

UK Butterflies Photography Workshop
West Tytherley, Hants, 25 April 2009
Organised by Peter Eeles

HIGH POINTS OF BUTTERFLY PHOTOGRAPHY (AND SOME LOW ONES)

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Introduction

I can remember the exact moment that I first met Peter Eeles. Following a tip from Nick Sampford about where to find Chequered Skippers, in May 2005 my wife and I were driving along a narrow country lane near Spean Bridge in Scotland. We were about a mile from our destination when two Canadian tourists driving towards us managed to slide off the road into a water-logged ditch, successfully blocking our passage. Within minutes Peter arrived in a hire car, having driven from Glasgow airport, going in a hurry in the same direction as ourselves. Both of us could go no further because of the bogged down vehicle in front. "I've got to get past because I'm a nature photographer," said Peter. "And I can't wait it's going to rain." "So have I," I replied, "I'm also a nature photographer." My wife maintains we solemnly shook hands and said "How do you do?"

Unknown to me, Nick Sampford was also due to arrive, so soon there would be three nature photographers unable to pass two stranded Canadian tourists. Because he was at the rear, Peter gallantly undertook to reverse back to a passing place, turn round and go back to Spean Bridge to get help in the form of a tow truck. With less gallantry, I reversed back to the passing place to clear the way for help, left my wife in charge of our car, and took off on foot at a brisk pace for the mile walk to our intended rendezvous point.

If anyone doubts Peter's resourcefulness after seeing the growth of his marvellous ukbutterflies.co.uk website, I can confirm that he got that Canadian car moved in double quick time and arrived by car at the rendezvous point before I could walk there. The irony of all this was that we couldn't find any Chequered Skippers when we got there. In spite of combing the recommended

site, later with the assistance of Nick Sampford and his wife, nothing was ever found there. And this was a place where Chequered Skippers had been seen reliably every year at this time for several years past. And then it started to rain! We all set off at full speed for the BC site at Loch Archaig, another good place to see Chequered Skippers – but unfortunately not today! A full Scotch drizzle had now set in! It turned into a no butterfly day.

Nick Sampford was a very good nature photographer, who many people knew. I remember first meeting him at Broxbourne Wood shortly after he had taken his superb photograph of a Purple Emperor, with the purple gleaming on both sides. He said that he had waited years to get such a good photo. Sadly Nick died a year after our Spean Bridge meeting, and he has been much missed at butterfly events around the country.

Chequered Skippers at Glasdrum Wood

Around the time we met Peter at Spean Bridge, my wife and I were staying nearby at Loch Lochy. From there I had a few more days for repeated attempts to get some Chequered Skipper photos. Eventually we succeeded at Glasdrum Wood, about 20 miles south. Our first visit there was again frustrated by drizzle and it was only at the start of our long drive home that, at the second attempt, there was a short break in the weather that allowed some photos.

That was almost a near miss. Two other photographers and I were patrolling under the power lines which are where most people see Chequered Skippers at Glasdrum Wood. It was cold, with intermittent light drizzle. After over an hour's looking we found one roosting specimen and we got some photos before it flew away and was lost. Triumphant (or relatively so) we made our way back to the main footpath, where we met a group of walkers who asked us what we had been photographing. "We've just seen a Chequered Skipper – that's a very rare tiny butterfly – and it's very hard to find." "Oh, we've seen lots of them. Just back up the path, there's a little open area and there are lots there!" I can tell you that we shot up that path in a very great hurry and, sure enough, there were quite a lot of Chequered Skippers nectaring on low flowers or roosting on wet grass stems. This time we all got some proper photographs. It's fortunate that Chequered Skippers are one of the few species that fly in light drizzle. In this case, the drizzle was sufficient to make you wet through, and enough to keep my wife under cover in the car. When she asked the walkers if they had seen us and whether we had seen anything, she was told that the butterflyers were ecstatic!



