ISSUE 71 SPRING 2022

Cornwall Butterfly Observer



FIELD TRIPS AND EVENTS 2022

Our field trips and events are back, including an open day at Lethytep. Do come and join us: all the details are in this newsletter
(pages 15 to 17)

BREEDING PATTERNS OF THE SPECKLED WOOD

Jerry Dennis explains the complex breeding and emergence patterns of this woodland butterfly
(page 7)

SEEKING SILVER-SPOTTED SKIPPERS

Roger Hooper went looking for Silver-spotted Skippers on a very hot day on Broughton Down in Hampshire
(page 28)

Butterfly Conservation
Saving butterflies, moths and our environment

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



Images:
This page: Field trip on Bray Down, Bowithick (photo: Tristram Besterman)
Front cover: Orange-tip (photo: Philip Hambly)
Back page: Cream-spot Tiger moth (photo: Philip Hambly)

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.

By the time you read this, many of Cornwall's spring butterflies will have been airborne for some weeks. Sturdy survivors from adult hibernation, Brimstone, Peacock and Small Tortoiseshell add a dash of colour and vitality to resurgent nature; and newly emerged from its over-wintering armoured pupa, the Orange-tip is busy among wayside Jack-by-the-Hedge. The rare Pearl-bordered Fritillary soon joins us for a brief period in just a few places, having got through the winter as a hibernating caterpillar. This is a species we watch carefully and protect by managing its habitat to favour the Common Dog-violet on whose leaves its caterpillar feeds, so that it can complete its fragile life cycle for another year.

Spring brings hope and renewed activity to Cornwall Butterfly Conservation too, as we plan to resume our public events programme and practical conservation work, so frustratingly interrupted by Covid-19. Fundraising, traditionally boosted by targeted public events, was also hit hard by the virus, so we need to pick ourselves up and boost income to support our work. (Bucking that trend at the height of the pandemic was the stonking £10,000 that our members contributed towards the cost of publishing *Butterflies of Cornwall*.) At the time of writing, infection rates are rising in Cornwall, but vaccination has reduced the risk of serious illness to the point where we can cautiously pick up where we left off in 2019. So, please keep an eye on the CBC website, where we publish our public and volunteering programmes.

Forget about tigers in China: in Cornwall, 2022 is hereby declared The Year of the Ant – you first read it here! Thanks largely to the pioneering research of Jeremy Thomas, we are beginning to understand ants' indispensable relationship with most of our 'blue' butterflies – the Lycaenidae – as nutritional benefit is shared between butterfly larva and ant community underground. The first episode of David Attenborough's superb Green Planet series on telly showed how leaf-cutter ants are set to work and manipulated by a fungus in their nest, again for mutual nourishment. Ants led Edward O. Wilson, arguably the greatest evolutionary biologist since Darwin, to revolutionary new ideas of altruism and cooperation as evolutionary drivers for reproductive success. Wilson, who died in late 2021 after an illustrious career, was also a formidable champion of biodiversity. He wrote, "We're extinguishing Earth's biodiversity as though species of the natural world are no better than weeds and kitchen vermin. Have we no shame?"

In the last issue of Cornwall Butterfly Observer (Issue 70 pp. 12–13) I wrote about the serious impact that street lighting can have on moth populations. I am indebted to CBC member and Cornwall Councillor, Dominic Fairman, who contacted me to point out the Council's policies designed to mitigate such

environmental impacts. It's good to know the policies exist. It's even better when they are put into action.

Roads, recent field research has established, impact on insects in another way. Air pollution from diesel fumes – principally nitrogen oxides – disrupt the ability of insects to forage successfully for nectar, and hence reduce their effectiveness as pollinators by up to 70% and reduce flower visits by as much as 90%. These are not marginal effects and are likely to be important drivers of the decline of insects, alongside the widespread use of pesticides and changes of land use (Environmental Pollution doi.org/hdd5).



Jo Poland (left) with volunteers surveying at Crowdy Reservoir, 2018 (photo: Tristram Besterman)

And writing of disruption, as Chair, I am entirely dependent on the support of a very hard-working and multi-skilled committee – all of us volunteers, of course, and doing our best to serve you, Cornwall's butterflies and moths and the mothership in Dorset, Butterfly Conservation. Every individual brings particular talents, experience and abilities to the table. None more so than Jo Poland, who has served CBC for over ten years as Fundraising and Publicity Officer. During Jo's time, the level of activity, fund-raising and outreach by CBC has increased many-fold. In her paid role as Volunteer Co-ordinator, the number of willing workers prepared to go out in all weathers to bash scrub or hunt for larval webs on boggy moorland reached a peak of 400. Jo was partially to blame for my recruitment to the Committee in 2014, when she and our then Chair, Philip Hambly, caught me in a pincer movement at a CBC event at Hayle Towans, near the derelict National Explosives Works. Although she proved to be dynamite, Jo has decided to go quietly and call it a day.

We also say goodbye to two other members of the Poland family, Shaun, unsung hero and master of the CBC website for the last dozen or so years, and Cerin who served for a year and a bit as County Butterfly Recorder. I will miss them for their scientific rigour, networking, long hours and for the laughs, too. All three contributed immeasurably to the book, *Butterflies of Cornwall*, keeping me on my toes and generally helping me to ensure the publication was as good as it could possibly be. To all three go my thanks; the Branch owes them a huge debt of gratitude, and I know that they will continue to support our work.

The good news is that Jerry Dennis has agreed to take over the demanding role of Cornwall Butterfly Recorder. Jerry retired to Cornwall a few years ago

and soon established himself as a keen observer of butterflies, both as a photographer and for his data analysis, as readers of this newsletter will know. He is also species champion for both the Grayling and Small Pearl-bordered butterfly. I am also delighted to announce the appointment of Leonie Morris as our new Branch Secretary. After a career in social services, she now runs a small business in Falmouth that involves health and well-being, connected to immersion in the natural environment. She is passionate about wildlife and nature conservation in Cornwall, and is already making a substantial contribution to the work of the Branch.

E.O. Wilson, in conversation with David Attenborough, was asked if the Covid-19 pandemic would change attitudes to the interconnectedness of species. In the fullness of time, he replied, the pandemic would be seen as "just a flick on a movie screen". Bring on the popcorn!

Tristram Besterman
Chair, Cornwall Butterfly Conservation

Introducing your Branch Committee

Continuing the series of who's who on the CBC Committee, this time it's the turn of our recently appointed Branch Treasurer, Anne Banks.



Anne Banks was born and raised in North Cornwall, where she lives with her husband and three children. The dramatic cliffs and sandy beaches of the north coast, where her father and grandfather farmed, are in her blood.

Anne joined the CBC Committee in early 2021 when she took over the mantle of Branch Treasurer from Helen Barlow, who left the accounts in excellent shape. Anne is an ACCA-qualified accountant and has nearly twenty-five years' experience of financial management in the public sector.

She gained her ACCA qualification whilst juggling the demands of studying, working and bringing up a young family. The role of Branch Treasurer is one she seems to take in her stride, as she tracks income and expenditure, keeps the Committee financially on track and liaises

with Butterfly Conservation's national hub.

Away from her laptop, Anne can be found enjoying the great outdoors. Walking her young Vizsla, paddle-boarding, camping and enjoying nature with her family and friends fill every spare moment. She's also a dab hand with a sewing machine and a power saw, which provide creative outlets for her practical skills!

Nature has always been close to Anne's heart, so getting to know her Cornish butterflies has brought her new delight. She recalls the joy of spotting her first Brown Argus on a valley walk last summer. Helping to conserve these small miracles of life and their environment connects Anne to nature and to her children's future.

Breeding patterns of the Speckled Wood

The Speckled Wood has a complex breeding and emergence pattern, as Jerry Dennis discovers.

