counts for habitat specialists included: 95 Silver-studded Blues near Burley Hampshire; 61 Silver-washed Fritillaries near Ibworth, Hampshire; 49 Graylings near Butley, Suffolk and 47 Adonis Blues near Langton Matravers, Dorset. The latter square supported three other habitat specialist species - Dingy Skipper, Lulworth Skipper and Dark Green Fritillary.

WCBS recorders are encouraged to count the day-flying moths and dragonflies that they encounter when doing their butterfly surveys.

**Moths** were counted in 142 (18% of the total) squares, one percentage point greater than in 2016. In total 590 individuals of 39 species (eight more species than in 2016) were counted. Silver Y was once again the most widespread species, occurring in 37% of squares (12 percentage points more than in 2016). For the fourth consecutive year, Six-spot Burnet was the second most widespread moth occurring in 13% of squares (eight percentage points fewer than 2016). Humming-bird Hawk-moth was in the top six most widespread moth species, being found in 6% of squares, confirming this species had a good migratory year.



*Humming-bird Hawk-moth (David George Clarke)*

**Dragonflies** were counted in 184 squares (23%) of all squares surveyed, thirteen percentage points fewer than 2016. A total of 1,844 individuals of 23 species were counted. Common Darter was the most widespread dragonfly occurring in 40% of WCBS squares (6 percentage points higher than in 2015). Brown Hawker and Southern Hawker were reported from one-third of all squares.



*Common Darter (Iain H Leach)*

**Table 1: How widespread were butterflies on WCBS squares in 2017 and comparisons with 2016 during repeat July and August visits.**

| Species                         | % squares recorded in 2017 | Change in % points from 2016 | 2017 rank | 2016 rank |
|---------------------------------|----------------------------|------------------------------|-----------|-----------|
| Meadow Brown                    | 86.6                       | -5.0                         | 1         | 1         |
| Small White                     | 79.9                       | -5.1                         | 2         | 3         |
| Red Admiral                     | 79.1                       | 15.8                         | 3         | 8         |
| Large White                     | 76.7                       | -8.9                         | 4         | 2         |
| Gatekeeper                      | 72.9                       | 3.1                          | 5         | 5         |
| Speckled Wood                   | 70.2                       | 5.7                          | 6         | 7         |
| Green-veined White              | 61.0                       | -10.9                        | 7         | 4         |
| Ringlet                         | 58.4                       | -9.4                         | 8         | 6         |
| Comma                           | 54.5                       | 16.5                         | 9         | 11        |
| Small Tortoiseshell             | 51.6                       | -4.6                         | 10        | 9         |
| Peacock                         | 45.1                       | 3.4                          | 11        | 10        |
| Common Blue                     | 40.3                       | 17.4                         | 12        | 15        |
| Small Skipper                   | 26.0                       | -2.1                         | 13        | 12        |
| Brimstone                       | 22.7                       | 4.1                          | 14        | 16        |
| Small Copper                    | 18.9                       | 7.7                          | 15        | 21        |
| Large Skipper                   | 18.9                       | -5.8                         | 15        | 13        |
| Painted Lady                    | 17.8                       | -0.1                         | 17        | 18        |
| Marbled White                   | 16.6                       | -2.0                         | 18        | 16        |
| Holly Blue                      | 16.6                       | -6.8                         | 18        | 14        |
| Small/Essex Skipper             | 15.7                       | -1.4                         | 20        | 19        |
| Small Heath                     | 15.4                       | 0.7                          | 21        | 20        |
| Silver-washed Fritillary        | 11.9                       | 5.2                          | 22        | 23        |
| Essex Skipper                   | 10.2                       | 0.7                          | 23        | 22        |
| Wall Brown                      | 7.0                        | 0.9                          | 24        | 24        |
| Brown Argus                     | 6.4                        | 2.7                          | 25        | 25        |
| Dark Green Fritillary           | 4.3                        | 2.0                          | 26        | 27        |
| Clouded Yellow                  | 3.8                        | 1.7                          | 27        | 28        |
| Purple Hairstreak               | 3.3                        | 1.4                          | 28        | 30        |
| Grayling                        | 2.3                        | -0.1                         | 29        | 26        |
| White Admiral                   | 2.1                        | 0.0                          | 30        | 28        |
| Orange-tip                      | 1.1                        | -0.1                         | 31        | 32        |
| Scotch Argus                    | 1.1                        | -0.4                         | 31        | 31        |
| Chalk Hill Blue                 | 0.9                        | 0.4                          | 33        | 35        |
| Silver-spotted Skipper          | 0.5                        | 0.5                          | 34        | -         |
| Brown Hairstreak                | 0.5                        | -0.2                         | 34        | 33        |
| White-letter Hairstreak         | 0.5                        | -0.2                         | 34        | 33        |
| Adonis Blue                     | 0.3                        | 0.1                          | 37        | 40        |
| Large Heath                     | 0.3                        | 0.1                          | 37        | 40        |
| Purple Emperor                  | 0.3                        | 0.1                          | 37        | 40        |
| Silver-studded Blue             | 0.3                        | 0.1                          | 37        | 40        |
| Lulworth Skipper                | 0.3                        | -0.2                         | 37        | 35        |
| Small Pearl-bordered Fritillary | 0.3                        | -0.2                         | 37        | 35        |
| Northern Brown Argus            | 0.2                        | 0.0                          | 43        | 40        |
| Dingy Skipper                   | 0.2                        | -0.2                         | 43        | 38        |
| Wood White                      | 0.2                        | -0.2                         | 43        | 38        |

