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Chairman's Introduction

In the last EIG Newsletter I gave details of a number of possible collaborative projects in Europe



Canary Islands Large White (Pieris chaeranthi)©Matt Rowlings

with European partners and colleagues. It is pleasing to report that several of these are planned for this summer season and the response to one request has already produced some very valuable information on one of Europe's rarest butterflies. Martin Wiemers suggested an EIG survey for *Pieris chaeranthi* (Canary Islands Large White) (EN) in Tenerife and sent me lots of useful information which I have forwarded to people visiting Tenerife and we have three recent reports including one from a new location. Matt Rowlings took this picture of a female last week. The butterfly flies all year on an island often visited by UK citizens. It is just one example of how EIG can gather useful information in Europe. We have been able to follow up several of the suggestions from partners we talked to in Laufen. There is to be an EIG trip to survey for **Scarce Fritillary** (*Euphydryas maturna*) recently rediscovered in north-west Italy. The two trips to survey for **Bosnian Blue** (*Plebejus dardanus*), one to Greece and the other to Bulgaria will also go ahead. Full details in EIG trips.

We need more opportunities to get EIG members together in the UK and members of the EIG committee would like invitations to speak about the work of EIG at BC branch events. I will be speaking in Taunton, Somerset at the Somerset & Bristol branch AGM on Saturday 10th November.

We are planning to hold the EIG AGM at Stratford Butterfly Farm on October 13th 2013 (see details on page 6.

In the last issue I reviewed the Distribution Atlas of Butterflies in Europe by Otakar Kudrna and others. This hugely valuable work is the basis of all recent butterfly distribution maps and is the primary source of our information on the biogeography of European Butterflies. It has been updated for modern taxonomy and produced with great care to exclude any erroneous data. Otakar is now planning a 3rd edition. We in the UK are used to sending in our records to our county recorders as recording sheets or spreadsheets and for these to be incorporated into the national database. The information is useful for highlighting declines such as the **Wall** (*Lasiommata megera*) in England and the northward expansion in range of several common species because of global warming. It is the heart of what Butterfly Conservation does. Apart from Holland, Switzerland and a few other countries there is not comprehensive coverage of similar schemes in Europe.

Online Recording Schemes

Butterfly Conservation Europe now has an Online Recording Scheme at http://www.butterflyrecording.eu/index.php?c=portal&m=home . Some of you may remember Chris van Swaay demonstrating a prototype at a Butterfly Conservation AGM a few years ago. There are a few quibbles, you have to be Mr or Mrs not Dr even though it allows for typically Dutch name prefixes like 'van' to be entered as a separate field. The address entry has no field for 'county' and does not expect house names presumably expecting a universally urban population but you can still put the house name in the number field. There is an excellent and now familiar 'google earth' module that allows you to pinpoint your site but I could not enter a UK map reference or even an easting and northing. You can add the site to your favourite locations to make data entry much easier. You can then build up a list of species with numbers without it expecting you to change the date and location. I was expecting to be able to attach a photograph which would overcome one of the major criticisms of schemes like this – validation. I could only indicate that there was a photograph as evidence. Otakar Kudrna is rightly sceptical of schemes of this sort because his standards of validation are very high. My county moth recorder expects photographs of anything unusual so I am used to this sort of exchange and for most but not all species it works. This BCE online system is trying to collect data for all taxa including birds and plants. I think our members would be much keener on submitting data to something specifically focussed on European Lepidoptera. Another interesting point is the relationship between this system and local BCE partners. At some point, the system should ask for a UK record entered on line whether the person supplying the data would like all the data automatically passed to Butterfly Conservation or the local BCE partner.

To really work, any online scheme should effectively have a monopoly of the recording effort. Properly implemented and integrated with the existing county recorder network, a UK Online Moth Recording system is going to work. It needs to be entirely focussed on moths. It needs to be UK focussed for things like addresses. It needs to have the backing of a big organisation like BC behind it sending out newsletters, running events and encouraging people. It will have critical mass. It may actually be almost exactly the same system as the BCE system and written by the same people. I suspect that for European butterflies, an online system would only really work if it had the full backing of all BCE partners and was fully integrated with local schemes, otherwise it becomes a black hole for semi validated data. Try it. See what you think.

We live in an era of very rapid technological change. In this issue I review an iPhone App which makes available distribution data, excellent photographs and notes on how to identify virtually all the butterflies of Europe. All for £11.99. It reminded me of a moment in 1979 when I first started to program an Apple II computer and seeing for the first time how a relatively cheap device could revolutionize how we did business. In this case, it made me realize that this sort of device will soon revolutionize how we do recording. Everything is there in one gadget. The field guide, the recording device, the GPS equivalent so it knows where you are, the communications tool that can send a text message or email directly from the site and even the camera to take and attach a photograph. The graphics are stunning and the Apple operating system intuitive and easy to use. I have a pile of local butterfly 'casual record' sheets beside my computer that I need to laboriously enter into a spreadsheet to submit to BC months after the event. With a free recording App they would get to BC in 'real time' and be passed on to me for verification. I might even get a text alert as 'county recorder' to pop down the road to see a Camberwell Beauty (Nymphalis antiopa). The programming to achieve all this is fairly trivial. BC may be developing an on-line Moth recording system at the moment but one day I look forward to using an iPhone when I open my moth trap. It is all perfectly possible.

If there are not competent butterfly recording schemes in many parts of Europe, it will not be long before someone makes such an App freely available and encourages people throughout Europe to send in their sightings from the field. The authors of the current European Butterflies App reviewed here chose not to do so. There will be issues of validation; there will be issues of how to handle huge amounts of data if butterfly recording 'goes viral', there will be issues of who owns the data and who has access to it but it will happen sometime because it is possible.

Membership issues.

Members of BC living abroad can now have membership of EIG as their free BC branch rather than have to pay an extra £10 to join EIG. We hope this will encourage butterfly enthusiasts from all over Europe to join Butterfly Conservation. It is mainly aimed at ex patriot members living abroad. If you know of such people or have friends living abroad please forward this newsletter and get them to join.

Simon Spencer Chairman

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Please email any thoughts, ideas or whatever you want included in the newsletter to: <u>cerisyi@btinternet.com</u>

EIG Trips for 2012

Greece: The EIG trip to survey for the Bosnian Blue (*Plebejus dardanus*) is going ahead with four members and Lazaros Pamperis. This one is now closed.

Bulgaria: The EIG trip to survey for the Bosnian Blue in early July is going ahead. Three signed up. Leader: Nick Greatorex-Davies. There are still places available Contact Nick: nickgdlepman@googlemail.com

Italy (north-west): Scarce Fritillary (*Euphydryas maturna*) survey to assist BCE colleagues in Italy. Trip going ahead . Eight EIG members travelling independently. This one is now closed.

