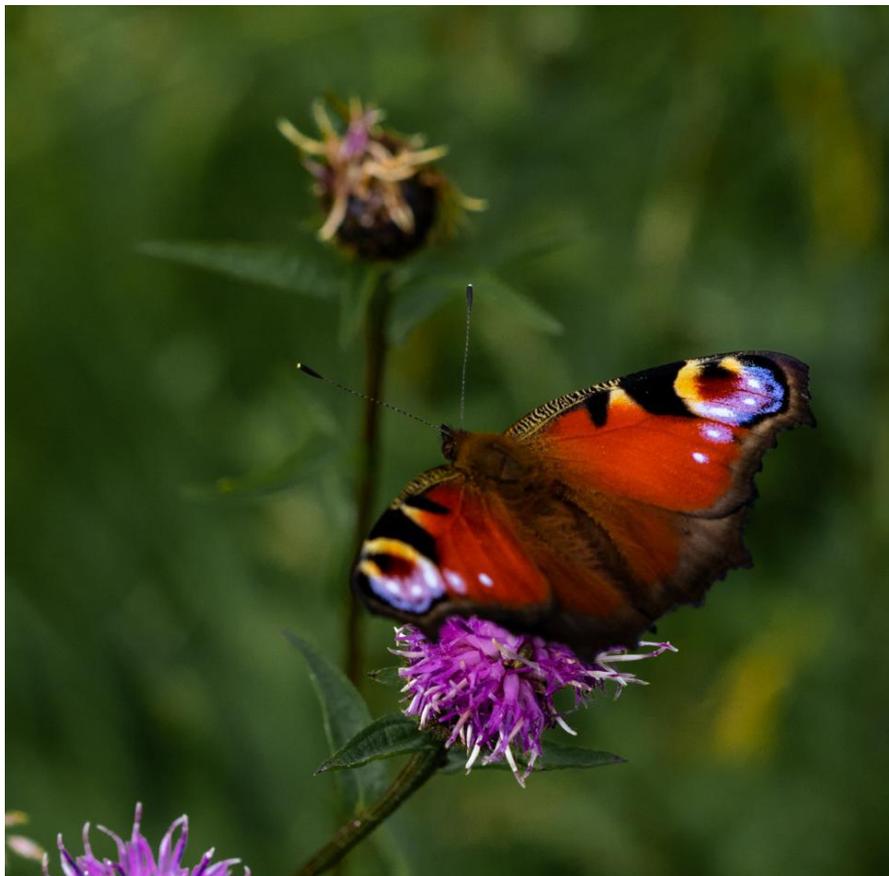


# Butterfly Conservation Cumbria Branch



**Newsletter 41 Autumn 2020**



Butterfly  
Conservation

## Moths in a muddle

All but one of the following are anagrams of vernacular names of macro-moths found in north-west England. These are as named in Waring et al, to determine whether or not the suffix "Moth" is included, eg Brimstone Moth, not plain Brimstone. Just to confuse you, a single butterfly species (hint, a Lakeland speciality) has been thrown into the mix. Number of letters per word in solution bracketed. We'll start with a very easy one!

1. It's Sue! (6)
2. Elver took turns (4,6,4)
3. Tired Grange (6,5)
4. Hot sprint home (6,7)
5. Alluring newly-wed ogre (5,6,9)
6. Elegant bras! (6&5)
7. Woman rents pillow (7,9)
8. Can't deter pet (6,6,)
9. North Metal (6,4)
10. Acne-itch research (7,9)
11. Had retardant (5,3,4)
12. O for seed grant! (7,6)
13. Old Bert Cameron (7,7)
14. Drag dress rows (3,5-5)
15. Girl adventure corps (6-6,6)
16. Pool chalk deposit (9,4-3)
17. Scottie's surfer (6,8)
18. Proven cadet (5,6)
19. Cough up, Eros! (8,3)
20. Naturist's tingle (5,10)
21. Migrated Hell (5,7)
22. Migration Tunnel (8,7)
23. I'd enter talk (5,6)
24. Old Bude record (7,6)
25. Twit Pedro stank ¿Que? (4-7,6)
26. New ash-trays (5,6)
27. Back, Charles! (5,6)
28. I love Bond (5-4)
29. End electric tugs (9,6)
30. End shale gas! (5,6)



Answers on inside back page

## MESSAGE FROM OUR BRANCH CHAIRMAN.....

Welcome to our latest newsletter. Someone recently said 'at least Covid-19 will not affect butterflies and moths.' In a direct sense that is largely true but it has certainly impacted on Butterfly Conservation and on what we can do to help both butterflies and those who support our work. However there have been some unexpected benefits too!

I hope you are keeping well and that even during the most stringent part of 'lockdown' you managed to exercise and enjoy wildlife and nature in your favourite local area: certainly the weather in April and May was truly exceptional. This has been a 'positive' to this shocking pandemic...that so many have gained in physical and mental well-being by discovering nature's beauty on their doorstep.

Spring butterflies have had one of their best seasons ever. Last spring was also very good but by the end of this May we were on course for near record numbers of most species....with almost all appearing up to 2-3 weeks early. Brimstones and Orange Tips

were abundant and there were very good emergences of Pearl-bordered and Small Pearl-bordered Fritillary, Dingy Skipper, Small Blue, Marsh Fritillary, Northern Brown Argus and Common Blue.



Enthused [by an excess of pheromone?] I made the rash prediction in both the CWT and 'Keer to Kent' magazines that 2020 would be exceptional: given the dramatic weather change we have endured since, I wish I had shown greater restraint! The good news is that most spring butterflies have had two really good years running.....but those emerging in June and July have found it difficult.

David Eastlick has kindly agreed to take on the role of writing and sending out our 'dotmailer' electronic newsheet that keeps members up to date with the latest between our twice yearly newsletters. We hope you have enjoyed its more frequent occurrence of late and our series of butterfly, moth and caterpillar quizzes! We thank Tom Dunbar for producing all our previous dotmailers and for his excellent contributions on our committee and elsewhere. Many know Tom as an outstanding field lepidopterist and friend to Cumbria and Lancashire.....he may still be seen in these parts but has decided to spend more time in Aylesbury. 'Thank you' Tom.

'Lockdown' hit just before we finished our winter conservation work party programme and the start of our guided walks. Sadly the latter had to be cancelled along with the start of the 'transect walking season'. It also meant our annual AGM and Members Day did not take place and our 'Training Day on Identification and Recording' .....all advertised in the last newsletter in the spirit of pre-lockdown intent. We hope all these events will run again next year and from September this year we plan to restart our work parties under Covid-19 recommended health and safety guidance. Details of this are given in this newsletter but only until December 2020. The winter 2021 programme will be sent out via dotmailer and posted on our web-site as soon as the longer term situation becomes clearer.

## **INVITATION TO ATTEND OUR VIRTUAL [ZOOM] AGM THURSDAY 22.10.20 AT 19.00HRS**

Despite the situation we are required to have an annual AGM and this will take place on 22<sup>nd</sup> October at 7pm. All are invited and an invitation to attend this virtual event by ZOOM will be sent out by dot-mailer nearer the time. To save on time this dot mailer will also have links to the chair and treasurer's reports together with any other information we normally provide for an AGM. The Agenda will include 'election of committee officers' and time for Q&A on the reports or on any other matters you wish to raise. Hopefully we may even have time for a brief presentation on butterflies and moths!

This issue contains a varied mix of articles on butterflies and moths..... with a few more articles on moths than of late. Butterflies tend to get excellent coverage [and so they should!] but with outstanding local moth experts in Martin Tordoff, Rob Petley-Jones, Brian Hancock and others I know you will love their contributions.....looking at Rob's photos of Pyralid moths there is a danger you will become 'hooked'!

Finally we know you love using our on-line 'sightings' pages. Following my brief article in the last newsletter and dotmailer you will know why we have had to restrict the viewing of certain species on screen. [This has not affected records as even if a sighting is 'withheld' on screen it is still recorded and sent to Cumbria's Biodiversity Data Centre at Tullie House in Carlisle.] Under lockdown extra species and sites were added to the 'withheld' category.....the good news is that as restrictions ease we will be able to resume normal service.



**Chris Winnick**

## New Arrangements for Conservation Work-parties.....

Below is a table detailing our conservation work-parties from September until December. We will follow Coronavirus health and safety guidance, and so unless this guidance is updated we will be limited to a group of 6 working out-doors while maintaining social distancing. Protective gloves and goggles can be taken home and loppers and bow-saws will be cleaned and quarantined ready for the next work party. Sanitizer will be provided. We would love to see you on at least some of our work-parties but please book a place in advance by contacting Chris Winnick.

It is also important to check our web-site for updates and possible changes in venue and if the weather looks unsuitable we will always try to show any postponement or cancellation the evening before. Otherwise please contact the work party leader. Further details are on our web-site and the new programme for January –March 2021 will be posted soon.