Chequered Skipper on wet grass at Glasdrum Wood, 29 May 2005. Canon EOS 20D, f8, 1/200 sec, Aperture priority, 400 ISO, Canon 100mm macro lens, hand held



Chequered Skipper roosting in the hanging garden at Glasdrum Wood, 29 May 2005. Canon EOS 20D, f8, 1/100 sec, Aperture priority, 400 ISO, Canon 100 mm macro lens, hand held but lying on the ground with arms resting on the ground

In the recent Spring 2009 issue of *Butterfly* magazine, there is an interesting article entitled *Capturing butterflies on camera* by no less an author than Peter Eeles. It includes a beautiful picture of a Chequered Skipper that must have been taken on another visit to the Lochaber area because there is no sign of the drizzly rain of May 2005. I would say that the key points about that photo are, in order: (1) exact focus of the whole butterfly, (2) background not distracting and with a good colour balance, (3) excellent framing with the butterfly the centre of attention while just off the major diagonal. It goes without saying that the overall colour balance is right with the insect rendered in its true colours, which it is.

How it all began

Like many of us, I started years ago, catching butterflies, finding caterpillars and sometimes eggs, and trying to build up my own collection. The *Observer's Book of Butterflies* was the only guidance initially, then the Frederick Warne books including Richard South's *Butterflies of the British Isles* and, later, Professor Ford's books in the New Naturalists Series, first his *Butterflies*, and some years afterwards, his book on *Moths*. You can still find all these in second-hand bookshops. Having bought and then sold them all when I thought I had outgrown butterflies, I have now bought them all back. I started with a Kodak box Brownie, graduated to an Ilford 120 camera, then onto an Agfa and a Pentax, gradually moving up-market as resources allowed. The Pentax was a good

camera but I didn't have a macro lens and so close-ups were difficult. Then, on a trip to New Zealand in the autumn of 2002, the Pentax shutter spring broke and there was no time to get it repaired, so I bought another film camera in NZ after considering that a change to digital half-way through a holiday might have an unpredictable outcome. However, passing through Singapore on the way home, I grasped the digital nettle and bought a Canon PowerShot S45 (which I still have and which continues to be very useful).

I had tried photographing butterflies with the Pentax, with mixed results, mainly because you couldn't focus close enough to the subject, but with the Canon S45's built-in zoom I soon discovered that much better close-ups could be obtained. I found that the best method was to set manual focus at a pre-chosen distance, select a fairly small aperture, and then concentrate on being the right distance away from the subject. When a Brown Argus popped up in our village garden near Cambridge and I got a presentable image of it, I was back into butterflies in a serious way.

Discover Butterflies in Britain

That led me to a Canon 300D with a Tamron 90mm macro lens, and the standard of photography improved further. At about this time, I came across Robin Page's book *The Great British Butterfly Safari* describing how he managed to see (although not photograph) all the British species in one season and I decided to have a go myself, although not in one season, and to try to get reasonable photos of all of them. I won't go on about the details, except to say that you do need to plan ahead and, as Peter said in his recent article in *Butterfly* magazine, you do need to know the species, particularly if you want to avoid wasting time by searching in the wrong place. Actually the planning turned out to be more difficult than I had expected, and led eventually to my book *Discover Butterflies in Britain* which hopefully makes it easier for others to follow the same path without undue wrong turnings and frustrations.

I completed photographing all our species in two years, rushing from some places quicker than I should have done, with some resulting compromise in the standard of photography, but by then I had a publication date and time was of the essence. Since that first go round, I have had the pleasure of going back to many good places and taking more photos. This is an addictive hobby – it's always possible to improve on your standard of photography and there's such a huge thrill in taking a really good photograph. And because a really good image is the result not only of skill but also, at least equally, of luck – luck to be in the

right place at the right time, luck to find an undamaged specimen, luck to catch an attractive pose, luck to have a non-distracting background, luck to have good lighting, luck to have a still day, luck for the butterfly to keep still, to name a few things that must go right – it's a level playing field and newcomers can often produce better images than old stagers who have been trying for much longer.

