



the **Comm**

No. 112 Spring 2022

Regional Magazine of West Midlands
Butterfly Conservation

Making it Happen:

How you can help us deliver

Our reserves:

25 years at Grafton Wood

Bringing *butterflies and moths* back to Britain • westmidlandsbutterflyconservation.wordpress.com



Chairman's Address

Committee news

It was unfortunate but understandable that our January Committee meeting was postponed due to ongoing Covid concerns. It had been arranged during one of the 'false dawns' the previous year. In lieu of the meeting, updates were written and distributed to keep members in touch with project developments



Michael Southall

Rhona Goddard updated us on progress with the Butterfly Mosaics Project funded by Severn Trent Water. Contractors have been employed to improve habitat for our rarer butterflies, helping our volunteer effort.

Natalie Norton our new BC Midlands Landscape Officer is working with Rhona and focusing on our BC nature reserves in the West Midlands. She has been well received and is getting stuck in – quite literally in the wetter woods – arranging and helping on work parties, getting to know our reserves and volunteers.

Scheduled work parties have taken place through the winter on reserves and elsewhere across the region, improving habitats for our most threatened species. Reports are that these have been well attended and productive, even when the weather hasn't always played ball. New blood is always welcome on work parties to help and eventually to replace the older warriors. Rhona is also working on how the new BC 2026 strategy will work in our region.

Mike Williams sent updates on Wyre Forest developments, our work with partners there, and on the Kentish Glory reintroduction project. The Shropshire Upland Commons Butterfly and Moths Festival is taking place this summer, so look out for events happening there.

Dave Jackson's Staffordshire update highlighted a Ministry of Defence **Grizzled Skipper** site and progress towards new butterfly and moth signage at Cannock Chase, using a recent donation from Druids Heath Golf Club.

Mel Mason wrote a thought-provoking *Time for Change* discussion document about the future direction of the branch, asking whether a more local approach would



Grizzled Skipper (Julia Saunders)

Cover story

4th instar Orange-tip caterpillar reared by **Andrew Magnay** (see pages 15–17).

Contributions

Please send articles and images to the Editor. Photographs should be as high-resolution as possible and sent as separate files (not embedded in a document).

Our copy deadlines are
Spring - 28 February
Autumn - 31 August
Winter - 30 November
(early submissions are welcome).
Contact the Editor for information.
Editor: Marian Newell,
comma.editor@newellporter.co.uk

Publisher

Butterfly Conservation West Midlands Branch. The opinions expressed in this magazine are not necessarily those of the Branch or of Butterfly Conservation.

 BC West Midlands Butterflies and Moths

 Butterfly Conservation West Midlands

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 @westmidsbutterflyconservation

be more effective or to stay as we are. His recently published *Butterflies around the Malverns 2021* is both colourful and informative – a great piece of work.

Thanks to everyone for their updates. More detail can be found on our website: westmidlandsbutterflyconservation.wordpress.com

Recording

With this year's first butterflies and moths appearing, attention has returned to recording. Winter **Brown Hairstreak** egg-hunting, led by species champion **Simon Primrose**, has already reported finding good numbers of eggs and increasing range (see pages 8–9).

This year will be the 20th year of recording for me and others on the Garden Moth Scheme, which started in 2003. I'm looking forward to seeing if my personal results will reveal any longer-term trends. New species of Lepidoptera continue to appear in the region, although an expansion in range can sometimes be combined with a fall in overall abundance.

Hopefully, this year's spring weather will be better for our early fliers than last year, and we can all enjoy 'Looking Out' again.

Michael Southall Branch Chair



Lunar Hornet Moth

National Moth Night photographic prize

Our Chair received some exciting news in January:

'I was delighted to be told that my entry had won the 2021 National Moth Night

photographic prize. I'd sent in a picture of a male Lunar Hornet Moth, taken during the event last July, along with my other records. This day-flying clearwing moth had been attracted to my Worcestershire garden by one of the newly available pheromone lures. Said to be our most widespread clearwing, its similarity to a Hornet means it's seldom noticed.'

His prize, donated by Opticon, was an 8 x 20 Gallery Scope with 3 x stand and LED light. The combination makes a powerful 24 x microscope.

Well done, Mike!



Opticon Gallery Scope



Butterfly
Conservation

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and in Scotland (SC039268)

Members' Day

Our Annual General Meeting and Members' Day will be held on Saturday 14 May 2022, from 11am to 1pm. As in 2021, this will be a Zoom meeting – see the Event Calendar for details. The AGM itself will start at 11am and be followed by two short talks, one by John Tilt on butterfly recording and the other by Mel Mason on the project to reintroduce Pearl-bordered Fritillary to the Malverns. At 12 noon, our guest speaker, Dave Goulson, will speak on 'The Plight of Insects, and what we can do to help them'. An event definitely not to be missed.

Branch AGM

Saturday
14 May 2022,
from 11am
to 1pm

Making it



Active conservation management in the Wyre Forest
(Mike Williams)

How can we achieve BC's national and regional goals?

As reported in *Comma 111*, Butterfly Conservation (BC) has recently published a new national strategy that will guide its work over the next five years. There are three main goals:

- To halve the number of threatened species among the UK's butterflies and moths
- To improve the condition of 100 of the most important landscapes for butterflies and moths
- To transform 100,000 wild spaces in the UK for people, butterflies and moths



Training new recorders on Long Mynd (Mike Williams)

The challenge

The challenge is turning this vision into reality. How do we make it happen? This is very much where branches and members come in.

With around 40,000 members, BC is the largest insect charity in the world but it is still relatively small when compared to other national UK conservation charities. Most of the paid staff are based at Head Office and employed with specific roles and responsibilities, which are sometimes dependent on external funding. In all of the Midlands, we have just two hard-working paid members of staff:

Rhona Goddard and Natalie Norton.

The strength of BC is its 32 regional branches, of which West Midlands Butterfly Conservation is the oldest and one of the largest. Branches are semi-autonomous groups within the national charity that, by and large, determine their own priorities and agendas. This is a huge strength because it enables BC to engage more people, focus on regional priorities for butterflies and moths, and work locally with conservation partners.

Progress to date

Most of the practical conservation of threatened species takes place within branches. Every year, volunteers put in countless hours on our nature reserves and elsewhere in support of



Explaining our work to the public

Happen



Filming the Lost Fritillaries project for Countryfile (Mel Mason)

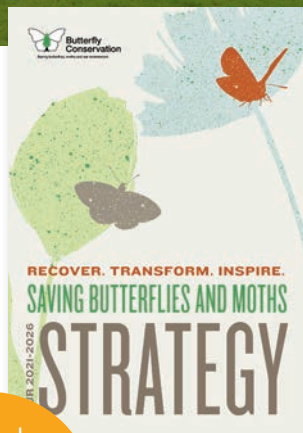
Places for Pollinators initiative has already resulted in almost 20 new places for people, butterflies and moths to enjoy, and we are still keen to add additional sites. We know our members also play their part through butterfly and moth gardening and generally supporting our work.

Future ambitions

Despite all this great work, some species (but not all) are still declining and the UK is viewed as the most nature-depleted country in Europe. We need to find ways to do more and this is where our members can help.

Nationally, BC needs to look at its organisational structure and work out how best to underpin the fantastic work undertaken by branches. The appointment of Natalie Norton as a Midlands Landscape Officer is a great start but we need to ensure continuity of this role and the appointment of more regional staff to support our work. Delivering on the new strategy requires action on the ground and this is best achieved by locally based staff working alongside committed volunteers. We need to be more opportunistic, quicker to back good ideas and less risk-averse.

To read the full national strategy, visit butterfly-conservation.org/our-work/our-strategy



our regional conservation strategy, making a real difference on the ground (over 100 conservation tasks completed annually). We promote our work at every opportunity through *The Comma*, social media, the local press and our own publications.

We have developed butterfly trails and provided information boards at a wide range of sites, informing the public about butterflies and moths and how BC is working to protect species and habitats. We work hard at involving our members in recording the species they see and helping us with specific surveys to fill gaps in our knowledge and identify where habitats might be improved (nearly 100 butterfly transects alone). Our

Locally, we need more volunteers turning out at our practical conservation tasks, helping with recording and monitoring, or offering to take the lead where they live and help us organise more events and activities. We need lots of ideas on how we can contribute to achieving these ambitious goals. Time is not on our side.