Romania: Martyn Davies has taken a small group to Romania to help with a mark and recapture study on Violet Copper (*Lycaena helle*).

All the above will benefit from Thriplow Charitable Trust funding as a part contribution to their expenses. (*Romania – no applications for the Thriplow Grant was received*)

Serbia: 17-25 June Fund-raising holiday. Trip going ahead. Eight signed up, places still available. Leader: Mike Williams with Safi as guide plus a driver, making a total of 10 people. Contact Mike: mike@stagborough.fsnet.co.uk

Spain (north) (Picos de Europa): Though a proper EIG trip to survey Woodland Brown (*Lopinge achine*) will not take place this year some EIG members assisted by Teresa Farino who lives locally will visit the area.

2013 EIG Calendar Competition

The photo competition we ran for the 2012 calendar was very successful with a lot of entries but unfortunately we couldn't use some of them (*see below). We printed 150 Calendars and sold most of them. A big thank you to all those who submitted photographs and to Anne Spencer for putting it together. We are running a competition for photos for the 2013 calendar – so get out your cameras and send in your photos to Anne Spencer <u>apatura.metis@yahoo.co.uk</u> by September 1st 2012. *Please do not send more than 3 photos per individual.*

Photos for the calendar should be:

- * JPEG files only
- * Minimum 1500 pixels on the long edge
- * Subjectively, the photos must also be sharp

Note:* Many photos have been submitted previously that don't meet this requirement and they have to be rejected as they will not print well. Most modern cameras will produce images that meet or exceed this specification.

We would like a bit of blurb about the butterflies – Latin & English name, where/when they were photographed and any other relevant information etc.

Marsh Award

EIG Committee would like to receive nominations for the 2012 European Marsh Award by September 1st. Nominees should be sent with a brief biography etc – a proposer and seconder and sent by email to Simon Spencer: <u>cerisyi@btinternet.com</u>

Thriplow Grants – Funds available for surveys in 2013

Thriplow grants have been awarded to support three surveys in 2012. Just over half the funds - more than £2,000 - remains to support surveys in 2013. We want to spend this money, and to spread the funds widely. Please start thinking now about projects you could lead or join in 2013. We hope to see a greater number of applications in 2013 and particularly encourage applications from those that did not apply in 2012. Essentially:

- the trip must be to survey for or contribute to the conservation of one or more Red List species
- grants will cover up to £250 towards travel and accommodation costs for EIG members leading expeditions; up to £100 towards travel costs for individual EIG members undertaking a visit to carry out targeted recording; and travel & accomodation expenses incurred by local collaborators.

Applications will be invited in the next newsletter, towards the end of 2012. In the meantime further details can be obtained from me at liz-nigel@hotmail.co.uk.

Nigel Peace EIG Treasurer & Chairman of Thriplow subcommittee

EIG AGM

We are going to hold the **EIG AGM on Saturday 13th October 2012** as a member's day and get together at Stratford Butterfly Farm - Web address is: <u>www.butterflyfarm.co.uk</u> and their address Swan's Nest Lane, Stratford-on-Avon, CV37 7LS it is a fairly central location.

Holding the EIG AGM at the end of the BC AGM has become increasingly unsatisfactory. It will be a great opportunity to be able to have more time for discussion and get to meet people.

The program is as follows:

11.00 Coffee
11.30 AM Tour of Butterfly Farm (£5.00) optional – you can just come for the AGM
12.30 Pub Lunch nearby or bring your own packed lunch as required
2.00 AGM to finish by 4 pm for cup of tea, depart 4.30

Please email Anne Spencer <u>apatura.metis@yahoo.com</u> if you are able to attend and if you require lunch before 1st October 2012

EIG 2012 visit to Natural History Museum In search of Alfred Noakes

Following last year's successful visit to the NHM (see Argus 61 BC Yorkshire Branch Newsletter), Howard and I booked for 2012. As it happened, only I could get there. 12 other members gathered, some delayed by public transport. This meeting was organised once again by Nigel Peace, who volunteers regularly at the NH Museum.

The object for Howard and me this year was to locate and look at the actual species named after Alfred Noakes. Alfred Noakes was Howard's Great Grandfather who worked in the Hill Museum in Surrey, as curator, and named butterflies for the museum's owner, James Joicey. The collections amounting to some 380,000 specimens were eventually donated to the NH Museum in the 1930s.

We duly arrived in the room, after clambering up narrow stairs into the new Cocoon building. We were shown to the appropriate cabinets selected. I was immediately told that there were two species named after Alfred Noakes, not one. One a butterfly and one a moth! This was exciting news. If only Howard could have been there to see this. We knew about the butterfly *Catasticta noakesi*, but not the moth, *Lasiomorpha noakesi*, from New Guinea, but to actually see them was something else. Not just it, there were two butterflies from Colombia, the male and female. They were in a type specimen cabinet too. This means they were taken from the original collection and kept in a bunker during WW2 as they were the only ones in the collection! Not only that they are actually mentioned and illustrated in a book. The book, **D'Abrera B., 1981**, *Butterflies of the Neotropical Region Part 1, Papilioidae & Pieridae :* Lansdowne Editions, was on the cabinet for me to look at too.

Once the information was absorbed, I was shown the other specimen named after Alfred Noakes, this time the moth from New Guinea, which has not actually been put into a specific family yet. It is rather an attractive moth and not too small either! I kept going back to look at them.

After much looking at other cabinets of Skippers, Clouded Yellows, and Fritillaries we went to have lunch. Unfortunately, the visit this year coincided with half term. The museum was heaving with people of all ages. It was difficult not to get lost from the group. Winding our way through noisy groups and a long dinner queue, we were taken to reserved tables and even our orders were taken by a waitress, what a relief. A good discussion and exchange of interests soon passed away the lunch hour. After a brief photographic session, we went our separate ways. I managed to see Scott's 100th anniversary exhibition with wonderful film taken on the expedition and actual memorabilia. The skis used were so primitive. I learned more about the work of other members of the team and of their amazing survival now forgotten about.

This is a winter visit well worth trying. Thank you to all the staff from the museum who helped, especially Martin Honey, Alessandro and Geoff Martin and Nigel Peace from EIG for organising the visit.