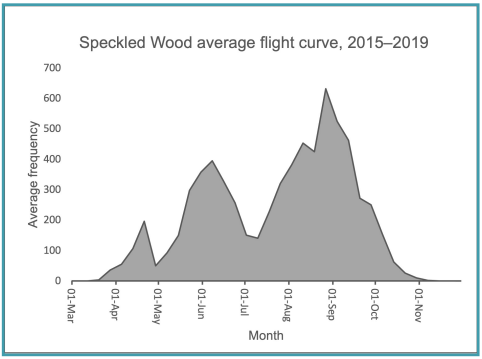
The Speckled Wood is one of the butterfly success stories in today's Britain. It has become widely distributed, able to maintain and expand its range through decades of changes to agricultural practices and woodland management. A big part of this success is that it can thrive just about anywhere there are trees, shrubs, hedgerows or even patches of scrub providing a bit of shade and sunny perching opportunities. Its larvae also eat some of the commonest grasses, including Common Couch, Cock's-foot and Yorkshire Fog.



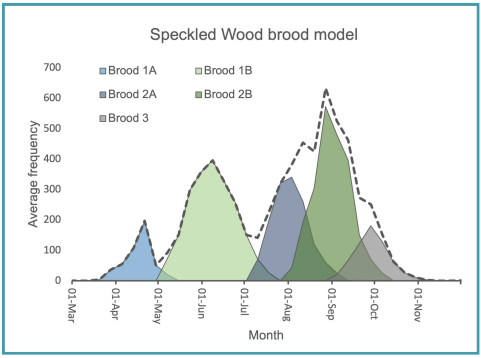
The Speckled Wood is found throughout Cornwall (photo: Jerry Dennis)

It is one of the best studied butterflies in the world and many details and quirks of its natural history have been discovered. Recent publications and local butterfly records confirm that the butterfly has three broods per year in Cornwall, with Speckled Woods flying continuously from March through to October. A glance at the average Cornish flight curve confirms this (*Graph 1*; page 8). This curve is generated from the number of adult butterflies that were recorded on each day during the year, and represents the overall pattern of abundance during the flying season. Discerning where each brood starts and ends is not straightforward. Instead, there is a complex pattern with irregular episodes of emergence. Two pulses at the start of the flight curve are clear, but later there appears to be a hotchpotch of two or three overlapping pulses. Making sense of this pattern requires knowledge of the butterfly's winter behaviour and some modelling to unravel the flight curve.

Studies have shown that the Speckled Wood can survive winter months either as a third instar caterpillar or as a



Graph 1



Graph 2



The female has bigger creamy markings on the forewing (photo: Jerry Dennis)

chrysalis. Winter caterpillars can also wake up and feed in warmer periods but do not progress to the fourth and final instar until the following spring.

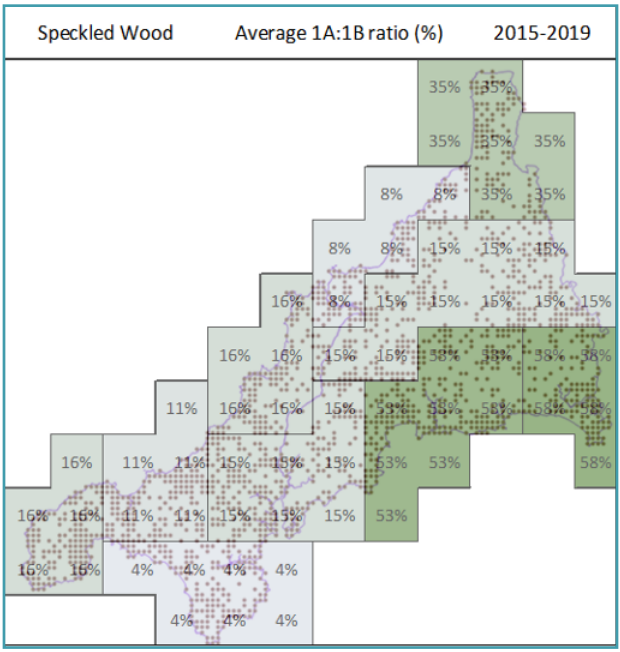
Applying the consequences of this behaviour to our Cornish records helped me to derive a preferred population model with five overlapping brood components using a deconvolution technique (*Graph 2*).

First brood

This is represented by two brood components in the model with a long overall duration of approximately four months. Brood 1A (light blue) is envisaged as the emergence of Speckled Woods spending winter as a chrysalis. They begin to emerge in small numbers at the beginning of March and numbers peak in the second half of April.

Brood 1B (light green) is the emergence of Speckled Woods spending winter as caterpillars. It has the longest duration of all of the model components and numbers peak in early June. The appearance of brood 1B butterflies is delayed compared to those of brood 1A by approximately seven weeks as they need to complete the third and fourth caterpillar instars before pupating. This gap almost completely separates brood components 1A and 1B and consequently there is very little opportunity for individuals from one brood to breed with the other.

The ratio of the number of brood components 1A to 1B has been calculated in ten different areas of Cornwall using a brood component cut-off date of 30 April. The results, expressed as a percentage, are summarised on the map (page 9). The 1-km squares with Speckled Wood records are shown as red dots. The 1A:1B ratio is higher in the southeast



Map: ratio of number of brood components 1A to 1B

and northeast of the county, inferring that the slightly warmer conditions allow more of the second brood caterpillars to fully develop and pupate before winter.

Second brood

This is also represented by two components in the model with overall duration of approximately three and a half months. Brood 2A (dark blue) commences in early July, overlapping with the tail end of brood 1B, and then peaks in early August. It is interpreted as the offspring of brood 1A. The peaks of brood components 1A and 2A are c.15 weeks apart, and this is more than sufficient for the Speckled Wood to complete a full life cycle. On average, brood 2A is a full one, being three times bigger than brood 1A.

Brood 2B (dark green) is the most pronounced component and the most distinctive in the population model and it peaks in late August. It represents a third of the average yearly numbers. There are modelling challenges here because of the overlap with adjacent brood components. Brood 2B is interpreted as the offspring of brood 1B and there is a period of 11 to 12 weeks between the peaks of these brood components, again sufficient to complete a life cycle, but shorter than the 1A–2A peak spacing because it takes place in warmer summer weather. Brood 2B is slightly bigger than brood 1B, and so it may not represent a full brood.

Third brood

One component, brood 3 (grey), is modelled. This one is quite elusive, as it is much smaller than brood 2B but overlaps significantly with it. Numbers peak around the end of September as brood 2B is finishing. The late Speckled Woods that we see in October are

therefore mostly attributed to this third brood.

The origin of this component is interesting, and clearly it is a small, partial brood. Using the average brood 1B–2B life cycle of c.11 weeks as a minimum duration, brood 3 can only be the offspring of the earliest part of brood 2A. A speculation is that the third brood may result from breeding during the short period when imagoes of late brood 1B and early brood 2A co-exist, with the prospect that brood 3 is in part a hybrid second–third brood. An interesting thought!



Males are more inquisitive and the most often seen

Surviving winter

Caterpillars from brood components 2A, 2B and 3 are destined to deal with winter conditions. It is envisaged that brood 2A's caterpillars either breed immediately to form the third brood or slow down their development to then pupate during winter. Caterpillar offspring of brood 2B may develop at varying rates, with some individuals achieving autumn pupation, but perhaps the majority successfully reaching third instar before winter. The offspring of the third brood inherit the most challenging situation and perhaps their only survival route is to reach third instar before winter. The forebears of brood 3 perhaps came through a lineage of broods 1A to 2A earlier that year, but their descendants may mostly appear in brood 1B in the following year.

The modelling has given me some insight into the complex and highly successful yearly pattern of Speckled Wood broods and I hope you found this interesting. It will not be long before the 2022 generations get going and I am looking forward to springtime walks in their company.

Conservation Working Group

Jim Cooper, Chair of the CBC Conservation Working Group, tells us about this newly formed sub-group of the Committee that will drive forward our conservation work

I am writing this just after Storm Eunice paid us a visit. The power is back on and there are tantalising glimpses of sunshine as I write – I am expecting the Peacocks and Small Tortoiseshells to start waking up from my woodshed any day now, where there is also an apparently very happy and busy colony of honeybees that moved in last summer!