## NEWS

# Latest from the WCBS

## New discoveries

The WCBS has a valuable contribution to make with regard to butterfly distribution discoveries. In 2017 the WCBS generated butterfly records for six previously un-recorded (i.e. having no butterfly records) 1km squares. Since 2010, there have been 54 new 1km records for 13 habitat specialist species, including 24 new squares for Silver-washed Fritillary (from Cornwall to Lancashire) and 11 new squares for Dark Green Fritillary (from Devon to Moray). Both these species are doing reasonably well with positive long-term population trends. White-letter Hairstreak was found in two new 1km squares, one near Newton, Cheshire and another at Wangford Warren, Suffolk. This is welcome news as this is the UK's most rapidly declining species (-72% drop in abundance in the last 10 years), and is in acute long-term decline (-97% reduction in abundance since 1976). Declines started in the 1970s when the caterpillar foodplant, Elm, was reduced by Dutch Elm disease.

A June visit to a square near Bramber, West Sussex resulted in the discovery of a new 1km square for Grizzled Skipper. A total of 26 were counted, and these were the only records of Grizzled Skipper for the WCBS in 2017, demonstrating the value of visits ahead of the main July-August period.

## Online system

The new online data entry system has been largely successful with 87% of data entered online by recorders. However, as with the adoption of any new system some people have struggled. We are confident that over time, familiarity and competence with the system will grow. For those of you who haven't embraced the new technology the instructions in the green box below may help. You could even cut these out and keep them!

There are now over 2,355 registered users (39% more than this time last year); 273 are WCBS-BC recorders, 255 are BBS recorders and the remainder are traditional transect recorders. Data collation and duplicate checking was simplified this year as the old WCBS data entry system was disabled and there was only one system in operation.

[Comprehensive guidance notes](#) including details on how to register are available to download from the homepage of the website [www.ukbms.org/mydata/](http://www.ukbms.org/mydata/). These provide details on using all aspects of the system. Screen shots are included to help those who don't like too much text.

There are several key benefits to the new system: recorders can review and edit their own data; County Butterfly Recorders, WCBS Branch Champions and Transect Co-ordinators have access to the data (if they are registered and set up) and can track progress throughout the season; recorders can also get instant feedback of sightings and results across the network of UKBMS sites (WCBS squares as well as traditional transects).

Data for taxa other than butterflies, moths and dragonflies can also be entered via the UKBMS online portal.

We have received records for around 150 other species including mammals, birds, reptiles, hoverflies, beetles, grasshoppers, shield-bugs and bumblebees. These data will go into the iRecord database for verification and be available to the relevant national recording schemes.

## WCBS Holiday squares

BC has secured funding to develop a website that will show WCBS squares that are under-recorded in both lowland and upland areas. The uplands are under-recorded, yet popular as holiday destinations. The website will enable people visiting these areas on their holidays to know of sites needing surveying. Coverage and uptake of WCBS squares in Glasgow and South West Scotland, Highlands and Islands, North East England, North Wales and the Peak District could be significantly improved. There are lowland squares available to survey in other popular holiday counties such as Cornwall, Somerset, Lincolnshire, Warwickshire and Wiltshire.

We hope this website will also facilitate an increase in the number of participants as it will make the scheme more accessible to a wider audience than the current methods of promotion. The WCBS provides a fantastic opportunity to get off the 'beaten-track' and engage with nature in new locations.

We envisage the development of this website will ensure that the WCBS continues to grow and contribute valuable data on common and widespread butterflies to the overarching UKBMS. These scientifically robust data are used to inform our conservation work and by Government to inform policy.



### WCBS online simple instructions for WCBS-BC squares

1. Register [here](#) (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 transect routes, 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.
- Full detailed instructions are available by following this [link](#).

### WCBS online simple instructions for WCBS-BBS squares

1. Register [here](#) (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 transect routes, 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.
- Full detailed instructions are available by following this [link](#).

## NEWS

## UK Butterfly Recorders' Meeting

Our annual UK Butterfly Recorders' Meeting will be held on Saturday 24 March 2018 at the Birmingham and Midland Institute, central Birmingham. This popular event is open to anyone interested in butterfly recording, monitoring and conservation. The programme has been finalised and is available [here](#). It is at this meeting that the official butterfly population trends from the previous year from the UKBMS transect network are announced. This year is Butterfly Conservation's 50th anniversary and Dr Martin Warren will be taking a retrospective look at important scientific insights from the 50 years of butterfly recording and monitoring. In addition to this, Professor Chris Thomas will be considering what the next 50 years hold for the UK's Lepidoptera.

Please remember to bring your wallets or purses as for the first time we will have stall holders in attendance. Confirmed stall holders so far are the wildlife illustrator [Richard Lewington](#), [Atropos Books](#), [Hachiware Art](#) and [NHBS](#).

If you would like to attend what is always an interesting day please book via our [online booking system](#). The (heavily subsidised) registration fee is £10.00 per person and includes morning tea/coffee and a buffet lunch. Of course, if you do not have access to the online booking system alternative arrangements can be made on request, please contact [info@butterfly-conservation.org](mailto:info@butterfly-conservation.org) or phone 01929 400209.