Marie-Christine Frost

Mountain Blues

A small group of 'blue' butterflies that are associated with high altitudes (or, in one case, the far north) have caused quite a bit of confusion. The Collins Guide (Tolman & Lewington 2008) puts them together in the genus *Agriades*. In all taxa, the males have predominantly silvery uppersides, with black discal spots and more or less dark shading distally. The females are mainly plain dark brown on the uppersides. The undersides have bold black spots on the pale ground colour, often with some spots on the hind wings absent (or reduced) and replaced by white patches. Tolman and Lewington 'lump' these taxa into two species – *Agriades glandon* (Glandon Blue) and *A. pyrenaicus* (Garvarnie Blue). The northern form, *aquilo* (Arctic Blue), and the southern form, *zullichi* (Zullich's Blue), an endemic of the Sierra Nevada, Spain are both treated as subspecies alongside the more widespread alpine Glandon blue (*Agriades glandon glandon*). The Gavarnie blue (*Agriades pyrenaicus*) is, in turn, split into three subspecies – a*sturiensis*, widespread in mountains of northern Spain, *pyrenaicus*, from the Pyrenees and *dardanus*, a very localised inhabitant of the Balkans. Lafranchis retains the generic name *Agriades* and puts *asturiensis* into the same species as *pyrenaicus*, but separates *aquilo* and *zullichi* from *glandon*, and treats *dardanus* as a distinct species from *pyrenaicus*.



Bosnian Blue (Agriades dardanus) © Ted Benton

The taxonomic revisions used by Kudrna *et al.* 2011 (See also Butterfly Conservation Europe's website, and the comments in Watts 2011a and b) put this group of butterflies in the wider genus *Plebejus* - though admitting that the move is provisional (p. 26). For these authors, the butterflies of the former '*Agriades*' group are listed as *aquilo*, *dardanus*, *glandon*, *pyrenaicus* and *zullichi*. *Plebejus glandon* and *pyrenaicus* are relatively well-known, but readers might be interested in 'encounters' with the other, more, elusive species in the group.

The encounter with the 'Arctic blue', *Plebejus aquilo*, was in early July, on the north coast of Norway. With some expert guidance from Nils Ryrholm, Bernard Watts and I eventually located the habitat of the species. The natural habitat is south-facing subalpine rocky slopes, but this site consisted of spoil-heaps from old mineral workings. Relying on the superb and pioneering book by Henriksen & Kreutzer (1982) we had been looking out for Astragalus alpinus, given by these authors as the larval host-plant. We should have checked Tolman and Lewington, which gives two species of saxifrage, on the basis of Tolman's own experience of rearing the larvae. Eliasson et al. (2005) give Saxifraga oppositifolia as the probable host-plant. We first noticed the rather inconspicuous butterflies nectaring from flowers of a white campion (Silene (vulgaris?)) and a yellow stonecrop (Sedum (acre?)). They alternated between feeding and basking on the rocks, wings part-open. The males appeared to be territorial, flying up to intercept passers-by, including, in one instance, a Pearl-bordered Fritillary (B. euphrosyne)! Numerous tufts of the saxifrage, not yet in flower, were present, growing from rock crevices. Several female were observed to oviposit on the leaves. Other butterflies present at the site included Hesperia comma (Silver Spotted Skipper), Cranberry Blue (Plebejus (=Vaccinium) optilete), Small Copper (Lycaena phlaeas) and Green-veined White (Pieris napi). The second member of this group of butterflies, *P. zullichi*, proved to be much more challenging! An endemic of the Sierra Nevada, it has been reported from the more accessible western peaks of Veleta and Mulhacen. We spent a couple of very pleasant days in mid July 2006 with Miguel Munguira and one of his students on these slopes, but concluded that we would have to explore one of the other, more inaccessible, peaks in the range to have a serious chance of finding

zullichi. Accordingly, we set off on a long track up the mountainside just after 7.00am, as dawn was breaking. After several km, we met two friendly shepherds by a very welcome spring-fed drinking fountain. The track continued up to a pass below a much steeper ascent to the summit.



Here I was pleasantly distracted by the appearance of the Nevada grayling (Pseudochazara williamsi (hippolyte)), my first sighting of this species. The final section of the climb was exposed. but with numerous butterflies settled, or flying low, battling the wind. Among them were many specimens of the local form of Apollo (Parnassius Apollo), which has yelloworange spots replacing the red that is characteristic of most other forms. The habitat was bleak and

Arctic Blue Agriades aquilo) ©Ted Benton

windswept, and the sky clouded over as we arrived! Undaunted, we explored the surrounding rocky habitat and were rewarded by a sudden break in the clouds.

Butterflies emerged from nowhere – Idas Blue (*Plebejus idas*), a huge Purple-shot Copper

(Lycaena alciphron), Polyommatus icarus, and several Aricia morronensis (the Spanish argus, another of our 'target' species for the trip). Eventually, on a rocky 'shoulder' we found *zullichi* – very small, and well-camouflaged against the grey rocks. The males seem to fly only in full sunshine, and in these exposed conditions fly very close to the rocks, occasionally stopping to nectar from thyme flowers. The females were noticed laying their eggs on the dense mats of the larval hostplant, Vitaliana primuliflora. The clouds soon closed in again, and we started on the 4-hour walk back de Zullich's Blue (Agriades zullichi) ©Ted Benton



Bosnian Blue (*Plebejus dardanus*) is a very localised species of the Balkan mountains. Both Tolman and Lafranchis include Bosnia-Herzegovina, Montenegro and Macedonia as well as Greece and Bulgaria as European countries from which it has been reported, but Kudrna et al give its distribution as limited

to the borders of northern Greece and southern Bulgaria. In mid-July 2008 Bernard Watts and I searched for the species at a confidential location close to the summit of a mountain in this area. Like the other species mentioned above, *P. dardanus* seems to favour open, rocky habitat, with sparsely distributed tufts and patches of vegetation. The males 'hill-top',

congregating on high ridges, and fly close to the ground. They are difficult to spot in flight, easy to confuse with small day-flying moths. Males fed from flowers of various low-growing plants especially a species of thyme, and a pink-flowered 'daisy' (probably *Aster alpinus*), while females, with much darker, plain brown uppersides, were eventually noticed egg-laying on the larval host-plant, *Androsace villosa*. Other species present included Ottoman Brassy Ringlet (*Erebia ottomana*) (a male of which species was chased off by two male *L. dardanus*!), Brown Argus (*Aricia agestis*), Silver-studded Blue (*Plebejus argus*), Queen of Spain Fritillary (*Issoria lathonia*) and the Balkan Fritillary, *Boloria graeca*. On the way down we saw the remarkable 'club-legged grasshopper' (*Gomphocerus sibiricus*), and, another Balkan butterfly speciality, Higgins' Anomalous Blue (*Agrodiaetus nephohiptamenos* – now included in *Polyommatus ripartii* by Kudrna *et al.*).