I am pleased to report that, after such a difficult couple of years for us all, your Committee has now been able to form a Conservation Working Group (CWG) with the remit of driving forward our vitally



Orange-tip female underwing (photo: Philip Hambly)

important butterfly conservation work. This group of committed individuals is drawn from the Branch Committee along with the County Butterfly Recorder, Transect and WCBS Coordinator, and several Species Champions. It is deliberately quite a small group to ensure it is lean and agile – well, that's what we like to think we are anyway: some of us may be more agile than others!

The group quickly devised a set of Terms of Reference to officially guide our work so that everyone can understand what we are aiming to do; the terms are realistic and manageable as everyone is giving their time as a volunteer. The next task was to write a draft Butterfly Conservation Plan 2022–24 to guide us specifically in our practical endeavours in the field and through communications and partnership working with other conservation and landowning organisations and individuals. As Chair, I am indebted to a small subgroup of the CWG who worked together in several Zoom meetings to devise and write the draft plan: thank you, team. Again, it is focussed, pragmatic and realistic given our limited resources. The Conservation Plan draws on material from *Butterflies of Cornwall* for the *State of Nature Report 2020* – CBC's contribution to the Cornwall report, written by Dick Goodere, with additional action plan tables contributed by Jo Poland. We owe a debt to Dick and Jo for this masterly document! Our plan also supports Butterfly Conservation's Butterfly Conservation Strategy 2021–2026, which describes a programme of five initiatives with which our plan aligns perfectly:

Recover butterflies and moths
Connect people to nature
Unite for wildlife
Tackle threats to species
Manage land sustainably

Next, the aim is to consult local conservation partners to ensure that everyone can 'buy in' to our Butterfly Conservation Plan and support our work to ensure maximum impact. This

consultation process will be underway when you read this piece. “What about moths?” I hear you say. Well, future work of the group will be to support the dedicated band of volunteers across Cornwall who champion this important group and focus our moth species and habitats conservation efforts – watch this space.

A second CWG subgroup has been working on the recruitment of a new Volunteer Coordinator following Jo Poland’s decision to stand down from the previous role after so many years of extraordinary commitment, energy and dedication. As Tristram says in his introductory *Post from the Chair* (page 4), I know you will all be very aware of the massive positive benefits Jo has brought to our Branch through her contracted work and, I must say, numerous additional days as a volunteer as well. When you read this, I am very optimistic that we will either have a new person in post or be very close to announcing their start with us! The Covid-19 pandemic has unfortunately delayed and delayed again our plans to recruit. Thanks are due to Kate Hardy, Head of People and Culture at Butterfly Conservation Head Office for her active support and assistance during this process: thanks, Kate.

Wishing you all a wonderful butterfly and moth season; I’m very hopeful that we will be able to ‘get out there’ again this spring and summer to observe and record Cornwall’s wonderful butterflies and moths that we all care about so passionately, many of which act as indicators of the health of our environment upon which we depend utterly.

Remembering Tim Dingle (28/8/1945 to 29/12/2021)

David Attwell pays tribute to a gifted naturalist and friend to Cornwall’s Lepidoptera

Tim Dingle sadly passed away at the end of December 2021, having suffered with Alzheimer’s for a number of years. He and his wife Sandy had left their beloved Cornwall in 2016 to be closer to their son and family near Ringwood in Hampshire, his county of birth.

Tim was born and brought up on the family farm near Petersfield and moved to Cornwall in 1970 when his parents bought Scadghill Farm near Bude. This was a progressive step for their dairy business with sale of the Hampshire unit generating sufficient revenue to buy a bigger and grassier farm. Tim and his brother Steven worked in partnership and quickly settled, getting actively involved in the community and their respective hobbies. In Tim’s case, this was his love of natural history fostered by his mother and magnified by his inherent skills as a naturalist. He quickly built a circle of like-minded friends and this was enhanced in 1986 when he left the farm to join the Heritage Coast Service with North Cornwall District. In his new role, and with the support of Charlie David, he was able to utilise his local knowledge and skills to help promote biodiversity and conservation.

In his youth, his backdrop had been the chalk downs, and this inspired two of his main interests in botany and Lepidoptera. Through his role with the Heritage Coast Service he was able to share his love of butterflies and moths by delivering a wide range of guided walks and talks alongside numerous publications and interpretive panels.



Tim Dingle at Castle Hill Gardens in Devon in 2012

"He took as much delight in a Speckled Wood as he did in a Heath Fritillary..."

Tim's responsibilities included managing a number of sites and reserves and he actively engaged volunteers in practical conservation tasks. Many of these focussed on habitat for key species such as the Pearl-bordered or Marsh Fritillary and, of course, the Large Blue whose last stronghold was at Marsland. He also developed the Bude branch of the Cornwall Wildlife Trust and sat on the central Reserves Management Committee for many years.

In the 1990s, Tim initiated the Cornwall Fritillary Group in response to declines in a number of iconic butterflies. He recognised the need to get the key agencies and specialists working together in order to drive forward practical action on the ground. As a result of his leadership a number of action plans were developed for threatened species and significant improvements were made to site management at key locations across the county.

Whilst Tim was interested in the rare and vulnerable, he was equally a champion of the common and unfashionable. He took as much delight in a Speckled Wood as he did in a Heath Fritillary and was constantly observing and questioning what he saw on a day to day basis. Tim was a wonderfully gifted all-rounder and will be sadly missed by his family, friends and the butterflies and moths of Cornwall.

Membership news

Branch Membership Secretary Kathy Wood brings us her report for Spring 2022

First, I must apologise to you that I was partly responsible for Head Office having sent you an email which was intended for new members. Regular readers of this column will know that all our bulk emails have to go through the secure system used by Head Office. In an unguarded moment I sent an email to a member of Head Office staff asking her to "send this message to all members of Cornwall Branch who joined in January 2022". This was in spite of my having had a previous life in pharmaceutical manufacturing and knowing full well that if it can go wrong it will go wrong, and that it is important to word instructions so that it can't.

The member of staff, being new and anxious to please, must have leapt into action and, apparently without stopping to read to the end of the sentence, sent it to all members of Cornwall Branch. That is probably Membership Secretaries' most frequent request, so it wouldn't have seemed odd (unless she noticed the subject line, and she doesn't have time for that). A couple of long-standing members told me that they had received the email, but at first I put it down to the problems we had had with the new database inaccurately picking out a segment of the membership. It was only in the last few days that I found out the scale of the problem and realised how it had really happened.

I apologise, and I have learned a lesson. I have made a new template for future messages, requesting that a message be sent "**only** to **new** members of Cornwall Branch who…..", so this should not occur again.

The new membership database held at Head Office actually now seems to be operating properly, but has some differences from the old one.

The most important change from the point of view of understanding these figures is that the number of children and teenagers who are part of a family membership is not now included in the figures. This means that our paying, adult membership is now more closely reflected in the number of members on our list than it was before, and the decrease since before Covid-19 is not as bad as it would seem from the decrease in the number of individuals.

Those youngsters are very important to us; unless future generations know and care about butterflies and moths, everything we have achieved so far will turn out to have been a waste of time.

As at 15 February, we now have 566 members (i.e. households).This is down from the high of 575 in July 2020. The number of individuals is no longer shown on the information sent to me, but I have added up the number of joint and two-adult family memberships myself, and I make it 169, The number of individual adults is therefore 735, down from 825, plus an unknown but very welcome and very important number of children and teenagers.



Field trip to Cubert Common in 2018 (photo: Tristram Besterman)

Summer events programme, 2022

NEW!! We are back in 2022 with a programme of field trips and events. Events have limited spaces. To be sure of a place, please note that it is essential to book using Eventbrite* (the link will be on the CBC website).

