MESSAGE FROM ….

…. our BRANCH CHAIRMAN

It appears another Summer has come and gone and it seems it's been a much better one for butterflies in Cumbria. Pearl Bordered and High Brown Fritillaries seem to be much improved on the last few years as does the Duke of Burgundy. The Marsh Fritillary is also thriving.

Is this all part of a natural cycle, a response to our habitat management work at our key sites across Cumbria, better Spring weather over the last two or three years or something to do with the harsher Winter … who knows the reason why, but it's very welcome nonetheless.

The Marsh Fritillary has had a very good year on all existing sites and just before going to print we have good news of our site near Penrith having 14 larval webs this year which is well up on the last few years. We have also carried out successful introductions on two more sites in the Ennerdale valley by using our captive bred stock. This now gives us three populations in Ennerdale with a fourth site planned hopefully in the not too distant future.

The situation in relation to the Small Blue on the ex-works site at Workington is still worrying with a very significant amount of important breeding and roosting habitat destroyed during decommissioning works by the previous owners. Butterfly numbers consequently were down this year by something like 50% on last year. It is to be hoped that the remaining habitat can be saved and some space found for wildlife within the envelope of this huge site re-development.

Myself and a few volunteers spent several sunny (and some not so sunny) days in June surveying targeted areas of the Fells for Mountain Ringlet, a very special Cumbrian butterfly. We jointly checked out 67 1km squares finding 37 (55%) occupied of which 7 were previously unknown locations. Highlights were Martin Tordoff finding two previously unknown large colonies in the Patterdale valley in the same week as Pete Boardman giving up after counting 300 Mountain Ringlets on High Raise overlooking Haweswater! Thanks to Pete, Martin, Alan, Chris and Ian for the many miles you put in and hopefully you are looking forward as much as I am to a repeat next Summer.

We had a good AGM in the brilliant new education building at Blackwood Farm (Braithwaite Moss) with Dr Keith Porter giving a very interesting talk on the Marsh Fritillary project at which he stated the project is the best example

of landscape scale habitat restoration for Marsh Fritillary in the UK today, something we can all be proud of.

David Ellwood resigned at the AGM after serving his three year term on committee and Verity Eddleston has taken his place. I offer thanks for volunteering and a warm welcome to Verity. David loves the countryside and is a good all round naturalist. We are very lucky to have him in our Branch and his wry Westmorland humour will be missed in committee. Thanks very much David.

Pete Boardman had also served his three year term but has enjoyed the experience so much he has volunteered for a second term … many thanks Pete.

Finally, details of our vital Winter work programme are to be found in the following pages so do please come along and help out if you are able.

Best wishes to you all.

Steve Clarke

WORK PARTIES – Winter 2010/2011.

Our vital Winter work programme starts soon and of course
it is the usual vital habitat management stuff we are now well used to doing. In 2010 we noticed significant signs that our work is beginning to pay off because in Witherslack Woods there were definitely more Pearl Bordered and High Browns and the Dark Greens and Silver Washed held their own.

So let's keep up the good work with more excellent attendance at the coming work parties this winter.

For all Work Parties bring LUNCH, RAINWEAR, WARM CLOTHING and STOUT FOOTWEAR. For the Braithwaite Moss date WELLIES are essential.

All Work Parties – meeting time 10.30 am please. It might be as well to check the status of the Work Party during periods of bad weather, particularly ice and snow. The first contact person is mentioned in each case but contact can also be made with Steve Clarke on 01946 725828.

Sunday 12th September – Braithwaite Moss
Follow A66 from Keswick towards Cockermouth. Pass junctions to Braithwaite village on left and the village hall on the right. The entrance to Braithwaite Moss is about 600 yards further on the right. Parking is at the farm entrance or in the yard.
Grid Ref; NY 232248
WELLIES – essential.
Contact; Steve Clarke, 01946 725828

Sunday 10th October – Witherslack Woods
Turn off A590 towards Witherslack, continue straight through to Witherslack Hall. Turn into a rough track (the kennels) to park.
Grid Ref: SD 436859
Contact: David Eastlick 015395 32076

Sunday 14th November – Witherslack Woods
Same directions and contact as above.

Sunday 12th December – Township Plantation
Turn off the A590 and take the A5074 from Gilpin Bridge. Take second left turn to 'The Howe' (no signpost), cross minor road and go uphill to the centre of the hamlet. Turn left on tarmac then bear right onto a bumpy track. Enter the wood and park at the first clearing beside the millstone. Limited parking.
Grid Ref: SD 454885
Contact: Sarah Bradley 015395 52340

Sunday 9th January – Township Plantation
Same directions and contact as above.

Sunday 13th February – Township Plantation
Same directions and contact as above.

Sunday 13th March – Fellside
A new venue for us. From A590 take A5074 from Gilpin Bridge, pass The Howe turning and pass the Lyth Valley Hotel on the right. After about 5 miles from Gilpin Bridge turn left signposted to Cartmel along a very narrow road with passing places. After 1 mile note signed Broad Oak farm on right. Shortly afterwards turn left (road actually bears right at a corner) before a house marked Greenside. Follow gravel track over cattle grid uphill to farm and park at the farm buildings at Fell Edge.
Grid Ref: SD 436890
Contact: Robin Eddleston 015395 32459

See you all there.

www.cumbria-wildlife.org.uk

This is a magnificent website written and run privately by one of our members, Peter Wilde. The site has recently been updated to include loads of Marsh Fritillary photos as Peter became one of our captive breeders this last year. The photos show all the life cycle stages and more. In addition of course there is all the usual information about all the other wildlife in Cumbria (not just butterflies). **Well worth a look.**

Our Major Cumbrian Projects

……. how are we doing?

The Morecambe Bay Limestone Woodlands Project

You will probably recall that this is a 4 year funded Project which aims to restore some form of management in up to 30 broadleaved woodlands in the Morecambe Bay Area. These woodlands either still support of are able to support a variety of butterfly and moth species but where commercial woodland management had stopped or was almost stopped.

Our worries are that highly endangered species such as the Pearl Bordered and High Brown fritillaries will be lost forever unless we do something about it.

The Project is now well on towards its halfway point in terms of funding. It is going well thanks to the efforts of our dedicated staff in Dave Wainwright and Martin Wain along with the work we do of course in Cumbria Branch. As with most things though there is good news and no so good news. Dealing with the latter first, the Project funding is halfway through its 4 year term and there is still a helluva lot to do. That's not because somebody has been slacking somewhere along the line, it is because wherever we turn, whichever woodland we go to there is so much more to do and other woodlands should really come into it as well. Dave and Martin are working on sustainability of the Project beyond the 4 year term however so enough of that for now. A fresh pile of funding would be useful – but ……. we dream on.