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Ted Benton

Spring Butterflies in the Lot and Dordogne

This article first appeared in Somerset and Bristol BC branch newsletter (Hence No Scientific Names)

For many years now, Jean and I have visited the Lot and Dordogne in the spring and last year we enjoyed some particularly good butterfly and orchid hunting. This was due, in some measure, to the warm and sunny early weather just as in the UK, and in contrast to the cool springs we had experienced in France in 2009 and 2010.

Our base is a small holiday park close to the village of Le Vigan and 5-6 miles from the town of Gourdon in the east of the Lot, within easy travelling distance of some excellent habitat in both the Lot and Dordogne. Limestone is the predominant feature with the higher ground of the Causse de Gramat lying in the Parc Naturel Regional de Quercy just a few miles to the east, and a relatively small area where sideritic ironstone overlays the limestone, known as the Bourianne, to the south and west. There is a district of acidic heathland, extremely rare habitat in the Lot, to the south-west overlooking the Bourianne, otherwise the sites we visit are limestone grassland, scrub and woodland. The Dordogne River is some 10 miles to the north, and the Lot River (and Quercy Blanc) some 25-30 miles to the south. Most of our butterfly and orchid hunting is done within a radius of about 20 miles of our base.

We enjoyed our first local walk on 18 April and saw both Swallowtail and Scarce Swallowtail, Brimstone, Orange Tip and Wood White; Small and Sooty Copper, Green Hairstreak and Small, Provencal Short-tailed, Green-underside and Common Blue, with Comma, Weaver's Fritillary, Small Heath, Wall and Speckled Wood also recorded. As well as the butterflies, we are blessed with a good range of orchids and Burnt tip, Lady, Early Spider and Sword-leaved Helleborine were noted.



Weaver's Fritillary (Boloria dia) © Dudley Cheesman

Weaver's Fritillary is usually the first of the fritillaries to be seen but on 22 April a fresh Glanville was noted, along with Dingy Skipper, Adonis Blue, Brown Argus and Berger's Clouded Yellow, amongst others species already seen. A day later we spotted Knapweed Fritillary larvae feeding, and both Early Purple and Tongue orchids; a Humming-bird Hawkmoth was also seen.

On 24 April we undertook a somewhat longer local walk with friends and discovered Duke of Burgundy in five distinct locations and our first Marsh Fritillary of the season. As we have come to expect, we later found this species well

distributed in our region of the Lot and into the Dordogne. Doubtless, the widespread distribution of its food plant allows the meta-population structure to exist, although many sites where we have found larvae cannot be more than an acre or so, and separated by some distance from the nearest habitat that we have been able to discover.

We found our first Twayblade, spikes of Violet Limadore pushing up, Bird's nest, Woodcock and Pyramidal Orchids on this walk, and a day later, on 25 April, on another local walk, saw Holly Blue and found Weaver's, Glanville, Knapweed and Marsh Fritillaries flying in the same area. In the case of the Knapweed Fritillary, we had discovered in 2010 both larval and adult stages of the butterfly at the same time, some of the larvae appearing quite immature.

We were puzzled a day later, 26 April, on our first visit to the Frau Heathlands of the year, not to



Queen of Spain Fritillary (Issoria lathonia) ©Dudley Cheesman

find Duke of Burgundy. Weather was fine and cowslips in excellent condition and we have found eggs and seen the butterfly here in previous seasons. I suspect this area of the Lot, being elevated and open to northerly winds, may be a little cooler than the Gourdon basin. This area of acidic heathland has always proved capable of delivering surprises but usually of a positive nature. As it was, we did see Queen of Spain Fritillary in rather poor condition that leads me to the conclusion that this species does, in some circumstances, overwinter as an adult. Small compensation for a disappointing butterfly day came in the form of good views of a Short-toed Eagle and an early sighting of Broad-bordered Bee Hawkmoth. Military orchid was added to the orchid list, somewhat surprising for this location.

In fine weather on 27 April, on a local walk, we had another surprise in watching a butterfly in the tree canopy of a woodland glade that, when it came into close view, could be identified as a Southern White Admiral, somewhat earlier than we would expect to see this species. Also seen was a Map butterfly, plus our first Monkey Orchid of the season.

Spotted Fritillary was first seen in the upper grassland of the holiday park on 29 April, with more butterflies of species already noted beginning to appear. The next day we made a visit to the Plana Greze and Braunhie on the Causse de Gramat in the expectation that we should find new species and enjoy the wonderful flora of this area of largely abandoned grassland and wood pasture, with good public access, at an elevation of 1200-1400 ft. Despite fine weather with a temperature of about 24-25C the only new species was Meadow Fritillary, but we did enjoy a good range of species and the glorious display of orchids and other spring flowers, discovering amongst those already seen, Green-winged, Dull (just a few spikes) and Greater Butterfly Orchid (very early), but could find no evidence of Man Orchid in its usual spot.

May began with the discovery of Common Spotted Orchid in the corner field, just down the road within half a mile of the holiday park, and many Marsh Fritillaries roosting in the cloudy, early morning conditions. On 4 May, within the holiday park, I saw the first Black-veined white in the upper field, and a Forester moth close by.

It was on 6 May that we visited the combe at St. Pompon, one of our favourite Dordogne sites that we had first explored several years previously with David Simpson who runs a guiding business in the Dordogne and provides excellent gite accommodation on the site of his home at Cabant et St.Meyme de Rozens (see advert in Butterfly magazine). The combe runs north off the Daglan – St.Pompon road and starts with grassland and a quarry, not at all promising, but narrows into a combe with a track bordered by scrub and woodland before widening out into more open grassland, becoming steeper as it reaches up to the plateau. It is recognized as a site of outstanding nature value but the level of protection is minimal, as we were to discover later in the year when we found clearance and planting had occurred in the upper reaches of the site. However, on the occasion of this visit with David and some of his guests we found, in addition to those species already listed, Red-underwing, Grizzled, Safflower and Mallow Skippers and Pearly Heath. At another location close by, we found Cleopatra and Mazarine Blue; Fly and Man Orchid along a path up to the plateau, plus a strange legume, *Dorycnium pentaphyllum*, almost like a heather, and then 28 handsome spikes of Robust Marsh orchid by

the St.Laurent reservoir.

The first Meadow Brown was recorded in a local meadow bordered by flowering Spiked Star of Bethlehem, on May 8, and a Cream-spot Tiger Moth was seen the same day. On May 9, we made a return visit to the Frau Heathlands. I had long believed that some of the habitat was perfect for Small Pearl-bordered Fritillary, if not Pearl-bordered Fritillary, but in searching for these species at this location in the previous five years had failed to achieve a confirmed sighting. This year of 2011, our luck was in because we were able to photograph fresh Small Pearl-bordered Fritillaries in exactly the area we had searched in prior years. It's just a question of timing, of course, but we've yet to find Pearl-bordered Fritillary in the Lot! (I must tell you that Dr Ian Small, a BC Trustee, visited the site at our recommendation in 2010 and photographed a Purple Emperor at the entrance, another species we have failed to record here!). Heath Spotted Orchid was showing in flower, and the other butterflies present in their diversity and abundance were a joy to see.