## BC Cumbria Winter Work Parties Autumn 2020

For travel details please see <http://www.cumbria-butterflies.org.uk>

**Due to Covid 19 regulations, booking is absolutely required. Only six people per work party.**

**Ring Chris Winnick 01539 728254**

Wed 9 Sep	Yewbarrow coppice SD 432845
Sun 13 Sep	Yewbarrow coppice SD 432845
Wed 23 Sep	Either Yewbarrow coppice SD 432845 or Witherslack Woods ride maintenance if Yewbarrow completed
Wed 7 Oct	Wakebarrow preparation Gillbirks to BOT
Sun 11 Oct	Wartbarrow SD 392765/392766 scrub control, brash burning.
Wed 21 Oct	Kendal Fell Cowslips planting, scrub cutting in and around Quarry
Wed 28 Oct	Wakebarrow Cowslip planting Gillbirks to BOT Connectivity
Wed 4 Nov	Wakebarrow Cowslip planting Gillbirks to BOT Connectivity
Sun 8 Nov	Wakebarrow Cowslip planting Gillbirks to BOT Connectivity If the cowslip planting is already completed, please see web site for updated details.
Wed 18 Nov	Township Plantation
Wed 2 Dec	Township Plantation

Sun 13 Dec	Holme Stinted Pasture SD 546785 or thereabouts Hawthorn and gorse scrub removal and burning.
Wed 16 Dec	Either Allithwaite Quarry or Wartbarrow SD 391766 scrub control, brash burning

The draft programme for early 2021 will be posted on the website before Christmas. The branch wishes to monitor the progress of the autumn programme before committing to the spring programme.

## Our Best-Known Butterfly?

Our cover star this time is the Peacock, perhaps the one butterfly that most people in the UK could identify and though familiar, surely one of the most beautiful, the equal of any tropical species! First named by Petiver as the 'Peacock's Eye' in 1699, it has consistently been one of our commonest butterflies and is expanding its range as climate change continues.

The beautiful eye-spots can be used to deter predators together with a loud click.

The spiny black caterpillars live communally in large clumps of nettles, followed by a brief period as pupae. The butterfly overwinters as an adult and individuals can live for 10 months.



**Karen Mclellan**

## Notes on Holly Blue from a north Cumbria garden

2020 has been an exceptional year for this species, aided by unusual amounts of fair weather - and perhaps increased observational time through the coronavirus 'lockdown'.

We live at Cumwhitton, about 12 km SE of Carlisle - a rural village, surrounded by farmland, above the more wooded Eden valley bottom. Our garden has both holly and ivy in some quantity. 2020 has been much better than any of the few other years in which the species has been noted. In 2004 (which was the first ever) we saw a male in spring and a female in summer; in 2012, a male for two weeks at the start of September; in 2019 a female (identifiably just one individual) was around for two weeks in August.



Sightings this year began on 10 April. The species was seen on many days, often several times on any one day, though never, ever, more than one individual at a time. Mostly, I suspect, they were of a male, or males, prospecting for females, hardly ever settling, and mainly keeping at hedge-top level.

It took some while to show that both sexes were present. The species' habit of almost always settling (if it does settle at all) with wings folded makes being certain of the sex especially difficult. On 25 May, a definite female was present all morning and made several visits to our big variegated holly, clearly ovipositing. At 4 or 5 metres above ground, it was hard to follow amongst the holly leaves, and offered no prospect of my ever searching for eggs! By 28 May, the almost familiar sightings of a small pale blue butterfly



erratically crossing the garden had come to an end. The small size and hairstroke-like 'bush-topping' behaviour of this species must make it especially easy to overlook. Low numbers don't help of course, and sunny days seem essential for its activities. We have been here since 1974 and I like to think it unlikely that we would have missed it pre-2004, or during the gaps between the years of the sightings mentioned. It was therefore very

pleasing that on 14 August, 80 days after the last sighting of the Spring generation, a male was exploring large growths of ivy- the first of the second generation!

**David Clarke**

## Rediscovery of two long-lost Cumbrian micro-moths

By a strange coincidence, on the same day, 9th June 2020, by quite different means I recorded two micro moth species both believed long absent from Cumbria and perhaps from NW England and beyond.

***Agonopterix atomella***. Two larvae were found on 9<sup>th</sup> June in locations approximately 200 metres apart in a dedicated search on their larval food plant Dyer's Greenweed (*Genista tinctoria*) at North Walney.

This Priority moth species within the UK Biodiversity Action Plan was last recorded on the same site in 1993 by John Langmaid, and this is believed the most recent Cumbrian record until the present find. Dyer's Greenweed is declining in its range in England, so it was satisfying to find decent stands of the plant at Walney.



Above and left  
Larvae of *Agonopterix atomella*, on *Genista tinctoria* (Dyer's Greenweed)  
North Walney 09 June 2020

Right  
*Sterrhopterix fusca*  
Meathop Moss  
03 June 2011



***Sterrhopterix fusca***. Embarrassingly, I discovered this when reviewing some of my old images, when I found I'd

misidentified a 2011 specimen of this species as *Psyche casta* (this was a year before publication of Sterling & Parsons field guide; that's my excuse anyway). This specimen was taken at Meathop Moss with a 250W MV light on 3rd June 2011. Phil Sterling has seen my photo and confirmed it as *S. fusca*. Prior to this, the last record in Cumbria was from Baron de Worms at Nichols Moss in 1965. Until the present find this species was believed restricted in the UK to Fenn's Whixall and Bettisfield Mosses NNR on the Shropshire / Wales border.

By a further coincidence, and confirming the species' continued survival in Cumbria, a specimen of *Sterrhopterix fusca* turned up in Edward Mills' moth trap at Witherslack as recently as 15 June 2020. It's perhaps notable that Edward's trap site is only around 1,500 metres from the location of the above-mentioned 1965 record on Nichols Moss. Searches on the south Cumbrian mosses for *S. fusca*'s distinctive larval cases could prove rewarding.



*Sterrhopterix fusca* larval case.  
Bettisfield Moss,  
17 July 2018 photo G M Tordoff

**Martin Tordoff**

## **AN UPDATE ON BC WORK IN CUMBRIA AND LANCASHIRE**

Martin and I, and now Kay (who is the most recent addition to our team), have put together a summary of the more interesting aspects of our work in your respective areas. At the foot of each section I have included various ways in which members can lend a hand with the work of the Regional Office. Contact me on 01388 488133 or [dwainwright@butterfly-conservation.org](mailto:dwainwright@butterfly-conservation.org) if you can help.

Since the last update, following consultation with local and national experts, County Recorders and BC Branches, our Regional Conservation Strategy (RCS) has been produced by BC staff. Along with other information, it identifies the moth and butterfly species of High and Medium Priority within Northern England. The document, in spreadsheet format, is available at:

<https://butterfly-conservation.org/sites/default/files/2018-11/Northern%20England%20Regional%20Conservation%20Strategy%202025.pdf>

The document will remain “live” until 2025 and it replaces a Regional Action Plan that expired in 2016. The priorities highlighted within the plan now determine activities to which BC staff devote their time and seek to promote. We are thinly spread so it is important that time and efforts target the species that are rarest and/or under the greatest threat. There now follows a Branch by Branch update.

### **Lancashire Branch Priority Species Work:**

**High Brown Fritillary** - The decline in numbers of the High Brown Fritillary has been alarming. We continue to work with landowners, land managers and volunteers to monitor HBF numbers in Lancashire and across Morecambe Bay. Our focus continues to be monitoring numbers, and to try to understand what is driving the decline. Top of the list is habitat change caused by climate change and nitrification, because we are seeing sites become more ‘grassy’ and less able to support HBF populations. We urgently need to understand these changes and apply this understanding to our management and to management advice. Our work with North West Universities is providing us with some excellent students who are helping to piece together the research. This year we have Jules Simons from Edge Hill beginning her PhD into HBF, its habitat needs and egg laying choice. We continue collating and analysing transect data from monitored HBF sites in Morecambe Bay. High Brown Fritillary netting licences for transect walkers are obtained from Natural England and distributed by staff to ensure correct classification of High Brown and Dark Green Fritillaries. Staff and volunteers offer training at branch site visits on habitat and



identification of the large Fritillary butterflies, which is often a challenge. Data from transects are analysed and regional trends for all key species are produced.

**Brown Hairstreak** – although an introduced species BC staff have used this as a focus to bring landowners together and to promote hedgerow management and scrub creation.

**Barred Tooth-striped Moth** - We continued our three year old pheromone moth survey for the Barred Tooth-striped moth with a mark-release-recapture study run by volunteers at several Lancashire and Cumbria sites.

### University liaison

BC staff and the Lancashire Branch organised a North West Research symposium at Salford University in September, which brought together a dozen students from 9 NW universities. We worked in partnership with Lancashire Wildlife Trust, to show case all the excellent butterfly, moth and restoration studies going on in the county. We hope this will be a springboard for more action and more research in Lancashire: so far 5 new projects are being undertaken at Lancaster University, plus two at Edge Hill and another at Manchester Met.

### Manchester Mosses Restoration project

BC staff and the Branch are working alongside Lancashire Wildlife Trust on their huge restoration project at the Manchester Mosses.

LWT are introducing Large Heath butterflies to the site and have aspirations to release Manchester Treble Bar moth too. We have offered our help with the Large Heath breeding and monitoring programme.

### Warton Crag Fritillaries

BC staff and branch members are working closely with the four management landowners on Warton Crag to retain and enhance the

Pearl-bordered Fritillary butterfly at this site. We bring together land managers and experts to share information and offer advice. The input of Lancaster University has been fantastic, and from their work we have built up important understanding of the breeding habitat which we can feed into management to retain the species here.