My experience of digital cameras

A word about equipment. Many of my best photos have been taken with a Canon 20D, now about 4 years old, which has the important advantage of being able to shoot at 5 fps. I upgraded to a Canon 5D about 3 years ago but its slower framing rate of 3 fps I have found a disadvantage. Particularly when holding the camera in hand, and with a flighty butterfly, I find that autofocus is essential and the (very) short interval between focussing and exposure that the 20D achieves seems to have given more consistent results. Of course we all take many images in order to get just a few good results. I remember discussing this with a very good American nature photographer some time ago, and mentioning I needed about 20 exposures to get one good image. Oh, much more than that, he said, at least 100 exposures for one good one is the norm.

An important difference between the Canon 5D and older 20D is the 5D's larger sensor. This is 35.8 x 23.9 mm whereas the 20D is 22.5 x 15 mm. That gives 12.8 megapixels for the 5D compared with 8.2 megapixels for the 20D. That is a significant improvement, but only if you have everything else right, and in particular that you have pin-sharp focus.

My preference for a 20D (now upgraded to the popular 40D) over the more expensive 5D is not shared by everyone. For bird photography, Andy Swash, who is one of the very best British bird photographers, and photographs all over the world, relies on the 5D, of which he has two, and has never had the criticisms I have. To the contrary, he is extremely enthusiastic about their performance. So it is possible that I have been unfortunate and have a rogue camera. At the time of preparing this, my 5D is at the Colchester Camera Repair service (a Canon authorised repair organisation) having a complete overhaul (which costs about £200). I hope to have a further bulletin on its performance later in the season.

I usually use a Canon 100mm macro lens if there is a chance to get in close, but if not, I have found that the Canon 70-200mm lens is very good (although not as good). Here are a couple of examples. (below). You need good magnification to see the difference, and the Brown Hairstreak was shot at a faster ISO speed rating,

but shooting from 2m distance is never as good as snapping from ½ metre. This comment assumes you have time to get in close without the butterfly disappearing. After shooting for a second or two with my long lens, I would have been able to get closer to the Brown Hairstreak but the time taken to change



Pearl-bordered Fritillaries at Bentley Wood, 23 May 2005. Canon EOS 20D, f8, 1/250 sec, Aperture priority, ISO speed 400, Canon 100 mm macro lens, hand held



Brown Hairstreak (f, ab uncilinea) at Whitecross Green Wood, 1 August 2008. Canon EOS 20D, f11, 1/400 sec, Aperture priority, ISO speed 800, Canon 70-200 mm lens set at 192 mm, hand held

lenses was too long. I should think that the interval between first seeing this butterfly and its disappearance was all of 10 seconds. I was pretty pleased to get any presentable pictures because this specimen turned out not only to be the first recorded female of the season but the *uncilinea* variation which I had never seen before.

Getting enough depth of field

Of course a problem with taking any close-up image is the need to achieve enough depth of field. This depends on the “circle of confusion” which is the largest circle that will be perceived by the human eye as a point. For a 20 x 12.5 cm print viewed from 25 cm, this is found experimentally to be a circle of about 0.2 mm diameter. By using the well-known optical formula $1/v+1/u=1/f$ where v is the object distance, u the image distance and f the focal length, it is possible to derive a formula which relates depth of field to object distance and focal length. This formula uses the permissible circle of confusion. The upshot of the calculation is that the closer you get to a butterfly, the smaller the lens aperture (i.e. the larger the f number setting) you need. To achieve a depth of field of say 20 mm, the object distance for a 100 mm macro set at $f11$ cannot be less than 0.7 m; when set at $f4$, it should not be less than 1.1 m. The corresponding figures for

a 300 mm telephoto are minimum object distance 1.9 m at f 11 and 3.2 m at f4. The moral is: don't get too close to the subject or you will not get enough depth of field. And it is always helpful to have a small aperture if lighting conditions permit and if an acceptable shutter speed is still possible. Even then the depth of field achieved will always be small for macro shots.