*This does not apply to the Lethytep Open Day on 2 July

Thursday 12 May: The Butterflies of Penhale

Penhale, 10am

In addition to seeing a variety of spring wildflowers, we should find Brown Argus, Dingy Skipper and the Grizzled Skipper, which is now only located on this site in Cornwall. Please meet by the M.O.D. South Gate near Treworthen Farm, Cubert (SW783566). Postcode for Treworthen Farm: TR8 5PZ. Please bring a packed lunch.

Leaders: Steve Batt 01726 252979 and Jon Cripps (CWT Ranger)

Saturday 21 May: Fellover Brake

St. Breward, 12 noon

A meeting hopefully to see one of the UK's most declining and endangered butterflies, the Pearl-Bordered Fritillary, at this hillside site that is known to be reliable for them. Directions: from St. Breward pub ('Old Inn') go north and down the hill to the junction. Turn left, continue down and the road levels out before a bridge over the Camel. We park and meet along this road. If coming north on the B3266 go past the signs for St. Breward and St. Tudy and watch out for a right-hand bend and then a left soon after. At this bend take the right-hand minor road signposted St. Breward and the road drops down the hill to the bridge and the meeting point beyond.

Leaders: Alan Stapleton (01208 850085) and Roger Hooper (01209 820610)

Thursday 2 June: Chapel Porth

Nr St. Agnes, 12 noon

Join us looking for Green Hairstreak butterflies along this beautiful cliff walk. The terrain can be steep and rough in places, so we advise a walking pole and sturdy footwear, but the views are spectacular. Meet at Wheal Coates NT cliff top car park (not the beach car park) (SW702500) TR5 0NT. Please note that there is a parking charge for non-NT members. Please bring a packed lunch.

Leader: Kathy Wood (01872 864344)

Sunday 5 June: Greenscombe Wood

Nr Luckett, 10.30am

Come and join us on a field trip to Cornwall's only site for the nationally rare Heath Fritillary butterfly which is now established here after a successful reintroduction in 2006. This walk has several steep inclines that can be slippery, so we advise a walking pole and sturdy footwear. Meet in Luckett Village car park, (SX389737) PL17 8NJ. Please bring a packed lunch.

Leader: Tristram Besterman (07796 660057)

Saturday 2 July Lethytep Open Day

Nr Lanreath, 11am to 4pm



Once again Philip and Faith Hambly are opening their wonderful wildlife farm for the benefit of CBC. Please hold the date, and check the CBC website for details nearer the time.

(Please note: this event does not need to be booked via Eventbrite. The availability of refreshments will depend on Covid-19 restrictions applying at the time.)

Thursday 23 June: Cubert Common

Nr Crantock, 11am

Cubert Common is one of the few enclosed commons in England. It is a gently undulating area of sandy dune grassland, bordering a stream valley with marshy areas. It is owned by the NT and designated a SSSI. We will be looking out for a wide variety of butterflies (including Brown Argus, Dark Green Fritillary, Silver-studded Blue and Small Heath), moths, other invertebrates, and rare plants. Meeting point is the NT Car Park near Polly Joke beach, (SW776599) TR8 5QS. This is a relatively small car park, so car sharing is advised. Directions: drive through Crantock village and, shortly afterwards, turn left onto the road to Treago farm. Drive through the farm and follow the track and park in the NT car park (note that at Treago Farm there is a gate crossing the track which you will need to open and close). Please bring a packed lunch.

Leaders: Jo and Shaun Poland (01872 540371)

Thursday 30 June: Upton Towans

Nr Hayle, 11am

Join us on a walk through this extensive sand dune complex situated between Gwithian and Hayle: a Cornwall Wildlife Trust (CWT) reserve and a SSSI. The main target species will be Dark Green Fritillary and Silver-studded Blue but there will be many other Lepidoptera species and other wildlife to see. Meet by the gate, in front of the large chimney at the entrance to the CWT reserve (SW579396) TR27 5BJ. Please bring a packed lunch.

Leader: Dick Goodere (01736 753077)



Silver-studded Blue (photo: Amanda Scott)

Thursday 14 July: Cabilla Woods

Glyn Valley (3 miles east of Bodmin), 12 noon

Join us for this walk through the CWT reserve described as “one of the largest and possibly finest ancient woodland in Cornwall”. Our target species is the Silver-washed Fritillary with a chance of seeing the aberration f. valezina. There should also be many other butterflies including Comma, Ringlet and Gatekeeper. Please bring a packed lunch. Directions: proceed along the A38 from the A30 heading towards Liskeard. About a mile past the Bodmin Parkway junction, turn left down Le Ball Hill. Cross over a small bridge and immediately turn right. There are some places for parking (SX129652) PL30 4BE but these are limited, so car sharing is advised.

Leaders: Roger Hooper (01209 820610) and Kelly Uren

Saturday 16 July: Penlee Reserve and Penlee Point

Nr Rame Head, 11am

We expect to see Marbled White butterflies, as well as Small Heath and Dark Green Fritillary, on this walk. There are spectacular views from this south coast meadow that is buzzing with life! Please bring a packed lunch. Meet in Penlee Battery car park (SX436491) PL10 1LG.

Leaders: Tristram Besterman (07796 660057) and Roger Hooper (01209 820610)

Sunday 24 July: Godolphin Woods

Nr Godolphin, 1.30pm

Join us for this interesting walk-through Godolphin Woods. There will be a wide variety of Lepidoptera, but the target species will be the Purple Hairstreak. Please bring a packed lunch. Directions: coming from Leedstown, turn left at Townshend, then at Godolphin Bridge the road swings to the left; some distance along this section there is a parking area on the left where a track runs down to the river. It is possible to park here, but it is better to drive down the short track and park in the larger car park at the bottom (on the right) at (SW600324) TR13 9RE.

Leaders: Perry Smale (01736 448304) and Roger Hooper (01209 820610)

Tuesday 9 August: Gwennap Head and Porthgwarra

Nr Land’s End, 11am

This beautiful location boasts an abundance of butterflies, including Grayling, Small Pearl-bordered Fritillary, Clouded Yellow, Small Heath and many more. Meet in the Porthgwarra car park (SW370217) where charges apply TR19 6JR (café). Please bring a packed lunch.

Leaders: Jerry Dennis (07956 041263) and Roger Hooper (01209 820610)

Recording

The latest updates from our County Recorders

Butterflies, 2021

Jerry Dennis, County Butterfly Recorder, reports on 2021 highlights

I have recently taken on the role of County Butterfly Recorder from Cerin Poland and this is my first report. A huge thank you to everyone who submitted their butterfly records in 2021. Despite another year of disruptions and restrictions from Covid-19, nearly 40,000 records were received, detailing more than 120,000 butterflies of 39 species in 1,681 1-km squares. Your data comes to us from several different sources, including UKBMS transects and iRecord, and notably Butterfly Conservation's Big Butterfly Count surveys in July and August that provided about a quarter of the 2021 records, with over 1,000 people taking part. This is excellent and please keep it up! Whilst there are still some outstanding data to be received, this report is indicative of how our butterflies fared during the year. All numbers shown in the report are provisional. To put our County butterflies in context, *Table 1* shows abundance and distribution data for the eight commonest species.

Table 1: Common species

Species	2021 total	2021 1-km squares
Meadow Brown*	25,006	921
Gatekeeper	14,398	747
Red Admiral*	12,689	1,145
Large White	9,412	940
Speckled Wood	8,921	745
Small White	7,042	837
Small Tortoiseshell	4,820	728
Ringlet	4,437	569

* Highest-yet annual total

The species requiring high vigilance are those that have been designated as Section 41 species of principal importance as these are the ones that are most threatened in Britain. We are fortunate to have eleven of these species in Cornwall as summarised in *Table 2*.