### BOOM Project Lancashire

Back On Our Map (BOOM) is a Heritage Lottery Funded project that has identified 12 key species that are absent or under threat in our landscape: it will attempt to re-introduce or bolster populations over its 5 years. The Duke of Burgundy is one of the focus species and we are working with them and the Lancashire Branch to look at restoring Duke of Burgundy sites in Arnsdale and Silverdale, and using Myers



Allotment reserve as a central site for habitat creation by planting more cowslips. Enhancement work at Gait Barrows is also planned.

Help is needed with: [1] Work parties at Myers Allotment. [2] Further habitat condition assessments at Warton Crag.[3] Monitoring of species across wide landscape areas.[4] Barred Tooth-striped moth surveys.

### **Morecambe Bay [Cumbria and Lancashire]**

#### **Morecambe Bay Facilitation Fund**

This funding stream derives from Natural England, the statutory government body tasked with delivering biodiversity targets for England. This particular pot of money is disbursed to organisations who can deliver training and demonstration events on management practice that best delivers benefits to target species and habitats while managing land in a way that is economically sustainable – a challenging task under current financial constraints.

The aim is to ensure land managers work together and, where possible, submit complementary grant bids, either to manage woodlands or the farmed landscape so that the landscape as a whole is managed in a manner appropriate to the target habitats and species. The bidding process to obtain this fund was a competitive one and depended upon BC staff being able to demonstrate relevant expertise in habitat management and grant applications and to sign up a worthwhile number of landowners to the project whose combined holdings exceeded 2000 hectares. The fund is administered by Martin Wain who provides information to landowners via a series of site visits, training days and practical demonstrations.

For example,

- A landowner day on the management of woodland and bracken habitats for High Brown Fritillary,
- With two Cumbrian quarries a training and demonstration day to plant nectar and food plants, targeting Dingy Skipper butterflies.
- We are helping to fund and pull together landowners and conservation groups to trial management at a Marsh Fritillary site in Cumbria.
- Several landowner awareness events to co-ordinate management for the Brown Hairstreak butterfly in Silverdale and Arnside.
- We have secured funding in five Countryside Stewardship schemes for landowners to undertake Small Pearl-bordered Fritillary monitoring and use this to show management success.



- For moths we have run training and identification days for landowners and volunteers with the Least Minor, and used pheromones to survey for Cistus Forester. We ran a training day looking at the Lancashire and Cumbria Netted Carpet habitat to try and bolster the Lancashire sites. Although elusive we have also offered training days with the Argent and Sable moth.

The current round of funding lasts for five years and we are within the final year of that timeframe. More information on the Facilitation Fund is available at <https://www.gov.uk/government/publications/guide-to-countryside-stewardship-facilitation-fund/guide-to-countryside-stewardship-facilitation-fund>

### **Fritillary habitat assessments**

The recording of habitat characteristics at Fritillary sites is ongoing. Assessments, involving recording the composition and structure of the vegetation of a variety of important sites, are being undertaken to create a baseline series through which changes to habitat, both positive and negative, can be identified. These data are also important in determining which management techniques are working and which need changing in order to improve habitat condition. As in some previous years, BC staff ran a training day at Warton Crag that also allowed valuable data collection.

### **Student research projects in the North West**

Project staff continue to work with most universities across the North West. At the moment we are aware of 9 Universities where students are undertaking moth and butterfly projects including 4 PhD's, 10 MSc's and many undergraduate studies. We work where we can to encourage students and direct them into areas of conservation where it is most needed.

### **Countryside Stewardship agreements across Morecambe Bay:**

BC staff continue to advise on the content of agreements on land that supports key species, especially in the Winster and Rusland Valleys as well as the Morecambe Bay Limestones. MW, in particular, and DW have both promoted agreements on various sites that support the County's key species. Monitoring of key butterfly species and habitat quality on some of these holdings is being undertaken by BC staff and will determine whether Stewardship is achieving its aims and that public money is being spent effectively.

### **Cumbria Branch**

#### **Facilitation Fund work: see Lancs Branch**

### **Rusland Horizons:**

The first phase of this project, which was funded by Heritage Lottery Fund, is now complete. Hilary Smith, to whom I am grateful, took forward our work in the Rusland Valley in many ways including..

- Comprehensive mapping of Small Pearl-bordered Fritillary sites within the landscape
- Duke of Burgundy & High Brown Fritillary survey, monitoring and habitat condition assessments

- Acting as BC's lead on the annual Netted Carpet monitoring and doubling the number of volunteers helping with surveys
- Co-supervision of a project student who researched habitat use by Small Pearl-bordered and Dark Green Fritillaries in Grizedale Forest
- Surveys for Argent and Sable (two new sites  $\approx$  25% of the known sites in Cumbria)
- Overseeing cultivation and planting out of primroses at potential Duke sites and other practical conservation tasks
- Running training days and other volunteer events.



Through the Facilitation Fund, we are continuing our ties with Rusland and will be initiating a woodland and butterfly project, bringing landowners together to talk about woodland management and opportunities for butterfly and moth projects.

**Morecambe Bay Limestones Woodlands project: (Walney Project)**

This community project aims to bring management to sites in Cumbria, including Whitbarrow, Yewbarrow and Witherslack, and running volunteer and community walks and events that link the contractors and managers with the public. We also want to show volunteers the management methods involved, the benefits to wildlife and how to get involved. Our work at Whitbarrow with landowners like the Forestry Commission, Cumbria Wildlife Trust and Landowner Associations is key.

**Duke of Burgundy Heritage Lottery Fund – Stepping Stones project**

This project in 2019 was overseen by the Cumbria Branch. A contractor was brought in to undertake surveys at known Duke sites to get a picture of how the butterfly is doing. 43 areas were visited on 129 occasions and searched for breeding activity, looking for eggs, larvae or adults. What makes the project exciting is the potential of this butterfly to move across the landscape as so many restoration projects for Duke of Burgundy are now in place. BC staff and volunteers have used this project as an initial step to prepare sites for the BOOM project: we hope to see in a brighter future for this species.

**Species monitoring: species we have focused on in the last year:**

BC staff continue to work with Branch members, partnership organisation, landowners and community groups to monitor and deliver management for our most threatened butterfly and moth species.

**High Brown Fritillary** - our monitoring and survey work has begun to identify the key remaining sites and breeding habitat that this butterfly depends on in Cumbria. BC staff are working with landowners to give up to date advice on the management of bracken and woodland sites for this butterfly. Several landowners have been on training days to give them the tools and understanding to begin to manage their land for this species. Stewardship schemes have also been developed with NE, where landowners have HBF as a central species in their creation, restoration and enhancement projects.



**Pearl-bordered Fritillary** – we were delighted to work last summer with two students from Lancaster University on Whitbarrow who undertook a mark-release-recapture study on PBF across this site: they had record numbers! The butterfly had benefited from a good breeding season in 2018, good larval survival over the winter, and good weather when emerging as an adult. We are still waiting for their paper to be completed but initial population estimates are very encouraging.

**Small Pearl-bordered Fritillary** in Cumbria continues to do relatively well and we are working with landowners and groups to record it across large landscape areas like Rusland, Bigland, Winster and the Morecambe Bay Limestones.

The RSPB work on **Mountain Ringlet** has been a great partnership project; we wait to hear from the PhD and Msc student working there.

BC staff and Branch have been working closely with the **Marsh Fritillary** Action Group, who with Steve Doyle, continue to count the successes of this brilliant reintroduction project. Last year the butterfly was found spreading out from known sites and colonising other areas. We hope to have students working with the group this year, and to continue to undertake progressive management and survey work. Smardale and Arnside Knott have long been strongholds for the **Scotch Argus**, but recently numbers on the Knott have declined massively. BC staff are working with the NT at Arnside to trial changes in grazing, while staff and students from Lancaster University have shown that both the populations are genetically robust and diverse. The SA Action Group, made up of branch members, staff and other organisations such as CWT, NE, Network Rail, Universities and landowners and managers aim to find areas that can be managed for the butterfly to provide satellite populations.

**Moths** – BC staff in Cumbria are working with Hutton Roof parish council to promote upland cattle grazing. We are undertaking butterfly and moth survey work here for species like **Least Minor** and we are delighted that Justine Patton is completing a Moth MSc at this site. This year in Cumbria we might focus on **Forester Moth** as we had a new site in 2019 found by Caroline Clay from Lancashire Branch. We will continue with the **Barred Tooth-striped** pheromone survey, last year we found the moth over in the Duddon Valley.

**BOOM Project - Small Blue on the Cumbrian Coast:**

BC staff continue to monitor vegetation of scrapes created at Derwent Howe and, if weather is favourable, to undertake timed counts of the species. Sadly in 2019 it rained...heavily. Habitat enhancement for resident SB is due at Barrow Slag banks.

**Netted Carpet Steering Group:**

BC is an active partner in this group and staff assist with species monitoring on an annual basis. Our role increased through the Rusland Horizons projects (see below) as the project area covers several extant and potential sites. 2020 will see a special effort made in monitoring this species at as many sites as possible.

The favoured technique involves counting larvae, a far more reliable way to determine long term population trends than any method involving adults. Surveys will be undertaken in early September (see below). BC staff are also working with Branch members like Brian Hancock to undertake trials to try to improve numbers at the Lancashire sites.



