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Cornwall Butterfly Observer



THE GRAYLING IN CORNWALL

Jerry Dennis asks how the best Cornwall sites for the Grayling compare with the best sites nationally (page 9)

RECORDING LEPIDOPTERA

The latest reports for 2022 from our County Recorders for butterflies (page 14) and moths (page 17)

A VERY LONG WALK FOR CBC

Find out about Volunteer Coordinator Georgie Paul's coastal walk, fundraising for CBC (page 13)

Butterfly Conservation
Saving butterflies, moths and our environment

Cornwall Branch
www.cornwall-butterfly-conservation.org.uk

The cover of this issue features the Monarch butterfly, which has an international reach. We honour the life of Queen Elizabeth II and celebrate the accession of King Charles III, both of whom are known for their love of the countryside and rural life.

King Charles' foreword to *Butterflies of Cornwall: Atlas for the Twenty-first Century* was penned two years ago as Duke of Cornwall, a title that has now passed to his son, Prince William, who also cares about the natural environment.

The Monarch butterfly, as described in *Butterflies of Cornwall* (pp.210–211 and 219–220), is an occasional visitor from North America to West Penwith, The Lizard and the Isles of Scilly. 1999 was a spectacular year for the butterfly, with 70 records in Cornwall and 178 on Scilly, where it has been recorded in 12 of the past 20 years.



Images:

Front cover and this page: Monarch butterfly *Danaus plexippus* (photo: Steve Jones, taken in Spain)

Back page: Dark Green Fritillaries *Speyeria aglaja* (photo: Steve Batt)

Editor's note

Cornwall Butterfly Observer welcomes contributions from members and supporters of Cornwall Butterfly Conservation. We are keen to publish information relevant to butterflies or moths in Cornwall, whether it's news of an event or development, or an in-depth article.

Cornwall Butterfly Observer is careful to check the information that it publishes. Whilst content attributed to a named individual will normally have been reviewed by fellow volunteers, the information and its interpretation, together with any views expressed, are those of the author and do not necessarily represent the settled position of Cornwall Butterfly Conservation.

If you would like to contribute to the Cornwall Butterfly Observer, please get in touch with the Editor, Amanda Scott, on editor@cornwall-butterfly-conservation.org.uk

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Post from the Chair

Dear reader, welcome.

Call it what you will, climate change or global heating, the evidence is overwhelming that we are frying our planet. Last winter's hurricanes and this summer's drought are the new normal and must be factored into how we manage resources. The 1976 drought was a turning point for butterflies in the UK, the data suggest. Habitat specialists like the Pearl-bordered Fritillary never recovered to pre-1976 levels, whereas the more resilient wider countryside species like the Gatekeeper and Small Tortoiseshell fared much better. This summer, the Silver-studded Blue flew in large numbers on Upton Towans, even during the July–August heatwave. However, the longer-term impact on such a habitat specialist, with its dependence on ants and the availability of specific larval food plants, will only emerge from population data gathered over the next few years.



Silver-studded Blue (male) on Bird's-foot Trefoil at Gear Sands,

Analysis of data by Cranfield University using a metric of soil moisture was published on 9 August. It concluded that soil moisture dropped to levels comparable to those seen in 1976. Whilst the Cranfield report focused on the likely impact on crops, biodiversity was not considered. As I say, that has a slower burn.

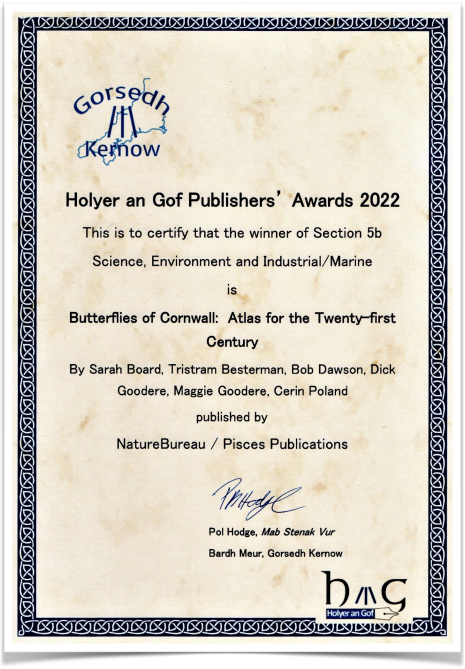
August also produced an unprecedented crop of Large Blue butterflies, not in Cornwall, alas, where it is still locally extinct, but in 40 sites across Somerset and the Cotswolds, where it has been successfully re-introduced. The 20,000 adults and 750,000 eggs recorded made national headlines. Declared extinct in the UK in 1979, caterpillars were brought from Sweden to carefully selected sites in England four years later. Forty years of painstaking and informed conservation have paid off: England's southwest now boasts the largest known colony of Large Blue in Europe.



Large Yellow Underwing (photo: Shaun Poland)

Despite the name, we must remember that Butterfly Conservation includes moths! And these insects have recently been discovered to be far more important pollinators than previously thought. A team of Danish academics studied insect activity in a Swiss meadow 24 hours a day throughout the summer. It turns out that moths accounted for 34% of visits to Red Clover Trifolium pratense. The principal moth species responsible was the Large Yellow Underwing *Noctua pronuba*. Dissection of Red Clover fruiting bodies, cross-checked with camera footage, showed plants visited by bumblebees and moths produced 11.6% more seeds compared with those that had not been visited. I wonder if they will include hoverflies and beetles, also

known to be important pollinators and vital to the health of ecosystems on which so much food production depends.



From alpine balm to Cornish bards: here's some shameless trumpet-blowing. The book, *Butterflies of Cornwall: Atlas for the Twenty-first Century*, written by CBC volunteers and published to critical acclaim in 2021, has won the coveted Cornish Holyer an Gof Publishers's Award in 2022 in the Science and Environment category. Please take a bow, the great team that pulled this off during the covid years.

A local disaster for Cornish butterflies was averted this summer, when a plan to re-forest unimproved meadow on the edge of Bodmin Moor was withdrawn. This patch of land is a stronghold of the rare and legally protected Pearl-bordered Fritillary. The initial scheme would have destroyed this valuable habitat. CBC raised the alarm and Butterfly Conservation engaged with the landowner, who values biodiversity. This resulted in a new scheme design that left this delicate ecosystem undisturbed. Good news for Cornwall's butterflies and an example of the work the branch does behind the scenes, and all too often goes unnoticed.