A return visit to the Dordogne and the St.Pompon and St.Laurent sites was made with friends on 11 May, following a text from David Simpson telling us that Black Hairstreak had been seen in the combe within an area of Blackthorn. Had it not been that it was such a hot day, I doubt that we should have found the Black Hairstreak. We had added fresh Baton Blue and Red Admiral to our species list and had enjoyed watching about 30 other species but could not find the target species. It was whilst the men in the party were peering into the Blackthorn scrub under a hot sun that the ladies sought some shade, and one of them called our attention to a 'small' butterfly moving about within the hedge. Yes, it was Black Hairstreak on bryony! Our day was not complete for, whilst enjoying lunch outside at a bistro in St.Pompon overlooking a dry streambed, we spotted and photographed False Heath Fritillary. Although there was no running stream in the streambed, a dripping water fountain overflow allowed sufficient water to maintain a few flowering plants and a damp patch of great attraction to mud-puddling butterflies! A visit to the marshland at the southern perimeter of the St.Laurent reservoir gave us the final surprise of the day: a fresh male Large Copper. David Simpson and I had agreed that it looked suitable habitat but neither of us had previously recorded the species here. Another example of timing! Spikes of Lizard Orchid were now flowering along our local road and a visit to the corner field just along from our site on 12 May provided another surprise: Twin-spot Fritillary. We had never previously seen the butterfly here despite looking, for there is adequate foodplant, Dropwort, and we had studied this species on the Braunhie. In fact in 2010, in poor weather at exactly the same time of year, early/mid-May, we had found and photographed caterpillars of Twin-spot Fritillary, knowing that we normally see the adult flying in late June into early July. This was extremely early but, again, provides example of the importance of timing.

A second visit to the Plana Greze on 16 May, gave us fresh Niobe and Heath Fritillary, Large Wall Brown and an aberration of the Spotted Fritillary – a leucastic form, where the orange pigment in the scales is absent. It was so unusual that, at first, we thought it was a very early Marbled White until we were able to study and photograph it.

Another wonderful day, but it was almost time to start packing up to return to the UK. However, fresh butterflies were still emerging and on our final full day we recorded llex Hairstreak and Marbled Fritillary both within the holiday park.

It had proved to be a very rewarding visit to this lovely area.

Dudley Cheesman

Encounters with the Geranium Bronze Cacyreus marshalli, on the Greek island of Corfu (Kérkyra)



Geranium Bronze (Cacyreus marshalli)© Dan Danahar

I thought it important to report on my encounters with the Geranium Bronze Cacyreus marshalli, on the Greek island of Corfu (Kérkyra) given its absence from the rest of Greece. Over recent years, the bays of Paleokastritsa have become the Danahar family's favoured retreat for our summer vacations. Our first trip was in August 2007 and since then we have returned on a further two occasions: July/August 2008 and July/August 2010. However, it was only on this last visit that I came across the Geranium Bronze. Interestingly, in the second and revised edition (2009) of his book "The Butterflies of Greece" Lazaros N.

Pamperis comments on this species as being first recorded in Corfu during 2009.

Unfortunately, the Corfiots have a habit of calling their capital by the same name as their island (Corfu-English and Kérkyra-Greek). So if the records quoted by Pamperis refer to the capital it would appear that in the course of one year the Geranium Bronze has travelled from Corfu town to Paleokastritsa, a distance of a little under 20 km as the crow flies, unless it was independently introduced into Paleokastritsa. Pamperis records the butterfly as being seen at sea level on *Pelargonium* and *Geranium* plants. In Paleokastritsa, I saw this species only ovipositing on *Pelargoniums*. The ova themselves were quite simple to locate because like so many lycaenids they are white and therefore conspicuous. On one morning, I decided to spend a couple of hours undertaking a survey of the eggs. During this time, I found about 20 eggs and about 90% were found on pink flowered plants and only 10% were found on red flowered *Pelargoniums*. Although none of this work was a scientifically conducted study, I got the distinct impression that the species was not at all abundant beyond 100m above sea level.

Of course, *Pelargoniums* are widely distributed as garden plants throughout Europe, having their origins in South Africa and the Geranium Bronze is considered a threat to their cultivation. Furthermore, it is widely recognised that one of the greatest threats to indigenous biodiversity is the introduction of alien species and so there is an understandable concern related to the spread of this butterfly throughout the Mediterranean, which incidentally also has its origins in South Africa. Most resorts in the Mediterranean use *Pelargoniums* and so the spread of this species through the rest of Greece, from where it is currently absent, is surely only a matter of time. In Paleokastritsa, *Pelargoniums* were planted widely and so it was quite easy to log a photographic record of this species, throughout its life-cycle. I have previously seen this species abundantly in Spain and Italy. In the UK, this species was recorded by Crispin Holloway, in his back garden, in Lewes, East Sussex during the summer of 1997.

Dr Dan Danahar

Good news for bog butterflies in the French Pyrenees

The Violet Copper (*Lycaena helle*) and the Bog Fritillary (*Boloria eunomia*) are both red data book species, listed as in danger and the Violet Copper is listed under sections II and IV of the



Violet Copper (Lycaena helle) ©Graham Hart

habitats directive. Seventeen years ago, I undertook as study of the Violet Copper for an MSc over 2 consecutive years. At that time, the butterfly was abundant and occupied most suitable habitat patches. A good indicator of the health of the population was the distribution of males that are very territorial, forming leks in the best places. The best lek that I identified had up to 11 males at any one time. Also another good sign of the health of the population was males occupying sub optimal habitat, ie at some distance from the preferred habitat, there were always one or two males at the edge of the small car park at the edge of the bog.

In recent years, I have never seen a male at the car park, nor in several other sub optimal areas where there were males during my study, and the big lek has yielded no more than three males. So in conjunction with the local naturalist's association (like a County Wildlife Trust) a couple of years ago, we started doing some egg counts as I had done in my study. These are done along a transect of 20m using a 1 m² quadrat every other metre along the transect so counting the eggs in 10 m². Seventeen years ago, I was getting egg counts as high at 46 in 10m², now we are finding two or three, so a greater than 90% decline. The butterfly has completely disappeared from some areas, but in others exists in low densities over quite wide areas, especially along the sides of forest tracks.