Help is needed with.... [1]Netted Carpet surveys [September]. Please register an interest with Dave W for further details. [2] Transects. There are a number that have been discontinued and a number of sites that would benefit from regular, systematic monitoring. [3] Habitat condition assessments for Pearl-bordered and High Brown Fritillaries, of increasing importance as these species continue to decline. Causes may well be climatic but it's likely that its impact is transmitted to butterfly populations through subtle changes to the species' habitats. If we know what those changes are, we *may* be able to devise management that addresses them. [4] Surveys. Targeting the two above-named fritillaries. Contact Martin W for directions to under recorded sites.

**David Wainwright [Senior Regional Officer] and Martin Wain [Conservation Officer]**

## GET BUZZING!

Yes I know, our job is to conserve butterflies but at the same time we have to have an interest in other pollinating insects which are at least equally as important in pollinating our wider countryside to keep it in good condition.

There is no doubt whatsoever that our Bee population is in serious decline and the result of that will adversely affect our wildflowers on which many species of butterflies depend for egg laying and larval growth. Butterflies themselves are pollinators of course but the loss of Bee species would be catastrophic.

Cumbria Wildlife Trust are leading a Project in West Cumbria called Get Buzzing and we in Butterfly Conservation, whilst not contributing in financial terms, we are working in partnership on the Steering Group of the project.

The objective is to create and/or restore more areas which have abundant nectar sources for Bees and other pollinating insects like butterflies and have many more such wildflower patches as stepping stones along traditionally used wildlife



connectivity corridors. Those corridors are the coastline from about Ravenglass right around the south Solway to Carlisle. Other such corridors are main roads such as the A66 across from Workington to Penrith via Keswick and other A roads in West Cumbria parallel to the coastline and which are alongside the railway line which is itself a great wildlife connectivity corridor.

To find out more about this Project and those routes just google Get Buzzing on your computer and there is a load of information there.

From our butterfly point of view although we are focussing on creation of butterfly habitat we are at the same time equally focussing on the creation of Bee pollination habitat which is more or less the same thing except that the wildflower seed mix we use is of a greater variety and should be more colourful as a result. We also have to have plants which flower and provide nectar throughout the Spring through to Autumn rather than simply a butterfly flight season.

The fantastic thing for the Get Buzzing Project is that we have helped them immensely by using our experience to



good effect and have created an enormous amount of additional habitat in the West Cumbria area. In Workington and Maryport alone we have put in an extra 42 large wildflower scrapes plus one enormous scrape on otherwise unused slagbanks in Workington. Seeding has been done to around 85% so far and will be completed this year. Next year should be a riot of colour if previous success on similar smaller scale projects is a guide to success. All we humans can do is provide suitable habitat to give the pollinating insects every chance to survive and thrive going forwards. We



are doing that – now we look for them to respond but fully realise it will not happen instantly, wildlife works in its own time and they along with habitat respond also to temperature and climatic conditions which none of us can do much about.

So far germination of our wildflower seed is looking great now that we have a bit of warmth to go with all the wet but we have to be greedy don't we, we want more of both!

In this article I've included some photos of the wildflower scrapes created and growth so far – it will be next year before we see more actual flowers.

**Steve Doyle**

## **Bishop Middleham Quarry Nature Reserve and Northern Brown Argus**

Bishop Middleham Quarry is situated 1km north of Bishop Middleham Village on the A177. Abandoned in the 1930s, this former magnesian limestone quarry is a Site of Special Scientific Interest, nationally recognised for the plant life it supports. It is managed by Durham Wildlife Trust.

The thin limestone soils support a range of plant species ranging from scarce orchids such as the Dark-red Helleborine to more common species like Common Rock-rose. The site attracts a large numbers of butterflies such as Dingy Skipper, Common Blue, Small Heath, Ringlet, Wall Brown and one of the county's largest colonies of the rare Northern Brown Argus, known locally as the Durham Argus which is best seen in June and July.

The Northern Brown Argus (NBA) is very closely related to the Brown Argus (BA) and those found in Scotland are distinguished by having a white spot on the upper side of each forewing and fainter black spots on their undersides. The colony at Bishop Middleham belongs to a separate race, *Salmacis*, which although like their Scottish

relatives have variable orange markings on their upper wings, may or may not possess a white upper forewing spot. Likewise, BA may occasionally have a white halo on their upper wing to add to the identification complexities.

In the past, range was a suitable way of separating NBA and BA. This is no longer the case in county Durham. BA has been increasingly and widely recorded in the south of our region. Whilst county Durham may well be right on the limit of its range here, it does seem to be firmly established. Possibly the hot summers have encouraged this butterfly to expand northwards from Yorkshire.

It was a good opportunity this spring to see if both Argus species could be found at the quarry, with the Government beginning to ease travel restrictions, my desire to stay local for obvious reasons and the long hot weather, even in the north east! I was armed with the knowledge that both species could be found in the county and early and late NBA had been recorded from a couple of inland limestone sites. Whilst any early Argus sightings were likely to be the BA expanding its range, I had to consider that many species were now flying earlier than in the past. This was likely to be the case this year given the excellent spring weather. The earliest record of NBA was at Bishop Middleham Quarry on the 18 May 2017 which was a fact I had forgotten when I made my first visit.

A summary of my observations follows.

My first visit was on the 15<sup>th</sup> May 2020. There was plenty of Dingy Skipper and Wall Brown despite the cloudy conditions, but the appearance of an Argus was rather unexpected. The under wing appeared silvery in flight. It settled once on dead vegetation during a brief sunny spell



with wings fully stretched (picture 1). My initial thoughts were BA, given flowering Common Rock-rose was almost absent, but it appeared to be a female NBA as it had plenty of orange markings and possessed a faint white spot on each upper wing. A dorsal view of a BA from a nearby quarry at Wingate is shown as a comparison, (picture 2). This appears browner and has no white spot although I accept light can change the hue of the wing.



A further three Argus species were observed in flight in the quarry or briefly nectaring on Common Milkwort. No underwing observations could be secured. I was intrigued as to whether these were all remarkably early NBA or whether BA was now firmly established in the quarry. Could they be a NBA x BA hybrid given the remarkably early date and the lack of flowering Common Rock-rose? Curiosity and the lack of underwing photos spurred me on.

On the 16 May 2020, an Argus with a dark spot and a lack of orange on each upper wing was found nectaring on Common Milkwort. A silvery underwing was again noted in flight. This appeared to be a male BA or a possible BA x NBA hybrid, but identification could not be confirmed from the brief views available.



Over the next few days, no Argus species were seen, presumably because of cloudy weather and a fresh westerly breeze. This changed on the 25 May 2020 following an improvement in the weather. Three male Argus species were observed. They appear to be all NBA. All had very recently emerged as they had the white margins to the upper wings. Another Argus species enabled me to secure an underwing photograph (picture 3) showing large black spots within the white under wing spots. This appeared to confirm the presence of BA in the quarry. Unfortunately, it took off, and could not be

relocated so no upper wing shots were secured except for a very blurred take off image which was consigned to the bin. A picture of an NBA under wing is shown (picture 4) to give a comparison. Note the reduced black spots in picture 4.

A further 5 Argus species were consigned to agg. status as I could not confidently identify them from the brief views available. Interestingly the local transect recorder had observed his first NBA earlier that morning.



Three more visits to the quarry up to mid-June revealed a total of 15 NBA together with 16 Argus agg. What appeared to be another single BA was observed but not photographed on 1 June. I should perhaps have undertaken further visits, but I was getting itchy feet and a desire to see a few more local species. I did make another visit at the end of June and in early July predominately to see the orchids. Ringlets

and Meadow Browns were recorded, but no Argus species were seen, although 1-2 NBA continued to be recorded by others until late July. I did observe several NBA at a nearby site in late June.

Where has the Spring sightings at Bishop Middleham Quarry left me? Well to be honest, rather confused! Both Argus species appear to be present at the quarry. Careful observation allows the Argus to be separated from the closely resembled female Common Blue but separating NBA and BA in spring is extremely difficult and often impossible where their range overlaps. A predominate white spot on each upper wing and the presence of small black spots within the white spots on the underwing points towards Northern Brown Argus but there is still the possibility of hybridisation. The issue of hybridisation with the spread of BA northwards and the risk this poses to our NBA population is still to be fully understood and is outside the remit of this short article. The purpose of this article is to make people aware that both Argus species are now present in Co. Durham. You can no longer take for granted that any Argus species will be NBA and you need to carefully check any early spring Argus sighting at sites with Common Rock-rose.

Whilst the West Coast does not currently have this problem (yet), maybe the NE Region now needs a new category called Argus agg. to capture all those Argus records flying in early Spring that cannot be positively identified at sites where Rock rose is present. Perhaps, I have inadvertently made the acceptance of early spring records that little bit more difficult, but I will give it another go next year.

**David Phillips**

### **MARSH FRITILLARY Update ....**

**There were plenty of adult butterflies this year and plenty of eggs laid so all looks good doesn't it ..... Errr, maybe not!**

In 2020 having closely studied the fortunes of the Marsh Fritillary for over 20 years I sense we might be on the cusp of a downturn in fortunes. I hope I'm wrong but as I write this I'm almost two weeks into the larval web counting season and the results so far are well down on where they should be. The flight season started and finished around 10 days early so I expected the webs to show through early.

They are not, but why?



