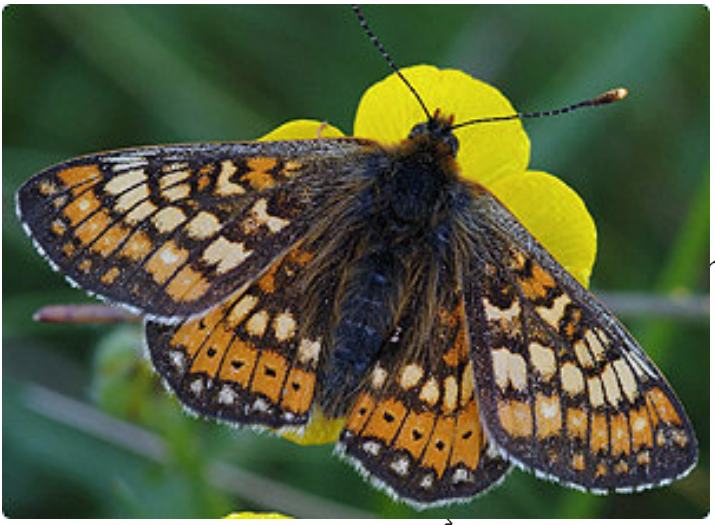
The Butterfly Observer

Cornwall Butterfly Conservation Newsletter No.46



Marsh Fritillary—picture courtesy of BC website

Butterfly Conservation

Spring 2010

Glanville's (Pennans) Field, Penhale, Perranporth



Silver-studded Blue. Courtesy of the BC website

Glanville's Field is the correct, old, name for the recently named Pennan's Field (after Pennan's Pond which is contained therein). It is situated immediately adjacent to the Penhale Camp military road (which is strictly out of bounds). However, if you fork right at the Penhale army gates, you enter a public footpath that crosses the field (in a NNW direction) which covers parts of two 1Km squares (SW7856 and SW7857). This path remains to the east of the Camp and gives open access to the well fenced field. The field is underlain by levelled sand-dunes (farming) and is thus highly calcareous. The field contains some 28 species of butterfly throughout a normal season, almost all of which breed there. The Field is thus the eastern-most portion of the largest sand-dune system in Cornwall, and can contain up to 2,500 butterflies on a sunny day in the months of July and August, which means that with many 2nd and 3rd broods, the field may see 10,000 butterflies per annum!



Meadow Brown. Courtesy of the BC website

Frequency of Species:

1. *Small Skipper*—the single brood in July/August is probably the most prolific of all, with 500+ at best. In short grassland.
2. *Large Skipper*—the single brood in June/July is sparse but annual, if less than 50+. Broad-leaved plants and perimeter.
3. *Dingy Skipper*—the very sparse single brood in May/June is annual, but the 5+ are difficult to locate. Open turf.
4. *Grizzled Skipper*—this rare species is scattered throughout the dune-system to the west and most of the few seen annually (2 or 3)

may have come from outside the field. April/May.

5. *Clouded Yellow*—this scarce migrant, varies in numbers from year to year. Thus numbers seen in the field vary from zero (2008) to a few dozen (2006). The food-plant is present.

6. *Brimstone*—very scarce here, presumably since its food-plant is absent. Just one male has been seen personally!

7. *Large White*—present annually but relatively scarce and passing over, nectar plants are plentiful, but may not breed.

8. *Small White*—scarce, but annual. Wanders into field from nearby gardens. First brood (spring) virtually absent.

9. *Green-veined White*—very common, 90% of whites seen are Green-veined Whites, which breed here and produce three broods.

10. *Orange-tip*—very common around the field's perimeter in season (April/June), where various food-plants may be found. The females are seldom seen, but may be overlooked, as whites.

11. *Small Copper*—quite plentiful, especially in the 2nd brood when a dozen or more may be seen. It runs to a 4th brood here.

12. *Silver-studded Blue*—is perhaps the butterfly for which the site is best known, sometimes emerging in 100's, even 1,000s in July into August, it's under-wing being unique. It is not the 'common' variety (of acidic sites) but a variety once found on chalk downland (more like 'cretaceous'). The field is calcareous.

13. *Brown Argus*—this little butterfly is second only to the Silver-studded Blue in beauty and abundance. Up to 500 may emerge in the 2nd brood (July/August). A 3rd brood is annual here even into October.

14. *Common Blue*—the 1st brood emerges just after the Brown Argus in June, the 2nd brood is large (100+) and a smaller third brood is annual. Most July 'blues' will be Silver-studded Blues at this site.

15. *Holly Blue*—this sky-blue butterfly is apparently sparse and is usually seen around the eastern, tree-clad perimeter. A larger brood occurs in July/August, but a half-dozen is a high day's total. A sparse, late 3rd brood occurs in September or later. This is the only blue which normally flies at head height.

16. *Red Admiral*—this ubiquitous and attractive migrant is common in late summer, either as a British brood or migrant.

17. *Painted Lady*—this is a scarcer immigrant which various greatly in numbers from year to year, from May to September. Any number from 1 to 10 is good. Most are on the central thistles.

18. *Small Tortoiseshell*—this resident, once common, species not only over-winters here (in small numbers), but produces a 3rd brood in October, not normally seen, or known elsewhere.

19. *Peacock*—the species is thinly distributed, but always present, over-wintering, 1st summer brood and a scarce 2nd brood in September/October. Seen in most warm summers.

20. *Comma*—the species is rather sparse and seen mostly near the entrance gate, where most 'trees' are.

All broods are normally present including over-wintering July brood (including the 'variety 'hutchinsoni'), and finally a 2nd brood in September.

21. *Small Pearl-bordered Fritillary*—this delightful fritillary was once quite common further north at Ellenglaze, where, as with other sand-dune systems the 2nd brood in August is more common than the normal June brood! They rarely fly south into Glanville's Field, although my last record is in August 2007. It probably survives at Ellenglaze.