Also in the unrecorded category is the branch's fund-raising. I am hugely grateful to Philip and Faith Hambly for hosting an open day at Lethytep in the summer, which raised over £1,200 for CBC, and to all our volunteer supporters who helped on the day. Another annual fund-raising event has been a dog show at Goldsithney, near Marazion, organised by Sue and Steve Cotton, who donate all the show proceeds to CBC. This year's show, which gave us over £400, was the last, so I place on record our thanks to the Cottons for their generous support and to Sue Allen and Roger Hooper who represent CBC with a stall, refreshments and a raffle at the event.

As this issue of Cornwall Butterfly Observer goes to print, our intrepid Volunteer Coordinator, Georgie Paul, is walking all 300 miles of Cornwall's Coast Path to raise funds for CBC (see page 13). This is a huge challenge to her (and maybe to her dog, Squirrel!) and just such a generous and courageous thing to do. We are so grateful to Georgie and if you haven't already chipped in, please do so on her fundraising page at: https://www.justgiving.com/fundraising/georgie-squirrel-cornwallcoastpath.

Sometimes butterflies appear in the most unexpected places. Raymond Briggs, the illustrator and author, died in August. Famous for *The Snowman*, *Father Christmas* and *When the Wind Blows*, Briggs was an important part of our children's lives as they grew up. One of his obituaries shows him at work with a picture of a Small Tortoiseshell

butterfly on the wall behind him. I shall think of Briggs with a smile whenever I see this lovely butterfly, still widespread but in decline nationally.

This will be my last 'post from the Chair', as I have decided to step down at the end of the year from the role of branch chair. It has been a great privilege to serve the branch on committee for the last eight years and I thank members of the committee, our team of volunteers and you, the membership, for putting up with me and for your support. I will continue to be involved in the work of the branch in practical ways.



Small Tortoiseshell at Bedruthan (photo: Tristram Besterman)

So, for the moment, farewell, dear reader, and success to my successor.

Tristram Besterman
Chair, Cornwall Butterfly Conservation

Introducing your Branch Committee

Continuing our series of who's who on the CBC Committee, find out more about our Membership Secretary, Kathy Wood

Kathy Wood spent her childhood in northwest Kent, now part of Greater London. In spite of living in built-up areas and having three noisy younger siblings, she saw and heard more wildlife in the 1950s and 1960s than one would in those places now, without ever going to look for it. There was sometimes a lizard or hedgehog in the garden, or a cuckoo to be heard, and there was a big starling roost in the trees near her school which made a loud and memorable display on winter afternoons. In those days, people took such sights and sounds for granted. Kathy learnt to identify common trees, flowers and birds naturally from adults and older children, but after childhood had little contact with nature.

In 1973, Kathy, with her brand-new Pharmacy degree and her brand-new husband, moved to Cornwall to train at Treliske Hospital to be a pharmacist, a profession she was to practise in various roles, largely self-employed, until retirement.

In the 1980s, she and her two small children began to take an interest in the wildlife around them. The children outgrew a lot of that interest, but Kathy didn't. Once the children were more independent, she joined Cornwall Wildlife Trust and the RSPB's local group, took part in some of their activities and learnt more about the wildlife of Cornwall, but was unaware of Butterfly Conservation.

Years later, Roger Hooper, CBC's Press Officer and also a leader of the RSPB local group, wrote an article in the group magazine describing a CBC field trip to see Silver-washed Fritillaries at Cabilla Woods. Liking the sound of that but having to work on Saturdays (then the usual day for field trips), Kathy resolved to join CBC after she retired, and did so early in 2014.

Soon after that, having never done anything like it before, she happened to go out with the Red River Rescuers (RRR) on their last scrub bash of the season, discovered a love of conservation work and met Jo Poland, who was then CBC's Publicity and Fundraising Officer and also our paid Volunteer Organiser. There was no chance of escape after that!



Kathy Wood (left), CBC's Membership Secretary, with volunteer Anne Green (right) at the Penryn campus Bioblitz, 30 April 2022 (photo: member of BioBlitz Committee)

The following winter she was going to scrub bashes with CBC and RRR, and by March she was dishwasher at CBC's AGM and had somehow agreed to join the committee and become Membership Secretary.

A more recent contribution, having been well taught by Jo, was to help at, and latterly organise, some of CBC's stalls at various public events for the purposes of public education about Lepidoptera, publicity for Butterfly Conservation and CBC, fundraising and recruitment.



Can you spot the Green Hairstreak in this image? Poppy Besterman did at the Chapel Porth field trip on 2 June 2022. In fact, she was the first to spot a Green Hairstreak on the day – this was very appropriate and delighted everyone there, as Poppy sponsored this species in *Butterflies of Cornwall* (photo: Tristram Besterman).

Could you be a Species Champion?

Species Champions are volunteers with an important role in CBC



Pearl-bordered Fritillary at Murrayton (photo: Andrew Thomas)

Species Champions focus on one butterfly species in Cornwall, learning about its life cycle and characteristics. They visit known sites, search for new ones, and monitor butterfly numbers. Getting to know landowners, meeting other volunteers, sharing knowledge and expertise is a great way to spend a sunny afternoon!

We have been Species Champions for the Pearl-bordered Fritillary for three years. It has been exciting and rewarding to focus on one butterfly species, in the process forming a personal connection with it, and wanting to protect and help it.

We can get worried by falling numbers but also overjoyed by new discoveries. Imagine our delight when we found a new population of 'Pearls' at Murrayton, near Looe!

"We can get worried by falling numbers but also overjoyed by new discoveries."

But we need more Species Champions in Cornwall – for butterflies like the Dingy Skipper, White-letter Hairstreak, Wall, and Small Heath. Please contact us if you'd like to find out more at specieschampions@cornwall-butterfly-conservation.org.uk.

Liz and Andrew Thomas
Species Champion Coordinators

A national perspective on the Grayling in Cornwall

Jerry Dennis tells us about the butterfly which he champions

It is the Grayling's turn to feature in an article, and this is perhaps overdue as I took on the role of Species Champion way back in 2018. I now realise that I possessed only a basic understanding of the species at that time, and after five years of observing the butterfly there is still plenty more to do and learn.