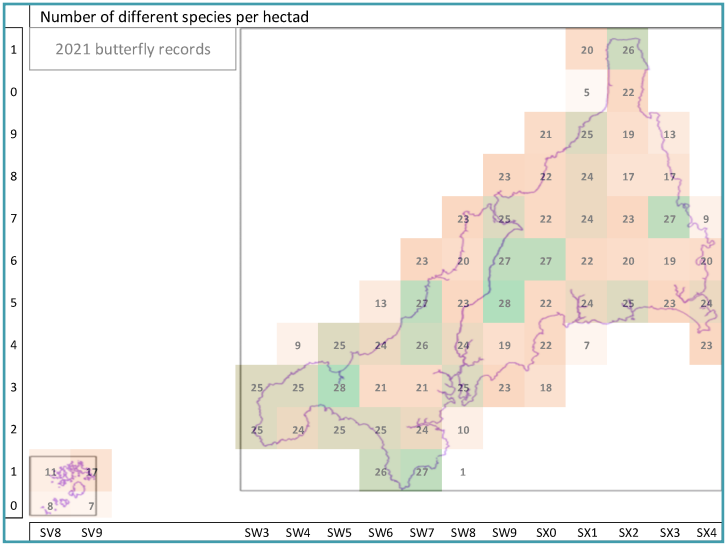
Table 2: Section 41 species

Species	2021 total	2021 1-km squares
Wall	1,113	215
Small Heath**	2,450	148
Small Pearl-bordered Fritillary**	658	93
Grayling**	2,840	67
Silver-studded Blue	6,313	62
Dingy Skipper	137	23
Marsh Fritillary	164	17
Pearl-bordered Fritillary	627	8
Grizzled Skipper	113	6
White-letter Haistreak	2	2
Heath Fritillary	610	1

** Highest-yet annual 1-km squares

The coverage of the 2021 records encompasses all parts of the County. The number of individual species recorded in each hectad (10-km square) is shown on the map (page 19), peaking at 28 in the area from Upton Towans to Marazion in hectad SW53 and in the Mid Cornwall Moors in hectad SW95. This reflects the intensity of the recording that was carried out at these places during the year.

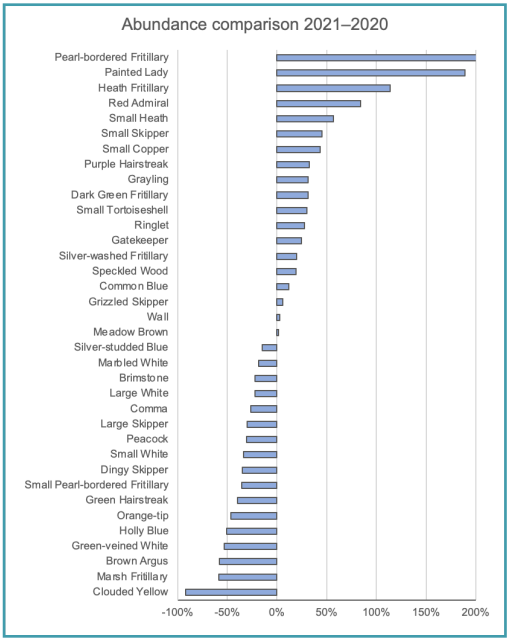
The following section compares 2021 with 2020 data to illustrate short-term trends that I hope you find interesting.



Both years had similar numbers of records and total numbers of butterflies. Three species that were seen in low numbers in 2021, the White-letter Hairstreak (2), Large Tortoiseshell (2) and Monarch (1), are not included. The single Monarch butterfly was seen and photographed by bird watchers at Porth Hellick beach on St Mary's, Isles of Scilly on 15 October. This was only the third sighting since 2014, the last year when several were recorded in the County.

Abundance comparison

The graph with blue bars (*Graph 1*) shows the percentage difference in species abundance between the years, where higher percentages represent higher 2021 numbers compared to 2020.

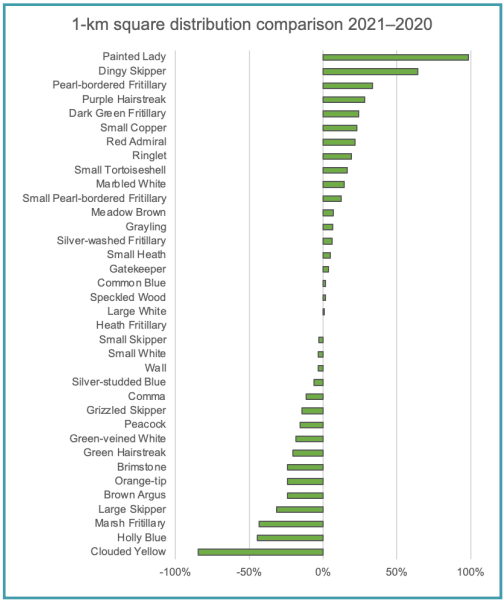


Graph 1

The species that were more abundant include six of the eleven Cornish Section 41 species, with significant increases for Pearl-bordered Fritillary, Heath Fritillary, Small Heath and Grayling. Recorders were less constrained by the Covid-19 restrictions in 2021 and they were able to monitor

more sites, particularly for the early species like the Pearl-bordered Fritillary, and to make more visits to the most important sites. All of the principal Grayling sites were visited in 2021 and the annual total was the highest yet recorded in Cornwall. The Heath Fritillary at its single site Greenscombe Wood had a much better year than in 2020. Two of our three regular migrant species, the Painted Lady and Red Admiral, were more abundant in 2021. The Painted Lady had a particularly poor year in 2020, but the Red Admiral 2021 totals were the highest in a single year in Cornwall, over 12,500, and exceeding a record previously set in 2003.

Of those species with lower numbers in 2021, two groups stand out. The six species in the Pieridae family (whites) were all less abundant last year. Other species that emerge during May and June, such as the Marsh Fritillary, Holly Blue, Green Hairstreak, Dingy Skipper and Small Pearl-bordered Fritillary, also had poorer years. A possible cause for these lower numbers is identified when the timing of their first broods is considered as discussed below. Our third regular migrant species, the Clouded Yellow, had an exceptionally poor year with only 12 butterflies recorded in 2021, the lowest total since 2008. The last year that we had a significant influx was 2014 and I hope that we get better numbers of this beautiful butterfly in 2022.



Graph 2

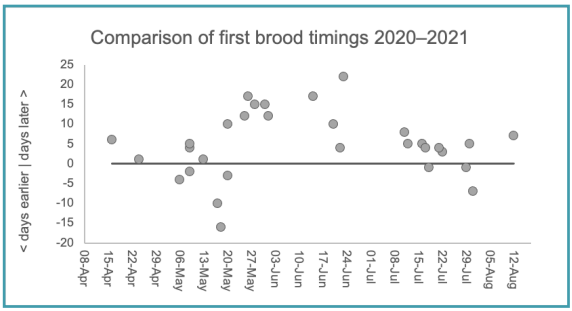
Distribution comparison

The comparison of each species' distribution in 2020 and 2021 using 1-km squares is shown on the graph with green bars (*Graph 2*). Again, the comparison is expressed as a percentage, with higher percentages signifying wider distribution in 2021.

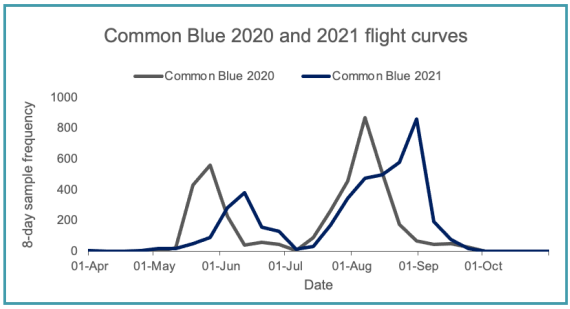
There is a reasonable correlation between the comparisons of both distribution and abundance, with most of those butterflies being seen in more places in 2021 also having higher abundance. There are some exceptions. The distribution of the Dingy Skipper was greatly increased in 2021 (23 1-km squares) compared to 2020 (14 1-km squares) despite having lower numbers in 2021, due to the limited surveying that was possible in 2020. Also worthy of mention is the Small Pearl-bordered Fritillary, that was seen in more 1-km squares in 2021 than in any previous year due to more surveying, but with a third less butterflies compared to 2020, particularly noticeable in the first brood numbers.