Using my MSc data, and remeasuring the habitat, what looks not to have changed visually since my study, has in fact changed enormously, vegetation height has often doubled, there is a lot more shading etc......need I say more.

So the naturalist's association has put together an ambitious plan using my data and recommendations for habitat preferences. This plan was presented to the Minister of the Environment at Paris along with a whole host of other projects, and..... it was the first project chosen by the Minister! A grant of 170,000€!!!! to clear invading woodland, create habitat corridors, and reduce sward height on the three most important sites identified in my study. These sites are all quite close so the whole is one metapopulation. It is planned to restore over 20 hectares of habitat with quite a lot of this being clear felling of what has become wet woodland. The work will involve both contractors and volunteers so if EIG is interested in coming out on a conservation working holiday just let me know!

I am so thrilled that this project is a direct result of my MSc thesis, all those hours of counting and measuring were not in vain! The Violet Copper is in sharp decline all over Europe, so this project will be keenly watched.

Graham Hart

pappyren@aol.com

Grahame took members of the EIG trip to the Pyrenees to this site last summer and it is really good news that there is now funding for restoration work (Ed).

Identifying Pyrgus Grizzled Skippers



A pair of Cinquefoil Skippers (*Pyrgus cirsil*), female on the right © Roger Gibbons

In the UK, identifying *Pyrgus* species presents no problems as only one species, Grizzled Skipper (*Pyrgus malvae*), occurs. In Europe, using the current classification that defines *P. malvae* and *P. malvoides* as separate species, sixteen species occur, and identifying them on the basis of appearance (rather than examination of genitalia) can be very difficult. They are one of the most difficult, perhaps the most difficult, groups to identify with any degree of confidence.

Of the sixteen *Pyrgus* species, fourteen of them occur in France: these are *alveus* (Large Grizzled Skipper), *andromedae* (Alpine Grizzled Skipper), *armoricanus* (Oberthür's Grizzled Skipper), *cacaliae* (Dusky Grizzled Skipper), *carlinae* (Carline Skipper), *carthami* (Safflower Skipper), *bellieri (foulquieri)* (Foulquier's Grizzled

Skipper), *cirsii* (Cinquefoil Skipper), *malvae* (Grizzled Skipper), *malvoides* (Southern Grizzled Skipper), *onopordi* (Rosy Grizzled Skipper), *serratulae* (Olive Skipper), *sidae* (Yellow-banded Skipper), and *warrenensis* (Warren's Skipper). (For brevity English names will now be omitted Ed).

They all have the same basic pattern of markings and seven of these species have reasonably unique features that enable their confident identification. The other seven (termed the "difficult 7") are harder to differentiate: *alveus, armoricanus, carlinae, bellieri, cirsii, onopordi, and serratulae.* Some have marks or features that are often described as characteristic, a word used to signify that it is unique to that species. However, many of these characteristic features are not always constant; if present and "classic", they can serve to identify the species with some degree of certainty, but



A male Safflower Skipper (Pyrgus carthami) ©Roger Gibbons

these marks may vary and in a number of cases there exists some overlap between species. One example is the upperside forewing cell spot of *carlinae*, often described as "C-shaped" which it often clearly is, but it can vary considerably and in some cases is just slightly concave or angled.

In observing these species over several years, it became apparent that it may sometimes need a combination of features to (hopefully) successfully identify a specimen. In some cases, such as Large Grizzled Skipper (*Pyrgus alveus*), there are no unique identifying marks, and identification is largely on the basis of eliminating other species.

A clear view of both upperside and underside makes identification a lot less difficult. However, quite frequently a view of only one surface is possible. Only a few species could be identified with confidence from the upperside alone. On the underside, the white markings on the hindwing provide very useful ID clues.

An ongoing exercise is being undertaken to collect photographic evidence of the undersides of as many specimens as possible in order to maximize the statistical validity of the findings. It should be stressed that:

1) the number of undersides photographed is, so far, only 10-20 for each species; the process is ongoing to build a greater data bank

2) only specimens from France (and a few from Switzerland) have been studied; populations from other European countries may differ

3) it is not 100% certain that all undersides have been correctly identified; the corresponding uppersides have, where possible, been photographed to increase the chances of correct identification and build a data bank of "known" undersides

4) it has not been possible to include the rare Pyrgus bellieri as yet

5) no butterfly was caught or harmed in this exercise; all were photographed in the wild in their natural environment



A pair of Carline Skippers (*Pyrgus carlinae*), female above ©Roger Gibbons

This article, and the links to the more detailed web pages (as it is far simpler to provide links than to reproduce the texts here), attempts to start a process to ascertain whether identification can be more confidently made by taking all indicators into account; initial findings suggest that this may be possible but, as with all things *Pyrgus*, it is rarely clear-cut.

There are a number of factors such as size, flight period, location and altitude, which are strongly indicative and may serve to eliminate some options but may only occasionally be considered definitive. Size is a useful indicator but is relative and requires some experience and there are some pitfalls. *Alveus, carthami* and *sidae*, and perhaps *cacaliae*, are noticeably large although small specimens of *alveus* in particular can occur. *Malvae/malvoides* and *warrenensis* are

significantly smaller. The remaining species are all broadly of the same size.

Photos of what are believed to be representative uppersides can be found at <u>http://www.butterfliesoffrance.com/Pyrgus%20upperside%20photos.htm</u> The comparative chart for the upperside colouring and markings is given at <u>http://www.butterfliesoffrance.com/Pyrgus_uppersides.htm</u>

Photos of what are believed to be representative undersides can be found at <u>http://www.butterfliesoffrance.com/Pyrgus%20underside%20photos.htm</u>. The *Pyrgus* underside hindwing is divided by veins into eight horizontal spaces; the veins and spaces are numbered v1 to v8 and s1 to s8 respectively. The white markings are broadly arranged in three bands, sometimes complete and sometimes not, and are broadly described as marginal, discal and basal. The illustration is given at

http://www.butterfliesoffrance.com/Pyrgus%20wing%20diagram.htm.

As a result, the chart comparing the unh markings for the "difficult 7" has been developed and can be viewed at http://www.butterfliesoffrance.com/Pyrgus_undersides.htm this is an attempt to produce a "weighted" marking scheme where the markings have differing values for each

species and under a "totting up" mechanism, reaching a combined total (of 100) is considered adequate for identification. Key:

1. a green box suggests a sufficient degree of consistency to enable the assignment of a weighted score

2. a yellow box indicates it is within the range of variation of this species, but not considered indicative

3. a red box indicates that the feature described would preclude that species.

In the course of studying these unh markings, a number of observations arose. These are given at <u>http://www.butterfliesoffrance.com/Pyrgus_observations.htm</u> for interest and possible comment.