The Grayling can be found in heathland or dunes with short grassy sward (turf) containing fine-leaved grasses such as Bristle Bent or Sheep's Fescue. Bare soil, stony paths or rock outcrops are essential elements of the Grayling habitat as they reflect sunlight and enable the butterfly to regulate its body temperature. To find out more about how to identify the Grayling and when and where to see it in Cornwall, please consult pages 118–121 in the award-winning *Butterflies of Cornwall: Atlas for the Twenty-first Century* (2021), a must for the Cornish butterfly enthusiast.

Grazing can be very important in maintaining the conditions required by the Grayling, specifically keeping grass short and creating paths and bare patches, without which Grayling colonies can decline and even die out. The recent IUCN Red List for UK butterfly species now categorises the butterfly as Endangered in its national context, based on its severe declines in the UK. We are fortunate in Cornwall still to have both inland and coastal sites where the butterfly is thriving in large numbers.

I have been working on an interesting and surprisingly tricky question: how does the best Grayling site in Cornwall compare with the best sites in the UK? I will share what I have done and learned so far but, to whet your appetite, the information currently available leads to the conclusion that we may possess one of the UK's best Grayling sites.



The male Grayling *Hipparchia semele* has a prominent white underwing stripe (photo: Jerry Dennis)

The first part of this question is of course identifying the best site in Cornwall, and by best, I mean the one with the biggest overall Grayling population. Surveys carried out from 2020 onwards seem to have clarified this. Our best coastal site is at Porthgwarra near Land's End, with over 1,000 Graylings recorded there in 2020. I made a population estimate of 1,750 within the Porthgwarra to Pordenack Point Site of Special Scientific Interest (SSSI) using the data collected. The Grayling credentials of two inland sites near Wadebridge – Rosenannon Downs and Trelow Downs – have been established and both are prolific for the butterfly with single counts of several hundred seen in each of the last three years.

The best Cornish site, however, a bit like the butterfly itself, was close by and yet unnoticed until very recently. This is located on The Lizard peninsula at Goonhilly Downs, an extensive flat-lying area of inland heath that forms part of The Lizard National Nature Reserve (NNR). This heath has a special flora due to the nature of the bedrock, and the rare Cornish Heath grows in profusion among tussocks of Black Bog-rush and Purple Moor-grass. The Grayling thrives in what is termed short heath that is much less tussocky and contains a higher proportion of the common heathers Ling, Bell Heather and Cross-leaved Heath, and, importantly, the grass Bristle Bent that is food and refuge for the Grayling's caterpillars. The first survey of at least 50 Grayling was made at this site as late as 2019, as historically this just was not a site frequented by generations of Grayling fanciers. Surveying specifically designed for the butterfly began in 2020 and in early September of that year I made a count of 71 in two patches of short heath within the North Goonhilly compartment.



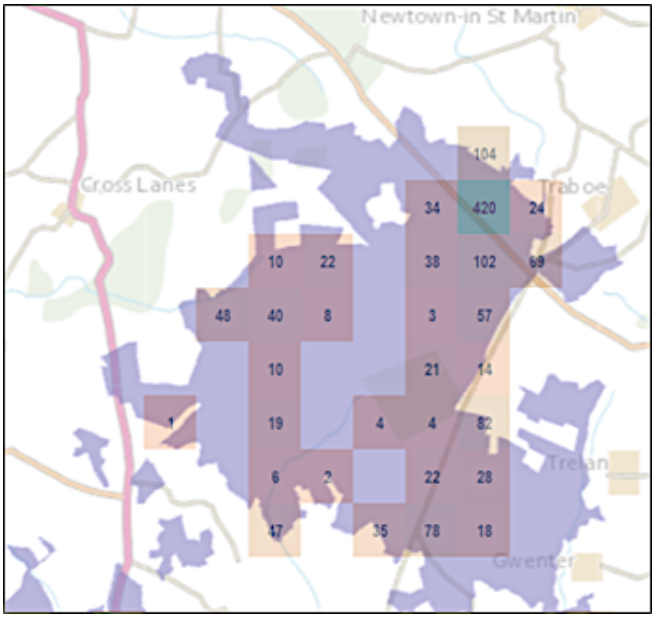
The female is larger than the male and lacks the male's prominent underwing stripe (photo: Jerry Dennis)

In 2021, monitoring was stepped up and nearly 1,400 were recorded throughout Goonhilly Downs, with the Grayling being found in every part of the heath that was



A patch of Grayling habitat, North Goonhilly, Goonhilly Downs (photo: Jerry Dennis)

surveyed (see map, page 11). I carried out a weekly survey in the central part of North Goonhilly and a circuitous route was devised to intersect discrete patches containing short heath covering about 6.5 hectares referred to as the North Goonhilly Loop. Graylings are found both in the short heath and also along the connecting pathways and fire breaks of the loop. More than 500 were recorded there in 2021 and an estimated population range for the entire North Goonhilly compartment containing c.16 hectares of Grayling habitat was 1,250–1,900. A simple model was used to derive a risked estimate of 14,500 Graylings for Goonhilly Downs as a whole. The North Goonhilly Loop covers 9% of the North Goonhilly compartment, and the North Goonhilly compartment is about 6% of the total area of heathland at Goonhilly Downs. This means that the estimate is based on detailed surveying of less than 1% of the total area! Longer term work has commenced that is designed to gain a more constrained understanding of the butterfly's population at this site and how it might vary from year to year. Incidentally, Goonhilly Downs may also house one of the biggest Small Heath butterfly populations in Cornwall, but perhaps more on that at a later date.



The Lizard NNR (purple) with 2021 Grayling totals per 500 m^2

So, to the second part of my question: which are the best Grayling sites in the UK? I do not yet have definitive answers as access to the level of knowledge required on such matters in other counties is not readily available. Fortunately, comparison to selected prolific sites is possible using the Grayling data recorded on the national transect scheme (UKBMS), and thanks to Butterfly Conservation, the Centre for Ecology and Hydrology, British Trust for Ornithology, and the Joint Nature Conservation Committee for allowing me to show this information. There are some 200 transects on which the Grayling has been recorded in the last decade and all of the 15 highest transect yearly totals were recorded on only six transects, as shown in the table (page 12). The Great Orme near Llandudno is the most prolific and, as an aside, this is home to the Grayling subspecies *Hipparchia semele thyone* that is smaller and emerges three weeks earlier than the nominate subspecies we see in Cornwall.