Our committee will be looking at how we can best respond to the national strategy over the coming months. However, we don't have a monopoly on good ideas and it's down to all of us to help Make it Happen.

Article by Mike Williams

To make a suggestion or offer your help, email our Chair at michael_southall58@hotmail.co.uk



Clearing scrub to provide
new habitat (Mike Williams)

Our reserves: Grafton Wood

The vital function of Butterfly Conservation and partnership nature reserves in their respective landscapes is undeniable. They help us to ensure the recovery, survival and prosperity of threatened and much-loved species in our region.

Let's focus on the **Brown Hairstreak** at Grafton Wood, which demonstrates the importance of targeted habitat management and evidence-based conservation in forming a resilient nature recovery network. This enables a species to disperse into the wider landscape, colonise sites and increase its distribution. After all, we cannot rely on having all our eggs in one reserve!

Conservation success takes hard work

Possibly one of the main challenges of conserving Brown Hairstreak populations is its choice of larval food plant: blackthorn. It goes without saying that this is a practical volunteer's arch enemy and yet, as conservationists, we strive to win the battle against its nemesis – annual flailing.

The total count of 403 eggs over two days searching this season at Grafton confirms that the sympathetic, rotational and sustained management of blackthorn undertaken by volunteers has provided suitable breeding habitat. Indeed, the success of breeding Brown Hairstreak at Grafton Wood is testament to the hard work of the reserve's dedicated volunteers: contributing to the annual management plans, leading and attending practical work parties, guiding people to catch a glimpse of the elusive butterfly and searching for eggs.

The time, effort and resources required can be analogous to the life phases of a butterfly and each has its own purpose and importance. There can't be the butterfly without the egg and, likewise, without work parties there wouldn't be suitable blackthorn for eggs to be laid; without surveyors there wouldn't be the evidence of presence to advocate for sympathetic management of hedgerows with other organisations, farmers and landowners.

Habitats need to be joined up

Despite positive signs of range expansion, there's still a considerable amount of work to be done, primarily in overcoming persistent, inappropriate flailing of

hedgerows in key corridors. The importance of continuing to foster effective collaborations with landowners, contractors and partner organisations to ensure sustainable management of land cannot be over-stated.

For instance, one of the many benefits of partnership-working is the ability to create and further enhance habitat. Recently branch volunteers and I met with Emily Cowell, Pollinator Recovery Project Officer for the Canal and River Trust, to advise on enhancements for Brown Hairstreak, including planting additional blackthorn in hedgerows along the Worcester and Birmingham Canal with the aim of bolstering dispersal of Brown Hairstreak from nearby Trench Wood. The Butterfly Mosaics project funded by Severn Trent Water is also supporting us to enable contractors to reinstate rotational management of blackthorn in the orchard adjacent to Grafton Wood.

Join the Brown Hairstreak champions

It was on a Grafton Wood work party that I was shown my first-ever Brown Hairstreak egg. I haven't been able to walk past blackthorn without having a look for an egg since! In my opinion, it's not until you see your first egg that you can truly appreciate the reasons for Brown Hairstreak being so susceptible. If you haven't seen a Brown Hairstreak egg, I challenge you to find one (and record it) – join the Brown Hairstreak champions and encourage a local landowner to take a closer look at their hedges.

Let's get Brown Hairstreak throughout Worcestershire and beyond!

Article by **Natalie Norton**



Cluster of four Brown Hairstreak eggs
(Andrew Fusek Peters)

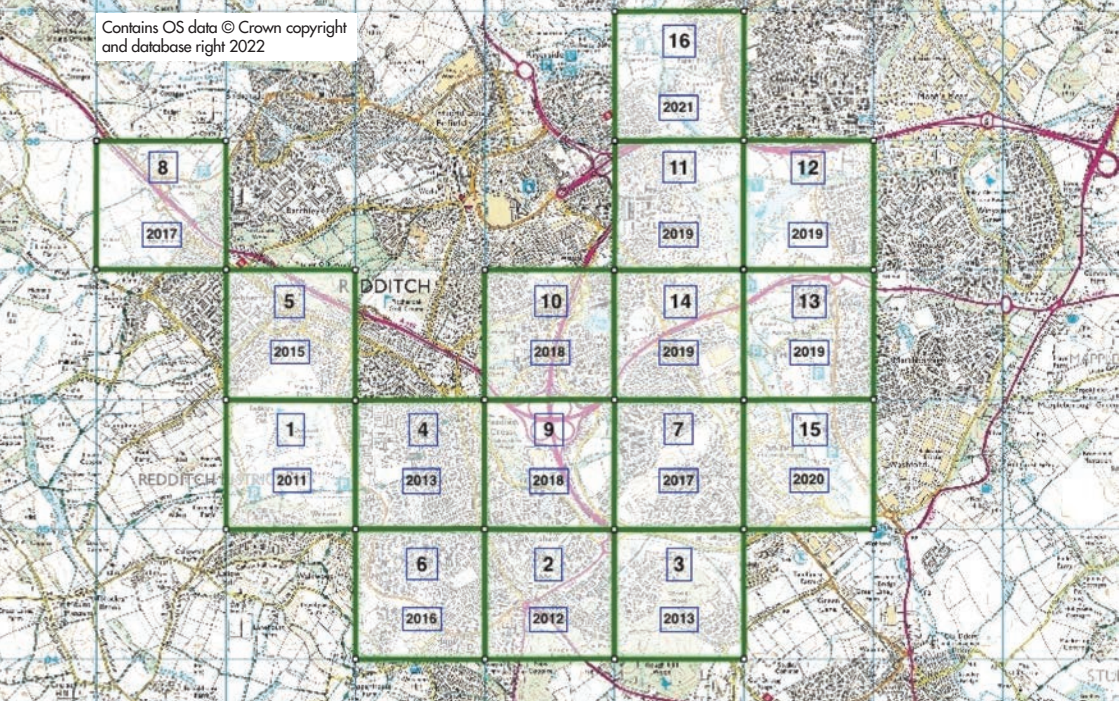


Brown Hairstreak (Mel Mason)

Grafton Wood 25th Anniversary Open Day

On 18 June 1997, Worcestershire Wildlife Trust and Butterfly Conservation acquired Grafton Wood as a Nature Reserve – 150 acres of ancient woodland. A very ambitious management plan was prepared to improve biodiversity and benefit butterflies in particular. This plan has been largely successful, with most of the management work done by a hardy band of volunteers. To celebrate this success, we're holding an Open Day:

- Saturday 23 July 2022
- Grafton Flyford Village Hall
- 11am – Talk on achievements at Grafton Wood
- 1pm – Light lunch (booking essential, email john.tilt2@btopenworld.com)
- 2pm – Guided butterfly walk around the wood
- Return to the village hall for tea and Grafton's famous cakes!



Brown Hairstreak colonisation of Redditch

A decade of growth, from a chance sighting to over 300 eggs counted in just one area.

One day in March 2012 Mike Williams and I were meeting with members of Redditch Council, at Morton Stanley Park, to discuss sympathetic blackthorn management. The aim was to persuade them to maintain their abundant blackthorn in the ideal state that might possibly tempt the **Brown Hairstreak** butterfly to visit, and maybe even colonise the park in future years.

While we were talking to them, standing beside a wonderful patch of young blackthorn suckers next to the car park, I cast my eyes down and to my amazement saw a double egg cluster! This was obviously extremely exciting and unbelievably well timed, given our meeting, but it also marked the first Brown Hairstreak



Brown Hairstreak (Mel Mason)

eggs ever found within the town of Redditch.

Little did we know, and never in our wildest dreams did we think, that those first egg finds would mark the start of an incredible success story for the butterfly in the town. Within ten years, the species would spread to cover the majority of Redditch and occupy a total of seventeen 1km OS grid squares.

What makes Redditch special?