The average temperatures in June and July in Cumbria were well below normal for the time of year. By example I was out web counting during the first week of August and by late morning the temperature had risen to a 'balmy' 13 degrees – in August! It should be at least 18 and probably over 20 in August but as I say during the previous two months we had below average consistently. Nature is very much controlled by temperature and climatic conditions, that's commonsense isn't it, and if shade is the problem we can maybe do something about it but if it's overall temperature we are much more limited.

So how does it affect Marsh Fritillaries?

The eggs are laid during the flight season in late May or early June. Given some normal dry warm days those eggs turn from bright yellow to brown/red before hatching out in larval form. All that is controlled by temperature, not a calendar or a clock. The tiny larvae (caterpillars) then rely on direct sunlight and temperature to quickly gain growth energy whilst they turn into little black hairy jobs, around 200 of them in each egg batch living in a little community together until going into hibernation together in September. The problem is that in June, July and so far in August 2020 those caterpillars have simply not progressed beyond the stage of hatching out and are still tiny in the first instar stage i.e. they have not grown enough to shed their skins into the second instar stage. They should by mid August be in the second instar stage and feeding and growing towards the third instar stage so they are robust enough to go into hibernation for at least 6 months during which time they will lose 50% of their size and body weight.

The point is that if they do not progress through those instar (shedding of skins) stages it is not as if they will temporarily be frozen in time, they will most likely die as larvae. Over my 16 years of captive breeding in my back garden where I can see them daily at close quarters I have seen many dead larvae and have wondered why but I'm now convinced of the reason which is as I've just stated. You would never realise that by standing in a field every day searching for dead larvae.

After extinction in Cumbria in 2004 we in Cumbria pioneered a reintroduction programme which as you probably know has been extremely successful. By the end of the 2019 season we had not far off 30 known and confirmed breeding sites/colonies. There were a few hiccups along the way such as severe flood conditions on our largest site and population crashes on a couple of other sites. By monitoring those situations and putting in place a management strategy in liaison with the farmers and landowners concerned we overcame the setbacks and things gradually improved to the extent that we had over 3,000 larval webs (egg batches) over our sites in total in each of 2016 and 2017. That total reduced to around 2,500 in 2018 and 2019 and I feel climatic conditions were largely a factor with it being too

hot for too long (yes, honestly!) or it being too wet or cold for too long (yes, this is Cumbria!).

We must accept that it will not be good news forever and there will be natural set-backs but what we should not accept is that inappropriate site management is the reason. The advice of Butterfly Conservation Cumbria is that light grazing by cattle over a limited period is ideal. At present we are unable to convince those who are responsible who have their reasons for not following that advice. In that respect our largest flagship core colony in Ennerdale which had 1,705 webs in 2016 had only 168 in 2019 and 2020 looks to be heading even more towards extinction. Why? Because of inappropriate habitat management in my opinion. The site has not been cattle grazed for several years now and cutting/removal has resulted in a major change for the worse. That is and was my opinion all along. The site is now dominated by Common Hogweed by the 1,000 and cutting all of that will simply release many more 1,000's of such seeds. The cutting of other vegetation has resulted in mass growth of other aggressive species which have eradicated all of our 'oases' of short sward preferred by the butterfly for egg laying. That necessary mosaic of habitat no longer exists.



So, some very disappointing news but to finish on a brighter note we still have almost 30 colonies of Marsh Fritillaries in Cumbria and although we presently expect larval web numbers to reduce this year we should still have a very viable population well capable of recovering going forward – and who knows as I write this, we might have a heat wave between early August and mid September! Fingers crossed.

**Steve Doyle**



## The Pyralids – My Favourite Moths

I have had a sort-of life-long love affair with the Pyralids, ever since I started to look at moths way back in the 1980s. I had been appointed as Reserve Warden for Ham Street Woods NNR in Kent in 1985 not really knowing anything about moths, and the fact that the NNR was particularly noted for its very rich Lepidoptera community meant I had a steep learning curve to climb!

Help was all around me in the form of some deeply knowledgeable and friendly local moth-ers, whose patience and generosity allowed me to learn from their expertise, despite my initial howling mistakes! Help was also available in the Nature Conservancy Council (remember them?) Wye Office library, which was well stocked with books old and new. Two recent additions to the shelves were Bernard Skinner's wonderful photo guide to the British macro moths (a ground-breaking and a hugely helpful work) and the slighter but no less helpful photo guide on Pyralid Moths by Barry Goater. It is strange to realise that there was no internet to help me in those days – UKMoths was a glimmer of an idea in Ian Kimber's mind! I did not even have a computer!



*Nymphula nitidulata*

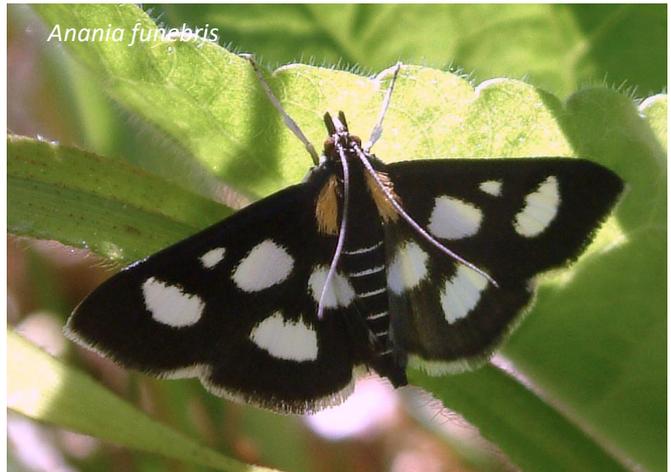
species was an added bonus.

Barry Goater's book was to become a constant source of learning for me over the next few years. Although I was initially very wary of micro-moths - there were far too many macro-moths to learn at Ham Street Woods anyway - I WAS immediately drawn to the very attractive range of species depicted in this book, and that many were day flying

Pyralids hover between Micro-moths and Macro-moths in my mind. Most fit nicely into the micro category, but some like the **Beautiful China-mark Nymphula nitidulata** would clearly look quite at home with the macros.

My first need to dip into Pyralid book came when I noticed a very attractive micro-moth flying around in the bright sunshine as I was carrying out my butterfly transect though the NNR. It was a small buzzing creature with white spotted black wings and intriguing golden shoulder pads – surely this would be so easy to identify? I first went to Skinner where in ignorance I searched high and low for a macro moth that looked like my creature. No joy there, so I turned to Goater where after working through the plates I finally spotted my mystery moth – it was **Anania funebris** (no English name of **White-spotted Sable** in those days!)

From then on, I was hooked on Pyralids and every Ham Street Woods moth trap was examined with great care to ensure I did not miss any of these wonderful little insects. Lovely species like **Hypsopygia glaucinalis**, **Hypsopygia costalis** (**Gold Fringe**), and **Endotricha flammealis** regularly graced the egg boxes, alongside the many **Scarce Merveille-du-Jour** and **Triangle!**



My transfer to Gait Barrows NNR in 1992 allowed me to continue my relationship with **Anania funebris**, with the added pleasure of such lovely species as **Pyrausta cingulata** and the always delightful **Catoptria pinella** and **Catoptria margaritella**. With more NNRs to care for after 2000 came more Pyralids - Roudsea Wood's coastal fringes regularly produced **Agriphila selasella**, while my first **Crambus ericella** popped up in front of me as I walked over the Great Asby Scar sward one day.

Travels in Ireland, France, Italy and Iberia have added opportunities for pleasure that Pyralids can bring to a naturalist on holiday, with species like **Pyrausta sanhguinalis**, **Cynaeda dentalis** and **Oncocera semirubrella**, rare in the UK, popping up everywhere, while I came across the lovely little pink **Eurodope rosella** in a Scabious rich dry grasslands in Central France.

However, there is nothing to beat those special nights when some intriguing Pyralid turn up in your home traps! The anticipation of such rewards as the autumn

migration time looms is more than matched by the leap of excitement when a pearly-white *Palpita vitrialis* is found sitting in the egg boxes!

The best moment for me (so far!) was the discovery of a wonderful *Spoladea recurvalis* in my trap at New Hutton in October 2011. This rare migrant is wafted from the tropics on warm southern autumn winds, and I really needed to get a photograph.....! My worst moment was seeing it disappear forever into the bushes before I could get the camera on it! Thankfully, the following night there was a second individual in the trap and this one did behave to have its image captured for posterity!



Even after nearly 40 years of moth watching, I still enjoy the sight of a Pyralid species (yes even the dreaded *Scoparia* species) and I am continually on the look out for old favourites and new personal discoveries. The recent field guide on micros from Phil Sterling and Mark Parsons has been such a help, while the good old UKMoths website and a small host of friendly Facebook groups aid the challenge of identification of some of the trickier species in this group.

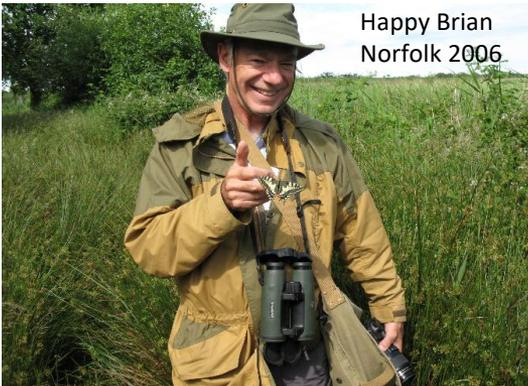


The Pyralids - a lovely group of moths for you all to enjoy, so do not dismiss them as too challenging. Their wonders will reward your patience and persistence with true joy. Start with the **Mint Moth *Pyrausta purpuralis*** in your garden and begin your journey of pleasure!