It must be stressed that this is a first tentative attempt and the author certainly does not profess to be an expert in this field. It is very possible that the experience of others will not agree with the findings to date, and input is actively invited. Please feel free to question any identifications or chart weightings, but do please give the reasoning. Contact with the author may be made directly to rig@butterfliesoffrance.com or via the contact box on the web site (accessed from the site home page).

Roger Gibbons

The New Wood White

The following is a modified version of part of the chapter on The Wood White Group in EUROPEAN BUTTERFLIES: A PORTRAIT IN PHOTOGRAPHS

Taxonomy and Systematics

The five European species in the group are:

Leptidea sinapis (Wood White); Leptidea reali (Real's Wood White); Leptidea juvernica (Irish Wood White); Leptidea morsei (Fenton's Wood White); Leptidea duponcheli (Eastern Wood White).

The subfamily Dismorphiinae has many species flying in Central and South America, but in the Old World there is only the one genus, *Leptidea*. All species in the present group are closely related to each other but not closely related to other groups of European species in the Pieridae (Whites and Yellows) family.

Leptidea species have a distinctive and very similar external appearance, to the extent that before 1989 only *L. sinapis*, *L. morsei* and *L. duponcheli* were recognised in Europe. Then it was found that certain examples of what had been thought to be *L. sinapis* in the Pyrenees had distinctively large genitalia, and subsequent investigations showed that individuals across the European range of *L. sinapis* consistently had either the smaller or the larger genitalia. Thus, it was concluded, there were in fact two species, more-or-less identical in external appearance: *L. sinapis*, with the smaller genitalia, and what became named *L. reali* Reissinger 1989, with the larger genitalia.

Then, remarkably, molecular (genetic) and karyological (chromosome number) studies by Dinca *et al* (2011) discovered that the supposed single species *L. reali* (defined by the larger genitalia) was itself divided into two distinct genotypes sufficiently different to warrant them being different species. Broadly, one genotype was found in Italy, southern France and Spain, including the Pyrenees, and thus retained the name *L. reali*, while the other was found in a more extensive northerly belt and was named *L. juvernica*.

It was also concluded that these three sibling species share a common ancestor, probably in Asia, up to about three hundred thousand years ago when the line of descent divided into two lineages, one of which subsequently divided again into what now are *L. reali* and *L. sinapis* while the other continued unbranched to become what now is *L. juvernica*. So *L. reali* and *L. sinapis* are slightly closer evolutionarily to each other than to *L. juvernica*. Presumably the common ancestor of all three had the larger genitalia, which have been retained by *L. reali* and *L. juvernica*, and *L. sinapis* has evolved to have smaller genitalia.

It will be convenient to refer sometimes to the trio of sibling-species as the *sinapis*-siblings.



There are several examples of *pairs* of sibling species in Europe, more-or-less indistinguishable from external morphology but separated by genitalic morphology, for example: Pontia daplidice and P. edusa (Western Bath White and Eastern Bath White), ch. 4.3, and Euchloe crameri and E. ausonia (Western Dappled White and Eastern Dappled White), ch. 4.4. These pairs of sibling-species have a definite west-east geographical separation which naturally suggests the geo-historical origin of their speciation. But the sinapis-siblings are more complicated, for they consist of a trio of sibling species whose distributions overlap in pairs (L. sinapis and L. reali in southern parts and L. sinapis and *L. juvernica* further north). How this came about is not so obvious, but a scenario is presented by Dinca et al, in which L. juvernica

Wood White (Leptidea sinapis) ©Bernard Watts

became established across Europe by immigration from Asia, while *L. reali* and *L. sinapis* speciated in southwestern Europe. Subsequently, *L. sinapis* extended its range back across Europe, but *L. reali* remained in southern and southwestern Europe No doubt, if this is a correct scenario, the glacial periods would have played a role in isolating *L. reali* and *L. sinapis* for substantial periods.

The time span of little more than one hundred thousand years for *L. sinapis* and *L. reali* to diverge from *L. juvernica* is very short compared to the million or so years involved in the evolution of most new butterfly species. Actually, though, one hundred thousand years is similar to the time elapsed since the appearance of the most recently evolved *Agrodiaetus* (Anomalous Blues) species, ch. 5.5, and it may be significant in the context of the following discussion that different *Agrodiaetus* species, like the *sinapis*-siblings, have very divergent chromosome numbers.

In another paper on *Leptidea* species, the same group of workers, Lukhtanov *et al* (2011), reported a truly remarkable discovery in their genetic measurements. They found the chromosome numbers found in various individuals of *L. sinapis* ranged clinally from 2n = 106 in northeastern Spain to 2n = 56 in eastern Kazakhstan. Although butterfly chromosome numbers may lie between about 10 and 130 in different species, normally they are constant in a given species. It is presumed that there is generally either reduced fertility and/or reduced fitness in their offspring when two individuals with different chromosome numbers mate. Indeed, any intraspecific variation of chromosome number suggests one should consider whether there may be two (or more) species involved. As a rule of thumb, however, a variation of one or two in chromosome number is commonly regarded as 'allowable' across the range of a widespread species, for example as in *Lysandra coridon* (Chalkhill Blue), ch. 5.4.

In the case of *L. sinapis*, the geographical variation of the chromosome number vastly exceeds the 'allowable' range, but variation within a population or among neighbouring populations

remains small, so that gene-flow is apparently not interrupted. Lukhtanov *et al* were able to effectively rule out the involvement of another species, in part because the actual variation of the DNA sequences measured was small, especially for such a widely distributed species. In fact, it was their experiments to exclude hybridisation with another species such as *L. reali* that led to the discovery of *L. juvernica* mentioned earlier. Taking these and other points into consideration, Lukhtanov *et al* concluded that *L. sinapis* is indeed presently a single species, which may be in the early stages of speciation taking place by chromosome fission/fusion, rather than by the supposedly usual method of geographical isolation, mutation and selection.

In the present publication it is convenient to ignore the underlying complexity of the *sinapis*siblings, and the three species will be discussed and described together in the same Species Section in the present chapter.

In Ireland, it turns out that all Wood Whites have large genitalia, except for certain isolated populations in the West. Thus, ignoring the latter *L. sinapis* populations, the species has run from being referred to as *L. sinapis* through *L. reali* to *L. juvernica*, as it now turns out to be according to its genome. Because in other regions where *L. juvernica* flies it has intermingled with *L. sinapis* to an unknown extent, the provenance of historical insects described is only reliable for those in Ireland. The name *juvernica* (Williams, 1946) was proposed by Dinca *et al* because it was the oldest taxon they could demonstrate unambiguously to refer to the new species, but future studies might evaluate even older available names, which would have priority. The type location of *L. juvernica* is Co. Kildare, Ireland.