The good news bit is that the work already done appears now to be paying dividends. Not all of the 2010 transect and other records are in yet but from what I've seen and heard from others, the numbers of Pearl Bordered and High Brown fritillaries have risen at least in some of the woodlands we have been working in. For instance Pearl Bordered have only been counted as one or two in Witherslack Woods for each of the last couple of years but numbers doubled that at least in 2010 and away from the transect there were Pearl Bordered flying where there were none in earlier years. Even better was the fact that they were flying on the very fresh coppiced areas done by the Project Team over this last winter. High Brown numbers also seem to be responding in similar fashion in Witherslack Woods and in the adjoining Cumbria Wildlife How Ridding I saw more there than in the last couple of years.

We will be in a better position to judge just how we are doing when all the records are in and of course there will still be problems and population declines where we have not yet been able to do any or enough management work. Remember too that things don't just happen as soon as work is done. Butterflies and nature generally take time to respond to habitat changes – in either direction – so we must be patient and not expect instant results. Hopefully however we are having a positive impact but for sure, we will be pressing on as best and as sensibly as we can.

Small Blues

Not much has happened since our last newsletter. We had hoped that the survey done jointly by ourselves and the consultants for the developers, would have been released and that a further meeting of interested parties/objectors would have been called by now but at the time of writing this, neither has happened. The main 'core' colony at Workington therefore still has to be regarded as very much under threat.

I have just written to Allerdale Borough Council planning department again to repeat our objection to the planning application and express our disappointment that the agreed survey report has not been released. I also repeated that we had no objections to the most part of the development but that it was only about 5% on the periphery of the site that we wanted to protect in total.

Our grateful thanks go to the developers however for allowing us to access the site to carry out another survey on our own in 2010. That produced a one day count of 196 Small Blues although it was not quite peak season so I estimate a peak count would have been about 240. That is just about half of the 2009 figure which itself was well down on previous years. There is no doubt that de-commissioning (of the site by previous owners) work has severely damaged the Small Blue habitat but even so with a count of 200 or

so it is still a viable colony. It has been stressed however that if the new road build goes ahead, such will be the further disturbance that the colony of Small Blues might not survive in good enough numbers to thrive in the future.

We do not wish to be at all obstructive but we do want to work with the developers and others to sensibly conserve this extremely valuable wildlife site. Hopefully our idea of 'sensible' will come together with others and a happy outcome will be achieved.

The Marsh Fritillary

I left the better news to the last. Marsh Fritillary numbers in the wild continue to thrive in good numbers on 3 of our 4 2007 release sites. Numbers fluctuate a bit but still up and down within very tight parameters. On the original Ennerdale site we know management needs to take place so that numbers can increase and matters are in hand to improve things there. On our Penrith site we still have management problems with no progress as yet but the Marsh Fritillary still hangs on in there but with only a maximum of 2 adults seen flying in a day.

The better news is that through the coordination by Steve Clarke we obtained agreement by all necessary to release more captive larvae onto 2 more sites in Ennerdale. Our captive breeding programme only allowed us to release another 10,000 larvae but even so we had very decent numbers of adult Marsh Fritillaries flying on both sites. Early days yet of course but it is a start as we push on with our objective of building the Ennerdale metapopulation of Marsh Fritillary sites.

Since the 2007 release on 4 sites, none of those sites have been re-stocked with further 'top up' captive stock. They have survived and thrived on their own so that is a good indicator of self sustainability – but we are still not complacent I can assure you. By the way, I must mention the Keswick colony particularly. That site, in fact the whole area was hit very hard by the Cockermouth/Workington floods last Spring. We wondered how the hibernating larvae would survive down in their silken webs in the grass roots with several feet of mucky flood water swelling over them. Well, no bother. We must have lost some but I can happily say that them there Marsh Frit larvae are now proper Cumbrian jobs, tough as old boots.

Don't forget that every May the Solway site at Finglandrigg NNR is fully open to the public to go and see the Marsh Fritillaries. There were 100's in flight again this year and I've already counted nearly 200 larval webs on only part of the site. I met lots of people there again this year and all were very appreciative of what we and Natural England are doing there. I even got a

phone call on site and ended up giving a ‘live’ radio interview – I don’t know, mobile phones can find you anywhere!

Lastly our captive breeding programme continues with several breeders spread across Cumbria. Our latest recruit is Peter Wilde in the Ulverston Riviera but thanks go to all concerned with helping me in that vital part of our Project.

Steve Doyle.
2011

RECORDING and the use of RECORDS

Butterfly and moth records have improved considerably in Cumbria as well as nationally. There are more recorders, more transect walkers and more professional databases operated by people who can apply commonsense when confronted with a doubtful record. In our own Branch we have over 40 members who have adopted a 1 km square or patch to record many areas of our county which have not previously been recorded or have been very under-recorded in the past. So what happens to the data?

Firstly our Cumbrian records go to the county recorder at Tullie House Museum in Carlisle. This then finds its way to the Butterflies for the New Millennium (BNM) and UK Butterfly Monitoring Scheme (BMS) databases. The latter has used the data to produce a new Red List of British Butterflies which has been published in 2010. The previous Red List was published in 1987 and we all know the state of British Butterflies has changed markedly since then, mainly with species’ declines.

So what is the Red List and why do we need it? To answer this and many other questions in detail you can read or download the full report on www.jncc.gov.uk/pdf/Web_Butterfly_Red_List_SpeciesStatNo12FINAL.pdf However I’ll truncate it a bit here otherwise we would need a much bigger newsletter.
The Red List places all British Butterflies into categories using a defined formula though one needs to understand it is a national formula. For example the Small Heath is in the NT (Near Threatened) category but in parts of Cumbria we are tripping over them. The data is used to identify trends and

target conservation action as soon as and wherever possible. The categories and the species within each now are :-

Regionally Extinct

Large Copper	Black Veined White	Large Tortoiseshell
Mazarine Blue		

Critically Endangered (CR)

Large Blue	High Brown Fritillary

Endangered(EN)

Chequered Skipper	Wood White	White Letter Hairstreak
Black Hairstreak	Duke of Burgundy	Pearl Bordered Fritillary
Heath Fritillary	Glanville Fritillary	

Vulnerable(VU)

Dingy Skipper	Grizzled Skipper	Brown Hairstreak
Silver Studded Blue	Northern Brown Argus	White Admiral
Marsh Fritillary	Grayling	Large Heath

Near Threatened(NT)

Lulworth Skipper	Silver Spotted Skipper	Swallowtail
Small Blue	Chalkhill Blue	Adonis Blue
Purple Emperor	Small Pearl Bordered Fritillary	Wall
Small Heath	Mountain Ringlet	

The other 28 species are in the Least Concern(LC) category.