Redditch is unusual for a large town in England. It underwent massive expansion during the 1960s after

Wanted

The Brown Hairstreak



Have you seen this butterfly?

This rare butterfly has been reported from the area. You can help Butterfly Conservation survey its range.

Look for it on Blackthorn (Sloe) hedges and Ash trees (it doesn't like flowers much).

The Brown Hairstreak is small, about the size of a 10p piece, and it's flying now until the end of September.

Send your sightings to
simonprimrose@aol.com tell us the location of the sighting and, if you can, send a photograph too.



being designated as one of the 'New Towns' but, despite all the new housing and major road systems, it retained a large amount of 'original countryside' features throughout the town in the form of old hedgerows, open spaces, rough ground, and wide roadside verges. One hedgerow shrub features much more in that landscape than any other – blackthorn.

Even today, and even in some of the most urban parts of the town, it's usually possible to find stands of blackthorn to search for eggs. It is this feature that is responsible for the butterfly's success at colonising.

Two hotspots for the Hairstreak

The butterfly's progress since that first discovery at Morton Stanley Park can be seen on the map shown. Typically we've only found a few eggs at each of the locations but two areas reign supreme: Morton Stanley Park, in the south west, and the much more recently colonised Arrow Valley Country Park in the east of the town.

Annual egg searches at Morton Stanley varied quite widely year-on-year, but averaged at about 25. We were therefore completely staggered when, a few weeks ago, we found over 300 during this year's count! And it wasn't only eggs that Morton Stanley provided, we had reports of adults there too last summer. Aided by the increasingly vigilant involvement of the local Redditch community, who no doubt responded to both our press stories and our 'wanted' poster (displayed on the park's information board since 2012), we received multiple reports of (confirmed) adult sightings.

Over at Arrow Valley, again an area with vast amounts of suitable blackthorn (which we'd been patiently and unsuccessfully searching for some years), we first discovered eggs two winters ago. Other finds quickly followed, with our latest discovery just a few weeks ago, and we have now found eggs in all but one of the seven 1km OS grid squares that cover this large area.

So, in conclusion, this is a fantastic success story for both the Brown Hairstreak and Redditch. It illustrates how even built-up urban areas can, given the right circumstances, provide an environment where rare butterfly species can flourish.

Article by Simon Primrose

Streak of success for rare butterfly

By Danielle Poole

danielle.poole@
newsquest.co.uk

A RARE species of butterfly is gaining a foothold in Redditch, much to the delight of conservationists.

The brown hairstreak butterfly has previously only been seen in Morton Stanley Park, with volunteers from the West Midlands Butterfly Conservation spotting eggs there every year.

Eastern Worcestershire is the only place in the entire West Midlands where this butterfly is found and now, the eggs from the species have been spotted further east across Redditch, with sightings in Arrow Valley this winter.

It means that the species is gaining hold across Redditch with conservationists believing the butterfly is using the town's green corridors to reach new areas.

The West Midlands Butterfly Conservation



The rare brown hairstreak butterfly

is hopeful that the butterfly can become an established species in the town and are calling on residents to get in touch if they spot its eggs.

Simon Primrose who is Butterfly Conservation's species champion for the brown hairstreak, said: "It is exciting news that the Brown Hairstreak has

begun to spread within Redditch and we are keen to find out, with the support of the local community, just how far into the town the butterfly has managed to colonise.

"The butterfly is very susceptible to annual hedge felling which destroys the majority of eggs and the key to success is for blackthorn to be cut on a longer rotation."

He added: "If any residents know of any sections of uncut blackthorn in a sunny position, particularly where young suckers are growing away from the base of the hedges, we would urge them to see if they can locate the pinhead sized eggs which are white in colour and are laid in the spine of the blackthorn."

"Although time they stand out against the dark colour of the bare wood. If you think you spot any take a photograph and get in touch by emailing simonprimrose@aol.com."



Our garden moths

One of Shropshire's micro-moth recorders shares his personal 'moths of the year'

Catherine and I moved back to the UK from south-west France in August 2012. We bought a bungalow in Church Stretton, which had a front garden of about 35m x 25m containing the usual couple of lawns and a few flower beds, with a good selection of plants and shrubs. Behind the bungalow on the other side of the road is the start of the Long Mynd, and behind us we have a very small raised terrace and beyond that, Brockhurst Wood.

Moth trapping

I regularly run a 125W Mercury Vapour (MV) trap on the back terrace and, less often, an 80W MV trap in the 'wild' front garden (and sometimes a Lepiled too, which uses an LED bulb). I very rarely run traps on consecutive nights, allowing the released moths to disperse naturally.

Although I've had many interesting records, a few weeks in the summer months last year proved exceptional here. It really began on 17 July when there was a **Bedstraw Hawk-moth** in my trap, a rare immigrant... and a Shropshire first. Then three traps later, on 23 July, I was delighted to find a *Metalampra italica* in the front garden trap... yes,

another Shropshire first.

Surprisingly, again three traps later, there was a funny-looking micro in the trap. I put its photo on our Shropshire Micromoths WhatsApp group and got a cryptic reply saying 'Look in the Erebidæ'. Well, that was quite a challenge because, in all my moth books, the word does not appear in any index! Oh, the joys of Taxonomy. So, after all that, it appears that my moth was a **Marsh Oblique-barred**, for which there are about 30 Shropshire records, all of which are at Whixall Moss, some 40 miles north of here.

Another puzzle arose on 2 August. Clearly, the moth was not a **White-line Dart** and, after much



Marsh Oblique-barred

scrutiny, the only possible alternative was **Square-spot Dart** – new for Shropshire. Many photos were taken and sent to the more knowledgeable and, of course, a specimen was kept. However, they kept on coming and one also arrived at Mike Shurmer's trap a couple of miles due north of us. So, specimens were sent off for examination of their genitalia but it appears that even after that, and comparisons with photos, there's a degree of uncertainty. It's not difficult to imagine that there's a breeding

population here; after all, the Herefordshire records are not that far south of us. Looking through photos taken in August 2020, I guess I had them then too!

Among the many plants in the garden is Greater Bird's-foot Trefoil, on which in previous years I've found larvae of *Aproaerema larseniella*. However, on 10 August, I found the leaf mines of *Trifurcula cryptella*, not a first for Shropshire but the only previous record was in 1930 and there are very few records for all of the West Midlands..

Finally, I had another major surprise on 2 September, and another first for Shropshire – none other than a Clifden Nonpareil. The underside shown in the photo is perhaps more spectacular than the more familiar upperside.

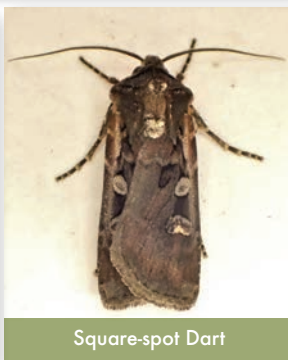
Here's hoping for the chance to produce a similar piece for 2022. Happy mothing!



Metalampra italica



Bedstraw Hawk-moth (*Hyles gallii*)



Square-spot Dart

Article and photographs by
**Graham and Catherine
Wenman**

Find out more

For more information about moths in our region, see WestMidlandsMoths.co.uk and the Branch's *Moths of the West Midlands* book.



Leaf mines of *Trifurcula cryptella*



Clifden Nonpareil (underside)

Large Skipper
(Phil Dawson)



Pepper Wood Extension

Worcestershire

Butterflies at this location

Pepper Wood is a block of ancient woodland to the west of the village of Fairfield that was once part of the Forest of Feckenham. Most of the woodland is even-aged oak trees, as it was clear-felled in the 1940s. The wood is managed as coppice by a local group of the Woodland Trust, but much of it is still quite dense woodland and therefore not ideal butterfly territory. Even so, the usual woodland butterflies are present, along with **Brimstone**, **White Admiral** and **Silver-washed Fritillary**. **Essex** and **Small Skippers** are found in a small open area to the east of the car park but only in very low numbers.