## Butterfly Conservation 2018 Symposium

Butterfly Conservation's eighth International Symposium will be held from 6 – 8 April 2018 at the University of Southampton. The latest research findings in the ecology and conservation of butterflies and moths will be revealed. The full programme is available [here](#). Keynote speakers include Professor Vojtech Novotny of the Czech Academy of Sciences who will speak about the tropical diversity of rainforest moths and butterflies; Dr Martin Warren, who will be providing a review of the 50-year history of Butterfly Conservation and Richard Fox, who will be presenting an overview of 50 years of moth conservation within

Butterfly Conservation. Other keynote speakers include Professor Jane Hill and Dr Scott Hoffman Black. There will also be a number of presentations using UKBMS data. More information and booking details can be found [here](#).

## Butterfly Events

Below we give a selection of BC 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 BC Branch and for details of other training and identification events please visit the 'In your area' [page](#) of the Butterfly Conservation website.

### Dorset

Dorset Branch holding a butterfly identification day for beginners who wish to take part in butterfly recording and monitoring. The event has an indoor element which will cover the theoretical techniques of identification. This will be followed by an outdoor visit to Giant Hill, a butterfly hotspot, to put the theoretical skills into practice. There is a £5 charge for attending and numbers will be limited so if you are interested you must book your place in advance by contacting Robin George.

Date & Time: Saturday 26 May, 9.30am to 4.00pm

Location: Cerne Abbas Village Hall, Kettle Bridge Lane, Cerne Abbas, Dorchester, Dorset, DT2 7GY

Contact: Robin George  
[rab.george@which.net](mailto:rab.george@which.net)

### Suffolk

Red Lodge Heath SSSI butterfly and moth day. Meet indoors to see moths trapped locally the night before, followed by a tour of the Red Lodge Heath SSSI. A rare day-flying moth is known to be on this site. Members, novices and families welcome.

Date & Time: Saturday 21 July, 10am, tour about 11:30am, end about 1pm

Location: Millennium Centre, Magnolia Close IP28 8TT, Map ref: TL699703

Contact: Twm Wade [twm.wade@yahoo.com](mailto:twm.wade@yahoo.com) 01638 577446 or 07743 305363

### Scotland

#### Butterfly Transect Workshop: Perth

A butterfly transect training day that will cover everything you need to know about identifying the butterflies you're likely to see, walking an existing transect

or establishing your own. Places are free but booking in advance is required. The events are suitable for all, but children under 16 should be accompanied by an adult.

Date & Time: Saturday 24 March 2018, 10am to 3pm

Location: North Muirton Community Centre, Perth, PH1 3BZ

Contact: Anthony McCluskey  
[amcccluskey@butterfly-conservation.org](mailto:amcccluskey@butterfly-conservation.org) or phone 07730221266

#### Butterfly Transect Workshop: Dundee Law

Attendees will be shown how to identify the butterflies they are likely to see. A new transect route will be established along the Dighty Burn. Places are free but booking in advance is required. The events are suitable for all, but children under 16 should be accompanied by an adult.

Date & Time: Tuesday 27 March 2018, 10am-3pm

Location: St David's High Kirk, 121 Kingorne Road, Dundee, DD4 8SD

Contact: Anthony McCluskey  
[amcccluskey@butterfly-conservation.org](mailto:amcccluskey@butterfly-conservation.org) or phone 07730221266

#### Butterfly Transect Workshop: Dighty, Dundee

Another workshop to find out how to identify and record butterflies in Dundee. This workshop will show attendees how to identify the butterflies they are likely to see, and we'll also establish a new transect route along the Dighty Burn. Places are free but booking in advance is required. The events are suitable for all, but children under 16 should be accompanied by an adult.

Date & Time: Wednesday 28th March 2018, 10am-3pm

Location: Douglas Community Centre, Dundee, DD4 8SD

Contact: Anthony McCluskey  
[amcccluskey@butterfly-conservation.org](mailto:amcccluskey@butterfly-conservation.org) or phone 07730221266

These events are part of the Urban Butterfly Project, a three-year project funded by Heritage Lottery Fund, Scottish Natural Heritage, and Butterfly Conservation members.

## NEWS

### Northern Ireland

BC's annual Northern Ireland Recorders Day (NIRD) will provide an overview of the 2017 recording season, a look forward to priorities for 2018 and some of the current research in butterflies and moths, as well as a great opportunity to network with like-minded recorders.

Date & Time: Saturday 14 April 2018, 9:30am for a 10am start to 4pm

Location: Peatlands Park, 33 Derryhubbert Rd, Dungannon BT71 6NW

Contact: Catherine Bertrand  
[cbertrand@butterfly-conservation.org](mailto:cbertrand@butterfly-conservation.org)

### Wider Countryside Butterfly Survey (WCBS) Workshop

This workshop will cover everything you need to know about the WCBS, including field methods and square availability in Northern Ireland.

Date & Time: Tuesday 17 April 2018, 12pm to 4pm

Location: Whitla Medical Building/ Seminar Room 6 (WMB/SR6), First Floor, Queens University Belfast, Belfast BT9 7BL

Contact: Stuart Watson  
[wcbns.ni@gmail.com](mailto:wcbns.ni@gmail.com)

### Butterfly Walkers Workshop

This is BC Northern Ireland's third annual 'Thank You' event to volunteers and recorders who support the UKBMS through walking transects and undertaking surveys, although anyone with an interest in butterflies is welcome! There'll be updates on the UKBMS programme, opportunities to network with other volunteers and to get those burning questions answered!