I bet every one of us who looks at that list and those categories will disagree with something. For instance I disagree with the Marsh Fritillary category; I think it is a darned sight worse off than merely being ‘vulnerable.’ Another example I would now challenge is the Pearl Bordered Fritillary which I personally feel is more endangered than the High Brown Fritillary. I’m not in any way critical of the formulae used but I think it is important to form one’s own views, particularly locally where we have to balance local species’ declines against the need of nationally endangered species’ declines. In other words we have a duty not only to conserve and manage habitat for what is locally endangered but we also have a duty to do the same for nationally endangered species which occur in our area. I think that in Cumbria Branch we do that admirably, but then I would wouldn’t I. What do you think?

There are loads more reasons for us to record butterflies and moths in Cumbria but I hope the above gives some flavour of what they are used for. Don’t forget to have a look at the full report, details above, if you have time.

Steve Doyle
2007

GARDENING for BUTTERFLIES and MOTHS….
…. Planning for next Spring.

Butterfly Conservation issue a wide variety of information leaflets, species fact sheets, posters etc. most if not all are available to download from the national BC website. One in particular is one of the most popular and one I am asked for frequently when I give talks and presentations. It is the 'Gardening for Butterflies' leaflet and the one I'm forever running out of, but you can download the information from your computer. However I know some of you are maybe not into computers so I thought it might be useful to print out some of the best butterfly and moth attracting plants for your garden. Have flowers available right through from Spring to Autumn, particularly the latter as some plants will flower up to the most severe of frosts.

SPRING and EARLY SUMMER NECTAR
Aubretia Forget me not Bluebells Honesty Clover Primrose
Violets Cuckooflower/Ladysmock Daisies including Ox eye daisies
Sweet Rocket Dandelion Wallflower

LATE SUMMER and EARLY AUTUMN NECTAR
Buddleia Marjoram (Origanum) French Marigold Lavender Mint
Michaelmas Daisy Sedum (Ice Plant) Red Valerian Ivy
Knapweed Scabious (all types) Thyme Bramble (if you can)
Thistles (I know, I know, but they are real crowd pullers).

Of course there are lots of others but a good rule of thumb is to have as many 'wild' type flowers as you can in your garden mix. Having said that my favourite three to have are Buddleia, Michaelmas Daisy and Sedum Ice Plant.

LARVAL FOODPLANTS
Providing nectar is one thing but why not try providing food for the caterpillars i.e. larval foodplants. Here's just a few you could try :-
Stinging nettles - Small Tortoiseshell, Peacock, Comma, Red Admiral, plus

Moths such as the Scarlet Tiger and Spectacle

Holly and Ivy - Holly Blue

Buckthorn - Brimstone (in South Cumbria)

Cuckooflower/Ladysmock and Garlic Mustard/Jack by the Hedge - Orange Tip and Green Veined White

Rockrose - Northern Brown Argus and Green Hairstreak (might sound extreme but one of our members in south Cumbria has Rockrose in her rockery which attracts N B Argus most years)

CREATING a BUTTERFLY PARADISE and ENJOYING BUTTERFLIES and MOTHS

- Provide nectar plants through from Spring to Autumn
- Grow some caterpillar foodplants
- Avoid using insecticides
- Let a part of your garden 'grow wild' – just a little bit will do.
- Don't buy peat based products, limestone chunks or similar which are stripping our natural countryside of vital habitats for endangered species
- Send in your butterfly and moth records even if only from your own garden, you might be surprised how many blank squares there are especially in urban areas where 'officially' there are no butterflies but you and I know simply everybody must get some on a Buddleia.
- Encourage friends to join Butterfly Conservation
- Join your local Branch on Summer Field Trips or on Winter work parties.

Hope this helps as you trawl through the garden centres later this year but let me know if you have any other butterfly 'crowd pulling' plants and I'll add them to my list.

Steve Doyle

2009

Surveying Mountain Ringlets …..
….. Lakeland's overlooked butterfly species

I was hardly aware even of the existence of the Mountain Ringlet butterfly until 2008 when my wife Gwen and I while out fell-walking almost literally tripped over one of these small dusky brown butterflies on the ridge leading from Hartsop Dodd to Caudale Moor. From a fuzzy photo sent to Steve Clarke our Branch Organiser I quickly received confirmation both of its identity as a Mountain Ringlet and, more important, its presence at a hitherto unrecorded location. Steve has built up a comprehensive body of data on this montane species' distribution across the centre of Lakeland - its only known British Isles location outside the central Scottish Highlands - and was only too keen to have this site properly checked out in future seasons.

Readers can find more information on the highly elusive Mountain Ringlet *Erebia epiphron* on the appropriate "Cumbrian Species" page on our branch website (link below). From there, Steve's table of known sites revealing their locations with survey dates and the numbers observed at each site can be downloaded. With a few notable exceptions the Mountain Ringlet has been the subject of very little serious study, and despite its quite wide distribution it probably remains Cumbria's least understood butterfly, both in terms of its whereabouts and its habitat requirements. How strange then that despite its frequenting mountain tops close to tracks and slopes tramped by thousands of walkers each year - generally between around 550 and 850 metres above sea level - there are still so many gaps in our knowledge. Even highly perceptive Lakeland writers from Wordsworth to Wainwright have either completely overlooked the species or considered it unworthy of mention – and it was around long before they were!

The following year, 2009, came and went and somehow I never got chance to retrace our steps on Hartsop Dodd. But then in spring 2010 with the flight season approaching came a plea from Steve for Butterfly Conservation members to check out both some of the butterfly's known past and present colonies and likely sites not previously checked. Around eight of us volunteered and we set up informal email links to try to ensure we weren't duplicating each other's efforts – or sometimes just to arrange a companionable day's searching the fells together. We were asked to cover as many as possible of around 35 1km squares in six major mountain groupings ranging from the slopes of Kidsty Pike above Haweswater in the east to great Langdale and beyond in the west. An even more daunting task than it sounds;

with a surveying “window” of only a month or so, a requirement for sunny days with temperatures over 15C, and often a very long uphill trudge from the car park or bus stop to the site. In practice it proved difficult for any of us to manage more than a few days’ work and to cover more than two or three squares in each day. But we did what we could and duly submitted our survey sheets (including several nil returns) to Steve, who hopes to summarise the outcome in next spring’s edition of this newsletter.