First brood timing comparison

Using the timings of the midpoint of the first broods of selected species in 2020 and 2021 provides a basis for comparison. *Graph 3* plots the number of



Graph 3



Graph 4





Above: A pairing of Graylings at Gwennap Head. The male is on the left.
Below: The Red Admiral had an amazing year in 2021.

days earlier or later that the midpoint of each first brood was reached in 2021 compared to 2020, where positive numbers signify the brood was later in 2021. This shows that 14 consecutive first brood midpoints between late May and mid-July were later in 2021 compared to 2020. This ties in with the weather patterns in 2021, where a cooler-than-average April and May and a very wet May occurred.

It is conceivable that those species developing through larval and pupal stages during April and May suffered higher-than-average mortality and slower development because of the weather conditions. The flight curves of the Common Blue (*Graph 4*) provide a good comparison between the two years, illustrating just how variable they can be and also the impact of poor spring weather. The first brood in 2021 was 17 days later and only 83% of the size of the 2020 first brood. The good news was that the 2021 second brood, albeit flying later, more than compensated for the smaller number of the first brood, being 27% bigger than the 2020 second brood.

2022 records

I have already been receiving details of some early 2022 sightings from you – thank you - and these records are extremely important to us and are vital in helping to understand how our butterflies are faring. You can email your records directly to me at records@cornwall-butterfly-conservation.org.uk or use the online iRecord app.

Moths, spring 2022

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

Although this report mostly covers the second half of 2021, further records for the whole of the year have been received since the publication of the Autumn newsletter, so some earlier records will be included here. The following highlights are based on records received at the time of writing (February).

Ectoedemia decentella (nationally scarce) was trapped at Callestick by Tony Wilson on 10 June, the second Cornish record – and from the same site and recorder as the first. Bob Dawson found *Diplodoma laichartingella* indoors on St Mary's, IOS on 9 June, only the ninth Cornish record and the first for the Isles of Scilly, then Cerin Poland added another at Gear Sands on 25 June. Tom Clark (TC) found *Nemapogon koenigi* at Downderry on 21 May and on 3 June, the first records for Cornwall. George Tordoff found leaf mines of *Phyllonorycter platani* on plane trees at the Eden Project on 31 August, another species **new to Cornwall**.

Ohsenheimeria taurella is scarce in Cornwall: James McCulloch recorded one at Rame on 15 July, only the twelfth record for Cornwall and the first since 2008. *Trachypepla contritella* was added to the Cornish list in July 2020 by Chris Vincent (CV) and Karen May (KM) with several recorded at Hayle. This year, Mike Spicer (MS) added one from nearby St Erth on 17 July. Mick Scott (MAS) recorded *Aproaerema anthyllidella* on St Mary's, IOS, on 25 September. The only previous records from Scilly were two records from Tresco in 1959. *Coleophora therinella* was trapped at Cury on 19 June by Frank Johns (FJ), the second Cornish record; the only previous was from Scilly in 1957.

Pachyrhabda steropodes was added to the British list from a record in Dorset in 2010. CV found a dozen flying at Mount Edgcumbe on 29 May, **the first Cornish record**. *Gynnidomorpha permixtana* is now considered an Endangered (proposed RDB1) species. CV recorded a number (possibly 20) in and around a light trap at Gwithian Green on 9 June, another species **new to Cornwall**. Using a pheromone lure, Tom Wilson (TW) attracted the erstwhile rare *Grapholita lobarzewskii* to his garden at Callestick with up to five individuals on several occasions between 24 June and 14 July. By the same method, TW also recorded *Pammene albuginana* three times from 26 May to 1 July.



Oncocera semirubella (photo: Chris Vincent)

Oncocera semirubella is a scarce species, both nationally and in Cornwall. CV recorded one at the Watch House Field, Penlee Point on 18 July, the first record for East Cornwall (VC2). All 12 previous Cornish records are from the Isles of Scilly and the Lizard Peninsula between 2004 and 2019. CV also trapped two *Euzophera pinguis* at Hayle on 8 June, only the third Cornish record, and this was followed by another by FJ at Cury on 29 June. The **first confirmed Cornish record** of *Ephestia woodiella* came from Mount Edgcumbe on 27

June: single moths came to light at two different traps, run by CV and by Dave Gibbon, and this was followed by one from St Mary's, IOS on 25 July by MAS. The once-rare *Anania stachydalis* has become established in parts of VC2 during this century, but one recorded by FJ at Trelusback on 31 July is the first record from VC1. It's now 10 years since the first *Agrotera nemoralis* was recorded at Mount Edgcumbe. Breeding was confirmed in 2013, since when occasional visits have shown the colony to be persisting. Five were trapped there by KM on 27 June.

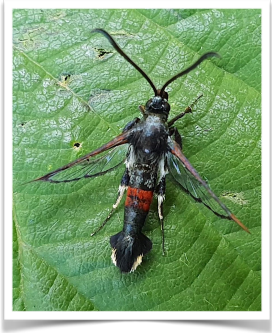


Spoladea recurvalis
(photo: Tom Tams)

Spoladea recurvalis is a scarce migrant. Although there are 25 previous Cornish records, they are only from six different years from 1995 to 2019. Tom Tams found one at the Lizard Point Holiday Park on 20 October. *Cydalima perspectalis* (Box-tree Moth) was first recorded in Cornwall in 2014, since when records have gradually increased. This year, Scott Barron found both larval feeding signs and an adult moth at Crelly on 24 July; Paul Fallon, Richard Wall and MAS recorded moths on St Mary's, IOS in October and TC trapped singles on 7 and 12 September at Downderry, the first records for VC2.

A Goat Moth *Cossus Cossus* was recorded by TC at Downderry on 1 July, to add to Torpoint moth reported for this year in the previous newsletter. Leopard Moth *Zeuzera pyrina* enjoyed another successful year with five records. Records came from TC at Downderry on 16 July, Peta Stephens at Helstone on 17 July, Mary and Tony Atkinson at Tutwell on 17 July followed by 2 at an adjacent site on 19 July and from Lizzie Stroud and John Nicholls at St Germans on 16 August.

Red-tipped Clearwing *Synanthedon formicaeformis* is a scarce and very local species in Cornwall with records confined to the southern part of the Lizard Peninsula. Dougy Wright attracted two to a pheromone lure at Windmill Farm Reserve on 18 July, as did MS (with John Foster) at Little Treleaver on 19 July.



Red-tipped Clearwing *Synanthedon formicaeformis*
(photo: Dougy Wright)

TC attracted a Yellow-legged Clearwing *Synanthedon vespiformis* to his garden in Downderry on 24 June using a pheromone lure. The Mallow *Larentia clavaria* is a scarce moth in Cornwall with only 14 records. MAS recorded one on St Mary's IOS on 11 October, the first Cornish record since 2012 and only the second from Scilly, followed by one by Peter Hogan from the Lizard on 13 October.

Channel Islands Pug *Eupithecia ultimaria* has been an occasional visitor to St Mary's, IOS since 2004 and another was recorded by MAS there on 21

September; in 2020 TC added the first mainland Cornish record from Downderry and he added a second this year from the same site on 17 August.

Juniper Pug *Eupithecia pusillata* is a scarce moth in Cornwall with only 4 records before 2021. CV and KM trapped a total of 8 (possibly a fresh emergence?) from two traps at Mount Edgcumbe on 27 June. Valerian Pug *Eupithecia valerianata,* a nationally notable species, has been recorded occasionally in Cornwall over the years, but only in VC2. CV recorded the first record for VC1 with two at Gwithian Green on 9 June.