Date & Time: Saturday 15 September 2018, 9:45am to 3pm

Location: Lough Neagh Discovery Centre, Oxford Island, Craigavon BT66 6NJ

Contact Rose Cremin  
[rcremin@butterfly-conservation.org](mailto:rcremin@butterfly-conservation.org)

## VIEWPOINT

### The BTO and the butterflies...

*Sarah Harris is the BBS National Organiser at BTO. She explains the BTO's involvement in the WCBS.*

The BTO is an independent charitable research institute 'inspired by birds and informed by science', using the expertise of both professionals and volunteers to design and implement a variety of bird monitoring programmes, and in turn, analyse the data collected to inform the public, conservation scientists, and those responsible for environmental policy. Moreover, our organisation's established reputation for impartiality enables our data and information to be used with equal confidence by Government and NGO campaigners.

So why, with this background in avian science, are we a partner in the WCBS, alongside BC, CEH and JNCC? We certainly feel that the BTO can make a valuable contribution to monitoring other taxa by using its expertise in survey design and implementation and the support and expertise of many thousands of volunteers passionate about the work of the BTO.

But, how exactly could that help with butterfly monitoring? In partnership with JNCC and RSPB, the BTO has run the Breeding Bird Survey (BBS) since the early 1990s, primarily to monitor the population trends of ca. 110 bird species across the UK. This survey is only possible through the dedication of over 2,700

volunteers who visit more than 3,900 randomly-selected 1km squares to walk a transect route twice during the breeding season and count all birds and mammals present. This is a close match to the WCBS where observers also walk transects two (or more) times per summer on randomly allocated 1km squares (as with BBS, to remove any bias in coverage towards 'favourable' butterfly or bird locations). But counting butterflies rather than birds. By the end of June, the BBS bird surveys are finished for the year and (sweeping statement alert) birders generally enjoy other wildlife too, especially if the wildlife in question has wings, like moths, dragonflies and butterflies! The WCBS therefore provides the opportunity for BTO volunteers to be involved in surveying something different, should they wish, on 'their own' BBS square.

Since its inception, BBS volunteers have contributed to around 40% of WCBS coverage each year. These contributions have significantly increased the data that feeds into the UKBMS and have improved capacity to produce robust and representative butterfly trends, particularly for the widespread species whose trends may differ between sites on semi-natural habitat and in the wider countryside. This has proved to be a good partnership, building on the resources and expertise of different organisations and providing information about changes in the abundance of multiple taxa on exactly the same site year after year. The fact that data from birds and butterflies are spatially matched allows



*Sarah Harris (Sally Harris)*

new analytical approaches and has already been used effectively to address significant ecological and conservation questions.

In addition to the scientific value of data collected by BBS volunteers for the WCBS, this partnership also reflects the desire and personal interest that BTO volunteers have to contribute to recording of taxa other than birds, especially outside of key bird-monitoring periods. Often it is just nice to go and revisit a 'known' BBS square at a different time of day and much later in the summer than during the annual bird counts.

BTO are very grateful to those individuals and organisations with whom we have been able to collaborate for the BBS and WCBS, and most importantly, to the volunteers who give so generously of their time to take part in both surveys.

## VIEWPOINT

## Peter Courtney – my time as a Branch Champion

**Introduction:** I have been a Branch Champion for Northern Ireland (NI) since 2013 and been involved in doing butterfly surveys in Greater Belfast since 2005. My role has been varied and rewarding in a number of ways: mentoring volunteers who need a hand with identification skills or ground surveying, doing training events, administration, leading walks, talking to members of the public at fairs and community events, and speaking at the annual recorders' meeting of the NI Branch of Butterfly Conservation. This is a few words about my experiences doing ground surveys over the last five years.

Prior to my role as Branch Champion, I was a transect walker for eight years at a nature reserve in South Belfast. I learnt a lot of useful things from walking Lagan Meadows; one memorable dry spell I saw over a dozen Green-veined Whites drinking at a muddy waterhole, by a gate, obviously attracted by the moisture and minerals to be found there. I was surprised and fascinated to observe such behaviour in a commonplace species, and bits of lesser known butterfly behaviour have intrigued me since then, for example, chancing upon a mass emergence of Peacocks in Clare Forest on the North Coast in late August 2014, and observing Speckled Woods attracted by over-ripe brambles on hedgerows at my regular site, White Hill, at Black Skull in West County Down.



*Long Mountain 8 August 2017 (Peter Courtney)*

**Preparation:** preparatory work has involved me in knocking on doors seeking access permission, and taking the odd detour or revising a route in the light of something new. I encourage volunteers undertaking an initial ground survey to take their time. It took me two years to finalise my Carryduff route. Inexperienced, and lacking any technical skills, I began plotting a route with only a sketch, found on the BCNI website. Initially confused as it was rather featureless, I fixed a route along the Killynure Road, an area a kilometre further west from the actual site. To compound my error, I did not survey any adjacent features to check they coincided with those on the map.

A year later, in 2013, having just become the WCBS Champion for BC NI, I reflected upon where I had gone wrong. Getting to know the Carryduff site, I had no concept

of ground truthing. My despondency about my wasted efforts later turned to ruefulness: why had my initial requests for help concerned only fixing a route rather than basic map reading?

**In the field:** My inexperience has however yielded some useful insights. One rule of thumb I have found helpful in this regard has been 'learn by doing'. At Slievenisky, near the Mourne, I was lucky to meet a shepherd, whose quad bike I watched traverse its flank. On many sites, the main difficulties are obstacles, usually either fences or watercourses. However, on upland sites, I am often tacking between navigation features, such as prominent trees or buildings, in order to check my position. Slievenisky is quite a low mountain and fortunately the timing of our visit gave me time to talk to the shepherd about access, permission and

*Long Mountain 8 August 2017 (Peter Courtney)*



## VIEWPOINT

retrace the route his quad bike took. The beginning of our second tramline began at the foot of the traverse, made easier to remember where his track ascended. This visit was salutary in another way leading to my discovery of a population of Small Heath on the way up.