22. *Dark Green Fritillary*—Perransands holds a very large number and even here on the eastern border a day count of 20+ is possible in June/July, mostly on the 'central' thistles. I once caught a pristine dwarf specimen on 4th October (2nd brood)!

23. *Speckled Wood*—an unlikely candidate for an open grassy dune-land field. Nevertheless not uncommon along the eastern tree-clad border. Shade loving and seen in all 3 (or 4) broods. (10+)

24. *Wall Brown*—is surprisingly scarce for an open, sandy field, but examples of all three broods may be seen. 4+ being good! A high number exist at Perransands to the west, (dune hollows).

25. *Gatekeeper* (*Hedge Brown)*—the species can be prolific in its single July/August brood, but mainly around the field edges, where leaved bushes predominate over grass. 100's can be seen in August.

26. *Meadow Brown*—as expected this is undoubtedly the most common butterfly from its June emergence well into September/October. Probably 1,000+ in an average year, 90% in short grasslands.

27. *Small Heath*—very common, but can be elusive in its June and August broods. Cannot say I've seen more than 50+ per day. Ground loving, it is normally seen below knee level among grasses.

28. *Ringlet*—the species can be surprisingly common in long, damp grassland (e.g. by the pool to the west of the field). Best seen in July, when black, but worn-brown by August when it is like the Meadow Brown.

This is the end of the 'systematic' list of certainties that I have observed personally over the years. However, there remains several other possibilities which one might expect due to proximity of Perransands, or due to ideal habitat suitability. These include: Green Hairstreak; Purple Hairstreak (each thought to have been seen once, in the tree-line at east); Marbled White (said to have existed in a small colony at Ellenglaze) and Grayling (the latter being not uncommon, but declining?) at Perransands. Surely a total of 30 species will be reached!

Butterfly species not mentioned herein do not exist in Cornwall or are way outside their specialised habitat e.g. the Pearl-bordered Fritillary.

R. Lane. 25 Warwick Drive, Bucklers Village, Holmbush, St. Austell, Cornwall. PL25 3JJ.

I would like to say a personal thank you to Roger Lane for this fascinating article. It gives a wealth of pointers as to what you might expect to see on the site and, as importantly, gives clues as to where you might find them. I would welcome more articles like this. ~ Ed.

Chairman's Report

Yo there! At the end of May, Spring is here and everybody is happy with the glorious weather.

First of all a big thank you to Phil Boggis for all his past efforts on our much enjoyed newsletter, once again thanks Phil! And thanks to Gillian Thompson for stepping up to become our Editor.

There has recently been an article on collecting in this magazine which resulted in a number of complaints. It is important to note that all articles in the Observer represent the personal opinion of the author and do not necessarily represent the opinions of the branch committee. It is now the policy of the Observer not to include any articles on collecting. Instead, the branch committee fully support the published Butterfly Conservation policy on collecting, breeding and photography [which can be copied to Members on request or by visiting the website www.butterfly-conservation.org, clicking on "Conservation" then "conservation policies".

We have just had our committee meeting at Allet. We have several new members this year who are taking us in different directions and are adding a bit of dynamism and adventure to the old–guard so it looks like being a productive and exciting year.

As part of our 2010 audit, we have already seen good numbers of Pearl - bordered at all the regular sites, including Bunny's Hill, and increased numbers at De Lank after much work on the habitat by BTCV. The Small Pearl-borderers seem to be everywhere this year. At the time of writing, we are still waiting for the emergence of Marsh Fritillaries!

Another bit of good news is that there seem to be many more Tortoiseshells than expected after some very bad years and a small increase in Holly Blue numbers [first brood]. The only one that is looking a bit suspect is the Grizzled skipper at Goss Moor after last year's wet summer, probably. If the weather keeps up we could just get a few more butterflies than in the last three years, so lets all keep gathering information and sending in records to help with the Audit!

We have had a small response from Members regarding their individual email address. As this is likely to be the last printed Observer in its recent format, it is requested that Members email Maggie (our Secretary) at gooderes@talktalk.net a message giving your name and email address.

The new format Observer which will be in the form of a short newsletter will be posted Bi-Monthly onto our Website and by email to those who register. If you do not have internet facilities please could you let the Editor know and the newsletter will be sent to you by post. An annual report which will be similar to the traditional Observer is likely to be published in the New Year and this will be in hard copy and sent by post to every Member.

There has been a good response for new Transects. I urge Members to offer help with looking for Whiteletter Hairstreaks. Members are invited to come to Stithians on 31st July for an Open Day, see p.13 for details.

Phil Harris

Where Have All the Monarchs Gone?

There are several migrating corridors for the Monarch Butterfly in the United States. The most easterly Monarchs are subject to being caught up and steered off course by tropical storms moving north from the Gulf of Mexico. As these cyclones veer up the eastern seaboard of the United States, they then enter the westerly jet stream and pass over the Atlantic ocean. Thus those magnificent butterflies, blown by autumn gales, have been found sporadically over the years, on our Cornish shores.

However, recent reports of this butterfly have been rare and the reason has not been hard to find as Mary Ellen Ryall explains in 'Butterflies and Gardens'. She begins by reporting on the recent floods in the Mexican Butterfly Sanctuary region. She says, "The Monarch Butterfly Sanctuary towns of Anganquero and El Rosario in the Mexican state of Michoacán have been considered disaster areas by the Mexican government due to unprecedented rains from January 31st – 4th February. Illegal logging has been going on for years in the mountains nearby and in the sanctuary, leaving

The following was our former Chairman, John Wacher's farewell message to the Committee. I would also like it to be mine in saying farewell as Butterfly Conservation's editor ~Phil Boggis

Taken from Northern Ireland Branch Newsletter (Autumn 2004)

I'm on a Committee (confessions of a committee member)

Oh give me your pity, I'm on the committee
Which means that from morning to night,
We attend and amend and contend and defend
Without a conclusion in sight.