The area with the most butterflies is Gorsy Piece meadow, which is situated in the north-west corner of the reserve. Its remote location and the fact that it is marked on Ordnance Survey maps as woodland make this quite hard to find. The meadow is fairly damp but extremely sheltered and sunny, so it should be prime butterfly territory but rank grass that suppresses the growth of most flowering plants means it's not as good as it could be. The meadow was originally going to be left to regenerate as natural woodland but now the plan is to allow grazing, which should control the rank grass and thereby help the orchids and other flowers.

Pepper Wood Extension Draft Woodland Design Plan



To contribute to the appeal, visit:
www.woodlandtrust.org.uk/pepperappeal

Location of Pepper Wood extension



Management Units

Woodland Trust Copyright – ↑ North

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Healthy populations of **Large**, **Small** and **Essex Skipper** are found here, along with **Brown Argus**, **Marbled White** and **Common Blue**. When compared with the nearby Black Meadow in Chaddesley Woods, numbers of Large Skipper are higher in Gorsy Piece while Black Meadow has far more **Small** and **Essex Skippers**. It would be interesting to find out the reason for this, as the meadows are outwardly similar – both are on very wet soil, although Gorsy Piece is noticeably warmer than Black Meadow.

Current status

The Woodland Trust has just purchased 120 acres to the north of the wood that will double the size of the reserve and, although the Trust is obviously primarily interested in trees, the new area will include some large areas of open ground that should be good news for butterflies and wildlife in general. The open areas will include viewpoints and a wartime decoy site, as shown in the Design Plan. Ongoing support is needed to enable the Trust to complete the project.

Article by **Steve Harper**

Maps courtesy of The Woodland Trust

Around our region

Introduction to moths

Last December, Staffordshire County Moth Recorder Dave Emley presented an introduction to moths, hosted by Transforming the Trent Valley. This is a partnership project of 18 organisations working together to restore

and enhance the natural and cultural heritage of the Trent Valley, with Staffordshire Wildlife Trust at the helm.

You can find out more at thetrentvalley.org.uk

Dave's talk and supporting document are available online:

www.youtube.com/watch?v=WET08-OJ_vc&t=6s

westmidlandsbutterflyconservation.wordpress.com/wm-moths

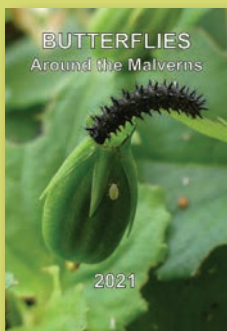


Butterflies around the Malverns 2021

The Malvern Butterfly Group & West Midlands Butterfly Conservation have published their annual report on butterflies around the Malvern Hills, The price is £10, with proceeds going towards the Malvern Hills Lost Fritillaries Project.

The report is designed to celebrate the diversity of butterflies around the Malverns. Compiled from the records of a large and increasing number of casual and transect recorders, it includes contact details for the various organisations involved in recording and conservation work in the area.

To order a copy, contact Mel Mason at melmason@btinternet.com





Peacock
(Melvyn Lambert)

Butterfly recording 2021



Register your sightings
at irecord.org.uk

Overview

Changes to our recording methods, particularly the move online, have taken our total number of records to over 66,000. This almost matches the unprecedented total of nearly 70,000 reported for 2020, attributed to increased participation during lockdowns.

Total

Number of records	66250
Number of species	42
Number of recorders	3840

UK Butterfly Monitoring Scheme

Number of transects	98
Number of butterflies	66583

Big Butterfly Count

Number of records	25790
Number of recorders	2658

The important next stage is to use this information to help conserve butterflies. With modern IT techniques and mapping software, it is easy to supply information on request. Unless we follow up this recording effort with conservation work, we are only monitoring the decline of butterflies.

Types of records

Casual records on iRecord identify the presence of species in specific places. For each species, we show on our website a map of our region marked with sightings in the last five years and a phenology chart showing the months in which those sightings occurred.

Transects, where a set route is walked weekly over 26 weeks each year, enable us to monitor population trends and the effects of habitat management. Again,

for each species, we show on our website a chart of the population trend.

For each species with a Biodiversity Action Plan, we publish a Google map showing the exact location of the species for each year.

Transect results

Five-year trends were based on 2016–19 plus 2021, as transect walking was disrupted by lockdowns in 2020. Only 41 of 98 transects were walked consistently and could be used for population trends (species phenology can be used to adjust for odd missed weeks).

Of 42 species, 32 have decreased and 10 have increased. The overall loss was 20% compared with the previous four-year average. Greatest losses were **Common Blue**, **Green-veined White**, **Meadow Brown** and **Ringlet**. Greatest gains were **Silver-studded Blue**, **Peacock**, **Small Tortoiseshell** and **Pearl-bordered Fritillary**.

How you can help

As we've reported before, some 10km map squares in our region are hardly recorded at all. The examples below show the difference, compared with the most popular locations.

Poorly recorded		Well recorded	
SO69	16	North Malvern	6433
SJ70	184	Wyre Forest	3154
SJ86	144	Grafton area	2452

Once again, we ask you to consider counting in squares such as these. To find out more, contact john.tilt2@btopenworld.com

Extracted from the annual recording report produced by **John Tilt**

Full details of butterfly recording in 2021 at westmidlandsbutterflyconservation.wordpress.com/recording

Members' Day and AGM

11am on Saturday 14 May 2022

With Guest Speaker **Dave Goulson** at 12 noon

The Plight of Insects, and what we can do to help them

Join Zoom Meeting

<https://us02web.zoom.us/j>

Meeting ID: 878 0515 2724

Passcode: 876853

To receive a link by email or resolve any problems, contact
Mel Mason at mbg.records@btinternet.com



Dave Goulson

Birmingham and Black Country

City Nature Challenge 2022

29 Apr to 2 May

Birmingham and the Black Country (Dudley, Sandwell, Walsall & Wolverhampton) will be taking part in the 2022 City Nature Challenge, an annual competition between cities all over the world to see how many wild species their citizens can spot in four days. Over 350 cities have signed up, including 13 city areas from the UK.

Last year we took part in the challenge for the second time and, despite the cold wet weather, we managed to record a whopping 9,291 species observations. This result meant that in Birmingham and the Black Country we managed to record more wildlife than any other UK city and we also had the 4th highest total in Europe!

Read more and sign up at bbcwildlife.org.uk/CityNatureChallenge. Find additional material, including links to the school curriculum, at bnhc.org.uk/city-nature-challenge/resources



Submit your sightings using the free **iNaturalist** app or website, which has recognition software to help you identify any species you've photographed.

IMPORTANT: Always contact the organiser before attending an event.

Worcestershire

Hartlebury Common Walk

Sat, 7 May. Target species: **Emperor Moth, Green Hairstreak**

Joint meeting with the Hartlebury Common Local Group. 11am at Wilden Top car park (SO826714) off the B4193 Stourport-Hartlebury road.

Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)

Woodland Moth Morning

Sun, 22 May. Part of National Moth Night (19–21 May) 10am at Wells Cottage, Norchard, DY139SN to open moth traps run in nearby woodland the previous night.

Contact Mike Southall (07970449353, michael_southall58@hotmail.co.uk)

Moth Morning and Butterfly Walk

Sat, 28 May. Part of 70th anniversary celebrations of National Nature Reserves. 10am to open the moth trap at Lodge Hill Farm, Wyre Forest NNR – follow the disused railway line from Dry Mill Lane, Bewdley (SO772764).

11.30am butterfly walk – target species: **Pearl-bordered Fritillary**. Tea/Coffee and cake provided. **Parking limited, booking essential.**

Contact Tom Simpson (tom.simpson@naturalengland.org.uk)

Moth Morning and Butterfly Walk

Sat, 9 Jul. 10am in Monkwood car park (SO804606), off minor road between Sinton Green and Monkwood Green. 11.30am butterfly walk; target species: **Wood White**. Bacon rolls available. **Booking essential.**

Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)

Purple Emperor Hunt

Sun, 17 Jul. Joint event with the Worcestershire Wildlife Trust. 10am in Tiddesley Wood NR car park (SO929459), off minor road running west from Pershore. Other target species: **White Admiral, White-letter Hairstreak**. **Booking essential.** **Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)**



Purple Hairstreak (Mel Mason)

Melilot Control – bring gloves

Thu, 21 Jul. Help us to reduce numbers of this invasive plant on ride edges. 10am at Monkwood car park. **Contact: Natalie Norton (07485 372199, nnorton@butterfly-conservation.org)**

Grafton Wood 25th Anniversary

Sat, 23 Jul. Open Day. 11am at Grafton Flyford Village Hall for a talk on achievements

1pm – light lunch (booking essential)

2pm – guided butterfly walk around the wood

Return to the village hall for tea and Grafton's famous cakes. **Contact: John Tilt (01386 792458, john.tilt2@btopenworld.com)**

Moth Morning and Butterfly Walk

Sun, 24 Jul. 10am at Uffmoor Wood car park near Halesowen to open moth traps followed by 11.30am butterfly walk.