Initially, I was mentored by my line-manager Catherine Bertrand of BC NI. Starting out, I had learnt to refer to aerial maps. Over several field trips with her, I applied my rudimentary field skills. One memorable trip was to the Grey Man's Path at Fairhead on the North Coast. The problem was relating what was on the ground to an overall map of the relief; it was just too nondescript and bare to either draw or interpret. A solution offered itself a year later when a local

ornithologist agreed to take Fairhead on. Using my field notes and Patrick's local knowledge, it was successfully mapped. Similar problems of mapping upland sites in the Mourne, a couple of years later, led me to abandon aerial maps in favour of Ordnance Survey maps.

When ground surveying, I try to find the most efficient way to cross the terrain as well as remember the route. On upland sites, where there is a gradient or a track to follow, crossing on foot is easier. Knowing landmarks helps with getting up and down. At one site in the Mourne, The Long Mountain, there is a steep gradient and no visible path. I was reliant on a volunteer to explain where to cross a dry stream bed and point out various cottages and Leylandii trees at

the foot of the mountain. I have to climb in an oblique manner with only the help of the landmarks below as a rough guide. Without any kind of natural contour to help, I rely on Bob's local knowledge about how to locate the tramlines higher up.

**Conclusion:** An OS map is essential for any volunteer. As well as preparing before a visit, I have found general features like pylons, quarries, way marked walks and parking useful in the field. They are a godsend when searching for sections of path or fence boundary on remote sites. I would also include local knowledge and ensuring all volunteers have basic map reading skills as essential tips for Branch Champions!

*Long Mountain 8 August 2017 (Peter Courtney)*



## GETTING INVOLVED

### Situations vacant

There have been several changes to the BC WCBS Champion line-up for the 2018 season; in Cornwall, Jim Barker has stepped aside for Kelly Uren; Martin Chadwick has taken over from Martin Tordoff in Cumbria; in Devon, Jenny Evans has taken on the role from Roger Bristow; Richard Bigg has stepped down from the role in Essex; for the East Midlands, Jane Broomhead is temporarily covering the Nottinghamshire area as Richard Rogers has stepped down; Peter Courtney has stepped down and handed over to Stuart Watson in Northern Ireland; Bill Downey has taken on Surrey and South West London from Harry Clarke; Scott Martin has stepped down in the West Midlands, a new Champion is being sought; and

finally, Janet Crittenden has taken over from Jane Martin in Wiltshire. The WCBS team are looking forward to working with the new recruits and thank their predecessors for their support and efforts with the WCBS across the Branches. A full list of BC WCBS Champions and their contact details can be found on the back page of this newsletter.

BC Branch Champions are lynchpins for the success of the WCBS. They are responsible for local promotion of the scheme to recruit volunteers; the provision of advice, support, encouragement and training to volunteers throughout the survey season along with gentle reminders of data submission deadlines and local feedback. There are a few vacancies for Branch Champions in various regions;

Cambridge and Essex: Essex; Lincolnshire; South Wales and the West Midlands. If you are interested in becoming a WCBS Branch Champion and helping to raise the profile of this important scheme please contact Zoë Randle via [survey@butterfly-conservation.org](mailto:survey@butterfly-conservation.org) or phone 01929 406006.

To gain an insight into the role of a Branch Champion, you can get information directly from the 'horse's mouth'; Peter Courtney has written an article on his experiences as Champion in Northern Ireland for this newsletter, you can read it on page 7. Steve Ryder, Champion for Lancashire wrote an article for the [2016](#) newsletter and Clare Topping reported on her experiences as Branch Champion in [2015](#).

## HURRY! SQUARES UP FOR GRABS

### SQUARE VACANT

**NY7189**  
**Falstone Forest**  
Kielder Forest Park



Photo © Peter McDermott (cc-by-sa/2.0)

This square, very close to Kielder water has easy access via woodland tracks and rides. The butterfly survey could be undertaken as part of a larger circular walk. It was last surveyed in 2016.

Contact **Brian Denham**  
✉ [denham1935@gmail.com](mailto:denham1935@gmail.com)



### SQUARE VACANT

**NN2787**  
**Leana Mhor**  
Highland



Photo © PeterJG1970 (cc-by-sa/2.0)

A 'white-hole' square with no previous butterfly records. Quite remote, outstanding views and Mountain Ringlets recorded in nearby 1km squares. This is a tempting square for an adventurous recorder!

Contact **Ewan Munro**  
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### SQUARE VACANT

**SU0869**  
**Avebury**  
Wiltshire



Photo © Alan Simkins (cc-by-sa/2.0)

Last surveyed in 2013 this square is easily accessible via footpaths. It also boasts the added attraction of Neolithic Standing Stones.

Contact **Janet Crittenden**  
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## Priorities for improving coverage 2018

On average 774 squares have been surveyed annually since the launch of the WCBS in 2009 (448 BC and 326 BTO BBS). The greatest participation was in 2013, the hottest summer since 2006, when 857 WCBS squares were surveyed. We are keen to increase coverage in the WCBS especially in upland areas of north and west Britain, where many recorders holiday, but few live. One way to tackle this is to link up recorders on holiday with survey opportunities (see news item on page 4 for more details of this exciting development).