**Rob Petley-Jones**

## Getting up close to your Butterflies and Moths

If you are like me, you will not be able to resist the temptation to pick up a butterfly or moth on your finger to have a really close look to appreciate its full beauty. Most of us are out on sunny days and there is precious little chance to persuade one to adopt your finger but on dull days or early or late in the day one may come across one at rest that can be persuaded to crawl onto your finger. I have done this often



Happy Brian  
Norfolk 2006

but have only a few photo records. I have usually been dependant on having someone else to take the photo though more recently I have had success with the camera held in my right hand with the insect on the other. Here are a few photos to illustrate these points.

As you can see from my attire that it was not a hot sunny day for my first visit to the Norfolk Broads. My friend, a local resident and I were searching for Swallowtails when I spotted one wings spread open, low amongst the rushes. I think it must have recently emerged. After taking some photos in situ, I was able to coax it onto my finger when it posed beautifully before taking off on its maiden flight. A once in a lifetime experience, no wonder I look happy.



A freshly emerged Swallowtail

The next photo was taken when the Arnside and District Natural History Society were on holiday based in Dorset. We were lucky enough to have an outing above Lulworth Cove with Martin Warren who was then CEO of Butterfly Conservation. He showed us how easy it was to get an Adonis Blue on his finger long enough for all of us to take photos.

Martin Warren and Adonis Blue



Female Adonis Blue

I have generally found the Blues to be the most cooperative though they usually keep their wings closed unless you are lucky. My lucky day came when I was surrounded by

Silver-studded Blues on the Great Orme last summer.

I have lived in the North West most of my life and I cannot believe it has taken me so long to discover the Great Orme. I had known for a long time that Silver-studded Blue could be found there but I had seen this species in several places in the south. I had been thinking of visiting for some time but some reason or other I could not make it or the weather was poor for its flight period of the second half on June and I was not quite sure where I should be searching.

I discovered filed away, a cutting I had kept from an old British Butterfly Conservation number on where to look on the Great Orme. I arranged an overnight stay on the 26/27<sup>th</sup> of June last year. The afternoon I arrived I parked as advised near the old Toll House at the junction of Abbey Road and the Marine Drive, SH 770821.



The old toll house on W of Great Orme

There was high cloud but that did not matter, I was in for a treat. You go up a short zigzag path heading west and find yourself on the appropriately name Invalids path, with only a slight incline. I had barely gone up the path and the blues were everywhere around the abundant Rock Rose. Even in Europe I don't think I have seen so many butterflies in one place. I could fit a dozen at once into a camera frame. The lack of sun was a bonus as

its was warm and windless, so they were

basking readily and presenting unrivalled photo opportunities. They were mostly in excellent condition and the females particularly beautiful being a mixture of blue and brown. After two hours of heaven I left only to return for another two hours next morning. This time there was sunshine and moderate wind, so the photo opportunities were not so good. The blues were basking but lower down amongst the herbage. I must have seen hundreds and total population must be well in the 1000s. Further along the invalid's path there is a steep zigzag path up the Orme. They were still there but fewer, though a bonus was sighting of the diminutive form



of the Grayling called *thyone* that is only found on the Orme. The final icing on the cake as one of Britain's rarest moths, the Silky Wave a couple of which were easily disturbed from their larval food plant Rock Rose. Apart from the Orme its only found at one site in the Avon Gorge and on the Gower Glamorgan.

Don't put off a visit, you should not be disappointed, you are in for a treat. Mine were all in good condition on these dates but I heard that this year 2020 they emerged earlier than usual, as many were flying on the 7<sup>th</sup> of June.

As well as a Panasonic Bridge camera I always carry a small pocket camera. For some years, it was Panasonic TZ series but for the last 18<sup>th</sup> months an Olympus TG model ( see note at the end). This can be carried by a wrist strap and if you have the appropriate setting in advance ,you can take the photo like the one above single handed. The most important thing to set the focus and exposure to spot metering so you just get the butterfly in the centre of the frame. I use it in Programme mode, so the best aperture and shutter speed are selected automatically having previously selected the appropriate white balance and ISO speed.

You can practice this single-handed photography with moths which are much more obliging in sitting still on a finger provided it is cool.

The Belted Beauty, Lancashire's top speciality, is an ideal candidate for single handed photography. If you want to see this lovely moth, then look for details of the annual Belted Beauty count in April. They are posted on the Lancashire Moths website a few weeks in advance.



After taking a studio photo of a special moth I let it go outside and its surprising how often it settles nearby and allows a close approach for a photo in a more natural setting. So, I have my little camera ready and this scarce little Thyme Pug settled on my wrist allowing me to get a cracking shot with the camera in my right hand. I have come a long way since my early days of netting and pinning my Butterflies and Moths.

Modern cameras have made a massive difference to our enjoyment, so be inventive and see what you can do.

**Note on the Olympus TG Cameras:** I have a TG5 model. It's tough and waterproof and easily slips in a pocket. Its brilliant for real close ups having a microscope mode and an automatic focus stacking option. This is great for increasing the depth of field of close photos.

This model has one defect. If you use it at full telephoto mode (only x4) and photograph a subject with a light background you get an obtrusive purple spot in the middle of the picture. Provide you avoid that combination is no problem and you would never notice it with general shots outside. There is now a TG6 model. I would recommend this as the defect has been largely corrected.



A Thyme Pug settled on my wrist

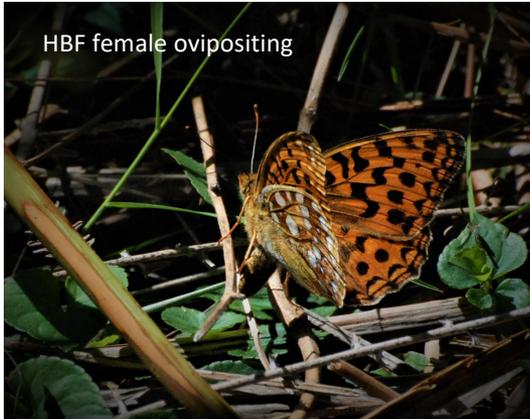
**Brian Hancock**

## **Important new research into the requirements of the High Brown Fritillary gets underway in South Cumbria**

The High Brown Fritillary (*Fabriciana addipe*) is one of the most striking British butterflies. It is also one of the most rapidly declining with a fall in abundance over the last 10 years of 85%. Cumbria is now one of just four remaining landscapes in

the UK to support the species, making the area key to understanding the conservation requirements of the species.

Recent research by Ellis, *et al* (2019) identified changes in micro-habitat despite management and highlighted the need for research into the drivers of change to ensure conservation is appropriate.



In October 2019, I began PhD research with the Biology Department at Edge Hill University, studying the micro-habitat of the High Brown Fritillary. This is the second Cumbrian focused butterfly PhD at Edge Hill, following Michelle Davis' study on the conservation genetics of the Marsh Fritillary. My research will address gaps in the ecological knowledge of the High Brown Fritillary, particularly by studying oviposition, a less

well studied stage of the life cycle. It is looking to answer several questions:

1. How does the micro-habitat change over the course of the year between oviposition and larval emergence?
2. Is habitat management contributing to changes in micro-habitat quality?
3. Is micro-habitat quality changing in a consistent manner across the UK range?

The warm spring bought on the earliest emergence of High Brown Fritillary in Cumbria (14<sup>th</sup> June). Numbers were good and thankfully I was able to get into the field to see it. I began intensively searching for females in hope of observing the crucial event. My field assistants and I observed four mating pairs. The female of one pair, started to attempt oviposition just seven minutes after mating.



Due to the difficulties in separating High Brown Fritillary from the Dark Green Fritillary (*Speyeria aglaja*) on the wing, verification was achieved when individuals settled. As observations of Dark Green Fritillaries were made, I also collected data on this species to further inform ecological separation of the two species.

The unsettled weather throughout July made observations less likely. Nevertheless, at the time of writing, I have surveyed over 30 oviposition locations of High Brown and Dark Green Fritillaries. These sites

will be monitored for temperature and vegetation cover over the winter months until larval emergence in early spring. This data will be added to next season, along with the commencement of management trials.

Observations from the field suggest that they have favoured localised spots for egg-laying and for nectaring. Ovipositing females can be seen dropping into the same spots almost on a circuit, and different individuals have been seen laying in the same locations, sometimes days apart. The data will reveal more when analysed over the winter.

Fieldwork has been hard work but hugely rewarding. Planning in such changeable weather and trying to avoid the curious cows that like to chew my equipment are the most challenging aspects. But, intensely observing one of the rarest UK species over an entire season has been a pleasure, and not something I can imagine I would ever have had the time for outside of this research.

The research is in it's first year and will continue to collect and analyse data until 2023. I'd be particularly interested

to hear from anyone who has observed High Brown Fritillary oviposition, or could help in marking such spots in future years.

Thanks to everyone who has sent their Fritillary sightings direct to me or to Butterfly Conservation this year, they have been very useful in confirming the best locations to be observing the species. Also, many thanks to my supervisors Dr Anne Oxbrough, Prof Paul Ashton & Dr Rosa Menendez-Martinez for guidance, as well as the support from Butterfly Conservation and local landowners.