I managed to get out surveying on just five days, of which only the first two yielded positive results. Firstly on15 June from a Patterdale base Gwen and I looked for the Arnison Crag colony last seen in 1993 but drew a blank there. We moved uphill to Birks, another outlier of St Sunday Crag, and there had our first ever sightings of Mountain Ringlets in flight at a new site for the species. First impressions were of just how tiny they were, looking little more than bumblebee-size against the sheer empty vastness of the open fells, and appearing much blacker than they really are. And rarely flying more than a metre or so above the ground. Around 20 were seen there with another eight on the next 1km square further up the crag, then a further 13 on our descent back through the Birks square. These numbers will of course represent only a very small proportion of total colony size; firstly because of the impossibility of covering more than a small fraction of the whole square when walking a zigzag path across it (a standard method to achieve maximum spread of coverage) and secondly because butterfly emergence from the pupa is a continuous process through the flight period with each individual having a likely life of only a few days. So our 40 or so records on Birks may well have represented a whole-season colony of several hundreds if not a thousand or more individuals. The question remains in our minds, was this a previously overlooked existing colony or simply a relocation up-slope of the former Arnison Crag one? These butterflies are notoriously sedentary and the patches of its food plant, mat grass *Nardus stricta*, were by no means continuous across the fell side, so there’s serious research yet to be done on their ability to relocate as conditions, climatic or otherwise, change over time.

My second outing, the following day, with a couple of BC Cumbria branch companions, took us up onto Caudale Moor from the conveniently-sited Kirkstone Pass car park, itself at around 450 metres asl. Caudale Moor has provided only poor pickings in the past despite plenty apparently good habitat and it proved little better on the day with only a few seen flying or disturbed by our footsteps. But in the afternoon I fared much better when I headed north to Hartsop Dodd, the fell where I’d had my first sighting of the species two years earlier. I traversed the whole summit ridge from end to end in a series of tight time-consuming zigzags and counted no fewer than 130 butterflies. Passing hikers were bemused by my antics but often showed interest when explanations were given. So that was another highly satisfactory result but again raising the old question – was it an original but previously unnoticed colony or simply relocation of a former one from elsewhere? The colonies on these eastern fells are usually thought to be discrete or discontinuous due to separation by areas of unsuitable habitat; by contrast, those in western areas have been described as a super-colony with probable linkage between sites along a sweeping arc of fells. Again, there’s a lot of research to be done, in a

very short time frame each year and in a sometimes hostile environment. Searches for the Mountain Ringlet in its eight-month or longer larval state have probably been considered but deemed impractical in the past.

My three remaining outings were as enjoyable as they were fruitless in terms of butterfly sightings. These were; the Snarker Pike and Red Screes area on 25 June (nil returns from previously healthy colonies); Selside Pike and Branstree from a base in the delightful and remote Swindale on 30 June (nil returns again, both from previously occupied sites and from new ones with apparent potential); Rossett Pike / Langdale Pikes area on 2 July, a day of deteriorating weather (again nil returns from former occupied sites). I've suggested we should revisit all these sites at least once more in future before declaring them no longer occupied, though shortage of available days each year can mean a difficult choice between repeat visits and exploring new potential sites. Hence my appeal below for more BC members and the wider public to become involved in this enjoyable and so worthwhile pursuit.

Looking back now on this short seasonal flurry of activity I can say I enjoyed almost every minute of it despite three out of my five days resulting in blank sheets. Just being out on the fells at that time of year is sheer pleasure, and made me realise just how quiet some parts of Lakeland are, even on the beaten track. But much of the survey work was well off the beaten track, and on the Selside Pike day I saw just a single soul in over five hours on the tops. *Homo sapiens* 1: *Erebia epiphron* 0 was the final score that day. It was a pleasant distraction too to come across a few day-flying moths I hadn't recorded before, probably not particularly rare ones, just species which wouldn't come within miles of a moth trap in a Kendal garden. These included the Red Carpet, the zebra-striped and inappropriately-named Wood Tiger and two tiny attractively-marked tortrix moth species *Olethreutes palustrana* and *Ancylis myrtillana*. Although I can find no recent Cumbrian records of the latter species it is doubtless quite common in its upland habitat of bilberry-clad moorland. But of course while I couldn't allow these to take my eye off the ball, such things were an interesting diversion when crossing areas where mat grass was absent. So that was that, and roll on June 2011 – and with some sunshine!

Finally on behalf of Butterfly Conservation Cumbria I'd appeal to all our readers, members or not, if out on the Lakeland fells in mid-June to mid-July in future years, to keep an eye open and report any sightings of these fascinating little butterflies – you might just stumble on a new colony as we happily did! (Please report with date, a digital image if possible and approximate grid reference to Steve or any BC Cumbria committee member – contact details on back cover.)

Martin Tordoff
2015

Website: www.cumbria-butterflies.org.uk

Moth recording in a Kendal garden – the first five years

I hope through this article to help convey to readers to the pleasures and fascination of garden moth recording by describing my own experiences in Kendal. Though clearly a minority interest, there are nevertheless believed to be at least 2,000 individuals across the UK – and the number is growing fast - recording moths daily in their gardens. Modern and cheap user-friendly recording software allows data to be stored not only for one's own reference but also fed through to local and national recording schemes and databases. Here they can provide invaluable data sources for environmental policy-makers and others. There are probably few other countries where the work of amateur biologists in many different fields represents such a valuable resource as in the UK, so quite apart from the pleasure of studying these beautiful creatures close-up there's an additional feeling of satisfaction of indirectly doing one's little bit to add to the sum of scientific knowledge.