We confer and concur and defer and demur
And reiterate all our thoughts
We revise the agenda with frequent addenda
And consider a load of reports.

We compose and propose, we suppose and oppose,
And the points of procedure are fun,
But though various notions are brought up as motions
There's terrible little gets done.

We resolve and absolve, but we never dissolve,
That's simply not in our text.
What a shattering pity to end our committee
Whatever would we do next?

Adapted from the original by the Grace Family, New Zealand

nothing to hold the soil back. The heavy rains created prime conditions for mudslides and floods. Roads, bridges and homes were washed away in and near Anganquedo and El Rosario . So far 41 people are known to have perished in the mudslides. There is no way in or out of the butterfly sanctuary.

The butterfly people of the region are dependent on annual butterfly tourism. People are suffering from loss of livelihood because tourists are down to the smallest numbers ever.



Overwintering Monarchs, Pismo Beach Monarch Butterfly Grove, Pismo Beach, California.
© Dan Benton by kind permission.

Chip Taylor of Monarch Watch at the University of Kansas says, 'A combination of bad weather and disappearing habitat has cut the Monarch population in half – and possibly more – since last year. As a result, the number of migrating Monarchs is expected to be the lowest since scientists began keeping track in the 1970s. It is suspected that at least 50 percent died in hailstorms before the floods and mudslides.'"

Also in the latest edition of Butterflies and Gardens Mary Ellen reports on Monarchs overwintering in California. She says, "Dan Benton sent me some photographs taken in December 2008 at Pismo Beach Monarch Butterfly Grove in Pismo Beach, California. Benton says, 'This is a population that overwinters in the Eucalyptus trees and Cypress in the park. The photo show them clustered together high up in branches for warmth. I would appear that there is enough sunshine for a few butterflies to open their wings to catch a few extra rays. The butterflies can be seen here from November to early March.'" Apparently this is a different migration than the East Coast and Midwest routes. Monarchs west of the Rocky Mountains normally do not migrate to Mexico. Although recently there is some science to prove that some do. The majority of western Monarchs overwinter in California.

More information about the Monarch butterfly and other conservation and organic gardening issues go to: *www.**happytonics**.org* and for their newsletter go to: http://happytonics.wordpress.com – simply scroll down to the download link.

Phil Boggis
May 2010

Letters to the Editor

Mr Roland Rogers, 1a Tuckswood Lane, Norwich, NR4 6BD

Thank you for your winter newsletter I received recently. I have, for some time, been meaning to write in appreciation of it. Circumstances prevent me from visiting Cornwall now but it is nice to see accounts about the sites I used to visit.

One comment I would like to make concerns your Chairman's reports on pages 2 and 4. He implies that the cold winter was bad for butterflies but I wonder whether that is actually the case. I would have thought it better to have consistently cold weather until spring arrives rather than mild spells in January or February which wake up hibernating species causing them to use up food reserves which are not easy to replace at that time.

By way of illustration that consistent cold is not a problem I should like to cite an example from my experience. In 1999 I went on a butterflying holiday in Sweden, from 7th to 20th June inclusive, with two companions. We visited the area north of Stockholm which is at a similar latitude to the north of Scotland. Here, in winter, it is very cold indeed with temperatures below zero for days or weeks on end.

During these two weeks we saw and photographed 36 species of butterfly, some of which are normally associated with regions further south than the UK. A list of what we saw is attached. From this I would argue that cold winters are not a problem for butterflies' survival as long as they are consistently cold. I suspect that damp is a greater problem, giving rise to the growth of moulds and I rather fancy that the cold in Sweden is drier.

I also enclose a list of the 25 species of moths I saw casually in the process of looking for butterflies.

Butterflies seen in Sweden 7th June 1999 to 20th June 1999 (36 species)

HESPERIIDAE
Chequered Skipper
Northern Chequered Skipper
Dingy Skipper
Grizzled Skipper
Large Skipper

PAPILIONIDAE
Swallowtail

PIERIDAE
Wood White
Moorland Clouded Yellow
Brimstone
Black-veined White
Small White
Green-veined White
Orange-tip

LYCAENIDAE
Green Hairstreak
Purple-edged Copper
Common Blue
Mazarine Blue
Amanda's Blue
Holly Blue
Mountain Argus
Geranium Argus

NYMPHALIDAE
Red Admiral
Peacock
Comma
Camberwell Beauty
Pearl-bordered Fritillary
Small Pearl-bordered Fritillary
Heath Fritillary
Scarce Fritillary
Assmann's Fritillary
Bog Fritillary
Speckled Wood
Northern Wall Brown
Small Heath
Pearly Heath
Scarce Heath

Moths seen in Sweden 7th June 1999 to 20th June 1999 (25 species)

PSYCHIDAE
Sterrhopteryx fusca (case)

GRACILLARIIDAE
Phyllocnistis labyrinthella (mine)

GLYPHIPTERIGIDAE
Glyphipterix bergsträsserella

TORTICIDAE
Celypha lacunana
Olethreutes schulziana
Ancylis badiana
Epiblema scutulana

PRYRALIDAE
Chrysoteuchia culmella
Crambus alienellus
Pediasia truncatella

PTEROPHORIDAE
Stenoptilia islandicus

GEOMETRIDAE
Small Argent and Sable
Common Carpet
Argent and Sable
Clouded Border
Latticed Heath
Scarce Umber (larva)
Dotted Border (larva)
Mottled Umber (larva)
Common Heath
Black-veined Moth

SPHINGIDAE
Poplar Hawk-moth

ARCTIDAE
Clouded Buff

NOCTUIDAE
Burnet Companion
Polypogon tentacularia

Editorial

I have very little knowledge about butterflies so if there are mistakes regarding these lovely creatures please blame the proof readers who will be tasked to check out all technical aspects!

I edited the Cornwall Family History Journal for several years in the late 80's & early 90's so if my name is familiar to those of you with Cornish roots you will know a little of my history.