Contact Mike Southall (07970449353, michael_southall58@hotmail.co.uk)

In Search of Valezina

Sun, 24 Jul. 11am in Trench Wood car park for guided butterfly walk in search of this rare and beautiful female form of the **Silver-washed Fritillary**. Leaders: Julia Saunders & Roger Littleover. **Contact: Roger Littleover (rogerlittleover@hotmail.com)**

Talk on Lost Fritillaries project – Mel Mason

Mon, 5 Sep. Public event organised by the Hartlebury Common Local Group – admission £3. 7.45pm at Stourport Sports Club, Kingsway, Stourport. **Contact: Mel Mason (mbg.records@btinternet.com, 01684 565700)**

IMPORTANT: Always contact the organiser before attending an event.

Staffordshire

Moth Morning, Kinver Rock Houses

Sun, 3 Jul. Joint event with the National Trust, West Midlands Butterfly Conservation and Kinver Moth Group. 9am at Kinver Rock Houses (NT); pastry plus hot drink £6. **Booking essential.**

Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)

Highgate Common – Walk 10 in Butterflies of the West Midlands

Sun, 10 Jul. Target species: **White Admiral** and **Purple Hairstreak**. 10.45am for 11am start, Corey Centre Car Park on Highgate Common (SO835895). **Contact:** Dave Martin (dave.martin3@btinternet.com, 07885788124)

Don't forget to check Butterfly Conservation's websites and groups for other events:

- westmidlandsbutterflyconservation.wordpress.com/events-and-work-parties
- www.facebook.com/groups/westmidlandsbutterflyconservation
- www.facebook.com/groups/250738579030862 (Malvern Butterfly Group)
- butterfly-conservation.org/events

Herefordshire

Herefordshire Butterflies (Spring)

Sat, 21 May. Tutors: Martyn Davies and Bob Hall
Learn about the spring species found in woods and meadows, and how to identify them.

10am–3pm at Haugh Woods; details and bookings at hbrc.org.uk/events/introduction-to-butterflies

Herefordshire Butterflies (Summer)

Sat, 16 Jul. Tutors: Martyn Davies and Bob Hall
Learn about the summer species found in woods and meadows, and how to identify them. 10am–3pm at Haugh Woods; details and bookings at hbrc.org.uk/events/introduction-to-butterflies-2

Guided Walk at Haugh Wood

Tue, 2 Aug. Green trail (about two hours); children welcome but must be accompanied by an adult; no dogs please. 2pm in the Forestry England car park off the minor road from Mordiford to Woolhope (SO 593365).

Contact : Bob Hall (01432 850623, randphall@gmail.com)

Shropshire

Himalayan Balsam Control

– bring gloves

Wed, 22 Jun. 11am in car park at Llanymynech golf course (SJ266326). Turn off the A483 in Pant just north of the Cross Guns pub and follow signs to the Golf Club; the middle one of three exits; single track road, plenty of parking. An important site for butterflies to be restored with the support of the Nature Networks Fund (see Comma 111)

Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)

Silver-studded Blue and Heathland Restoration Guided Walk

Sun, 3 Jul. 2pm on the access track opposite the Steel Heath turning off the A49. Wear suitable clothing and footwear.

Contact Stephen Lewis (phwarden@sky.com, 07900 886809)

Bridgnorth Cemetery Guided Walk

Sat 9 Jul – see page 20.

Shropshire continued ►

Shropshire continued

Butterfly & Moth Festival 2022

March to August

A series of events recording and celebrating the butterflies and moths of upland commons in the Shropshire Hills. **Contact: Mike Williams (07802 274552, wmbutterflies@gmail.com)**

Wed 18 May, Green Hairstreak and Emperor moth survey day Part 1, 11am at The Bog car park, Stiperstones

Wed 25 May, Green Hairstreak and Emperor moth survey day Part 2, 11am at Heatham Gate entrance to Clee Liberty Common (SO573849)

Thu 2 Jun, Green Hairstreak and Emperor moth survey day Part 3, 11am outside National Trust Tearoom in Carding Mill Valley, Long Mynd

Fri 17 Jun, Join the Bog Squad – wetland search for Small Pearl-bordered Fritillary, 11am at The Knolls car park, Stiperstones. Wear suitable footwear

Sat 18 Jun, Long Mynd Moth morning (hoping for

some of the large and spectacular **Hawk-moths**) followed by butterfly walk (weather permitting), 9am Batch Valley car park

Fri 1 Jul, Butterfly ID workshop – learn how to identify and record the butterflies and day-flying moths of the Long Mynd. Importance of local recording (target maps available), 10.30am classroom session at All Stretton Village Hall followed by afternoon walk in Batch Valley, Long Mynd. Bring packed lunch, tea & coffee provided

Sat 16 Jul, Moth morning and Big Butterfly Count. Learn more about moths and how to take part in the Big Butterfly Count. Meet 10am at Rectory Field car park in Church Stretton to go through moth trap followed by 12 noon butterfly walk to Townbrook Valley, Long Mynd in search of Grayling.

Sun 31 Jul, Introduction to moths, 10am at Burnt House, Clee St Margaret to look at moths caught the previous evening (event courtesy of Polly Bolton, local Clee Liberty commoner).



Butterfly & Moth Festival 2022 Photographic Competition

You can submit up to six landscape-format photographs of butterflies or moths, which must have been taken in 2022 on one of the three commons – Clee Liberty, Long Mynd and Stiperstones. For each entry, you must state the date on which it was taken and an exact grid reference (at least 6-figure) of the location.

Send digital images of at least 1Mb in size singly by email to nigelaball@gmail.com by the closing date of 30 September 2022. The judges' decision as to the winners will be final and prizes will be awarded to the top three photographs. We hope that the overall winner will feature in the West Midlands Butterfly Conservation 2023 calendar.


We look forward to seeing some excellent photos and receiving lots of records.

Shropshire Moth Group 2022 Programme March to October

The group aims to record the moths of Shropshire and advance public knowledge of them and their place in the natural world. Why not join them for a survey or moth trapping night and discover the magic of these tiny creatures? Everyone attends at

their own risk and anyone under 18 must be accompanied by a parent/guardian. Bring a torch and wear outdoor clothing and footwear suitable for the prevailing weather conditions. The group does not trap overnight and usually finishes around midnight. Most sites have restricted access or private parking, so it's essential to confirm attendance to Tony Jacques at rec-vc40@vc40tj.plus.com

IMPORTANT: Always contact the organiser before attending an event.



A rose between two thorns: a freshly emerged female waits for two male pupae to emerge (note their spectacular colouration and intact girdles)

*The Spring is Sprung, the grass is riz,
I wonders, where dem Orangetips is?
Dey say da butterfly's on da wing...*

But I say Fie!

For da Wing is on da Butterfly!

(with apologies to the prolific poet 'Anon')

The secret life of the Orange-tip

For those who love spring, what is more delightful than seeing our early-emerging **Orange-tip** butterflies flitting between bluebells in dappled woodland clearings, or around flowering hedgerows and damp meadows? Surely it's our most welcome, charming and striking species seen throughout the British Isles. The fluttery eye-catching male, wandering far and wide searching for a mate, and the shy, easily overlooked and delicately marbled female, are the surest sign that spring has indeed sprung. But how often do we see – or more likely not see – the

other life stages of this ubiquitous beauty? In fact, spotting the eggs and larvae is surprisingly easy, once one knows where to look. Why not make this year an opportunity to find out for yourself?