Use a tripod if you can

I have found that it is always better to use a tripod if time permits. Photographing Glanville Fritillaries on a dull day at Compton Bay is an example. There was all the time in the world – actually too much because we would much rather have seen the sun – to set up and take pictures from all angles. As a very rough guide I have found the “rule” that shutter speed should be at least as fast as $1/(2 \times \text{focal length})$ is a good rule. If you are hand holding and want to avoid serious blurring, make sure that you have at least this shutter speed, if necessary selecting a higher ISO speed rating so that you do. Although image stabilised lens are more forgiving, it is very difficult to get really sharp pictures by hand holding a long lens. Don't forget that an unusual or rare butterfly may cause a lot of excitement which has the irritating consequence of making one more-than-normally unable to keep still! A shaking hand does not lead to a good picture.



Glanville Fritillary roosting on ribwort plantain at Compton Bay, 6 June 2005. Canon EOS 20D, f10, 1/125 sec, Aperture priority, ISO speed 400, Canon 100 mm macro lens, tripod mounted



The same subject, viewed from the opposite side, and intended to show the habitat. Details the same except f11, 1/200 sec, tripod mounted

One camera that has a very fast framing speed is the Canon 1D, Mark III, which achieves 10 fps. I know that it's intended for sports photographers wanting to get the very best action shots of fast-moving competitors, but it should also be very

good for butterfly photography. If anyone has any experience, it would be very interesting to hear comments. The downside is the (very) high cost of the camera and the need to carry a different charger and different battery packs from the cheaper Canon cameras.

Searching for Mountain Ringlets in the Lake District

The 1D Mark III is also a heavy camera. Hauling sackfulls of equipment around can get tiring as the day wears on. Last summer I was at the Honister Pass in the Lake District, hiking up towards Grey Gable on the track of Mountain Ringlets.



Slate quarrying at Honister, 30 June 2008. Canon EOS 20D, f6.3, 1/800 sec, Aperture priority, ISO speed 400, Canon 24-105 lens set at 24 mm, hand held



Mountain Ringlet habitat at Honister, 1 July 2008. Canon EOS 20D, f7.1, 1/500 sec, Aperture priority, 24-105 lens set at 105 mm, hand held



Mountain Ringlet at Honister, 1 July 2008. Canon EOS 20D, f7.1, 1/400 sec, Aperture priority, ISO speed 400, Canon 100 mm macro lens, hand held



The same as on the left, except f7.1, 1/640 sec.

On 30 June, I was one of 6 butterflyers combing the grass in the vicinity of the Standing Stones where we knew that Mountain Ringlets had been seen a few days before. One determined photographer had come all the way from Southampton that day and for him it was today or not this season, so we really tried to find them. Although it was sunny, a blustery wind made the weather cold and we found absolutely nothing except a few Small Heaths and one or two Whites. Fortunately for me, I was staying locally, and was able to return the next day. Knowing that the flight span for Mountain Ringlets is short and their emergence is later the higher their altitude, I trekked higher towards Grey Gable and found a good colony in a sheltered coombe overlooking Buttermere. With two cameras, three lenses, a supply of batteries and my stock of food and clothing, I felt fairly heavily laden by the end of the day.

Finding Purple Emperors



Purple Emperor at Fermyn Woods, 1 July 2006. Canon EOS 20D, f8, 1/200 sec, Aperture priority, ISO speed 400, Canon 24-105 IS lens set at 105 mm, hand held



The same as at left, except f8, 1/125 sec

I have had many exciting moments. Finding Purple Emperors in Fermyn Woods in 2006 after several days looking is one of the best. I had got up early in order to be in the woods by 9 am, but once again the weather was overcast and quite cold for the time of year and about 9:30 I phoned my wife to say that there was again nothing doing and I expected to be home by lunchtime. No sooner had we finished talking than the sun miraculously appeared, followed shortly after by the first unmistakable, low-flying Purple Emperor, and then by several more. All flew low along the woodland ride, stopping periodically to probe the surface and then remaining still for the camera, sometimes for minutes on end. Within an hour, I was on the phone to WildGuides telling them that better pictures of

Purple Emperors would be on the way to them this evening and to hold finishing the final master for *Discover Butterflies in Britain* until they had these better photographs.