### Achievements in 2017

Last year we appealed for people to revisit squares with long data runs that hadn't been surveyed since 2015. Four of these were revisited; SU7835 (BBS) Bordon, Hampshire; SU6833 (BBS) Kitwood, Hampshire; SN8002 (BBS) Clyne, Neath Port Talbot and TF5016 (BC) Walpole St. Peter, Norfolk.

Six squares with no previous butterfly records, were surveyed in 2017 a total of 84 records for 21 species were generated. The squares were as follows: NY3425 (BC) near to Scales, Cumbria; SP1227 (BC) near to Condicote, Gloucestershire; ST8288 (BC) near to Oldbury on The Hill, Gloucestershire; SP8254 (BC) near to Horton, Northamptonshire; TL0098 (BC) near to King's Cliffe, Northamptonshire and TM1982 (BC) near to Rushall, Norfolk.

The five squares that were resurveyed in 2016 for the first time since 2013 were also resurveyed in 2017; this continuity is of great benefit to the scheme. In Suffolk, a total of 39 squares were surveyed, this increase in coverage of 11 squares (10 BC / 1 BBS) has resulted in this area been removed from the priority area list Walpole St. Peter, Norfolk; this is fantastic news. In addition to this Suffolk has experienced its best year in the WCBS to date. Increased coverage in Devon (+5 squares) and Lancashire (+3 squares) has seen these areas reduced from high priority to medium priority areas. A total of 22 squares were covered in Lancashire, the greatest number for the area to date.

### Challenges for 2018

There are 127 randomly selected WCBS squares yet to be surveyed for which we have no butterfly records. For details please contact Butterfly Conservation via [survey@butterfly-conservation.org](mailto:survey@butterfly-conservation.org).

### Defunct squares with good data runs

There are 11 squares with a run of ten years of data (including pilot testing years pre-2009) that were not surveyed in 2017. It maybe that these squares were not surveyed due to other commitments. However, it would be great to get these re-instated for the 2018 season. Seven of these are BBS squares and details can be obtained from Sarah Harris ([sarah.harris@bto.org](mailto:sarah.harris@bto.org)) at the BTO. The four BC squares are: SS9944 Dunster, Somerset; ST0140 Withycombe, Somerset; ST1340 Bicknoller, Somerset and TF9040 Wells-Next-The-Sea, Norfolk. A further 33 squares have data-runs of nine years and another 16 have data runs of eight years but haven't been surveyed since 2016. Table 2 details the 27 squares which are co-ordinated by BC. Please contact the relevant WCBS Branch Champion for more information (see page 14).

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.

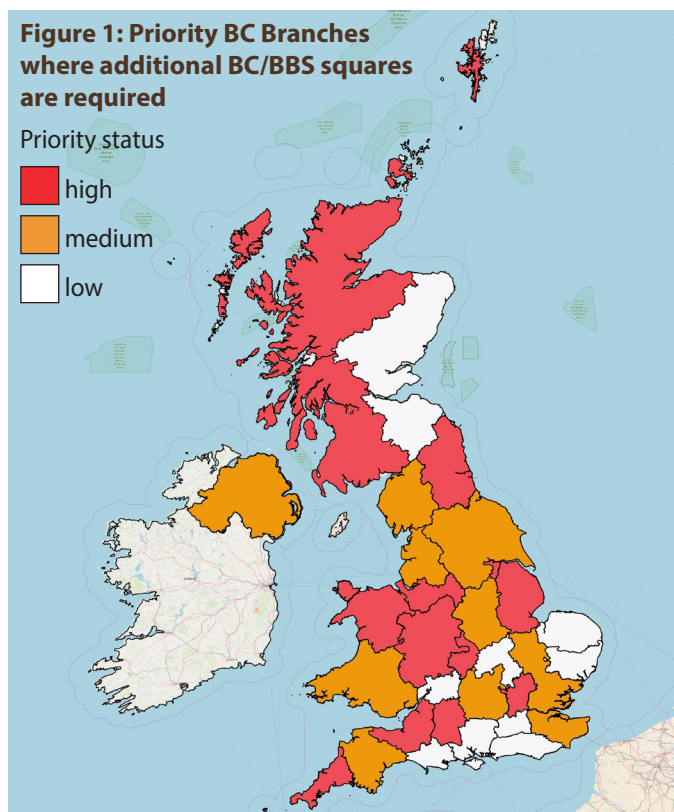
**Figure 1: Priority BC Branches where additional BC/BBS squares are required**

Priority status

high

medium

low



**Table 2: Available BC WCBS squares with long data runs**

| Square | Type | Branch                          |
|--------|------|---------------------------------|
| TL3962 | BC   | Cambridgeshire and Essex        |
| SJ6679 | BC   | Cheshire and Peak               |
| SX6153 | BC   | Devon                           |
| SX3783 | BC   | Devon                           |
| ST8518 | BC   | Dorset                          |
| ST9707 | BC   | Dorset                          |
| SY8985 | BC   | Dorset                          |
| SK2517 | BC   | East Midlands                   |
| SK2936 | BC   | East Midlands                   |
| NS6546 | BC   | Glasgow and South West Scotland |
| ST9198 | BC   | Gloucestershire                 |
| TL2831 | BC   | Herts and Middlesex             |
| TQ2688 | BC   | Herts and Middlesex             |
| SD7224 | BC   | Lancashire                      |
| H9560  | BC   | Northern Ireland                |
| J1476  | BC   | Northern Ireland                |
| J2263  | BC   | Northern Ireland                |
| J2678  | BC   | Northern Ireland                |
| C5805  | BC   | Northern Ireland                |
| J2097  | BC   | Northern Ireland                |
| SS7944 | BC   | Somerset and Bristol            |
| SS8838 | BC   | Somerset and Bristol            |
| SS9238 | BC   | Somerset and Bristol            |
| TQ3331 | BC   | Sussex                          |
| TQ5036 | BC   | Sussex                          |
| TQ7611 | BC   | Sussex                          |
| SE1028 | BC   | Yorkshire                       |