For me it all began well over twenty years ago back in West Yorkshire when our young son showed a very early interest in moths and butterflies. Most of all he wanted a moth trap, so we bought him a Heath trap – looking little more than a glorified biscuit tin supporting a pale blue "actinic" light and all powered by an old car battery. Despite our urban surroundings he soon became aware that in addition to the normal garden species occasionally a rarity would crop up, including sometime migrant moths blown way off course. In our six years there he recorded around 10,000 individual moths of over 170 species. In those days we had to confine our recording to macro moths (generally the larger and more easily identified species), there being no affordable field guides for the smaller species, and definitely no internet. When our son left home for university we moved to another part of Yorkshire in slightly greener surroundings. At the same time I was left under strict orders to continue the moth-recording tradition, so I had to start taking a bit more interest rather than watching from the sidelines like a shivering football dad. I went on to build a Skinner trap – this one more like a large tea chest but sporting a 125W mercury vapour (MV) lamp. Crude-looking though it was, it still serves me nightly 15 years later, and when we finally packed up for the big move north to Kendal a little over five years ago it was like the proverbial kettle – the last item to be packed in the van and the first to be unpacked!

I trap and record moths in our small back garden close to Kendal's town centre on around 250 nights each year, including winter nights when it's not too cold or windy. The setting is not quite ideal as two large sodium street lights overlook the garden and must prove a counter-attraction to moths to some extent. But on the other hand we've a park and a large allotment site nearby which no doubt provide homes for additional species. In five seasons here I've recorded around 400 moth species in the garden, accounting for almost 25,000 individuals in total. Impressive though this species count may sound, my total of around 130 micro moth species pales into insignificance against the UK-wide total of around 1,500; similarly my 270 or so macro moths are but a third of the UK total of over 800. The majority of UK species

have quite specialised habitat requirements and would not occur in Cumbria let alone in an urban garden there.

Identification of moths by amateurs has become much easier in recent years, not only with the arrival of the internet in most homes, but also with the publication of several new modestly-priced moth identification guides. But many species are difficult to separate from similar ones, even with moths in a fresh condition, and worn specimens are best discarded at source. For others, despite all the excellent resources available nowadays, I still sometimes have to rely on the help and goodwill of more experienced recorders for help with identification. This is especially so when dissection of specimens for microscope examination of genitalia is necessary for reliable identification of difficult species. A Yahoo e-group “Cumbria Moths” is an excellent resource but has yet to build on its very small base of regular contributors and I still find it helpful to look at neighbouring counties’ e-groups to get a better feel of what’s happening around us.

I write this in late July, when moth activity is at its yearly peak, and in addition to running the trap nightly I try to get out at least once a week into the field with my generator and MV light seeing what’s around in South Lakeland’s woods, heathlands and mosses. Then it’s into bed as late as 0100 hours, crawl out at 0430 hours to turn off and cover up the moth trap before the birds get to it. Snatch a few more winks, then up again at maybe 0630 hours to start the painstaking task of emptying the trap before the day warms up – so much easier in the cooler morning air before the moths get too frisky. This process can easily take an hour or more at the peak of the season, perhaps the main reason I welcomed retirement when it came a few years ago. Following a warm and muggy night I may have as many as 60 species in the trap, of which perhaps 80% to 90% can be readily identified; the rest are put aside in small transparent pots for more detailed study later with reference to identification guides and the internet. There’s also chance nowadays to take digital photos of any unusual or attractive specimens – today’s “reference collection” for most amateurs is far more likely to be an accumulation of digital images than a lifeless collection of specimens pinned in dusty display cases. Additionally the images can be flashed around among other recorders to get second opinions on some of the more difficult ones. Once identified, the morning’s moths – sometimes hundreds of them – are left in a darkish place where they’ll lie dormant until dispersing at dusk. After allowing a decent time interval for this process I switch the trap on and the whole nightly cycle starts all over again. Although successive catches may tend to be repetitive at any one time of year, there are never two quite alike and I’ve yet to see this daily routine as being in any way a chore – when it becomes one maybe I’d call it a day and do something else.

So what kind of moths should one expect to find in a semi-urban setting like mine? As an example I’ll refer to my list of 166 moths of 60 different species from 30 June, a total which is unlikely now to be surpassed this year. This represents an average of under three of each species; indeed, its notable that 29 species - or virtually half the total - were represented by singletons and no species had over 13 specimens, a diversity unlikely to be found in any other

field of biological recording. I should add that it isn't always so; only a few days later I had no fewer than 165 **Bird-cherry Ermine** moths in or around the trap. I firmly believe in the value of counting or estimating each species' numbers rather than just indicating its presence on a particular date in my record-keeping. On the night in question I identified 43 macro moth species, of which 16 were of the generally slim-bodied Geometrid family, including such large and colourful ones as the **Swallow-tailed Moth** and **Large Emerald**, along with a good range of smaller but equally attractive species including **Green Pug**, **Brimstone Moth** and **Clouded Border** to name but three. There were 22 species of Noctuid moths – the other major grouping, of generally heavier and stouter-bodied moths – including such common species as **Heart & Dart**, **Dark Arches** and the ubiquitous and thuggishly-energetic **Large Yellow Underwing**. Perhaps more attractive species present from this family included **Burnished Brass**, **Beautiful Golden Y** and **Small Angle Shades** – names almost as beautiful as the moths themselves. Finally among the remaining macro moths from other families were a couple of **Elephant Hawk-moths**, with their striking pink and olive-green colouring and 60 mm wingspan. Turning to micro moth species – a bit of a misnomer since in many cases the larger of these dwarf the smallest of the macros – there were 17 species, few of which were graced with vernacular names. Apart from the Bird-cherry Ermine mentioned above I found specimens with such glorious names as ***Lozotaenia forsterana***, ***Dipleurina lacustrata***, and ***Hofmannophila pseudospretella*** (the latter also having the more prosaic name **Brown House Moth**). The following morning by contrast I counted only 38 species, but including no fewer than 11 species not seen in the previous night's bumper bundle of 60. This changing composition of the catch from day to day along with the rarities which show up from time to time all add to the fascination of garden moth recording. Indeed, a couple of days later still I found a moth which may well have been the first of its species recorded in Cumbria. This was an iridescent "pyralid" micro moth ***Phlyctaenia perlucidalis***, a newcomer to south east Britain some 60 years ago and slowly working its way north ever since. By chance I was almost certainly the first Cumbria recorder of this but won't be the last.

I hope this account will encourage at least some butterfly enthusiasts around Cumbria to consider widening their Lepidoptera experience by taking a look at the moths around them. They would quickly realise that the sheer number of moth species present in the UK (say 2,300 species as against only 70 or so butterfly species) and their great diversity of size, shape and colouring would provide a welcome complement to their butterfly-hunting activities. (While walking my weekly Butterfly Monitoring transect on nearby Helsington Barrows I sometimes feel a little frustrated when straining my eyes to see the secretive and well-named **Dingy Skipper** butterflies but having to disregard the many much more colourful moth species around; these include **Yellow Shell**, **Clouded Buff** and **Green Carpet** to name but three often seen on that site by day.) Careful search in one's garden can reveal many moth species even in daytime, some day-flying like the migratory **Silver Y** and, if you're very lucky, **Humming-bird Hawk-moth**, others simply resting among the vegetation or on walls or fences. Larger numbers can be attracted at night either at open lighted windows or by patrolling the garden with a butterfly net.