Monarchs in Madeira



Monarch in the Jardim Municipal, Funchal, Madeira, 9 May 2007. Canon EOS 20D, f11, 1/640 sec, Aperture priority, ISO speed 800, Canon 70-200 mm IS lens set at 135 mm, hand held



The same as at left except f11, 1/800 sec.

We went to Madeira in May 2007 for a holiday and, naturally, to photograph butterflies. I particularly wanted to get some pictures of Monarchs because I am making a collection of photographs of all the rare migrants to Britain and this seemed to be a good opportunity. But the weather that May was generally poor with the inland areas having a good deal of hill fog and temperatures were low. We were there for a week, Wednesday to Wednesday. On the Saturday we saw our first Monarch near Assumada church but it was never within range of a photograph. It flew through three gardens that we could not reach, and then onto inaccessible high ground, quite elevated, with a mixture of brambles and scrub, disappearing from sight and lost for ever. Then there were no more sightings until our last full day. In the Quinta do Palheiro Ferreiro, otherwise known as Blandy's Garden, one of the most beautiful gardens of Madeira, I had a fleeting glimpse of another Monarch, being chased away by a Speckled Wood. How annoying! And that was it – we were not destined to photograph Monarchs on our week on the island.

As so often happens when on holiday, on our very last morning in Madeira, before leaving for the airport in the afternoon, the weather changed. It was the

warmest and sunniest day of our whole week. But it was too late. All we could do in our last two hours before driving our hired car back to the airport was to visit the floral parks in Funchal city centre. My experience of municipal parks would not normally suggest them as good butterfly sites. But how mistaken was I. Just as we arrived, there were two photography-friendly Monarchs in the sun-drenched Parque de Santa Catarina and several more in the centrally-located Jardim Municipal. They spent their time gliding round the flower beds with usually three strong wing beats and then a glide of several metres, all at a low height, perhaps two metres above flower level. All of them stopped frequently to take nectar, and a vast number of photographs were taken before we had to break off to head for the airport. An interesting thing was that most other tourists did not even notice these beautiful butterflies gliding around them. Quite a few people asked what all the excitement was about. I suppose I was rather excited although I didn't notice at the time. Because Monarchs are large butterflies and the sun was shining, some good images were obtained and we went home happier than we expected to be the day before!

Hazards of butterfly photography

I could go on in this vein for ages. I haven't mentioned the failures and there have been plenty of them. I have tried ring flash and am interested in what others will say about this technique. The fine anatomical detail they reveal is usually better than when relying on natural light but, unless the extra light is kept very small, I have found that flash gives a butterfly's wings a slightly artificial appearance. Also the flash and its additional battery pack are more weight to carry around, and changing lenses takes longer if the flash has to be removed first. So mostly I don't use flash these days. I have persevered with a monopod to try to keep a steadier hand, but not found this particularly helpful other than as a walking stick. And that can have its downside. I have still to retrieve the bottom section of my Manfrotto monopod which is somewhere below the surface of the peat bog at Bowness Common. I have fallen over walls and into bushes, slipped on wet paths (chasing Apollos is the most dangerous, they move so fast), and dropped valuable lenses on two occasions when trying to make a quick change of equipment. But all that is nothing compared with the hazards described by Torben Larsen in his book *Hazards of Butterfly Collecting*. Torben has met every conceivable hazard, which he always overcomes in the end. I recommend his book for bedtime reading.

Happy butterflying!