**Table 3: Number of BC and BBS WCBS squares covered by Branch areas in 2017 and comparison with 2016.**

|                                          | BC 2017 | BC net change from 2016 | BBS 2017 | BBS net change from 2016 | Total 2017 | Total net change from 2016 | % of total |
|------------------------------------------|---------|-------------------------|----------|--------------------------|------------|----------------------------|------------|
| <b>Dorset</b>                            | 56      | 4                       | 5        | 1                        | 61         | 5                          | 7.9        |
| <b>Gloucestershire</b>                   | 39      | 9                       | 6        | 1                        | 45         | 10                         | 5.8        |
| <b>Bedfordshire and Northamptonshire</b> | 35      | 10                      | 9        | 3                        | 44         | 13                         | 5.7        |
| <b>Sussex</b>                            | 20      | 0                       | 24       | -5                       | 44         | -5                         | 5.7        |
| <b>Hampshire and Isle of Wight</b>       | 29      | 5                       | 11       | 0                        | 40         | 5                          | 5.2        |
| <b>Suffolk</b>                           | 31      | 10                      | 8        | 1                        | 39         | 11                         | 5.0        |
| <b>Norfolk</b>                           | 33      | 2                       | 6        | -8                       | 39         | -6                         | 5.0        |
| <b>Surrey and SW London</b>              | 23      | -1                      | 12       | 2                        | 35         | 1                          | 4.5        |
| <b>Yorkshire</b>                         | 4       | -4                      | 28       | -4                       | 32         | -8                         | 4.1        |
| <b>East Scotland</b>                     | 20      | -4                      | 11       | 2                        | 31         | -2                         | 4.0        |
| <b>Cambridgeshire and Essex</b>          | 15      | 1                       | 14       | 3                        | 29         | 4                          | 3.7        |
| <b>Cumbria</b>                           | 22      | 4                       | 5        | -1                       | 27         | 3                          | 3.5        |
| <b>Upper Thames</b>                      | 10      | -2                      | 17       | -1                       | 27         | -3                         | 3.5        |
| <b>Northern Ireland</b>                  | 20      | 1                       | 6        | 2                        | 26         | 3                          | 3.4        |
| <b>South Wales</b>                       | 7       | -1                      | 18       | 0                        | 25         | -1                         | 3.2        |
| <b>Kent</b>                              | 7       | -2                      | 18       | 1                        | 25         | -1                         | 3.2        |
| <b>Lancashire</b>                        | 11      | 2                       | 11       | 1                        | 22         | 3                          | 2.8        |
| <b>East Midlands</b>                     | 13      | -2                      | 9        | -5                       | 22         | -7                         | 2.8        |
| <b>Devon</b>                             | 7       | -2                      | 13       | 7                        | 20         | 5                          | 2.6        |
| <b>Cheshire and Peak</b>                 | 11      | -1                      | 7        | -2                       | 18         | -3                         | 2.3        |
| <b>Herts and Middlesex</b>               | 9       | -3                      | 9        | 1                        | 18         | -2                         | 2.3        |
| <b>North Wales</b>                       | 10      | 1                       | 5        | 0                        | 15         | 1                          | 1.9        |
| <b>Glasgow and SW Scotland</b>           | 10      | -4                      | 5        | 0                        | 15         | -4                         | 1.9        |
| <b>West Midlands</b>                     | 7       | -2                      | 7        | -2                       | 14         | -4                         | 1.8        |
| <b>Somerset and Bristol</b>              | 4       | -6                      | 9        | -2                       | 13         | -8                         | 1.7        |
| <b>Highlands and Islands</b>             | 9       | -1                      | 3        | 0                        | 12         | -1                         | 1.6        |
| <b>Cornwall</b>                          | 8       | 2                       | 3        | 0                        | 11         | 2                          | 1.4        |
| <b>Warwickshire</b>                      | 6       | 3                       | 1        | 1                        | 7          | 4                          | 0.9        |
| <b>Wiltshire</b>                         | 3       | 0                       | 4        | -3                       | 7          | -3                         | 0.9        |
| <b>North East England</b>                | 6       | -4                      | 0        | -5                       | 6          | -9                         | 0.8        |
| <b>Lincolnshire</b>                      | 1       | 0                       | 3        | 0                        | 4          | 0                          | 0.5        |
| <b>Isle of Man</b>                       | 1       | 0                       | 0        | 0                        | 1          | 0                          | 0.1        |

**Squares in BC Branches with substantial coverage gaps**

Reduced coverage in three BC Branch areas has resulted in them being elevated from medium to high priority (Figure 1). These are Somerset and Bristol where eight squares (-6 BC and -2 BBS) were lost; Herts and Middlesex where there was a net loss of two squares (-3 BC, +1 BBS) and Cheshire and Peak, where three squares were lost (-1BC, -2 BBS). Participation in the WCBS in these three BC branch areas was the lowest since the start of the scheme in 2009.