I hope to update you on the progress of my research in future issues. In the meantime, if you are interested in my research or can help with sightings or observing oviposition, please email me: [simonju@edgehill.ac.uk](mailto:simonju@edgehill.ac.uk).

**Julia Simons**  
**PhD Researcher, Edge Hill University**

Rob Petley-Jones asks: Can you name the Pyralid? (answers after BOOM article)



## SMALL BLUE Update .....

It's great to be able to start with some good news and our delightful little *Cupido minimus* is a pleasure to have in Cumbria in any event. To have two good flight and breeding seasons in a row is even better news. True that we've had some set-backs along the way and we still have some but overall the progress we



have made in our restoration project has gone a long way to arrest decline, steady the ship and start to gain a bit of momentum.

So lets have a bit more about the good news before we focus on the set-backs. A brief bit of history firstly; the Small Blue has colonies in the West Cumbria area along the coastline in Workington and Maryport with some new discoveries near Whitehaven in recent years. It no longer flies anywhere else in the north of England except if an introduction in Teesside last year was successful. The habitat it occupies is ex-industrial sites such as slagbanks historically used for dumping excess coal and steelworks material. Wildflowers grow best on poor substrate areas because they are not out-competed quickly by more aggressive and dominant species which thrive on better top soils and therefore more quickly snuff out the wild flowers. The Small Blue butterfly lays its eggs on Kidney Vetch which given a fair crack of the whip will thrive and self-seed itself year after year provided its habitat is kept in suitable condition. That's where we in Butterfly Conservation Cumbria can do our bit to help. Along with the superb staff and volunteers of the Workington Nature Partnership (WNP) we restore, create and maintain suitable habitat throughout the year for the Small Blue butterfly. Our work also helps create suitable habitat for other wildlife species as well as other species of butterflies. Ground nesting birds such as Skylark are important to us as is rare flora such as Orchids for example the very special Bee Orchids and the even rarer Purple Broomrape which is found nowhere else in the UK north of Hull – we had over 200 such plants on one of our sites in 2020!

It flies only for around three weeks from late May to mid-June although those three weeks can be a tad earlier or later depending on climatic conditions each year. After the female lays her eggs singly on the flower heads of Kidney Vetch she dies not long after having done her adult life's work, the males having appeared earlier to establish territories then died earlier having done their work as adult butterflies. It's left to the eggs to mature by warmth and direct sunlight then hatch out into tiny larvae (caterpillars) to grow then hibernate overwinter until re-emergence next mid-April, feed on fresh Kidney Vetch growth, grow, pupate and emerge as adults in mid to late May. We humans can only assume and hope all is well during that long,

long hibernation period as larvae down in the earth or between stones, only coming out to bask singly on very warm days. I have to say in all my years I've only ever come across one doing that, quite by chance.

Sorry, but now a bit of the not so good stuff. We have to look and think positive but equally we must be aware of the possible and actual negatives. In June, July and early August our average temperatures in Cumbria have been a lot below normal so might and probably have affected Small Blue larvae development. We won't know until next year for sure by seeing how many adult butterflies emerge. Even that depends on the climatic conditions at the time. Hopefully with the better flight and breeding season in 2020 the number of eggs laid will compensate to some extent to offset a higher than usual casualty rate throughout the larval and hibernation period.

Other problems we and the butterfly face involve habitat loss through re-development and Planning Applications. 'Brownfield' sites are in demand for housing, job creation and other commercial reasons and several good Small Blue colonies have been lost over the decades. The Local (Council) Plan however now emphasises the importance of wildlife and locally endangered and protected species so there is a responsibility to do that.

Our work this year has been helped greatly by the Cumbria Wildlife Trust led Get Buzzing Project which we are happy to liaise and work with. That has enabled us to create a vast amount of additional suitable habitat for Small Blues and many other species of pollinating insects (see elsewhere in this newsletter).

Coming back to where we started with this article we have made very significant progress with our Small Blue Project. Still have some negatives to deal with – that's life, but there is now a much greater awareness both nationally and more importantly locally, The 'Allerdale' butterfly (*aka the Small Blue*) is hopefully here to stay and that will always be the case as far as Butterfly Conservation Cumbria and our friends in the Workington Nature Partnership are concerned.



**Steve Doyle**

## **The End of Lockdown Blues**

The arrival of lockdown in March threw my normal yearly plan into disarray. The months of May, June and July are an incredibly busy time for me. In May I coordinate an annual recording programme for Duke of Burgundy in North Yorkshire which has continuous records for over twenty-five years and in late May/early June I

move to recording the Small Blue colonies on the west coast of Cumbria. At the same time, I am also busy fishing for sea trout and the occasional salmon in rivers in Cumbria and southern Scotland as rain brings them in from the sea to spawn. These months are one mad rush, determined by the weather as it affects the life cycle of the various species, but with Butterfly Conservation saying that any recording of butterflies outside our gardens was a breach of lockdown regulations, and all fisheries closed, all my hopes and plans were thrown into disarray.

My wife and I live near Cockermouth and would normally go for walks in the nearby Lake District, but as this was closed we spent the early weeks of lockdown doing long walks in hot sunny weather using the public footpaths around our home.

Although we live in a rural area this was a depressing experience. The fields were either permanent pasture cropped to within a few millimetres of the ground by flocks of sheep or had been ploughed, fertilized, and sown with grass to produce silage for cattle in winter. The only semi-natural environments left were fragments of road verges or field margins where one might find some early wildflowers and the occasional Orange Tip butterfly. Our intensive modern farming methods appear to have created a desert and I realised it is hardly surprising that our butterfly species have declined so greatly.

As lockdown continued and the prospect of my completing my normal butterfly recording programmes looking ever bleaker an alternative plan began to develop in my mind. Most of my butterfly recording is very strenuous involving walks of several miles often up and down hills or cliffs so I do quite genuinely regard my normal butterfly recording as a form of exercise. Why not develop a plan to record what butterfly species could be found in the few semi-natural habitats within 5 to 10 miles from my home in west Cumbria whilst undertaking my permitted daily exercise under lockdown either walking from home or using a bike?

My wife and I began recording the butterflies we saw on our daily walk (although I had resolved not to tell anyone that I was recording butterflies or that I was a member of Butterfly Conservation for fear of lurid headlines in the media such as 'Butterfly spotters stopped by Cumbria police entering the Lake District') Reading the guidance issued by the National Police Leaders council it did seem unlikely that the police would be bothered providing we didn't stop for long in any one place. The guidance said it was even okay to stop for a picnic whilst undertaking ones daily exercise, but it did draw a line about taking a short walk to a local park and sitting on a bench!

The area in which I record the Small Blue is accessible by bike from my home and includes some of the most important natural habitats in our area; some derelict industrial sites in Workington (a very important local habitat for many butterflies), some coastal cliffs and two sand dune systems. To complete my 'Lockdown recording plan' I simply needed to add some local areas of unimproved grassland, fens, and bogs which have been protected from intensive agricultural to provide a good sample of the few remaining areas of semi-natural habitats in my home area.

The lockdown restrictions began to ease in May which allowed me to retrieve most of my planned Duke of Burgundy recording programme in North Yorkshire and to complete my Small Blue recording in west Cumbria (although I must admit that I used a car rather than a bike to do this). I did however continue with the 'Lockdown plan' to record what butterflies were present in sites with semi-natural habitats in my local area in the months from May to July. We recorded our sightings as best we could with my wife creeping up on the butterflies with her mobile phone.

This was educational for me in that most of my butterfly recording to date has been over focused on searching for two rare species. I used to get extremely frustrated if a butterfly I hoped to be a Duke of Burgundy turned out to be a 'boring' Dingy Skipper but began to appreciate a much wider range of species. As lockdown eased and fisheries opened it finally began to rain which brought sea trout and salmon into our rivers. The fishing on the River Derwent three miles from home actually proved much better than at the usual places I fish up to 40 miles away.

In my 'Lockdown recording plan' I found a total of 25 butterfly species at over 20 local sites (including my garden). The species



are listed below with the number of sites on which I found them in brackets: Small Tortoiseshell (12), Peacock (2), Orange Tip (5), Green Veined White (5), Small White



(5), Painted Lady (2), Large White (4), Speckled Wood (4), Red Admiral (7), Dingy Skipper (6), Common Blue (9), Small Blue (7), Small Heath (12) Large Skipper (9), Small Copper (3) Small Pearl Bordered Fritillary (4), Wall (2), Meadow Brown (13), Large Heath (2), Ringlet (6), Small Skipper (2), Grayling (2) Dark Green Fritillary (2) Gatekeeper (1).

The highlight was finding a new Marsh Fritillary colony on a large area of unimproved grassland only three miles from my home (and about 10 miles from the

main recorded colonies in the Lake District). I attach the photo which my wife took using a mobile phone to help confirm the identification by Steve Doyle.



Heath and Marsh Fritillary.

I guess many of us are asking the question as to whether there will be any long term benefit from this extended lockdown. This exercise has certainly improved my knowledge of a whole range of butterfly species and has highlighted a potential in future years to search potentially suitable habitat in my local area for new undiscovered colonies of species such as Large

## Robert Parks

### 'WILDING' by ISABELLA TREE

PUBLISHED BY PICADOR 2018 ISBN978-1-5098-0509-9 £20.00 Hardback.