To work towards a fuller knowledge of one's garden moths, especially to build up a continuous time series of data, one would need at some stage to invest in a moth trap. The latter range from home-made Skinner or similar traps, the electric components for which would cost say £40 to £50 (or around £100 in complete ready-to-use form), through various other types of actinic and MV traps to the Robinson MV trap at upwards of £200. But for a taster, even a tungsten light bulb slung over a white sheet in the garden can draw a surprising number of moths especially on a warm and muggy night. The other main investment is in identification guides; though there are excellent sites on the internet to help with this there's really no substitute for a book in the hand. An internet search of "moth identification guides" will lead both to useful field guides and websites sufficient to get one started.

So why not give it a go? If moth recording and study gives you half the pleasure and interest it's given me you'll have no regrets. I certainly don't have all the answers – far from it – but would offer any possible help to potential moth-ers around the Kendal area, including an invitation to join me now and again at the daily emptying of my garden trap (contact details on back page).

Martin Tordoff

Excitement in the Branch Budget

Cumbria Branch is one of the smaller Butterfly Conservation branches with 189 members but still has to manage a budget to pursue its activities. Our principal regular income is a proportion of each member's subscription plus the interest from investment of branch money. Together with other small donations, the total income is about £1300. We do receive a number of large individual donations but we should not expect donations as matter of course.

So how do we use our income to manage our activities? The committee firstly decides what activities it wishes to pursue and these can be described broadly as member's services, summer field meetings and winter conservation work parties.

Within members' services (30% of budget) lie the AGM, the branch web site and the bi-annual newsletter. The newsletter is the most expensive item in this group. A recent budgetary discussion has confirmed the bi-annual publication and style of the newsletter and noted that the cost of postage equals the cost of printing. The committee is looking to try and reduce postage costs by electronic mailing to those members who are willing to receive it in this manner but it is the firm intention that the paper version will continue for all those that wish it. The web master is a volunteer and apart from the initial purchase of software, the site is a useful, no cost tool for publicising Cumbrian butterflies.

Summer field outings are run by volunteers and do not have a financial charge.

The committee believes that its principal activity is the management of selected sites for the benefit of butterflies. Each year there is a programme of winter work parties where existing sites are maintained and improved, for example Witherslack Woods and Township Plantation, with the agreement of the owners. These sites target the fritillaries of South Lakeland. At the other end of the County, work parties help in the re-establishment of the marsh fritillary which became effectively extinct a few years back. In conjunction with Natural England and landowners, habitats are managed. A larval breeding programme requires cage construction and organisation.

Practical work requires tools. The branch sets aside money for the replacement of hand tools and personal protective equipment (PPE in the jargon). The hire of contractors is undertaken rarely for larger defined projects but for work parties the committee believes in power tools used by its own members as the most effective method of working. We are fortunate in having people trained in the use of brush cutters and chain saws (by other organisations thank goodness!). A new chain saw operator will be trained using money from HQ. Tools need maintenance and consumables (oil, petrol, new chain blades, cutting heads…..), revision training and PPE replacement. Modern organisations demand trained first aiders. All these items need to be budgeted (55% of budget) for current and future needs. Materials and consumables take 15% of budget.

We mentioned donations above. Donations are either spent in areas requested by the donor or allocated by the committee where there is no restriction for major projects. Recently 2500 devils bit scabious plants for marsh fritillaries were bought and planted using donated money. The branch holds a fund dedicated to the South Lakeland woods for maintenance in later years once the current Grantscape funded activities are completed.

Balancing the budget requires decisions. This year the committee decided to axe the all risks insurance on its power tools saving 8% of budget in later years. A very significant saving is the donation of members' time at work parties and the voluntary nature of the committee members' and newsletter editor's time.

David Eastlick
Branch Treasurer.

WOODLAND MANAGEMENT.

Recently I read an article in the Conservation Land Management magazine, something I find interesting bearing in mind my general love of woodlands. Such places are, as we know very good places for butterflies as well as flora and other wildlife species. In Cumbria Branch we have been working in woodlands for many years now during our winter work parties and with some degree of success as shown by the increase in numbers of fritillary butterflies in 2010 within the woods we have helped to manage.

Woodlands come in lots of different types so management must follow suit. Several basic principles need to be observed though. Firstly a woodland is a woodland and we should not try to make it anything else by, for instance clear felling huge areas of it. Secondly we must seek advice from experts and obtain permission to do our work and that consent needs to come from the woodland owners and in the case of a SSSI Natural England. The latter are there to control who does what in such strategic places because there may be other considerations in addition to those which are our prime objectives. Then there is the Forestry Commission to consult and we are very fortunate in our area that we have a first class team at FC who have helped us immensely in the last few years. So there seem to be a lot of hoops to jump through but when you think it through it all makes sense, provided everyone along the line plays their part.

Getting back to the article in the Conservation Land Management magazine I'll outline some of the bits I found particularly interesting. The title sets the scene 'Ancient woods – managing the fundamentals.' Then it goes on to give a quick summary ' Ancient woods are some of our most precious habitats. They can also be complex: on the one hand, a closely integrated ancient ecological system, on the other hand a place for visitors, or a working wood.' Maybe that makes it all seem a bit technical to the layman but lets have a closer look at it.

The article goes on to say 'Springtime is a marvel in ancient woods. Out of gnarled old timbers, sunken gills and winding tracks comes a crescendo of fresh vitality: supple leaves, bright flowers, birdsong, flies, cobwebs, beetle frass. The character of these places is at once that of a slow, old, complex accumulator, yet at the same time it is dazzlingly alive, youthful, dynamic and self renewing. This paradox of old and new may have a large part to play in some of the conundrums faced by managers of ancient woods.'

Why on earth would we want to do anything to interrupt that process? The article continues 'We know that inappropriate or heavy handed management can devastate their special value, such as the 'rehabilitation' management of the 1950's to 1970's when ancient woods were cleared and replanted with conifers' many of which were not native species I might add. But we know that in the decades and centuries before that active management by people as a way of life was carried out by rotational coppicing, selective timber extraction and replanting. Workers lived in the woods, maintained wide rides for access and those woodlands were alive, renewing and teamed with wildlife but more

than that. They were also sources of food not only for wildlife but for people who collected fungi, berries and even had small plots for growing other things which provided more open areas here and there.