Yorkshire and Upper Thames Branches have also been elevated to the medium priority list as a result of reduced participation

in the WCBS; -3 squares (-2 BC, -1 BBS) in Upper Thames and -8 squares (-4 BC, -4 BBS) in Yorkshire. Despite this, participation by BBS volunteers in Yorkshire was the best since 2013. Conversely, in Yorkshire, participation by BC volunteers was at its lowest since 2014 and down by 50% on 2016.

Areas that require considerable improvement in participation and uptake of WCBS squares are Lincolnshire, North East England, Wiltshire, Warwickshire, Cornwall, Highlands and Islands, Somerset and Bristol, West Midlands, Cheshire and Peak, Herts and Middlesex, North Wales and Glasgow and SW Scotland where fewer than 20 squares were surveyed in 2017 (see Table 3).

*We have 202 BC WCBS squares on our official list for which there are no butterfly records in the Butterflies for the New Millennium (BNM) database since 1999. Who knows what species these squares are harbouring, are you game enough to help us find out? Photo © Richard Dorrell (cc-by-sa/2.0)*

# Discover the day fliers

By **Robert Still** – One of the authors of the Princeton WILDGuides field guide *Britain's Day-flying Moths*, produced in association with *Butterfly Conservation*.

Day-flying moths are those that habitually fly during the day – nocturnal species will fly only if disturbed. Britain has more than twice as many 'larger' day-flying moth species as butterflies. It is fair to say that most are less conspicuous and not as brightly coloured as our more familiar butterflies, though closer inspection may reveal some delightfully intricate patterns. Most day-flying moths are widespread and fairly common within their preferred habitats, and here we present some identification tips for seven species that can be confusing – which will hopefully make your surveying more rewarding!

## The common Burnet moths

### Six-spot Burnet, Five-spot Burnet, Narrow-bordered-five-spot Burnet

Three species with narrow, red-on-black forewings that are held close to the body when at rest, and reveal a flash of red on the hindwings when in flight.

When it comes to identification, the clue is in the name – or so you might think...

**Six-spot Burnet** is the most commonly found species, preferring flowery grassland where bird's-foot-trefoils (the caterpillar foodplants) are found.

**ID:** Six spots, two close together where the forewing meets the body, and four in a 'dice-like' pattern on the central wing area.

**Five-spot Burnet** and **Narrow-bordered Five-spot Burnet** are very similar indeed. Narrow-bordered is found in rough grassland and is considerably more common than the Five-spot, which is associated with chalk downland and damp grassland.

The forewing spots of both species are similar: two close together where the forewing meets the body and a 'two-plus-one' pattern on the central wing area – although the 'two' can meet or be slightly merged... The hindwing border, which is usually hidden when at rest, is a comparative feature and there is some overlap in width between the two species.

**ID:** There are no reliable features – the most straightforward distinction is that, typically, the rarer Five-spot often has the two (sometimes all three) central wing spots in close proximity, or slightly merged, whereas the much more common Narrow-bordered almost always has these spots separated and well defined. If possible, check the border to the hindwing, as this can provide additional identification evidence. A good rule of thumb is: **merged spots and a broader border = Five-spot**; **separated spots and a narrower border = Narrow-bordered**. A further clue is the plants nearby – a five-spot burnet in an area where bird's-foot-trefoils are absent is almost certainly a Narrow-bordered.



*Six-spot Burnet (Patrick Clement)*



*Five-spot Burnet (Paul Brock)*



*Narrow-bordered Five-spot Burnet (Paul Brock)*

## The heaths

**Common Heath** is very widespread and, as its name suggests, is mainly found on heathland – but it does also occur in meadows and woodland. It is a very variable species, with a base colour ranging from white through dusky-yellow to grey, with brown speckles and bands of variable width, intensity and definition.

**Latticed Heath** is also widespread, occurring on heaths and moors but also downland, gardens and waste ground. It is generally pale yellowish to white, with thicker brown markings giving a defined 'lattice' pattern.

**ID:** While some poorly marked Latticed Heaths can appear like well-marked Common Heaths, the more clearly defined pattern of Latticed generally allows separation. In addition, when at rest, Latticed Heaths usually hold their wings closed (like a resting butterfly), whereas Common Heaths rest with open, flat wings. Note the potentially confusable Grizzled Skipper butterfly has clubbed antennae.



*Common Heath (Paul Brock)*



*Latticed Heath (Patrick Clement)*

## Mother Shipton and Burnet Companion

These two common and widespread species show considerable overlap in their habitat preferences, and can be found together in flower-rich grassland and along woodland rides and verges, together with the potentially confusable Dingy Skipper butterfly – the clubbed antennae of which provide instant differentiation.

**ID:** **Mother Shipton** is generally a brown-and-buff patterned moth, named after the distinctive 'long nosed, beady-eyed face profile' on the forewing that is said to resemble the 16th century prophetess.

**Burnet Companion** has warm brown, striped forewings and distinctive orange-yellow markings on the hindwings.



*Mother Shipton (Andy & Gill Swash)*



*Burnet Companion (Andy & Gill Swash)*

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**Butterfly Conservation**  
Saving butterflies, moths and our environment



**BTO**  
Looking out for birds



**United Kingdom  
Butterfly Monitoring Scheme**



**Centre for  
Ecology & Hydrology**  
NATURAL ENVIRONMENT RESEARCH COUNCIL



**Scottish Natural Heritage**  
All of nature for all of Scotland



**defra**  
Department for Environment  
Food and Rural Affairs



**JNCC**  
Joint Nature Conservation Committee



**Department of  
Agriculture, Environment  
and Rural Affairs**