So how does North Goonhilly Loop data compare with these sites? An important distinction of the North Goonhilly Loop is that it is not a transect and it was designed to provide an estimate of the Grayling population by surveying areas of habitat in addition to the transect-like tracks joining them up. Numbers in 2021 would have been much lower if a transect had been designed and walked. Data that has been collected this year suggests a North Goonhilly transect-equivalent total is just less than half of the North Goonhilly Loop total. This would make the 2021 transect version of North Goonhilly Loop similar to the Porthgwarra transect (Roskestal West Cliff) and therefore approximately a third of the number of Graylings recorded at the Great Orme transect.

Table: Grayling yearly averages at the best UKBMS transects		
Butterfly Conservation Branch	**Transect name**	**Average of two best Grayling yearly totals**
North Wales	Great Orme	829
Cumbria	Whitbarrow NNR - Hervey	422
Norfolk	Winterton Dunes	335
North East England	Greenabella Marsh	297
Suffolk	North Warren	289
Cornwall	Roskestal West Cliff, Porthgwarra	286



A female Grayling in late afternoon sunshine. A trick of the light provided the blue lichen (photo: Jerry Dennis)

As the North Goonhilly Loop samples only a tiny part of the Goonhilly Downs heathland, and with the Grayling found in every part of the heathland at the site that has been surveyed, Goonhilly Downs almost certainly houses a larger population than all of the best UK sites that are monitored with transects. The quest to identify major UK Grayling sites that are not monitored by transects, and to better understand what we have at Goonhilly Downs, of course continues.

Data collected in the last three years has elevated the importance of Goonhilly Downs from Grayling obscurity to perhaps one of the best Grayling sites in the UK and I extend my thanks to my fellow surveyors and the Lizard Natural England team who helped out with many hours and miles of detailed surveying in 2021.

If you are interested in getting involved with monitoring of the Grayling butterfly near where you live and want to know more about how you can help, please make contact by email using records@cornwall-butterfly-conservation.org.uk.

A very long walk

Georgie Paul, CBC's Volunteer Coordinator, tells us about her walking challenge (with her lovely rescue dog Squirrel) to raise money for CBC



Georgie Paul and Squirrel

On 13 September, I set off with my dog Squirrel to walk the entire 296-mile Cornish section of the South West Coast Path. We first headed southwards from our home in Newquay. Once we reach Plymouth, we will hitch a lift to Marsland Mouth in the far north of the county, from where we will follow the coast path back to Newquay. The reason for the unusual route beginning and ending in Newquay is to avoid the temptation to head for home half-way through the trek!

This walk will be the greatest challenge of my life, and maybe even Squirrel's (but who knows – he's a rescue dog…). Squirrel is going to wear butterfly wings the whole way!

We haven't done any training, and are going to avoid eating out. My backpack will contain water and food for Squirrel and me, plus camping gear: its weight is going to fluctuate between 14 and 24 kg, depending on how recently I've picked up supplies.

Who knows how long this walk will take or how many tears and blisters it will entail, but we will keep going until it's done! So, fingers crossed for a late start to winter storms. I estimate we can walk between five and ten miles a day…but hopefully more than that as we both get into our stride.

The money raised will be going to Cornwall Butterfly Conservation. Will you sponsor Squirrel and me on this walk to raise essential funds for CBC's work? Our fundraising target is £1,000, but hopefully we can smash it! If you would like to support us, please visit our JustGiving page. If you want to follow our progress, then we'll be posting about our journey on CBC's Facebook page.

Recording

The latest updates from our County Recorders

Butterflies, 2022

Jerry Dennis, County Butterfly Recorder, reports on 2022 highlights to date

It is mid-September as I write this report and the 2022 butterfly season is beginning to wind down. I am pleased to see that 17 species are still flying, dominated numerically by a current influx of Small Whites. The year as a whole is likely to turn out as a reasonably successful one for our butterflies, some doing better than average, others doing less well, as is typically the case.

2022 recording

More than 25,000 records detailing around 80,000 butterfly sightings of 38 species have already been submitted and processed and a big thank you to all concerned. If this year's recording follows recent trends there may yet be more than 10,000 records to come in, including all of this year's Big Butterfly Count (BBC) data. I am therefore not in a position to give a definitive view on the year's outcomes, and I will do this in the Spring edition.

The recording in the County is not evenly spread and whilst the coverage is very good overall, there are areas in the east where there has been little or no data in recent years. I would like your help in improving this situation. The map (Figure 1) shows the number of butterfly species recorded this year in 5-km squares in the east of the county. There is a major gap in records in the environs of Launceston and so, if you live in this area or enjoy walking in this part of Cornwall, please consider making a note of the butterflies that you see and send them in. Those of

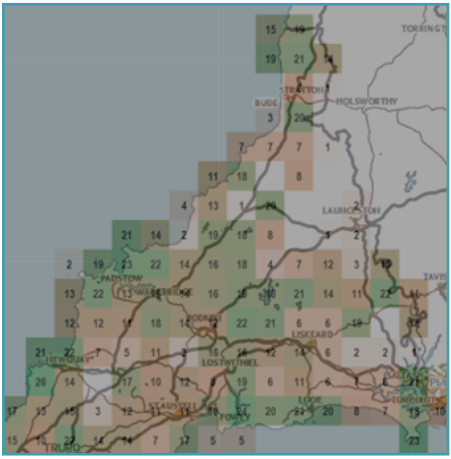


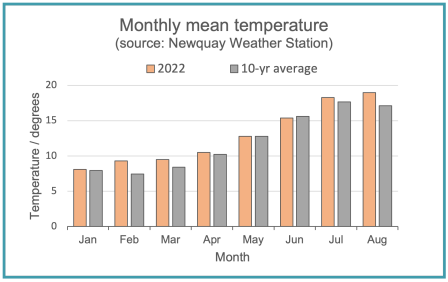
Figure 1: Number of butterfly species (year to date) in the east of Cornwall, per 5-km square

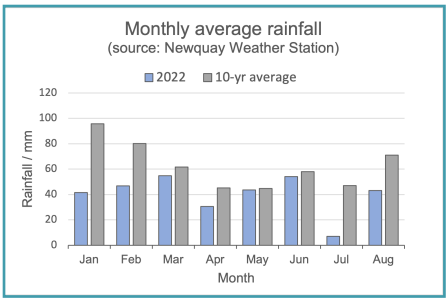
you with smart phones will be able to download the iRecord Butterflies app, which makes it easy to record and report butterflies in the field if you want to try this.