Bleached Pug is a nationally scarce moth that turns up occasionally in Cornwall; one was recorded by TC at Downderry on 7 July. Latticed Heath *Chiasmia clathrata* is scarce in Cornwall with 15 previous records and seemingly turns up as an occasional immigrant. MAS recorded one on St Mary's, IOS on 7 September. Yellow Belle *Aspitates ochrearia* is found locally around our coast. This year's records included both an adult and a larva found by Phil Barden at Penlee Point on 14 September.

George Davis recorded a Latin *Callopistria juvenina* at Maenporth on 3 July. The only previous Cornish record is from the same site and recorder in 2019. In 2020, Slender Burnished Brass *Thysanoplusia orichalcea* enjoyed a successful year with eight records. This year, only one was reported, by Julian Clarke at St Kevern on 19 November.

Porter's Rustic *Atethis hospes* is a rare migrant that has turned up almost annually on the Isles of Scilly in recent years as well as twice at Lizard Point. This year TC recorded one at Downderry on 7 September, the first record away from those sites. Orange Sallow *Tiliacea citrago,* was a rarity in Cornwall until it showed an increase in records this century with several recorded annually from 2008 to 2014. Since then only three have been recorded, including one this year by Lee and Robert Slaughter at Kilhallon on 14 September. Radford's Flame Shoulder *Ochropleura leucogaster* has become a regular immigrant recently, with over 20 records in each of the last three years, mostly from the south coast and the Isles of Scilly. This year one was recorded from St Tudy by Chris Button on 14 November, by far our most northerly record. Anita Payne recorded a Blossom Underwing *Orthosia miniosa* at Brackenfield on 30 March, only the sixth Cornish record this century and the first in VC2 since 1996.

Transects, 2021

Kelly Uren reports back on a good year for transects

The season for 2021 looked much more promising for us all than the previous year, and this was reflected in the data which was gathered. Our volunteer walkers were able to get out and about much more freely, which allowed more transects to be monitored than had been possible in 2020 due to the lockdown restrictions, and this was reflected in the number of butterflies seen. A total of **37** transects was monitored and **36,868** butterflies recorded. Compared to the results obtained for 2020, this was an increase of four transects and almost 4,400 more butterflies.

2021 saw the welcome addition of **three** new transect routes, so a huge thank you to the walkers of the new routes which have been set up at Messack on the Roseland Peninsula and Godrevy Warren. We hope you enjoyed your first season of butterfly recording and are looking forward to seeing what butterfly sightings this year will bring.

Cornwall's 2021 transect season in numbers
36,868 butterflies were recorded
37 transect sites were monitored
32 species of butterfly were identified
10,163 Meadow Browns recorded (most abundant species)
1 Clouded Yellow observed (least abundant species)
46% percentage of transects which recorded 20 or more species
3 number of new transects established

Meadow Brown and Gatekeeper were the two most abundant species, managing to hold onto the top spots of first and second place respectively for the past four years. In 2017, Gatekeeper was bumped down to third place by Speckled Wood. This year Speckled Wood featured fourth in our species ranking, narrowly missing out to Silver-studded Blue for third place. Rather interestingly, and perhaps slightly bizarrely, a very precise total of 4,000 Speckled Wood was seen this year by our recorders. Four species of 'brown' feature within this year's top ten, along with two species of 'white', two of 'blue', a skipper and a Vanessid. 2021 appears to have been a good year for Red Admiral sightings on our transect routes. Over the past few years, they have been steadily rising up the abundance ranking, holding a position within the top ten for the past three seasons; this year they featured 5th, with 2,209 butterflies being counted. These results are summarised in *Table 1* (page 26).

The transect upon which most butterflies were seen was **Upton Towans**, near Hayle; a staggering **4,867** butterflies were counted in total over the course of the 26-week transect season. This location also yielded the highest number of species, of which there were **24**, and was closely followed by routes at Tidna Valley, Porthgwarra and Gwithian Common who recorded a total of 23 species each.

Meadow Brown, Speckled Wood and Red Admiral were the most widely distributed species being observed on 100% of transects. The very beautiful Peacock was the next most widespread being recorded on 35 out of 37 of the transect routes, closely followed by the Large White and Small White which were both recorded on 33 transects. At the opposite end of the distribution spectrum, this year four species were observed in just single locations; these were Clouded Yellow, Purple Hairstreak, Heath Fritillary and Marbled White.

A total of **12** of our transects recorded an **increase** in butterfly numbers on the previous year; for **13** there was a **decrease**, and for **1** the numbers seen were astonishingly **exactly the same** as in 2020. For 11 transects it was not possible to draw comparisons as these were not monitored during 2020. *Table 2* (page 26) provides a summary of these findings.

We would like to extend a heartfelt thank you to our highly dedicated band of transect walkers, each and every one of you. Thank you for so kindly donating your time, to help us gather such vitally important data regarding butterfly populations in our beautiful county.

If you would like to find out more about how to monitor butterflies in Cornwall, please get in touch with either me or Jim Barker for more details. Perhaps you have been inspired to set up your own route to monitor or would like to help with a transect which is already established:

all forms of volunteering will be very gratefully received. You may even like to head out with us on one of our walks to see what transect walking involves, and you would be more than welcome. We are currently looking for a volunteer to help monitor a transect at Trevose Head - if you're interested, please contact Jim Barker or myself (see below for our contact details).

Here's looking to this year's transect season, who knows just what we might see!!! I am still holding out for the possibility of having a first-hand Monarch sighting in Cornwall, if the winds remain like they have been of late, that may just very well be possible this year.

For further details please contact either Kelly Uren, transect@cornwall-butterfly-conservation.org.uk or Jim Barker, jimfrances@talktalk.net

Table 1: Top ten butterfly species seen on transects in 2021

Species	Number recorded	Ranking (2021)*	Ranking (2020)*	% distribution	Number transects
Meadow Brown	10,163	**1**	**1**	100.0	37
Gatekeeper	5,221	**2**	**2**	83.8	31
Silver-studded Blue	4,157	**3**	**5**	24.3	9
Speckled Wood	4,000	**4**	**3**	100.0	37
Red Admiral	2,209	**5**	7	100.0	37
Large White	1,571	6	6	89.2	33
Small White	1,410	7	**4**	89.2	33
Small Skipper	1,323	8	10	75.7	28
Ringlet	1,259	9	8	83.8	31
Common Blue	1,045	10	9	83.8	31

*The five most abundant species for each year are marked in bold

Table 2: Summary of changes in butterfly numbers per transect, comparing 2021 to 2020

Increase	Decrease	Same
Butterfly Lane	Dodman Point	Kilkhampton Common
Cotehele	Erisey Barton	
Godolphin Warren	Greenscombe Wood	
Little Treleaver	Gwithian Common	
Lower Portmellon Valley	Lamledra	
Marazion Marsh	Lower Lewdon	
St. Martins, IOS	Luckett Wood	
Tidna Valley	Nare Head	
Trecarne-Delabole	Pentire	
Treluggan Cliffs	Roskestal West Cliff, Porthgwarra	
Trythall School	Ruan Lanihorne	
Upton Towans	Treveal	
	Upper Portmellon Valley	

Financial update

Branch Treasurer Anne Banks' report as at 31 January 2022

Head Office holds two accounts for CBC, the 'general fund' for conservation work and the day-to-day operations of the branch, and a 'restricted fund', which is solely for the *Butterflies of Cornwall* publication. The funds from the restricted account can only be applied for the Branch's conservation work in Cornwall.