Modern life, the conifer revolution and other things no doubt, altered all that. The result in the last few decades was that many of our ancient broadleaved woods were vacated and not managed effectively or at all. It became not commercially viable and cheap imports took over many of the traditional markets. Many woodlands throughout the UK were destroyed by coniferisation and many more were no longer actively managed with the result that as growth continued unchecked, life within those places greatly wound down and in some cases species of wildlife were lost from within. We know of course what the effect has been on our woodland specialist butterflies in Cumbria even though we are more fortunate than in some other areas like East Anglia for instance.

Times are still changing again however and this time hopefully for the better. In a time when timber markets especially for woodfuel seem to be picking up maybe woodland owners may be wise not to ignore the productive potential of their ancient woods. Sustainability (coppicing and replanting for example) policies are encouraged by the Forestry Commission's woodfuel strategy and Grants are available for agreed woodland management projects. Such Grants have been extremely useful locally as we strive to reverse the decline of our endangered butterfly species by agreeing woodland management projects with many owners and covering about 30 woodlands. All this is done by both Cumbria Branch and by our Regional Officer as part of the Morecambe Bay Limestone Woodlands Project.

MANAGEMENT OPTIONS.

Lets have a closer look at what management is appropriate and how we might tackle the job locally. We must not significantly alter the true character of a traditional woodland. That would wipe out some of its value. Straight away then our options might seem somewhat limited so we need to examine or at least try to visualise what a wood looked like when it was alive with butterflies, wild flowers, dormice, bats, birds and so on. Then having consulted with owners and others as outlined above we try to re-create the type of habitat within each woodland which should be capable of supporting our target species without harming habitat for other species or the structure of the wood itself. The magazine article I keep referring to above continues 'So long as the ancient woodland features are maintained or enhanced in condition then within reason we can be relatively relaxed about our other management goals in the woodland. The approach relies on detailed site specific knowledge. Appropriate decisions and practice can rarely be achieved remotely.' Your committee members in Cumbria Branch spend a lot of time in the woodlands we work in, we get to know the wood, we get a feel for it, we can see and feel when things are changing. We can consult with others from a background of on the ground knowledge. Most of our members will not know the amount of work we do within this part of Branch activities so I hope this goes some way

to explain what we do all year round and why we always need funds, well attended work parties and lots of time and patience.

Getting back to active management we know what we prefer to do but it has to be said we are not able to do everything we would like. Firstly we are restricted by funding. Ideally we would deer fence coppice coupes but fencing is very expensive so we have to look at other options. One is to re-create and manage wide access rides and bridleways which goes a long way to getting back to what used to happen when workers lived there. Secondly we create wider areas along those rides where particularly good habitat exists and then occasionally we create larger areas where the canopy is already a bit thinner.

We can't change everything quickly even if we could afford to but we can bit by bit try to get back to a situation where some of our ancient broadleaved woodlands are once again managed. Working with the owners and the Forestry Commission is essential because we need to acieve two objectives, Firstly our own which is to reverse the decline in butterfly numbers. Secondly to encourage owners to manage woodlands again and helping by promoting woodfuel, renewable energy, projects.

Steve Doyle
2003

NOTES FROM THE CUMBRIAN RIVIERA

Riviera? Well, if the heading had said this was going to be about a slag bank you'd probably have moved on by now to the next article. In fact, I want to extol the attractions of the Furness Peninsula, a little bit of Cumbria tucked down in the south-west corner of the county. We are surrounded on three sides by coastline and I like to claim that it gets more hours of sunshine in a year than anywhere else in the county – at least that's what I told Editor Steve when I offered to look after some Marsh Fritillaries, but more of that elsewhere.
We have some superb nature reserves down here, four of national importance for the species they hold. There's also scarce limestone grassland, limestone pavement, a wonderful spring-fed kettle tarn and ancient woodland that used to supply oak for the Elizabethan navy (that's the first Elizabeth). All these are packed into an area of about ten miles by ten.
But, forget all those for now, as the best site for butterflies is actually a new one – the Channelside slag banks of the old iron and steel works in Barrow-in-Furness. Thanks to some "European" money one of these was cleared, reseeded and provided with paths some years ago; the second one received similar treatment finishing early last year. The end result is a vast area - each slag bank is more than 1 kilometre north to south - of wild and uncultivated habitat covered in flowers, especially the flowers that thrive on thin soils like Bird's-foot Trefoil, Kidney Vetch, Ox-eye Daisy and Clovers. But in places many unusual and less common plants like Viper's Bugloss, Yellow-horned

Poppy, Blue Fleabane, Wild Parsnip and even Northern Marsh Orchid have gained a hold. As an added bonus there are splendid views all around.
So what does it offer in the way of butterflies? The second slag bank is only in its first full year after seeding, so has yet to develop its butterfly potential, but the first one is magnificent. How about counts of 32 Dingy Skipper, 37 Grayling, and 74 Common Blue, each within the space of about 500 metres? In all my years of pottering around the Furness Peninsula I've never seen such numbers of these species. The first two are significant as "vulnerable" species in the new Red List. I rarely see Dingy Skipper these days elsewhere in Furness and the colony of Grayling is so strong that a sunny afternoon in July provides a very good chance of seeing the fascinating courtship of this species, something I saw for the first time there.
On the slag bank my restricted mobility meant I could only cover a small area at a time – my guess is that, because there is so much of their food plant, Bird's-foot Trefoil, there must be much greater numbers of Dingy Skipper and Common Blue than I recorded. And, if the Small Blue would only make the short hop down the west coast (why doesn't it catch a train?), there is probably enough Kidney Vetch on the slag banks to support most of the British population of the species – tens of thousands of plants!!
There are of course many other butterfly species throughout the season, especially on the eastern edge where the railway line follows the slag banks. There are plenty of Wall, Small Heath (both classified as "near threatened" in the new Red List), Large Skipper and heaps of Gatekeeper, plus small numbers of Orange-tip, Small Copper, Speckled Wood and Dark-green Fritillary, not to mention the ubiquitous Whites and Vanessids, although at the time of writing I have to say I haven't seen a Painted Lady anywhere in Furness this year.
Then there are the day-flying moths. Both of the Burnet moths, Six-spot and Narrow-bordered Five-spot, are present in huge numbers and provide one of the easiest of all pupae to find in the wild (suspended from grass stalks). I haven't seen the Mother Shipton moth there yet, but it's surely only a matter of time as it is close by and clovers are everywhere on the two slag banks. It's not surprising that there are huge numbers of the Burnet Companion moth, as it also feeds on Bird's-foot Trefoil. Now that's an original name for a moth! Err....what shall we call this little brown thing? I know ....it flies at the same time as the Burnet moths so why not call it the Burnet Companion? I think anyone doing butterfly counts today would probably have gone for something like "Dingy Imposter", as it infuriatingly resembles and flies with Dinger Skippers, meaning that you have to get close enough to be sure which you're counting!
So, all in all, a superb butterfly site created out of an eye-sore. Quite probably butterflies were never given a thought in the planning of it, but they were quick to seize the opportunity as soon as the habitat was right. And, the Council have just built a little car park giving access right between the two slag banks so that we old folk can enjoy them more easily. Brilliant – I look forward to seeing the second slag bank blossom like the first one in years to come!