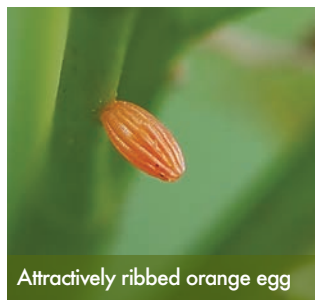
Locating laying females

The **Orange-tip** (*Anthocharis cardamines*) loves to fly around habitats where its food plants are likely to be located, particularly Garlic Mustard (aka Jack-by-the-Hedge) and Lady's Smock (aka



Typical location on Garlic Mustard host plant

CONTINUED ON PAGE 16 ►



Attractively ribbed orange egg

CONTINUED FROM PAGE 15 ►

Cuckoo Flower, damp habitats), plus a variety of other crucifers*. The female flies from plant to plant in the local habitat, nectaring and seeking a host plant. She prefers taller, less crowded, unshaded but sheltered plants, usually selecting a stalk beneath the flowering crown (Garlic Mustard) or a flower stalk (Lady's Smock), or else a leaf branching point. She deposits a single oval egg 1–1.5mm long.

At first white, but quickly turning bright orange, the egg is readily visible to the observant eye. Where suitable plants are scarce, more than one egg may be laid per plant.

Rearing larvae

Garlic Mustard is the simplest choice to rear larvae in captivity. Captive rearing is easy and rewards patience. Only take a few eggs or

larvae in one season from the wild.

After six to eight days, the egg turns brown and hatches. The tiny orange 1st Instar, only 1.5mm long and bearing fluid-tipped hairs, turns its shiny blackish face round to eat the eggshell, before marching onto developing seed pods on the host plant. If it turns towards the flowers or fresh tiny leaves, no problem, equally tasty, but the seed pods are the main food source throughout the larval stage.

To rear these larvae in captivity, no need to take whole plants, leaves or flowers – just pick off a seed pod or two per larva, replenishing every two days, or sooner if needed as the larvae grow larger. Larvae should be reared individually to avoid accidental cannibalism.

The 1st instar moults at around 3–4mm, to a 2nd instar with some greenish-grey colouring. Three subsequent moults reveal increasingly long slim greenish, then finally blueish, smoother looking larval instars, well-camouflaged on seed pods as they age. To see them in the wild requires a few good opportunities 'to get one's eye in' and thereafter they become easy to notice. After 5th instar, pupation occurs, just two months after the egg was deposited.

Overwintering pupae

Pupae develop head-up, secured to a twig with a silk tail-pad and girdle. Green or brown pupal forms are normal, resembling wrinkled stunted twig stubs projecting upwards and outwards from the anchor-point. In captivity, upright host plant stems 3–4 inches long are sufficient, although in the wild larvae usually pupate on more robust twigs to face winter.

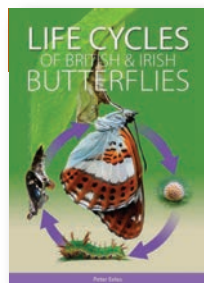
Captive overwintering in a cool, dark, pest-free location will usually yield more than 90% successful emergence in April/May. This is triggered by bringing the pupae into a warm and shaded daylight location, avoiding desiccation (occasional water fine mist spraying can help). Rarely, a pupa may delay emergence until two overwinters.

Wait until stable warmer spring weather before bringing the pupae out to complete eclosion (metamorphosis), and be sure nectar sources are well established for when the adults emerge. They cannot survive more than 2–3 days without feeding, and the females need nectar to ensure successful mating and laying of viable eggs, so release them in good time to ensure the cycle of life continues.

Forty-eight hours before emergence, the wings become visibly differentiated and the colour difference between male and female pupae is then obvious. Watching them emerge and unfurl their wings is one of the most exquisite and beautiful events in the spring calendar. Don't forget your camera!

Article and photographs by **Andrew Magnay**

* typically flowers with four petals arranged in a cross



Look out for...

- **ISBN:** 9781874357889
- **Author:** Peter Eeles
- **Publisher:** Pisces Publications
- **Cost:** £34.99
- **Publication date:** September 2019
- **Format:** Hardback, 394 pages, 1300+ colour photos, colour distribution maps



1st instar eating egg



2nd instar on Garlic Mustard



Female pupa held in place by silk pad despite broken silk girdle



3rd instar on Garlic Mustard
(see cover photograph for 4th instar)



5th instar on Garlic Mustard



Adult male feeding on Bluebell



Female laying on Lady's Smock



Figure 1 Possible location of androconia on forewing (male)

The Courtship of the Silver-studded Blue

As we saw in *Comma* 111, the **Silver-studded Blue** has a special relationship with the *Lasius niger* ant at the larval stage. This short article is aimed as an introduction to the beauty and nuances of the courtship of the adult butterfly (imago). All observations were made at Prees Heath Common Nature Reserve.

Finding a mate

The Silver-studded Blue tends to live in discrete colonies so, unlike our countrywide species of butterfly, locating a potential mate is not so much of a challenge in terms of distance travelled. For any would-be male suitor there is, however, a lot of competition from other males. On a good day at Prees, one can witness a blue haze of male butterflies above the heather and rosebay willowherb.

So, how does a male attract a female? Colour possibly? Not necessarily; the bright blue colour of the wings is more a warning to other males than an attraction for a potential female. Instead, there are modified scales on the forewings that emit pheromones

to attract the female – if you like, it's the male's aftershave. These scales, known as androconia, are usually elongated and often include hairs to aid pheromone dispersal.

From my initial research, using macro photography, the androconia appear to be located in tufts of white hairs to the fore of the cell on the forewing (Figure 1). The **Adonis Blue** exhibits a similar tuft. I plan further investigation using higher resolution imagery.

The female proceeds to 'taste' the male using her antennae and palps (appendages near the mouth). I have also seen the proboscis used (Figure 2). Females often perch in strategic positions in the vegetation and flutter their wings gently, awaiting a suitable male (Figure 3).

Dancing together

Prior to copulation, several 'dances' are exhibited by the Silver-studded Blue. I only have space here to describe one, probably the most beautiful I have witnessed: the 'spiral dance'. The male and female



Figure 2 Female 'tasting' the male



Figure 4 Start of the spiral dance

position themselves opposite each other, on a stem usually, and they then move anti-clockwise around the stem, always remaining opposite each other (Figure 4).

I have seen this on heather, where the distance travelled was only about 5cm, and also on rosebay willowherb, where the distance was more like 15cm. Perhaps this is so the female travels through the male's pheromones aroma and gets intoxicated, or for further tasting and assessment? It is an intimate courtship and a delight to witness.

Why not visit Prees Heath during June and witness the amazing courtship of the Silver-studded Blue for yourself?

Article and photographs by **Nigel A Ball**

Note: Figure 1 was taken using a historic set specimen from Worldwide Butterflies Limited (data: 'Whitchurch Heath, Salop 6.7.61').

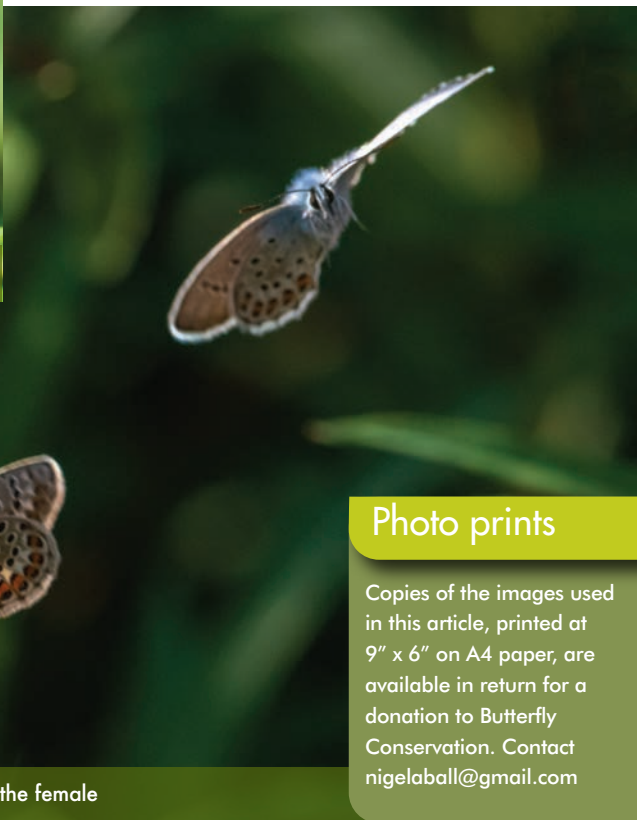


Figure 3 A male spots the female

Photo prints

Copies of the images used in this article, printed at 9" x 6" on A4 paper, are available in return for a donation to Butterfly Conservation. Contact nigelaball@gmail.com

Orange-tip



Following on from the article on burial grounds in our last issue, a Branch member shares his favourite.