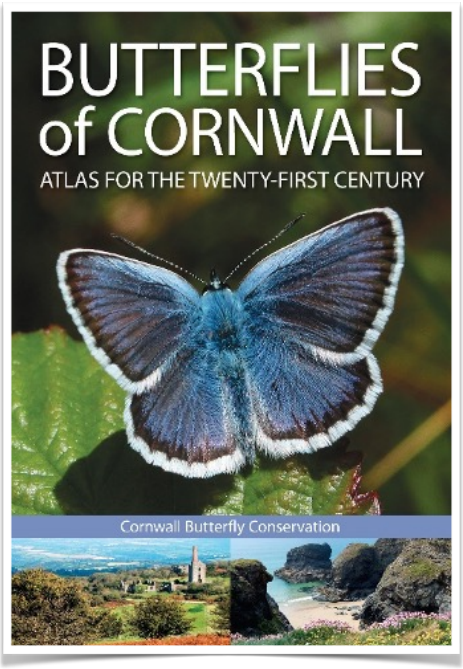
General account

This account is currently £17,712 in surplus, because of reduced expenditure and some income generation. Expenditure on conservation management was put on hold for two years as a result of covid restrictions. Useful income was generated at Lethytep in June 2021 at the successful launch of *Butterflies of Cornwall* and from butterfly talks given by Roger Hooper.

The branch has used some of the underspend to fund a specialist contractor to undertake essential habitat maintenance work for the Pearl-bordered Fritillary at De Lank Quarry. Meanwhile, recruitment is underway for the CBC Volunteer Co-ordinator, a paid role that, after two years suspension, will reinstate the vitally important fieldwork of the branch in habitat maintenance and surveys.

Restricted account

The book, *Butterflies of Cornwall: Atlas for the Twenty-first Century*, was three years in the making and published last summer. Within the first six months, 772 copies have been sold, pointing to its success and taking it past breakeven with a modest surplus of £1,717



However, we can't rest on our laurels, as every copy sold raises funds for conserving butterflies and moths in Cornwall. So, we need your help! If you haven't bought your copy yet, please do. If you have, then perhaps there's that special someone who'd love it as a gift, or someone you know to whom you can recommend it. It's easy to order online: just visit the Cornwall Butterfly Conservation website and click on the 'Atlas' tab.

If you would like to order multiple copies, then please get in touch with me, as I can arrange a discount.

Anne Banks
Branch Treasurer
treasurer@cornwall-butterfly-conservation.org.uk

Seeking silver

Roger Hooper looks for Silver-spotted Skippers

In the summer of 2019, I saw that the Dorset branch of BC had a field meeting scheduled to see Silver-spotted Skipper in mid-August. I had it marked on the calendar and the plan was to stay in Dorset overnight on the Saturday and see glorious numbers of them on the Sunday. Unfortunately the weather had other ideas and on the Saturday the forecast was pretty dreary for the Sunday of the meeting. The one constant in articles about Silver-spotted Skippers is their love of heat, it is always emphasised, so I cancelled. Something that, unknown to us back then, was to become the norm for a very long time.

Fast forward to the weird summer of 2020. Like everyone else I was unable to travel to see family for months because of the restrictions but as rules changed I decided now was the time to visit Hampshire to see my daughter and sister. I always stay with my daughter, who lives on the big chalk hill that overlooks Portsmouth and is the habitat of Marbled Whites and Chalkhill Blues. My visit was bang in the middle of a ferocious August heatwave that lasted the best part of a week and set new record temperatures. If the Silver–spotted Skipper was a heat-loving species and needed at least 20°C to fly, surely this week was going to be perfect for it.

As I had before, I consulted the excellent *Alan Thornbury's Hampshire Butterflies* website for advice on where to search. The Hampshire and Isle of Wight Wildlife Trust reserve of Broughton Hill Downs was recommended. On the first day of my visit my daughter had to work and both grandchildren were at the other grandparents so this was my chance, before grandad duties kicked in! It was around 10.00am when I opened the car door only to be hit by what felt like a furnace of heat. I had to wait a minute or two just to get in, and on start-up the thermometer read 29°C, so the air-conditioning was switched on straight away.

It then just got hotter as I drove away from the bustle of Portsmouth and headed for the wonderful Meon Valley which takes you directly north towards the South Downs. The waters of the River Meon are crystal clear and great clumps of vivid green plants wave in the current. Along with the Itchen and the Test, the Meon is a perfect example of a chalk stream, and the water in these Hampshire jewels comes from underground aquifers that filter the water as it is released into daylight. Fishermen pay eye-watering amounts of money for the pleasure of casting a fly onto their sparkling surface.

Further on, my route skirted the BC reserve of Magdalen Hill Downs near Winchester as I crossed the M3, and then the very busy A34 as I headed for Stockbridge and Salisbury. Broughton sits between the two and I felt I was clearly headed towards Wiltshire as the fields of boring monoculture just got bigger and bigger and images of the horrible prairie land each side of the A303 came to mind.

Anyhow, Broughton was found without any snags and the first local I asked knew exactly where the reserve was because…

"Oh, everyone takes their dog there".

Oh no, do they really? The modern curse of the Nature Reserve is 'somewhere to walk the dog', or more often 'dogs' as it now seems to own one is not enough.



Silver-spotted Skipper (photo: Neil Hulme; used by kind permission of Peter Eeles, *UK Butterflies* website, https://www.ukbutterflies.co.uk/index.php)

When I got to the reserve entrance a chap and his wife were just leaving and told me the Silver-spotted Skippers were out on the hillside and they had seen quite a few. What they didn't say was that it was a very long climb up a chalk track to even get up to the level that the skippers inhabited. I was being dim, as the clue was in the name, 'Broughton Hill Downs'.

I had seen, as I pulled up to park, that the car thermometer read 35°C and I thought this was great until I had toiled for 15 minutes up that track, switching from side to side for shade. I met two ladies who were coming down (with dogs of course) and asked for assurance that I was more than half way up.

“Ooh no luv, I’d say you are about a quarter of the way. We never walk up this way, we only come down”.

I could see why! Thanks for the tip! I plodded on for ages before at last the ground levelled out in a hilltop wood. Through the trees I could see the open downland. It was hot in the trees but on the open hillside it was an oven. Even the very short vegetation was hot when I knelt down to get my camera out of the rucksack.

However, that mattered not, as the first butterfly I saw was a pristine male Adonis Blue. He was bluer than the sky above and he alone was worth the trek to get there. The hillside was exactly the type of habitat described in guides about Silver-spotted Skippers. Short herb-rich chalk downland turf with lots of bare patches. These patches were, of course, courtesy of the local rabbits and the skippers were found on, or very near, these.

My first was nectaring on a very short-stemmed Knapweed flower and allowed me very close views of it. I soon realised this was lucky, as most of the skippers were jet-propelled in the heat and clearly having a great time. By mid-August no other skipper species remain on the wing so there was no confusion, but each one was a whirling blur as they flew around and it was really difficult to find where they had landed. Like most golden skippers they sort of half-dive-half crash-land into vegetation. I did manage to get a couple of dodgy photos of them and began to just enjoy the other species there which were also out in numbers. Small Heath, Gatekeeper, Common Blue, Meadow Brown and both Large and Small Whites seemed to be everywhere and I had started with Adonis Blue!

In normal conditions I would have to be dragged out of the place but the heat was really intense and there was not a breath of wind. After barely an hour I had had enough and made my way back to the car. At least it was downhill now. When I turned on the ignition to drive away, the temperature on the dashboard read 36.5°C. Unbelievably, the day was getting hotter!

I drove back the way I came but this time stopped in the Meon Valley near the hamlet of Exton. I have known this area since the start of my teens and knew a spot here where I could sit on the bank of this lovely river with my feet in the cool water.

From here I could see Beacon Hill and Old Winchester Hill, both of them National Nature Reserves and important butterfly sites. They were just two of the rolling chalk hills that undulated into the distance.

Sadly, the modern world had not been so kind to the others. They must have been like Broughton or Beacon before the catastrophe struck. How many other Old Winchesters were there? They would have had great south-facing swathes of species-rich turf and amazing insect life, just like the mere remnants that still exist. They are like tiny islands of nature in an ocean of arable farming, as is, a few miles to the north, Noar Hill, home to the Duke of Burgundy and itself only a couple of miles from Selborne, where one of the most famous books in Natural History was written by Gilbert White.

He, I’m sure, would be horrified to see what has happened to the countryside he knew.

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