This edition of the Observer is slightly changed in its format because the Committee has decided to take some cost cutting actions and also to reduce the workload for Phil Boggis who has in the past spent many hours in production.

I have been told that in future there will be an e-mail posting to all Members of a Newsletter format which will be a little more up to date and subject to space available, have less pictures of people and more of butterflies & Moths!

Please will Members send direct to me, preferably by e-mail, any News or comments that they would like included and any interesting articles which will be published when space allows.

There will be an Annual Observer in hard copy that will be published after the January AGM. The Annual Report will contain AGM deliberations and articles held over because of shortage of space.

There has been a good increase of members attending Field Trips and I have been asked to remind you about Projects - in particular the Social Event on 31st July which was posted to you last month. Also the need to look out for scarce species for the 10 year Audit and the request for Volunteers to search for Whiteletter Hairstreaks.

Gillian Thompson…..
paul@gillianthompson.orangehome.co.uk

A Male Brimstone Went Sailing By

Getting to grips with the Cornwall transects is my summer project, getting my mouth around the word is one thing and getting my head around the walks is another. The word is a near neighbour to transexual but I hope all members of BC are sufficiently aware of the concept to realise that I am not about to appear in a dress.



Male Brimstone—courtesy of the BC website

The actual number of transects is larger than I thought with 21 either Definite, Probable, Possible or Awaiting data from 2009. There also 9 Lapsed ones, so plenty to get my head around this summer.

The 4th May and I did a walk with Paul Brewer with a view to setting up a new transect, a Probable. We met at the car park where a new cycle trail has been laid and just before the old St Dennis railway line crosses the B3279. From there Paul took me up to another dismantled railway that ran further west to serve some quarries. So from SW937587 we headed South West along the old route until we hit the Trerice Manor Farm road, a walk of approximately 1 kilometre. Here we saw 20 Green veined Whites, 8 Orange Tips, a Peacock, 2 Speckled Wood and a male Brimstone went sailing by.

We attempted a few photos and I kept the notes. Having retraced our steps we moved on to another stretch of the old line SW936580 and headed North towards the junction with the St. Dennis line SW936587. This stretch has been managed by some volunteers from our local branch, amongst others, for the Grizzled Skipper; the management has encouraged the growth of more Wild Strawberry which is the foodplant of the butterfly. There seemed to be plenty of the plants around, no strawberries unfortunately since it was around my usual lunchtime, so while Paul took a phone call I looked around the area. A grey shadow moved around the ground and sure enough I spotted my first ever Grizzled Skipper and even got a photo. Further investigation of the area revealed three in all. We then moved on to the other side of the old railway tracks to look for possible Dingy Skippers but with no luck.

Paul will now set this walk up as a weekly transect and it will become part of the UK Butterfly Monitoring Scheme. My intention is to visit all these transects so if you walk one, I hope to see you. If you have a regular butterfly walk then why not consider adding to the list? Give me a ring on 01736 794134 or email me: jimfrances@talktalk.net.

Place	Grid Ref.	Code
Luckett Wood (Greenscombe Wood - Trust)	SX391726	A
Bunnys Hill, Cardinham	SX117676	A
Tuckingmill, St Breward	SX095775	A
Deer Park Wood	SX378733	A
Greenscombe Wood - Ridge	SX395725	A
Lundy Bay	SW958798	A
De Lank quarry		A
Bodmin Beacon LNR	SX0666	D
Gwithian Common (Green)	SW587413	D
Butterfly Lane (Trewartha, St Ives)	SW518378	D
Watch House Field & Penlee Battery	SX435492	D
Cape C	SW3522318	D
Kenidjack	SW358325	D
Steeple Woods	SW518388	D
Treen	SW396223	D
Trevean	SW411356	D
Upton Towans	SW579396	D
Dodman Point	SX000404	D
Cubert Common	SW781595	D
Erisey Barton	*SW7117*	L
Gear Sands	*SW5740*	L
Gwithian Towans	*SW584416*	L
Gwithian Sandpit	*SW584416*	L
Holywell Dunes	*SW765595*	L
Godolphin Manor	*SW603323*	L
Valency Valley	*SX108911*	L
Marsland	SS216173	L
Welcombe	SS224184	L
Gwennap Head		P
Goss Moor	SW936587	P
Stithians		P

CODES:
D = definite
L = lapsed
P = possible
A = awaiting data

Diary Pages

Friday 25th June 2010, 9pm – Pont's Mill, nr. St. Blazey, Par. Mid-summer Moths at Pont's Mill. See Newsletter No.45 for further details.

Sunday, 27th June 2010, 11am to 5pm—The Barn House, Higher Penhalt, Poundstock. Open Garden. See Newsletter No.45 for further details.

Friday 2nd July 2010, 9.30pm – Kilminorth Woods, West Looe Valley, Looe. Midsummer Mothing for the Scarce Merveille Du Jour Moth. See Newsletter No.45 for further details.

Saturday 3rd July 2010, 11am Upton Towans, nr. Hayle. See Newsletter No.45 for further details.

Saturday 10th July 2010, 10.30am Penlee Battery CWT Reserve & Penlee Point (Possibly Moving on to Seaton during the afternoon). See Newsletter No.45 for further details.

Saturday 17th July 2010, 1pm Bunny's Hill, nr. Cardinham, Bodmin Moor – Also Treslea Downs. See Newsletter No.45 for further details.

Sunday 18th July 2010, 1pm Cabilla Wood, Glyn Valley, nr. Bodmin (C.W.T.Reserve). See Newsletter No.45 for further details.

Saturday, 31st July 2010, 11am, Trelusback Farm. See article "Save Our Butterflies Week" on page 13.

Saturday 7th August 2010, 11am Kynance Cove, nr. The Lizard. See Newsletter No.45 for further details.

Sunday 8th August 2010, 11am Gwennap Head and Porthgwarra. See Newsletter No.45 for further details.

Sunday 15th August 2010, 10am Gwithian Green, & then onto Gwithian Towans, nr. Hayle. See Newsletter No.45 for further details.