This is not a butterfly book but an inspiration to all who love wild life and the countryside: it also has a chapter on the Purple Emperor! I did not want to put this book down but needed time to think over the importance of what was being 'said'. This sounds rather exaggerated but really does sum up how I felt while reading this beautifully written and well researched book. The book does not break entirely new ground but it does ask the reader to look at land and landscapes in a different and more sustainable way. This is a very thought provoking book.

'Wilding' is the inspirational story of a pioneering experiment that is helping to change the way we look at nature, the countryside and conservation. It is not a prescription for how all farming should be but as James Rebanks has stated 'every farmer needs to spend a day at the Knepp Estate to work out what we can do to



let nature back into our farmed landscapes.'

Isabella Tree and her husband Charlie Burrell own and run the substantial Knepp estate in Sussex. The estate includes areas of 'heavy clay weald soil' and when inherited by the author's husband in 1987 this mixed farm of dairy and cereals was already losing money. Intensification, diversification and putting some operations out to contract where all tried with little economic [and no environmental] success; it was not until EU 'Common Agricultural Policy' was reformed in June 2003 that real transformation could start. The CAP reform allowed farmers to take land out of production while receiving subsidy so allowing Knepp to come out of conventional farming.

Over the next 10 years, with begrudging and then growing financial support, land was successively taken out of production. Many neighbouring farmers were unimpressed as Exmoor Ponies, English Longhorns, Tamworth Pigs and Fallow and Red Deer were introduced to the various blocks of now stock proofed land that make up this vast estate. Yet today [despite some persistent opposition] we can record astonishing economic as well as environmental achievements.

Grant income is now supported by sales of organic meat, rented holiday accommodation and a thriving campsite and safari business. It has some of the most bio-diverse landscape in the UK and is the best place to see Turtle Dove, Nightingale and Purple Emperor butterflies.....and a whole host of other wildlife. In 2018 it was

singled out by DEFRA as an 'outstanding example of landscape scale restoration in recovering nature' The author clearly wishes other land owners, especially those on marginal land, to engage with the wilding process...even highly productive land can support hedgerows,



shelter belts, coppices, streams and ponds. However if she has a missionary message [and her scientifically researched arguments are powerful and eloquent] it must be to those who want to persist in conventional farming where land is simply too marginal and would be far better put to the return of nature.

Before embarking on this remarkable project Isabella Tree was already an award-winning author and travel writer. Her books include 'The Living Goddess' and 'The Bird Man'

**Chris Winnick**

## An unexpected garden visitor

We have a clump of *Persicaria bistorta* beside the pond. It is a large garden form which flowers well and is an excellent attraction for nectaring insects - bees especially and the spring butterflies such as Orange-tip. However, on 1st June this year it was something of a surprise to find the nectaring visitor was a Green Hairstreak. The nearest suitable habitats, separated by farmland, are the local Mosses of Cumwhitton and Moorthwaite, half a kilometre or more distant - presumably the source of the visitor. It all goes to show that, given good weather, this 'moorland' specialist will undertake at least local dispersal and could spread to adjacent sites - if there happened to be any of course!



David Clarke

## Back on our Map butterfly project update

Supported by the National Lottery Heritage Fund, Back on our Map (BOOM) is a four year project led by the University of Cumbria, and is delivered in partnership with Cumbria Wildlife Trust, Natural England, Forestry England and Morecambe Bay Partnership. BOOM is a multispecies restoration project aiming to reinforce and reintroduce a suite of locally threatened or extinct species into the lowland fells of south Cumbria and the coast of Morecambe Bay. The BOOM team will work together with local communities to restore and re-connect habitat and species at a landscape scale, reversing biodiversity decline through community action.

The Small Blue butterfly and the Duke of Burgundy butterfly are two of twelve species the project is aiming to restore. The Duke of Burgundy butterfly *Hamearis lucina* has seen a distribution decline of nearly 84% since the 1970s, thought to be



due to intensive overgrazing of chalk/limestone grassland and a drop in abundance of the larval food plants, cowslip and primrose (*Primula veris* and *Primula vulgaris*). There still exist a few populations in Cumbria but these colonies are small, isolated and threatened by genetic inbreeding and local extinction. Led by project officers Mic Mayhew and Ellie Kent, the BOOM project aims to expand the geographic range of the species and establish a metapopulation in surrounding areas with suitable habitat.

A detailed survey and assessment of the current population on Whitbarrow will take place this summer to determine whether numbers are substantial enough to support a captive breeding programme which will commence in the subsequent months. Habitat and botanical surveys are to take place through spring of 2020 of all potential recipient sites and results will be included in a model of suitable criteria to highlight the most appropriate areas for Duke of Burgundy reintroduction.

There is a delicate and particular requirement for Duke of Burgundy habitat suitability. Suitable habitat is described as mid-successional with a mosaic of taller vegetation for breeding purposes and shorter sward to allow sufficient growth of larval food plants. Scrub patches provide shelter but should not dominate more than 20% of the proposed area and moderate cattle grazing from late summer to winter is advised. After detailed consultation with landowners, partners and invaluable

advice from Butterfly Conservation the BOOM project is working together with volunteers to establish this niche habitat at all current recipient sites, whether they are chosen for reintroduction in this phase of the project or not. This includes the propagation and planting of cowslip and primrose.

The Small Blue butterfly has also seen a dramatic national decline of nearly 40% since the 1970s. This could be due to its habit of occupying post-industrial or brownfield sites which are nearly always first on the list for development.

Furthermore, they have a highly sedentary nature, and as weak dispersers their ability to colonise new sites is compromised, meaning current populations are often left isolated and vulnerable. Again, over grazing and extended grazing into the spring and summer months can be extremely detrimental as adult females rely on the young flower heads of kidney vetch to lay their eggs (about 50 plants needed per female). If the kidney vetch is grazed into spring and early summer the female will not be able to lay her eggs and the population becomes unsustainable.

After a translocation from Workington, there is now a stable population of the Small Blue at Barrow Slag Banks. The aim of the BOOM project is to improve the habitat at Barrow to reinforce the population, and if this is successful to assist in a translocation of adult butterflies to other appropriate sites.



Together with David Wainwright and Chris Winnick from Butterfly Conservation, we have developed a management plan which involves the creation of scrapes and bunds in particular areas, and the removal of encroaching scrub including ominous patches of

sea buckthorn and cotoneaster. We will be sowing kidney vetch seed into the scraped areas and plant kidney vetch plug plants at the top of the bunds allowing seed to fall down the slope, creating a successional rotation of flowering. Other wild flowers with a rich nectar source will also be planted, such as birds-foot-trefoil.

In May this year, we are hoping to recruit one or two dedicated volunteers to conduct some intensive monitoring of the population of Small Blue at Barrow Slag Banks which will provide us with baseline data from which we can analyse our success. This will involve mark recapture techniques; if you or anybody you know is interested in participating please let us know via the contact details below.

The recipient sites listed for translocation are Hodbarrow Nature Reserve (RSPB) and Millom Iron Works (Copeland Borough Council). There is already kidney vetch at Hodbarrow but it is located in a wind-swept and exposed area of the reserve. We have begun to do some major habitat management works there with the creation of scrapes and bunds and the sowing of kidney vetch seed, and plugs will be planted within the next couple of weeks. If all of this proves successful and kidney vetch



establishes well at Hodbarrow and the Barrow population remains strong then a translocation of 40-60 adult butterflies will take place in the final year of the project. This will be a phased translocation, moving adult males first followed by the

females up to a week later.

If you would like to participate in any BOOM activities or have any questions please don't hesitate to contact us:

Email: [boom@cumbria.ac.uk](mailto:boom@cumbria.ac.uk)

Twitter: [@BoomCumbria](https://twitter.com/BoomCumbria)



Instagram: [back\\_on\\_our\\_map](https://www.instagram.com/back_on_our_map)

Facebook: [/BackOnOurMap](https://www.facebook.com/BackOnOurMap)

**Ed Note:** Due to lockdown, the 'mark and recapture' training has been delayed, but a pilot captive breeding programme with the DofB has so far been very successful. More news in future newsletters.

## Answers to Pyralid Quiz

a: *Crambus ericella*

c: *Palpita vitrealis*

e: *Pyrausta sanguinalis*

g: *Catoptria margaritella*

b: *Pyrausta cingulata*

d: *Cynaeda dentalis*

f: *Udea lutealis*

h: *Udea ferrugalis* Rusty-dot Pearl

## Moths in a muddle - solutions

1. Tissue
2. True Lover's Knot
3. Garden Tiger
4. Mother Shipton
5. Large Yellow Underwing
6. Argent & Sable
7. Swallow Prominent
8. Netted Carpet
9. Antler Moth
10. Chinese Character
11. Heart and Dart
12. Frosted Orange
13. Marbled Coronet
14. Red Sword-grass
15. Silver-ground Carpet
16. Scalloped Hook-tip
17. Cistus Forester



18. Devon Carpet
19. Ochreous Pug
20. Satin Lutestring
21. Light Emerald
22. Mountain Ringlet
23. Alder Kitten
24. Clouded Border
25. Twin-spotted Quaker
26. Tawny Shears
27. Black Arches
28. Blood-vein
29. Neglected Rustic
30. Angle Shades

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