2022 weather

The weather is a key factor that affects butterfly population numbers and timing, and every year's weather is distinctive in some way. A quick look at how this year has turned out shows it to have been one that was significantly hotter and drier than the recent average. Figures 2 and 3 (page 15) show monthly mean temperature and rainfall averages using data available from Newquay Weather Station. The 2022 averages are shown alongside 10-year average data (2012–21) for comparison.

Within these monthly averages, we experienced the hottest day on record in Cornwall at Bude on 18 July (34.2˚C) and





Figures 2 (upper) and 3 (lower) showing monthly mean temperature and monthly average rainfall, respectively

two extended periods with no rainfall: 18 days in March and 16 days in July. Butterflies breeding in Cornwall are not usually badly affected by hot weather, but the dryness of the late winter and spring months, and again in July, was potentially bad news for caterpillars as they need the rain at these times to provide fresh growth of their foodplants.

Butterflies doing well

There was good news for fans of the Clouded Yellow after last year's dismal showing. A good local brood emerged, peaking in late July, and sightings have been reported throughout August and into September with 320 seen so far, the highest total since 2014. I hope you were able to see one and get a decent photo.

Two fritillary species had good years, both of which use the Common Dog-violet in larval stage. The Dark Green Fritillary has posted its highest yearly numbers on record (over 700). This species frequents dry coastal sites and clearly experienced optimal weather conditions this year. The butterfly was not more widely distributed than in recent years and the increase was due to higher abundance in known locations. Unexpectedly high numbers were seen along the west coast of the Lizard. A plot of the weekly reported totals (Figure 4, page 16) shows that the population peak was very pronounced and was reached a week earlier than usual, an effect attributed to the hotter-than-average temperatures.



The Clouded Yellow was seen in locations throughout Cornwall (photo: Jerry Dennis)

The Silver-washed Fritillary, Cornwall's largest butterfly, also emerged in high numbers this year with 622 reported so far. This species can be seen patrolling sunny rides in mature woodlands with oak. Records to date show that this species has been seen in more places in 2022 than in all other years except 2018. Again, the weather conditions clearly suited the butterfly and this implies that the violet growth was not adversely affected at critical times for the

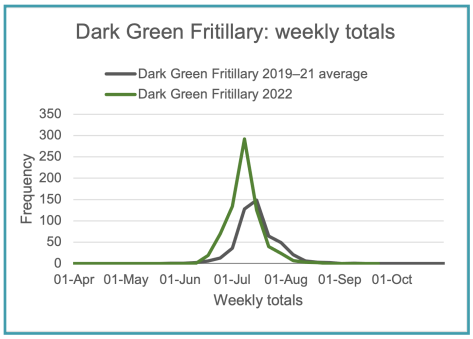


Figure 4: Weekly totals for the Dark

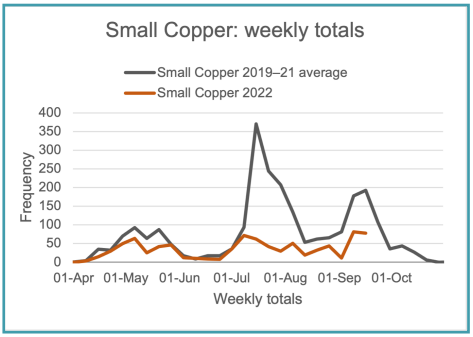


Figure 5: Weekly totals for the Small

caterpillars of both of these fritillary species.

Butterflies struggling in 2022

It is important that we recognise and try to understand why certain species did not do well in 2022. One of these was the Small Copper. I usually enjoy seeing at least 250 each year but in 2022 I have seen less than 100 and the County-wide records show that numbers to date are about 30% of the recent average.

The plot (Figure 5) shows what has been going on with this butterfly. It has three broods each year and the first brood was typical compared to the average of 2019–21. The second brood, the main one of the year, however, did not



2022 was the best recorded year for the Dark Green Fritillary (photo: Jerry Dennis)



A silver-washed Fritillary at Gwendreath, one of more than 60 sightings on The Lizard peninsula (photo: Jerry Dennis)



The Small Copper has experienced a difficult year in 2022 (photo: Jerry Dennis)

materialise fully and numbers have remained at low levels with no signature of a clear third brood pulse. With more records to come in, and with the third brood still flying, I hope that second brood numbers will ultimately be higher and overall numbers will be improved. Small Copper caterpillars eat leaves of Common Sorrel and Sheep's Sorrel and the most likely explanation for what occurred is the effect of dry conditions in the spring promoting insufficient growth of these plants at the time that the second brood caterpillars were active. The butterfly has been exposed to this vulnerability before and 2022 numbers are currently slightly less than those of 2016, which was the worst year in recent times. The good news is that the Small Copper is usually able to bounce back quickly after these difficult years.

Monitoring: how you can help

The principal means that we have to monitor our butterflies is the records that we receive from you and it is vital that we collectively continue to gather and analyse the field data. Seeing butterflies is also one of life's joys and can lift anyone's spirits and so please keep looking for the butterflies near you, enjoy them, and send in their details. For email contact, please use records@cornwall-butterfly-conservation.org.uk.



Peacock (photo: Jerry Dennis)

Moths, autumn 2022

Leon Truscott, County Moth Recorder, brings us his latest report

The following highlights are based on records received at the time of writing (early September). As ever, there are plenty of reports of notable species on social media etc. still to be recorded. Hopefully they will appear in the next edition.

The nationally scarce *Micropterix mansuetella* is extremely local in Cornwall, having been recorded at only two sites: a single record from Lower Lewdon in 1996 and regular sightings at Breney Common since its discovery there in 2011. John Cook (JC) found one at a new site, Menadew Moor, on 22 May. John Worth found leaf mines of *Stigmella speciosa* on Sycamore at Tehidy Woods on 29 July, the first Cornish record since 2011. He followed this up with four more similar records in the Penzance area during August.