Thursday 9th September 2010 – 7:30pm – Bat & Moth Night, Tehidy Country Park (South Drive). Organised by Cornwall Council Environment & Heritage). See Newsletter No.45 for further details.

Marks and Spencer Partnership

Butterfly Conservation has signed a new partnership deal with Sir David Attenborough and Marks & Spencers. BC will receive royalties from 19 products, being sold by M&S.

As part of the new arrangement, BC is giving advice to their key farmers and producers on how to encourage butterflies and moths on their farms. Several of their producers are very keen to help and M&S will be distributing our farm leaflet to all their suppliers in the next few months.

Publicity events will be held at M&S major stores on 24th July to promote the Big Butterfly Count. Unfortunately, none of the stores are in Cornwall.

We hope you agree this is a wonderful new development for BC.

Save Our Butterflies Week

Saturday 31st July 2010 –

Trelusback Farm, Penhalvean, Redruth, TR16 6T

A new locality which contains wild-flower meadows, woodland, wetland and a lake. If the weather permits, visitors can expect to see a wide variety of butterflies, moths, birds and dragonflies. Keith, our host also keeps rare breed poultry at the farm.

This is an opportunity to meet and socialise with other members. If you can, bring a guest or two and introduce them to the delights and wonders of butterfly and wildlife conservation! A barn will be available for chatting, eating, coffee etc.

Please bring a packed lunch plus a cake or something sweet to share with other members and our guests. New members will be made very welcome – please introduce yourself to Keith Wilson, Jo Poland or one of the other committee members.

Meet at 11am at Trelusback Farm (shown on the OS map as 'Trelusback' at map reference SW 712384), which is about half a mile 'from the western end of Stithian's lake and about halfway between Stithians and Redruth.

Those with satnav will be able to use the postcode to get to a red 'phone box at the end of the driveway to Keith's house. Proceed down this lane and the barn we are using is about 200 yards past the sandschool and bungalow.

For more detailed directions or if you get lost please 'phone Keith on 01209-860298 or if no reply 07972-376982.

Field Meeting at Murrayton

Approximately 7 Cornwall Butterfly Conservation members attended the field meeting looking for the Pearl-bordered Fritillary at Murrayton on Sunday 25th April.

Unfortunately the weather was patchy as can be expected in a Cornish spring. Overall the temperature appeared low compared to at least the past few Aprils.

During a brief spell of sunshine after some patient waiting for the weather to change, a few were sighted. One was spotted surprisingly, roosting with closed wings on the underside of a sycamore bud in a small tree. Then one, which was flushed out, flew to roost on an ash flower. Above it on another ash flower was another Pearl Bordered Fritillary.

The cool conditions made the butterflies very inactive and members were able to get some good close up pictures. My approximate count was 5-6 Pearl-bordered Fritillaries. Wall Brown and Holly Blue were also sighted.

~ Patrick Saunders, May 2010.

Wider Countryside Butterfly Survey 2009 – year 1 sightings

A successful first year

Following four years of pilot studies, the Wider Countryside Butterfly Survey (WCBS) was formally launched in 2009. The WCBS is the first UK-wide survey of butterfly abundance based on random sampling. In spite of limited resources for promotion, there was a fantastic response by volunteer recorders. In total 1,642 visits were made to 763 1-km squares by 611 recorders, who collectively walked 3,300km of survey line, counting 119,000 butterflies of 47 species. Coverage stretched from the Orkney Islands in the north to the Channel Islands in the south and from south-east Kent to western Fermanagh, Northern Ireland.

The WCBS has generated 12,382 butterfly distribution records for the Butterflies for the New Millennium database, including 90 new 10-km square records. Most importantly, the WCBS has successfully established a baseline dataset more representative of the distribution and abundance of common and widespread butterflies across the UK from which to track future changes. Given that butterflies are valued indicator species, the data will be important in assessing the overall health of the countryside.

Running the survey

The WCBS is run as a partnership between Butterfly Conservation (BC), the Centre for Ecology & Hydrology (CEH) and the British Trust for Ornithology (BTO). Participants included



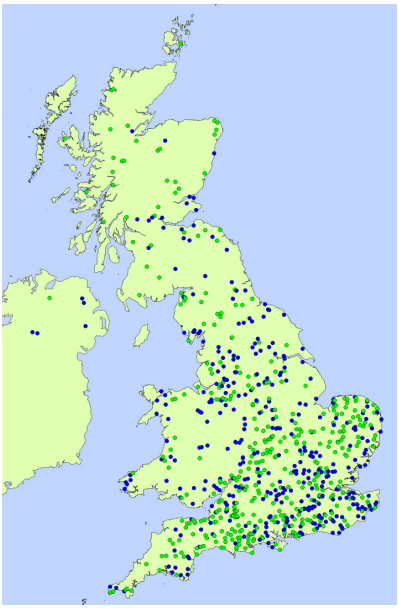
recorders from the BTO's Breeding Bird Survey (BBS) and BC volunteers. 568 squares were allocated to BTO recorders who signed up to take part in 92 BTO regions, whilst a further 721 squares were allocated to BC volunteers though a network of 31 WCBS Branch Champions. National co-ordination was undertaken by Katie Cruickshanks at BC HQ, with support from Kate Risely BBS National Organiser at BTO HQ.

Participation

360 BBS squares (47% of the total) were surveyed by BTO recorders, whilst BC volunteers covered 403 squares (53%). Although not all allocated squares were sampled, achieving coverage of 763 squares in the first year is still a great achievement. This is especially so given limited publicity, a late announcement to the roll out and the scheme running on minimal resources. The result can also be seen in the context of it taking more than 30 years to reach a similar level of sampling coverage level for annual

monitored sites in the UK Butterfly Monitoring Scheme!