Peter Wilde

MORE FROM THE CUMBRIAN RIVIERA

There's no doubt that the Marsh Fritillary likes sunshine and there's no doubt that the coastal areas of Cumbria receive more hours of sunshine than central areas like Keswick. I thought that was a good enough reason to ask to be involved in the captive breeding programme for MFs. Thanks to Steve, that has been possible and what a privilege it has turned out to be. Steve has put a Herculean effort into this project and it has all had to be done virtually from scratch; nothing on this scale had ever been attempted before with butterflies. One of the many things he'd learnt from the project is that a proportion of the larvae don't develop fast enough to be able to pupate by mid-May, so they can join the others during the main flight period. Rather than turn up late, it seemed they just gave up and didn't pupate. Steve was keen to locate some of his "stock" on the Riviera, as he calls the Furness coast, to see whether a sunnier climate would help bring on more of the larvae. In any event it is best to have breeding stock spread around the county as a precaution against potential disasters. We all know that, in our county, weather can be totally different within a distance of twenty kilometres or less!

It has proved to be a thoroughly enjoyable and enlightening experience. I've also learnt that nature is much more weather dependent and adaptable than the standard butterfly books might have us believe.

One excellent butterfly book suggests that female MFs emerge early in the morning, pair for two hours and begin egg-laying right away. If only life was that simple and Cumbrian weather so amenable. In fact, I didn't observe any emergence before noon, either of males or females. It took a good two hours to expand and dry the wings and usually longer before flight was attempted, by which time it was late afternoon and they'd be settling down for the night! Pairing usually started around noon and, in most cases, pairs remained coupled over-night – though this may just be a response to the presence of many other males in the close proximity of a cage. Egg-laying never began before noon and leaves that enjoyed full sunshine throughout the afternoon were the ones selected. There was no activity if the weather was dull or wet, so pairing and egg-laying must often be delayed by several days.

Watching your charges like a mother hen makes you so conscious of the part the weather plays at crucial stages in the life cycles of our butterflies. This year it was very hot and dry during the pupation period and a few pupae perished, while one or two produced adults with deformed wings. Clearly, rapid cell division and growth of the wing buds is a major part of getting from larva to adult and it's important that the pupa doesn't get too dry during this delicate process. Witnessing this change, taking just 16 to 18 days, I couldn't help thinking that it makes the hormonal changes of human puberty look quite minor!

Later, just as the eggs started to hatch, a hosepipe ban was introduced so, of course, it poured down every day. I feared the little 1 mm long caterpillars would get washed away. However, within a few days, these minute things are able to spin a huge – well, huge at least relative to their size - protective silk web and take refuge inside from the worst of the Cumbrian rain. It's not always sunny on the Riviera, but don't tell Steve!

Peter Wilde
2012a

Butterflies around the World ….
…. and around the UK.

Over the years I've been fortunate to travel widely and have seen a great deal of wildlife along the way. It's great to see iconic species like Grizzly Bear in Canada or Koalas in Australia but it's the butterflies which really grab the imagination of course.

Space this time restricts us but in the next issue of Newsletter one of our members, Andy Senior will tell us about his 'Tour of Britain' when he determined to see all the UK species and many sub-species in a calendar year – and he did it too. We'll also mention several iconic butterflies from around the world, including a favourite of mine, the Ulysses Swallowtail butterfly from Australia. Wherever you go, be it South America, Africa or Asia there are marvellous butterfly and wildlife species to look out for. Of course we must not forget the 'jewels' just across in mainland Europe which is much more accessible to us.

As well as Andy Senior and me recounting some of our sightings at home and abroad respectively, we will be pleased to include comments by any of our readers who have butterfly tales to tell when outside our county boundaries. Go on, put pen to paper and send them in, please.

Steve Doyle

CUMBRIA BRANCH OFFICERS

Branch President At present vacant following the sad loss of John Strutt on Monday 2/March

Branch Organiser Steve Clarke
Low Cray
Gosforth
Seascale
CA20 1EB
01946 725828
clarkelowcray@btinternet.com

Newsletter Editor Steve Doyle
14 The Willows
Durdar
Carlisle
CA2 4UP
01228 544059
stevedoyle44@hotmail.co.uk

Conservation Officer currently done jointly by the Branch Officers.

Moth Officer Sarah Bradley
Thornbarrow Hill
Witherslack
Grange over Sands
LA11 6RR
015395 52340
bradders@aol.com

Treasurer David Eastlick
Benrigg
16 Highfield Road
Grange over Sands
LA11 7JA
01539 532076
eastlick@ktdbroadband.com

Committee Members

Peter Boardman
36 Market Street
Kirkby Stephen
CA17 4QN
01768 372063
telemark-hq@ktdinternet.com

Robin Eddleston
7 Westcliffe Gardens
Grange over Sands
LA11 6BT
015395 32459
robeddleston@hotmail.com

Verity Eddleston
7 Westcliff Gardens
Grange over Sands
LA11 6BT
015395 32459

Martin Tordoff
1 Fletcher Drive
Kendal
LA9 7DL
01539 735935
mt@vmst.fsnet.co.uk

Webmaster Nick Hirst, Nickhirst@aol.com

Regional Officer Dave Wainwright, Butterfly Conservation regional office, Low Barns, Witton le Wear, Bishop Auckland, Co Durham DL14 0AG Tel : 01388 488428 E-mail address dwainwright@butterfly-conservation.org