Marbled White



Guided walk – Saturday 9 July

I intend to give a guided walk of Bridgnorth Cemetery for those who might be interested. We will also take in High Rock and The Hermitage (ancient meadowland), making a full circular walk.

If you'd like to join me, email rogerlittleover@hotmail.com.



This is Walk 12 in our *Walking with Butterflies* book (with special added extras). To buy the book, send your name, address and payment of £5.95 per copy + £1.50 p&p per order, to WMBC, Annesbrook, 2 Dewberry Close, Stourport, DY13 8TB. Please make cheques payable to Butterfly Conservation West Midlands Branch.

Bridgnorth Cemetery

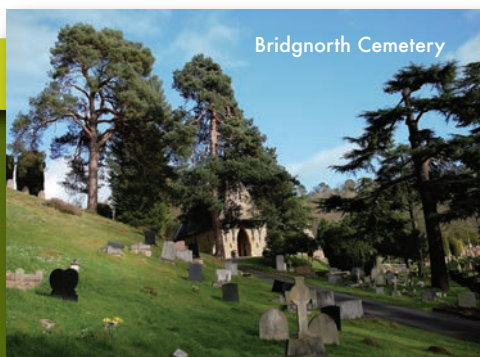
Those of you who follow the posts of my butterfly photos on our Facebook group will probably think I spend more time in Bridgnorth Cemetery than at home. In fact, you would probably be right.

The cemetery is my garden, being only a 10-minute walk. I've spent many hours there, photographing the abundance of life that thrives on the grassy banks edging the woodland leading to High Rock.

As well as blossom and birdsong, the cemetery is a sanctuary for so much wildlife. My heart never fails to leap as I spot my first **Brimstone**, signifying that spring is here at last.

Early spring flowers such as forget-me-nots and Cuckoo Flower open their petals to accommodate the **Orange-tip** butterfly, while the bumbling Bee-fly hovers from flower to flower. The rarer Shepherd's Cress (*Teesdalia nudicaulis*) is also a regular find for me in the cemetery. The graveyard maintenance workers show great interest in what's been found, often asking me when, where and what they can cut back or strim.

Article and photographs by **Roger Littleover**

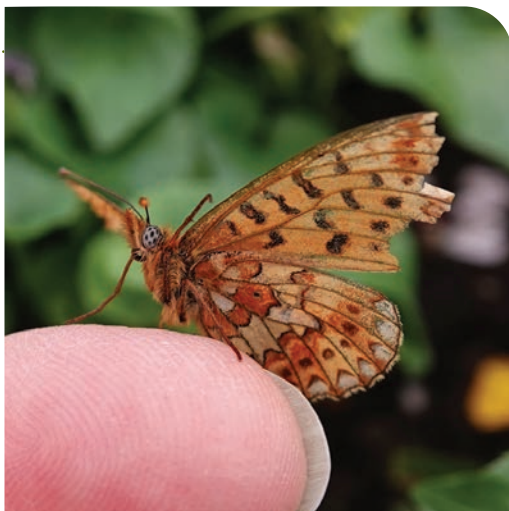


Malvern Hills Lost Fritillaries

We've been keeping you informed about this project over the last year or two. In *Comma* 110, we reported that a female **Pearl-bordered Fritillary** was transferred to the Sanger Institute in Cambridge for genome sequencing after she had laid her eggs.

The Sanger Institute is one of the partners in the Darwin Tree of Life project, which aims to sequence the genomes of all 70,000 species of eukaryotic organisms in Britain and Ireland (organisms whose genetic material is DNA in the form of chromosomes contained within a distinct nucleus). This is a vast undertaking and outstanding species have to be suggested for priority – enter the Malvern Hills Pearl-bordered Fritillary.

Her story was published on 10 December 2021: see www.darwintreeoflife.org/blog



Our ageing female (Mel Mason)

Already eight days old (average adult life expectancy of six or seven days in the wild), she went on to be immortalised as the first whole genome sequence for her species.

Old Lady recovering after falling into garden pond!

I recently trimmed the ivy around one of the garden ponds and most of it, unavoidably, fell into the water and was then removed with a large net and piled up on the adjacent patio. When the pile of cuttings was cleared, I spotted a very soggy, nondescript larva, which I dried off and placed in a container with a few ivy leaves.

On closer inspection the next morning, I could see it was actually quite well-marked. It was soon identified as a larva of the large, bat-like **Old Lady moth** (*Mormo Maura*) and appeared to be recovering well from the experience.

.....
Taken from a post by **Patrick Clement** on the Branch Facebook group



Old Lady Moth caterpillar (Patrick Clement)

Fairly common across our region, this species overwinters as a small larva and flies from July to September. It comes sparingly to light traps but more to sugar and sap runs.

The Flutter at the Rodd
in Herefordshire

A Flutter of

realised that the practicalities of storage and transport meant I needed to downsize for further creations. Over the next few years, I built up a menagerie of beetles, bees and other insects (plus the odd bird and mammal), all made to Velcro onto a glove so that they could be worn. I wrote interview scripts designed to educate about habitats, food preferences, place in the ecosystem and problems raised by human activity.

This interactive approach proved to be a successful way of engaging people to take more notice of and save 'the small things that run the planet' (as the charity Buglife puts it). My insects have travelled to schools, meetings, conferences and special events far and wide, and received very positive feedback.

Five years ago, I wrote and self-published *The Wildlife Roleplay Book*, a collection of my scripts, illustrated by photos of my creatures and including ideas on making your own.

Butterflies join the menagerie

My latest additions are 29 species of British butterflies, known collectively as 'The Flutter'. Covid restrictions have limited their activities so far to appearing on a custom-made transportable display arch, accompanied by an ID quiz, but they hope to be allowed to hold interviews this year.

Roleplay that involves putting oneself in the shoes of a butterfly or hoverfly is a good way to come to appreciate the problems of loss of habitat and use of pesticides faced by insect pollinators today:

'You look unhappy, what is the matter?'

'Not enough nectar about and I'm starving hungry. The council cut the grass verges before wildflowers had a chance to seed and too many people here have covered their gardens with decking and concrete instead of growing flowers and herbs.'

The Flutter is hoping for more outings this year and is available on a voluntary basis for conservation charities holding wildlife-friendly open days and special events. We are willing to travel if expenses are met, particularly if refreshments are provided.

Article and photographs by Jenny Ogden

Since Covid lockdowns, there have been very unseasonal sightings of a surprising variety of butterflies on the Welsh border, which can be tracked down to my home in Presteigne, Powys.

After spending many years as a primary school teacher, forest school leader and educational workshop leader, for the last ten years I have invited participants of all ages to interview my handmade menagerie of models of beetles and bees in an attempt to raise awareness of the importance of protecting biodiversity.

My Wildlife Roleplay approach was developed initially from making a one metre long dung beetle – a beetle too large to be ignored. I mounted it on a safety helmet and asked children at a Forest School session to ask me questions such as 'Have you always been a beetle?'