BC Branch target coverage levels were exceeded in Somerset and Bristol, Norfolk, and Dorset, whilst BTO coverage was strongest in Yorkshire, Sussex and Kent. The least sampled areas were Northern Ireland and rural parts of mid-Wales, northern England and Scotland. During the core July to August survey period, over 1400 surveys were completed with nearly 80% of squares (597 in total) receiving the required two visits. Additional visits to squares included ~200 in spring and ~300 in the core period.



The majority of recorders (82%) sampled single squares, with the maximum being six. The most visits to a single square was seven, although best effort must surely go to one recorder in Yorkshire who completed four visits to one square despite failing to see a single butterfly on any of the visits! The big survey day was Saturday 25th July, when 98 visits were made (6% of the total). Sixty visits were made on Saturday 8th August, whilst the most surveyed week day was Wednesday 19th August when 50 surveys were completed. No other date had more than 50 surveys.

Recording standards and data quality were thought to be high, with 0.2% of records considered as misidentifications based on species known distributions and flight times.

Data came in swiftly at the end of the year, with over 70% of recorders using the online data entry system devised by CEH.

Butterfly sightings

More than three-quarters (47 of 59) of the UK's regularly occurring butterfly species were recorded. Good coverage (i.e. present in more than 30 squares) was achieved for all of the target wider countryside species, with the exception of Scotch Argus (found in 17 squares). Optional spring visits boosted coverage for several species including Brown Argus and Wall Brown, with the main bonus being good coverage for the Orange-tip (present in 65 squares).

The most widely recorded species recorded over the core July and August period was the Large White, occurring in nearly 90% of squares, whilst the most abundant species was the Meadow Brown with over 15,000 individuals counted. Two Browns (Meadow Brown, Gatekeeper) and three Whites (Large White, Small White, Green-veined White) accounted for two thirds of all butterflies counted.

As expected, coverage of the majority of habitat specialist was low, due to these species having highly restricted distributions and a strong association with semi-natural habitats. Most widely recorded was the Silver-washed Fritillary, occurring in 52 squares. Although



Large White Tom Brereton

habitat specialists comprise more than half of UK butterfly species, they accounted for less than 0.5% of the total number of butterflies counted on WCBS squares in July and August.

On average, recorders counted ~80 individual butterflies of 8 species per survey over the July and August period, confirming that an average WCBS visit is likely to yield a reasonable butterfly return. Over the same period, on average 130 individual butterflies of 9-10 species were seen on UKBMS butterfly transects (of mean length ~2km). This indicates the diversity of butterflies seen on WCBS squares compares favourably with UBMS butterfly transects, especially given that most butterfly transects are located on high quality habitat.

The most species-rich square was in Suffolk with 21 species recorded, whilst the most butterflies counted on single squares were in Northants and Hampshire, with more than a 1,000 in each over the two summer visits combined. The highest species day count was of 895 Painted Ladies near Horncastle, Lincolnshire on the 29th May. Maximum counts for other species at individual squares included 288 Ringlets on 4th July near Fakenham. Norfolk; 263 Meadow Browns on 4th July near Wincanton, Somerset; 247 Gatekeepers on 25th July near Hastings, East Sussex and 226 Green-veined Whites on 19th August near Corby, Northamptonshire.

The eight regular UK species not detected by the WCBS were habitat specialist species that are either rare and/or have flight periods largely outside the main recording window. The most likely habitat specialist species to have been encountered which was not detected was the Silver-spotted Skipper, which is known from ~260 calcareous grassland sites located in 30 10-km squares in southern England.

2009 will be remembered for a spectacular immigration of Painted Lady butterflies, with crude estimates suggesting up to a hundred million may have entered the UK at the end of May. The Painted Lady was the fourth most widespread and sixth most abundant species seen on WCBS squares over the core period. Four of the five largest day counts were of Painted Lady. Map 2 indicates that the bulk of migrants stayed to breed in lowland Britain, with most of the larger counts south and east of an imaginary line between the Severn and the Humber.

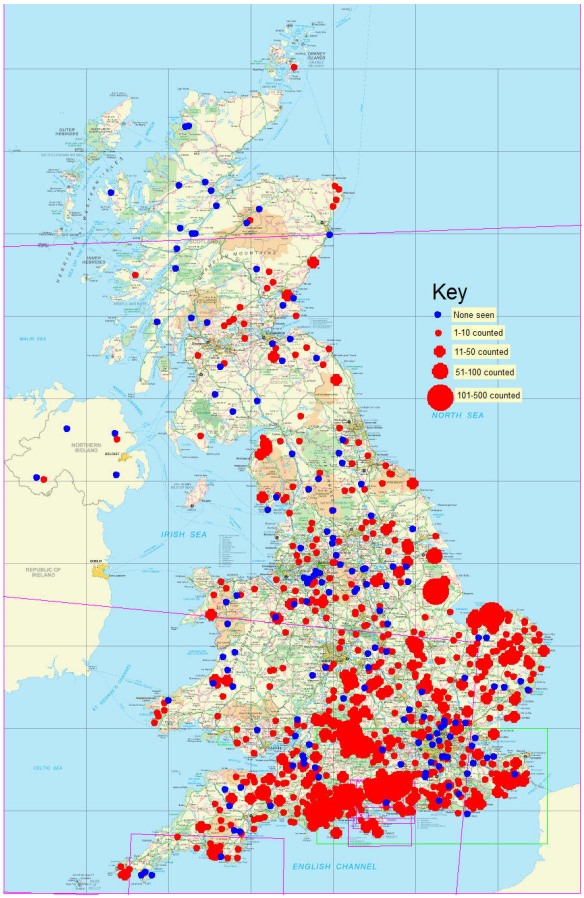
A number of wider countryside butterflies are a cause of conservation con-