Acrocercops brongniardella
(photo: George Davis)

Most of our 15 records of *Acrocercops brongniardella* are of leaf mines. George

Davis (GD) recorded adults at light at Maenporth on 28 July and 27 August. One *Agonopterix conterminella* was recorded at light at Upton Towans on 12 July by Chris Vincent (CV), the eighth Cornish record and the first in VC1 since 1987. CV also recorded the very local *Metzneria aestivella* at the same site and date; it is new to the site and the first Cornish record for ten years. Ann and Gerry Sutton (A&GS) recorded *Teleiodes luculella* at Blisland on 17 June, the tenth record for Cornwall. Jack Oughton (JO) found a larval case of *Coleophora genistae* on Petty Whin at the Lizard NNR on 22 May, the fifth Cornish record and the first since 1995.

GD recorded the scarce migrant plume, *Oxyptilus laetus* at Maenporth on 18 July, the first Cornish record since 2019. CV recorded the rare *Gynnidomorpha permixtana* at Gwithian Towns on 12 July following his record there from 2021. GD trapped *Thyraylia nana* at Maenporth on 5 June, the tenth Cornish record, but new to VC1. JO found *Rhopobota stagnana* at the Lizard NNR on 22 May, only the third Cornish record since Redruth in 1951 and St Clement Wood in 2010.



Epiblema foenella
(photo: George Davis)

Epiblema foenella is rare in Cornwall, the only previous records being from Torpoint in 2006 and St Agnes, IOS, in 2018. GD recorded one on 18 July at Maenporth. (Another reliably reported by Tom Clark from Downderry on the following night.)

In recent years, many old records of *Delplanqueia dilutella* are now suspected to refer to *Delplanqueia inscriptella* and the two species can now only be identified by critical examination. CV found and confirmed *D. inscriptella* at Mexico Towans on 5 July and at Upton Towans on 12 July, our only previous record being in 2000. *Anerastia lotella* is locally found along the north coast. CV recorded one on that successful night, 12 July, at Upton Towans, our first record since 1995. *Anania verbascalis* is nationally scarce, with only three Cornish records until this year, when another two were recorded: John Nicholls (JCN) at Downderry on 4 June and Graham Cundale on St Mary's, IOS on 17 July.



Anania verbascalis
(photo: Leon Trustcott)

A Death's Head Hawk-moth *Acherontia atropos* was found with damaged or malformed wings on St Mary's, IOS on 27 July by Louise Gilbert. Cornwall had its share of the influx of Striped Hawk-moths *Hyles livornica* in early summer. A dozen records were received, mainly from the west, in May and June including

a total of eight at Maenpoth on 22 May (GD). Plain Wave *Idaea straminata* is a rarity in Cornwall with only a single record in 1993. This year GD recorded one at Maenporth on 22 July. (Now, another reliably reported from Mick Scott on St Mary's in August.) Channel Islands Pug *Eupithecia ultimaria* has been recorded on St Mary's, IOS and from Downderry in recent years. So far this year, three records have been received from Downderry by JCN in May and June and one from a new site: Maenporth on 3 August (GD). JCN recorded a Waved Black *Parascotia fuliginaria* on 20 July at Downderry. It is rare in Cornwall with only one previous Cornish record: from St Agnes, IOS, in 2016.

A&GS recorded a Purple Marbled *Eublemma ostrina* on 22 May at Blisland, our first record for three years, and unusual away from its previous occurrences, normally the coastal far west and Scilly. The first Small Marbled *Eublemma parva* for three years was trapped by JC at Newquay on 17 July. A Clifden Nonpareil *Catocala fraxini* was found by David Pearman in his garden at Feock on 23 August.

There were two recent records of Dewick's Plusia *Macdunnoughia confusa*: from Marazion on 10 August by Pete Fraser and from Kelynack on 14 August from Paul Butter. There was a single record of a Scarce Merveille du Jour *Moma alpium*. Debi Phillips found one on 13 July at Deer Park Wood, which is actually a new site but still part of the woodland complex around the Upper West Looe Valley near Herodsfoot. JCN recorded an Eastern Bordered Straw *Heliothis nubigera* on 13 August at Downderry, new to VC2. There are eight previous records: from St Mary's, IOS and the Lizard peninsula. (There are also two reports from Falmouth this summer, hopefully to be included in the next edition when details are received.)

Butterfly monitoring

Kelly Uren explains how to become involved

Taking greater notice of wildlife on any level is incredibly rewarding, and in some cases may actually prove to be lifechanging. Sometimes we are all so busy bustling around with our day-to-day activities that we don't allow ourselves the chance to stop, even just for a few moments, to take a closer look at the natural world around us which is also going about its vital daily activities. Once you take the time to slow down and look closer into the hedgerows whilst you are out, you will quickly find a whole new world unravelling in front of you: a fascinating world about which you may soon find yourself wanting to learn more.

"Once you take the time to slow down and look closer into the hedgerows…you will quickly find a whole new world unravelling in front of you."

Butterfly spotting is an immensely rewarding pastime, and sightings can become even more valuable if they are documented: they not only contribute to the data we gather in Cornwall, which allows us to see where particular species live and frequent, but also to national datasets that reflect upon the state of butterfly populations. Insects have decreased at an alarming rate since the 1970s, and butterflies are a particularly useful insect group to study as they are easy to see, are active during daylight hours, and no specialist equipment is needed to locate most of them.

There are many ways in which you can contribute to the data we collect, and you



Common Blue female (photo: Steve Batt)

do not need to have a vast butterfly knowledge as the ID skills required will soon develop as you become more involved. No experience is needed; just a keen interest in helping nature. Soon your eyes will become open to a whole new fluttery world that you may not have known existed. Getting out in nature also has the added benefit of being good for improving your physical and mental wellbeing.

Ways to become involved:

Setting up a new transect

One way to become involved is to monitor your own transect site at a location of your own choosing; this could perhaps be a favourite spot you enjoy walking or a new area you have never explored before.

Butterfly transects monitor the number and variety of butterflies present at a specific site from year to year. The data gathered feeds into the *UK Butterfly Monitoring Scheme* [UKBMS] which has monitored changes in the abundance of butterflies throughout the United Kingdom since 1976. Countrywide, approximately 2,500 transects are monitored annually as part of this scheme. In Cornwall we currently have in the region of about 50 transects being monitored by a band of invaluable volunteers.