Three more giant beetles followed, after which I

Butterflies



Common Blues



Beetles gathering in Presteigne



Duke of Burgundy



Grayling



Painted Lady



Silver-washed Fritillary



Skippers

For more information

www.beetlesandbees.co.uk

You can contact Jenny at:

info@beetlesandbees.co.uk

Tel: 01544 260460

Mobile: 07909 556628

To find out more about Stratford Butterfly Farm, visit: www.butterflyfarm.co.uk



Atlas moths are a sight to behold – widely regarded as the largest moths in the world. Photograph: Russel Sach

An entomologist describes his work at a butterfly farm and the role that such farms can play in conservation.

Tropical

Since the age of seven, I have longed to immerse myself in steamy tropical rainforests, to encounter nature's exquisite diversity first hand. This desire is something which has stayed with me to this day, though I have no explanation for its persistence. My childhood curiosity in the natural world has developed into a life-long ambition to conserve our most fragile habitats and the species which inhabit them, and I've been lucky enough to visit the tropics to witness them

for myself.

These days, I work at Stratford Butterfly Farm in Warwickshire as an Entomologist. I am responsible for breeding tropical moths and butterflies, which are exhibited in live educational displays. These displays aid in teaching the general public about butterfly lifecycles, tropical rainforests and species conservation. Breeding tropical species is not without its challenges, but the rewards are more than worth it. My fascination



Conservation ethics

Despite the imported butterflies originating from captive projects, there are still ethical considerations which must be defined to ensure that wild populations remain stable. Firstly, all of the butterflies imported at Stratford Butterfly Farm are of least concern in the wild – educational butterfly houses simply do not require endangered species to provide an impactful experience.

Furthermore, the propagation of common species can aid in the conservation of species which are at a greater risk of becoming endangered or extinct.

In the tropics, a captive project is typically initiated by collecting eggs from wild-caught females. These offspring can be bred many times over before needing to introduce fresh genetics. This inflicts a minimal impact on wild populations; in nature, it is estimated that just 2% of butterfly offspring reach adulthood due to the risks associated with surviving in the wild. At captive breeding projects, almost all offspring will reach maturity thanks to the carefully controlled environment in which they are reared.

Some breeding centres opt to re-release a proportion of captive-bred offspring to bolster wild populations. This is however a contentious topic among conservationists, who sometimes argue that releasing captive-bred butterflies may dilute the wild gene-pool with the genes of butterflies that would have otherwise perished and, ultimately, interfere with the process of survival of the fittest.

It's difficult to define the balance between the positive and negative effects of captive breeding butterflies. However, I would argue that immersive tropical butterfly houses are valuable advocates for promoting the conservation of exotic species.

Jewels

is such that, even when I am not at the butterfly farm, I tend to a micro tropical butterfly house in my urban garden at home.

Getting the conditions just right

Breeding tropical butterfly species poses demands when compared to breeding temperate species. The

CONTINUED ON PAGE 26 ►



The metallic, jewel-like chrysalis of the **Cream-spotted Tigerwing** (*Tithorea tarracina*) is perhaps one of the most beautiful pupae in the world. This species hails from Costa Rica.



The African Blue-banded Swallowtail
(*Papilio nireus*) inside my garden greenhouse

CONTINUED FROM PAGE 25 ►

first of these is that tropical species originate from countries that typically experience high levels of precipitation and hot temperatures. To achieve these conditions, a greenhouse is the ideal captive setting. An air temperature of 26–30°C and humidity of 80% or higher is necessary for the majority of such species.

Fewer seasonal constraints near the equator allow many species to breed year-round. Furthermore, the hotter temperatures and consistent rainfall give species the opportunity to grow much larger than in cooler regions.

Butterflies and plants go hand in hand

When housing tropical species, the second thing to consider is the larval host plants that are required. Some species of butterfly, such as **The Great Eggfly** (*Hypolimnas bolina*), are polyphagous, meaning that their caterpillars can consume a range of different plant species. However, many butterflies, such as the **Glasswing butterfly** (*Greta oto*) will only consume plants within the genus *Cestrum*. It goes without saying that a knowledge of butterflies is nothing without a knowledge of plants.

Tropical host and nectar plants are often very difficult to obtain, sometimes limiting which species can be bred in cooler climes. Only when one has mastered the art of cultivating tropical plants can butterfly breeding be attempted.

Obtaining tropical species

At Stratford Butterfly Farm, we import up to a staggering 20,000 butterflies in pupal form each week. They are flown in directly from the tropics where they have been captive bred. The captive breeding of these butterflies helps to fund conservation and social projects, such as Kipepeo Butterfly Project in Kenya. By earning money through breeding butterflies, the local community is incentivised to protect biodiverse forests and conserve endemism in the region.

Most of the pupae that are imported are made available to leading zoological establishments around the world to help promote wildlife education. At Stratford, we often welcome over 1 000 visitors to the attraction each day, hopefully inspiring the next generation of naturalists and conservationists.

A tropical utopia

Once the conditions of a tropical forest have been replicated, all that remains is to introduce some butterflies and witness their fascinating activities unfold. If you are anything like me, this can mean hours of enjoyment sitting in my greenhouse in the summer sipping on a gin and tonic, while the butterflies sip their nectar.

Article and photographs (except *Atlas moth* image) by
Coogan Middlebrook



Even a domestic greenhouse can become a tropical paradise with a few alterations

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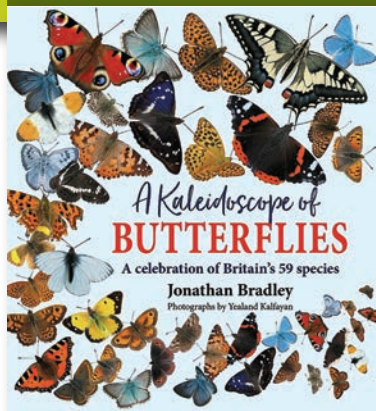
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A Kaleidoscope of Butterflies



- ISBN: 9781910723999 • Author: Jonathan Bradley.
- Photographs: Yealand Kalfayan • Publisher: Merlin Unwin Books • Publication date: June 2020 • Cost: £16.99 • Format: Hardback, 192 pages, 147 photographs

species? Writer and poet **David Bradley** and photographer **Yealand Kalfayan** share a life-long fascination with our butterflies and this is evident on every page.

Each butterfly has a commentary on appearance, habitat and life-cycle. Also, the author pays particular attention to the story and meaning behind not only its English name but more particularly its scientific name, revealing the fascinating world of Greek and Roman myth.

In addition, there is an original poem dedicated to each species. These come in various forms and range from the light-hearted to the more serious, often evoking the emotions that the butterflies arouse and the lives that they lead.

The accompanying photographs (two for each butterfly) are excellent.

Also scattered throughout the book are several short biographies of famous lepidopterists from days past including **Eleanor Glanville**, **Margaret Fountaine**, **Vladimir Nabokov** and **Winston Churchill**. It seems butterflies have held a fascination for everyone from British Prime Ministers to Russian novelists.

This book is not another field guide or work of reference. It is a refreshing, colourful and often personal celebration of our native butterflies. A book you can dip into or read from cover-to-cover as you wish. It is informative, entertaining and is highly recommended.

Both Bradley and Kalfayan are members of Butterfly Conservation, and a donation will be made to the charity from sales of the book.

Review by **Craig Jones**



'Margaret Fountaine was a remarkable individual who deserves to be remembered for her enormous contribution to the study of butterflies... It is said that when she died on a Trinidad mountain she was still holding a butterfly net.'



Adonis was a beautiful youth in Greek mythology, and the name suits a butterfly whose male wears one of the most stunning colours of any British butterfly. The male is a brilliant iridescent blue, variously described as azure, sky blue or turquoise. This is impossible to describe adequately in words, and has to be seen to be believed. Remarkably, much of this colour is generated by light refraction rather than as a result of pigmentation in the wings. The females are brown. The poem recounts some of the story in the myth, and especially Adonis's unfortunate need to choose between two divine women, one of whom, being rejected, arranges for him to be killed by a wild boar. But he was not forgotten, as the poem tells us.

Adonis's Blue male displaying his brilliant ground-colouring.

We carry a book review in each issue of *The Comma*. Newly published titles are ideal but particularly interesting or useful books from the past are also worth highlighting. See page 2 for contribution details.