Occurrence and abundance data for butterflies recorded during repeat summer visits to					
Species	Occupancy		Abundance		
	%	Rank	Total counted	% of all counted	Rank
Large White	89.4	1	14817	15.71	2
Meadow Brown	87.3	2	15281	16.20	1
Small White	86.8	3	13489	14.30	3
Painted Lady	82.6	4	6803	7.21	6
Gatekeeper	75.4	5	10520	11.15	4
Speckled Wood	73.9	6	4825	5.11	8
Green-veined White	71.9	7	8505	9.02	5
Peacock	68.3	8	2632	2.79	10
Small Tortoiseshell	60.0	9	2642	2.80	9
Comma	53.4	10	1058	1.12	12
Red Admiral	50.8	11	910	0.96	14
Ringlet	46.6	12	5446	5.77	7
Common Blue	39.0	13	1643	1.74	11
Small Copper	26.1	14	379	0.40	20
Small Skipper	23.3	15	897	0.95	15
Brimstone	18.3	16	277	0.29	22
Large Skipper	17.8	17	403	0.43	19
Small/Essex Skipper	16.4	18	960	1.02	13
Small Heath	13.6	19	422	0.45	17
Wall Brown	11.1	20	405	0.43	18
Holly Blue	10.7	21	95	0.10	27
Essex Skipper	10.4	22	261	0.28	23
Brown Argus	9.7	23	194	0.21	24
Marbled White	8.5	24	476	0.50	16
Silver-washed Fritillary	6.9	25	139	0.15	26
Clouded Yellow	5.2	26	88	0.09	28
Purple Hairstreak	3.2	27	50	0.05	29
Orange Tip	1.8	28	13	0.01	35
White Admiral	1.7	29	49	0.05	30
Scotch Argus	1.5	30	379	0.40	20
Grayling	1.5	30	169	0.18	25
Dark Green Fritillary	1.5	30	18	0.02	33
Chalk-hill Blue	1.2	33	21	0.02	32
Small Pearl-bord.Frit.	0.5	34	16	0.02	34
Small Blue	0.5	34	6	0.01	36
White-letter Hairstreak	0.5	34	3	0.00	38
Adonis Blue	0.3	37	25	0.03	31
Brown Hairstreak	0.3	37	3	0.00	38
Green Hairstreak	0.3	37	3	0.00	38
Silver-studded Blue	0.3	37	2	0.00	42
Large Heath	0.2	41	6	0.01	36
Lulworth Skipper	0.2	41	3	0.00	38
Dingy Skipper	0.2	41	2	0.00	42
Pearl-bordered Frit.	0.2	41	1	0.00	44
Purple Emperor	0.2	41	1	0.00	44
Wood White	0.2	41	1	0.00	44

cern, owing to recent rapid declines. These include the Small Heath and Wall Brown, which are both Priority Species for research action in the UK Biodiversity Action Plan (UKBAP). The Small Heath was found in 14% of squares, with a widespread but patchy distribution. The Wall Brown was found in a smaller number of squares (11%) and was chiefly restricted to coastal areas, with some worryingly large gaps in distribution in central-southern Britain (Map 3), which has also been documented through BNM distribution surveys.

Comparisons with pilot study data from 2007-8

Through the pilot studies, 310 squares were surveyed in 2007 and 192 in 2008, whilst ~100 squares have been surveyed in all three years from 2007-2009. Preliminary analysis indicates butterfly abundance on WCBS squares was up by nearly a third over 2008 (interestingly a similar change level to that on UKBMS transect sites), and 1-2 more species were seen per visit. 2009 was a particularly good year for the Large White and as previously mentioned the Painted Lady, which moved up 20 places in rank abundance from 26th in 2008. More rigorous comparisons of species richness, abundance and assessment of trends over time will be available soon on the UKBMS website.



Map 2- Peak Painted Lady counts in July and August

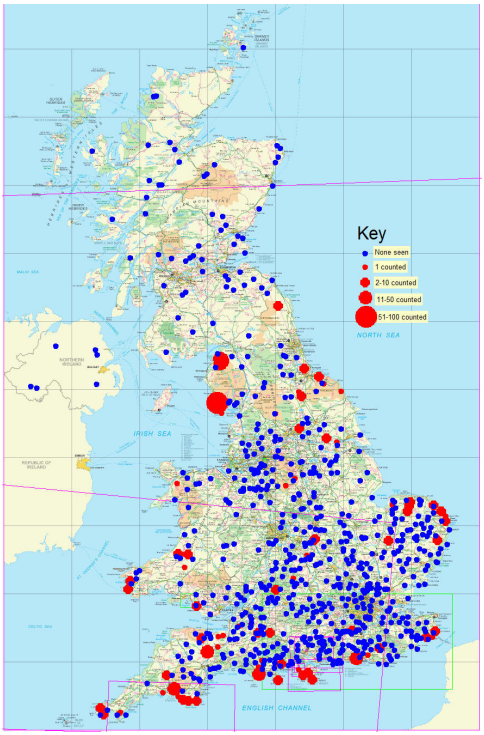
Moth and dragonflies

WCBS surveyors were encouraged to count dragonflies and day-flying moths, and there was an excellent response with records generated in 383 squares (50% of the total).

439 moths of 52 species were counted in 233 squares (131 BC, 120 BTO). A migrant, the Silver-Y was the most widespread and abundant species, with 194 counted in 152 squares. The only other moderately widespread species was the Six-spot Burnet with 49 individuals counted in 40 squares. Of conservation relevance, several UK BAP Priority moths were recorded including Argent and Sable, Drab Looper

and Narrow-bordered Bee Hawk Moth.

2,370 dragonflies of 28 species (plus 3 'Unidentified' groups) were counted in 285 squares (161 BTO, 122 BC). Common Darter was the most widespread species (24% of squares), closely followed by Brown Hawker (21%) and Southern Hawker (21%). The most abundant species was the Common Blue Damselfly accounting for 31% of all individuals seen. Uncommon species recorded included Brilliant Emerald and Yellow-winged Darter.



Map 3 - Peak Wall Brown counts in July and

Insect flower search

The optional insect flower search proved popular amongst recorders with about a third taking part. All 12 target species were detected, with five species occurring in more than half of the squares sampled. The Common Carder Bumblebee was the most widespread species, whilst the Marmalade Hoverfly was the most abundant species.