What's involved?

Transect routes should ideally be walked weekly for a period of 26 weeks, between the 1 April and 30 September, to enable the number of butterflies present each week to be recorded. Not all butterfly species emerge at the same time, and so by monitoring over a wider

period of time you increase the chances of seeing as many different species as possible. Additions to the UK transect network are always welcome. Transects should typically take about 45–60 minutes to walk and be about 1–2 km in length. Butterfly activity is very much weather-dependent and so transect counts are carried out within specified weather criteria, which involves it being not too cold, not too cloudy and not too windy, as butterfly activity is much reduced during adverse weather conditions. Therefore, you will be getting out and about in fine weather - something which we have had plenty of this summer!



Large White, male (photo: Shaun Poland)

If you would like to find out more about this scheme please contact our Transect Coordinators Jim Barker at jimfrances@talktalk.net or Kelly Uren at transect@cornwall-butterfly-conservation.org.uk

Monitoring a Wider Countryside Butterfly Survey square

Another way to become involved is to monitor a pre-determined grid square which has been identified for the Wider Countryside Butterfly Survey (WCBS). This is a national survey, which is now in its fourteenth season. It was established in 2009 to help improve data being gathered relating to butterfly populations across the countryside as a whole. It is an important monitoring tool as it tackles the observational bias introduced by only recording in butterfly-rich habitats. Over 800 1-km squares have been randomly identified across the UK which are in need of monitoring during the peak butterfly flight period. Compared to transect recording, the WCBS requires less of a time commitment – only two to four visits a year – and so makes an ideal introduction to butterfly recording, while still providing very useful information relating to the status and trends of butterflies throughout the UK. There are 25 WCBS squares located in Cornwall, but currently less than 50% of these are being monitored.

Might you be able to help us increase our coverage of the squares? Please contact Kelly Uren our WCBS Champion if you would like to find out more details on this project and where the vacant squares are located: transect@cornwall-butterfly-conservation.org.uk

Casual recording

Don't forget you can also use the apps iRecord or iRecord Butterflies to record butterflies you spot when out and about, or email the County Butterfly Recorder on records@cornwall-butterfly-conservation.org.uk

Committee reports

Treasurer's report

Branch Treasurer Anne Banks' report for 1 April 2021 to 31 March 2022

After the challenging years of Covid, when field activity was curtailed and fundraising was on hold, the financial position of CBC at the end of 31 March 2022 has improved. The branch ended the year with a balance on 31 March 2022 of £17,056.71.

The **General Fund** relates to the day-to-day management of the Cornwall branch:

General Fund	2019–20	2020–21	2021–22
Income	13,560.66	4,245.24	7,507.55
Expenditure	(11,554.76)	(5,476.69)	(5,064.49)
Fund transfers	405.16	(2,448.47)	1,600.00
Closing balance	**18,445.63**	**14,765.71**	**17,056.71**

Donations in the year totalled £2,356.63, which is a 256% increase on the previous year (£921.25). The Atlas launch and annual charity event hosted at Lethytep in June 2021 raised £191.92 in sales and £1,552.53 in donations. The branch holds no significant fixed assets.

The **Restricted Fund** relates solely to the CBC publication, *Butterflies of Cornwall: Atlas for the Twenty-first Century*.

Restricted Fund	2020–21	2021–22
Income	14,087.50	10,669.70
Expenditure	(6,851.47)	(18,518.07)
Fund transfers	2,448.47	0.00
Closing balance	**9,684.50**	**1,836.13**

All profits from the sale of this publication are to support the branch in its butterfly conservation work. In 2021-22 despite the final large payments for printing 2,000 copies, the sales have passed the breakeven point and as at the 31 March 2022 had a positive balance of £1,836.13.

If you still do not have a copy, or would like to make a gift of one, then please order one through the CBC website.

Update on the current year (2022/23) so far…

CBC's summer public field events got under way again in April. The ten field trips included our annual charity fund raising event at Lethytep on 2 July 2022, generously hosted, as ever, by Philip and Faith Hambly. Despite the rather changeable weather, donations totalled over £1,500.

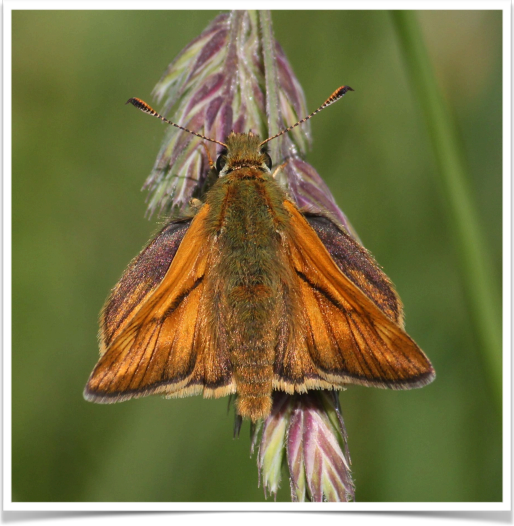
There are sufficient funds to cover the costs of conservation work planned over the winter and a projected surplus by the end of March 2023.

Finally, I would like to thank members and volunteers for their support, help and ideas over the year. It has been a pleasure.

Membership report

Kathy Wood, Membership Secretary, gives her report for autumn 2022

First, I'd like to extend a warm welcome to our new members. We hope that you will enjoy your membership and be able to take part in some of our activities, and if possible help us in our work.



Large Skipper (photo: Shaun Poland)

I am pleased to say that, since I last reported in the spring edition of *Cornwall Butterfly Observer*, Cornwall Branch membership has continued to increase, albeit very slowly, and at the end of August it now stands at 560 households, with 792 individual adults. We are still ten households short of the peak membership of 570 which we achieved before Covid, but this is very encouraging in these uncertain times. Please do all you can to publicise CBC and recruit new members.

Going paperless

We need to reduce CBC's expenses so that we can have more money available for our conservation and education work. One of our biggest expenses is the cost of producing this magazine twice a year, and we know that not all members need or even want a hard copy. Your committee has therefore decided to ask you all to consider if you would be happy to have the newsletter emailed rather than posted to you. If you would like to make this change please let me know, remembering to tell me your name if that is not obvious from your email address and, if you know it, your

membership number, via my official email address, membership@cornwall-butterfly-conservation.org.uk.