What's happening next?

We plan to continue the scheme again in 2010 at a similar level to 2009. You will be hearing from us again very soon with more details of how the scheme will operate. For further news and results, please keep an eye on the website www.ukbms.org/wcbs.htm or contact us

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Continued overleaf ...

Occurrence and abundance data for target species sampled in 279 squares during the Insect Flower Search		
Species	% squares occupied	Total counted
Common Carder Bumblebee	71	621
Marmalade Hoverfly	68	2170
Common Red Soldier Beetle	55	1933
Red-tailed Bumblebee	53	537
Hoverfly - Sericomyia silentis	32	584
Hoverfly - Chrysotoxum bicinctum	15	241
Great Pied Hoverfly	8	45
Thick legged Flower Beetle	5	39
Duck-billed Hoverfly	4	21
Common Malachite Beetle	3	11
Black and Yellow Longhorn Beetle	3	10
The Wasp Beetle	1	9

Top ten most widespread and abundant day-flying moths and dragonflies		
Species	No. squares	Total counted
Silver Y	152	194
Six-spot Burnet	40	46
Cinnabar, The	18	18
Shaded Broad-bar	13	13
Silver-ground	13	13
Yellow Shell	13	14
Common Heath	10	13
Grass Rivulet	8	10
Humming-bird Hawk-moth	8	8
Chimney	7	7
Common Darter	68	306
Brown Hawker	60	160
Southern Hawker	59	111
Common Blue	48	735
Emperor Dragonfly	29	51
Golden-ringed	26	68
Banded Demoiselle	24	200
Migrant Hawker	22	85
Blue-tailed Damselfly	20	77
Broad-bodied	15	34
Large Red Damselfly	14	30
Azure Damselfly	13	144

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Moth News – Those 'Little Brown Jobbies'

In the last issue of the Butterfly Observer you may remember I mentioned, at the end of the article entitled 'In the Depths of Winter', a moth known as *Tinea dubiella.* This moth was seen on the 1st May this year flying in a zig zag fashion towards my kitchen ceiling whereupon it clung, suspended upside down, as if caught by a minute thread.



Tinea dubiella, St Austell, 1st May 2010. Photo © P. H Boggis.

The moth is quite small with a wingspan no greater than 15mm. and is often found in bird's nests particularly that of swallows and also found in owl's pellets. The moth has a habit of scurrying about fluttering its wings until it finds a suitable resting place often hidden away in a nook or cranny. This habit made it particularly difficult to photograph once disturbed. The moth along with its close relative *Tinea pellionella* which it is often confused with, also feeds on wool and other manufactured animal products. As I said in my last article, I believe this moth to be more common in the South West than *Tinea pellionella.* The worrying thing for me is that I have recently had a new fitted carpet with a high wool content!

The Big Butterfly Count

The Big Butterfly Count is now live, but please note that this will not be able to receive records till July.

Go to: www.bigbutterflycount.org for more information.

It is important to stress that this is not aimed at existing recorders but to stimulate an interest amongst the public and, hopefully, start their interest in butterflies and moths.

So please do pass the link on to friends and relatives.

Why not also put up the small poster, you will receive in the Butterfly magazine, in a prominent public place near where you live?

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Bunny's Hill Field Trip – 15th May 2010

A Report by Phil Boggis – CBC Moth Officer



Quite the largest number to ever attend a CBC field meeting is pictured here

After a number of cold weeks for this time of year with temperatures struggling to get above 11/12 degrees centigrade, it was a welcome change to wake up on this particular Saturday morning to warmer winds from the west rather than the north. Many butterfly enthusiasts were keen to get out and so it was that at 2 pm at this, perhaps one of our best **Pearl-bordered Fritillary** sites, quite the largest number of people that have ever attended our meetings were keen to get going. 29 of us began fanning out in a northerly direction along the top of the hill and then down a gentle slope to where this butterfly is usually found flitting around at about knee height. We were soon rewarded with the sight of a male – perhaps a few days old as it had a chip in its wing. Another, more pristine specimen was soon spotted and moments later, a number of others – all believed to be males. We pointed out the underside 'pearl' to several people who had never seen this species before, explaining the differences between it and the **Small Pearl-bordered Fritillary** with the help of Lee Slaughter's field guide.



Incurvaria masculella ♂ Bodigga Cliff, South Cornwall, 26th April 2003. Photo © P. H. Boggis.



Incurvaria masculella, ♀ Bunny's Hill near Bodmin. 15th May 2010. Photo © P. H. Boggis.

It was good to take a detour over the road and further down to a cleared area where many of us have never been before (grid ref. SX121677). It looked just right for the **Pearl-bordered** with plenty of violets and some bracken but none were seen there. We all felt that it was a little early for a peak emergence, the season being so far behind this year. Perhaps in a week or two, with warmer weather, quite large numbers will probably be seen.



Pearl bordered fritillary—courtesy of the BC website

Bernard Hocking, in his own inimitable way, diverted his attention away from the main group to scout around on his own. He soon found a small day-flying moth known as ***Incurvaria masculella***. With their feathery antennae the males look slightly different to the females. The male's feathery antenna is a characteristic of a number of moth species.



Small pearl bordered fritillaries—for comparison. Courtesy of Paul Brewer

Incurvaria masculella is quite small with a wingspan of approximately 14mm and is therefore considered a 'micro moth'. This species is often found, at this time of year, around Hawthorn - its food-plant.

The larva makes a small circular blotch mine in the leaf during May and June. It then cuts out a larval case leaving an almost circular hole in the leaf which is quite conspicuous and then descends to the ground whereupon it continues to feed on dead leaves, enlarging its case by cutting larger oblong pieces from dead leaves. The case is fixed near the ground with a few strands of silk. In this position the larva over-winters and pupates emerging the following May.