Please do this even if you are one of those members who have previously asked not to receive a hard copy, as unfortunately the list of those who had made this request did not survive the installation of the new membership database at Head Office; Butterfly Conservation Head Office therefore no longer has this information. Please ensure that I have your correct email address, but if in doubt send it to me anyway, at membership@cornwall-butterfly-conservation.org.uk. I must stress that the choice is yours, since we will be continuing to produce the printed edition (it is very useful in our publicity and recruiting), and those of you who would prefer to continue receiving a print copy need do nothing. We do realise that not all our members use the internet, and we do not want anyone to be left out.

This seems like an appropriate time to remind everyone that previous editions of this magazine, going back as far as the year 2006, are available on our Branch website, http://www.cornwall-butterfly-conservation.org.uk/resources.html.

Many thanks to all who supply photos for this purpose, and those who write articles for the magazine: please keep them coming. Anyone is welcome to send a contribution for consideration: it is not necessary to be a committee member. And many thanks to our excellent editor (Amanda Scott) and the equally excellent printers (ARRC of Redruth) for their high standards.

Conservation Working Group update

Liz and Andrew Thomas, Joint Chairs of the Conservation Working Group, give an update on its work

It is fair to say that most, if not all, of the practical conservation work of CBC results from the Cornwall Butterfly Conservation Plan. It was devised by the Conservation Working Group (CWG) and is under constant review. This vital document identifies species priorities, as follows:

Cornwall butterfly species priorities 2022–23:

1 Pearl-bordered Fritillary
2 Marsh Fritillary
3 Small Pearl-bordered Fritillary
4 Wall
5 Dingy Skipper
6 Grizzled Skipper
7 Silver-studded Blue
8 Grayling
9 Small Heath
10 White-letter Hairstreak
11 Dark Green Fritillary
12 Green Hairstreak
13 Purple Hairstreak

Key sites for these butterflies are named and the work needed to promote the species' populations is outlined.

Many of the activities in the Conservation Plan are for the Volunteer Coordinator to organise and carry out. But not all. Some are addressed to Species Champions, conservation partners, landowners, and contractors. For example, in the plan, the Pearl-bordered Fritillary (PBF) Species Champions are requested to carry out the important task of monitoring and surveying the PBF population at Hard Hills at the Marsland Nature Reserve. Working with conservation partners in one instance, entails collaboration with Cornwall Wildlife Trust to carry out scrub management in Penhale for the benefit of the Dingy Skipper.



A contractor uses a brush cutter to clear scrub for
Conservation Butterfly Conservation (photo: Happy Habitats)

In February 2022 after detailed survey work by members of the CWG, contractors carried out four days of work at De Lank quarry to improve the habitat for PBFs. The work included removing areas of scrub, buddleia, brambles etc, to keep paths accessible, and to restore optimal conditions for violet growth on track edges and clearings. But of course, conservation management is never finished, so members of CWG surveyed De Lank again in June to see what work would be needed in the coming year both for contractors and Volunteer Coordinator-led work groups.

The CWG supports and oversees the work of the new Volunteer Coordinator (see page 26 for her report). Georgie Paul was appointed in April 2022 and led her first event to Pendrift in early May. The activity entailed leading a group to survey and search for PBFs and Small Pearl-bordered Fritillaries. Georgie was supported and mentored by CWG members e.g. taking her to key sites, and expanding her knowledge of the butterflies concerned.

Survey and search days for Marsh Fritillary larval webs have been carried out as Volunteer Coordinator-led groups with Species Champion support. For instance, at Irish farm, Bodmin Moor, Georgie led 20 volunteers, many undertaking larval web searches for the first time, in discovering an amazing 80 new webs.

Two days of Volunteer Coordinator-led work groups are planned for later in the year at De Lank, and another day at Fellover Brake.

There's always more work to do! The conservation plan will guide our efforts over this coming autumn and winter so that we can get out there next spring to enjoy our butterflies once more. We rely on the hard labour of CBC's stalwart volunteers to whom the CWG is forever grateful.

Volunteer Coordinator's report

Our new Volunteer Coordinator, Georgie Paul, tells us about herself and tells us what she's been up to for CBC so far

Before starting my role as Volunteer Coordinator, I had a range of experience working in the conservation sector. I moved to Cornwall to study a degree in conservation in 2019 and fell in love with this amazing county. Since then, I have volunteered for various charities in Cornwall, some of which I am still involved with, including British Divers Marine Life Rescue. I also volunteered abroad for a wide variety of conservation organisations. I have worked with manatees, elephants, local communities, a reforestation project and a natural living community, which is where I gained my volunteer management experience.

After five months of being in this role, my enthusiasm for Lepidoptera has only grown. While I still have a lot to learn, I am amazed by how much our Committee members, Conservation Working Group, and volunteers have taught me! I am eager to learn everything I can about butterflies and moths to contribute to CBC in every way I can.

Since starting in April, I have organised a few events for volunteers to attend, as well as working with other organisations to promote our work at public events. In spring, I coordinated a trip to the military base at Penhale sand dunes which was fully attended. We managed to find two Grizzled Skipper eggs and confirmed a new breeding area. In the summer, I organised two trips to privately owned farms to search for Marsh Fritillary larval webs. On one of these events, we managed to find a total of 165 webs.

As it is my first year in this role, I am still finding my feet but am receiving a tremendous amount of support from CBC. Our wonderful volunteers have been so great to work with: I cannot wait to see how amazing next year will be!

Committee members and contacts

Branch Committee

Chair:
Tristram Besterman*
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Joint Chairs of Conservation Working Group:
Liz and Andrew Thomas
specieschampions@cornwall-butterfly-conservation.org.uk

Secretary:
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Membership Secretary:
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Publicity and Fundraising Officer:
Vacant

County Butterfly Recorder:
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Wider Countryside Butterfly Survey Champion and Joint Transect Coordinator:
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Press Officer:
Roger Hooper
press@cornwall-butterfly-conservation.org.uk

*Anne Banks and Tristram Besterman will step down from their roles on the Branch Committee at the end of October and end of December 2022, respectively

Health and Safety Officer:
Vacant

Emeritus Chairman: Philip Hambly
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Other key contacts

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Like us on Facebook: https://www.facebook.com/ButterflyConservationCornwall/

Follow us on Twitter: @Cornwall_BC