I shall therefore use the common name Irish Wood White for *L. juvernica* to reflect the comments in the previous paragraph.

Another common name being used for *L. juvernica* is the 'Cryptic Wood White'. In my view this is unfortunate because it is certainly not cryptic, i.e. hidden, in any peculiar sense. It is true that its genetic particulars are hidden to field observation but this could be said equally of its siblings or, indeed, of any living species. On the other hand, *L. juvernica* is by no means restricted to Ireland and may be found, for example, in eastern Kazakhstan. In favour of the name 'Irish Wood White', however, it can be observed that it does have resonance as an *English* common name.

There is one final puzzle concerning the *sinapis*-siblings. What geo-historical explanation can account for the apparently complete absence of *L. juvernica* from England, but its presence, indeed preponderance, in Ireland: how did *L. juvernica* get to Ireland while leaving no trace in England? It has been suggested that it came to Ireland in the same way that various plants from the Iberian Peninsula, especially from its northwestern region, arrived (by seafaring?). This explanation seemed feasible until now, when it has become recognised that it is *L. reali* that exists in the Iberian Peninsula, not *L. juvernica*.

Acknowledgments

I am deeply grateful for the help of Roger Vila and Vlad Dinca. The former made a number of useful comments which I have incorporated, and the latter supplied helpful information.

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Bernard Watts © March 2012

Intergeneric pairing of butterflies in Greece



Interspecific pairing of a *Mariola jurtina* male and a *Brenthus daphne* female, Mt. Vernon, Florina, Greece. Photo: Lazaros Pamperis

Lazaros Pamperis reports in the Entomologists's Gazette 2012 (vol 63, Page 52) a very unusual pairing of butterlies on Mount Vernon he observed last year and has kindly shared the photograph with us. It is **Meadow Brown** (*Maniola jurtina*) mating with **Marbled Fritillary** (*Brenthis daphne*) female. He observed them for 45 minutes during which time a male *Brenthis daphne* tried to mate with the female. They flew off still in cop.

Atlas of Butterflies of Slovenia

Slovenia is a fabulous country to visit and observe butterflies (I've been there 28 times!). The landscape is varied: from the Alps adjoining Italy and Austria in the north, to the lush Mediterranean coast bordering Croatia in the south. Inbetween are extensive limestone karst grasslands and forests. In this country, the size of Wales, 179 species of butterfly occur.

The newly published *Atlas of Butterflies of Slovenia*, the first distribution Atlas for the country, tells you all you need to know about its butterfly fauna. It is a large book (456 pages), published by the Centre for Cartography of Fauna and Flora in co-operation with the Society for the Conservation and Study of Lepidoptera in Slovenia. Its principal author is Rudi Verovnik, whom some of you will know through Butterfly Conservation Europe. The text is in Slovene and English in the introductory chapters, and there are English summaries for each species (as befits a country whose second language is English).

In order to reduce costs (eg postage and bank charges), copies will be available from the second half of May in the UK to members of Butterfly Conservation. The price is £45, including postage. Cheques should be made payable to 'David Withrington', and sent to me at 21 Lawn Avenue, Peterborough PE1 3RA. Don't forget to include your postal address.

Enquiries to <u>david.withrington@ntlworld.com</u>.



Safflower Skipper Pyrgus carthami Socerb, Slovenian karst, 2011



Clouded Apollo Parnassius mnemosyne Ratece, north-west Slovenia, 2011

photos: David Withrington

David Withrington

Requests for Information

Gardening for Butterflies

Jan Miller (Jan@7wells.org) is working on expanding her book on 'Gardening for Butterflies, bees and other beneficial insects' to include the rest of Europe, both for internet courses and publications in different countries. This is important because we need to get the public on board in order to put pressure on governments to go ahead with larger conservation programmes. And one of the best ways of getting the public interested in the beginning is through gardening. She would be most grateful if EIG members could help her with information about butterfly species common to gardens in the main regions of Europe and the main plants they are attracted to (wild larval foodplants as well as garden nectar). She needs to condense it all down to a beginners level. Please refer her also to any useful websites. If you are a native speaker of a language and would like to see the book translated please contact her.

Reviews

Butterflies of Europe for iPhone by Chris Manley, Matt Rowlings, Peter Eeles and Guy Padfield.

Just occasionally technological change makes it possible for people to do something completely new. Not long ago the idea of having a complete photographic guide to the butterflies of Europe on your mobile phone would have been inconceivable. Today it is a reality. What makes it possible is the iPhone or if you prefer the phoneless and cheaper iPad. For £11.99 you can download 3000 images including maps for the 400 odd butterflies that occur in Europe. This package totals 400 mb. The human interface is remarkably intuitive and makes full use of the capabilities of the Apple operating system. You navigate quickly by icons. A quick tap takes you to the next level and you can bring up crystal clear photographs of virtually every butterfly in Europe. You can check against similar species. In many cases you can bring up annotated diagrams telling you what to look at. You can also bring up a map which covers northern Morocco to Arctic Scandinavia and eastwards to European Turkey showing the distribution. There are also notes on foodplant and life cycle. This is all in your pocket.

What makes this special is a collaboration between some of the best butterfly photographers and experts in Europe with someone who has contributed to a similar but somewhat inferior product on Moths. This butterfly App makes full use of the Apple graphic interface which the moth App failed to do. It also uses the very latest Taxonomy using the list available on the EIG website. Hopefully the next edition will have a complete set of photos but most island endemic graylings all look the same. I could have done with a bit more text as that takes very few megabytes compared to pictures.

I can leave behind the field guide and even the GPS but I still need to take my notebook. What is required now is a facility to record in the field, building up a list of species with an abundance code and to send it by email to BC with the date, location and coordinates before leaving the site!

Published by Lepidapp @ £11.99 www.lepidapp.co.uk See it on the iTunes store http://itunes.apple.com/gb/app/butterflies-of-europe/id499848412

Simon Spencer

Notices

Swiss Butterfly DVD

For a review of an interesting DVD on Swiss Butterflies go to http://www.ukbutterflies.co.uk/reports_wetton2.php Thanks to Peter Eales of UKButterflies for bringing this to our attention

Free download from BCE

We are pleased to inform you that the paper #2786 "Dos and Don'ts for butterflies of the Habitats Directive of the European Union" was published in Issue 1 of Nature Conservation, http://www.pensoft.net/journals/natureconservation/article/2786/abstract/dos-and-don, doi: 10.3897/natureconservation.1.2786.

2nd International Butterfly and Moth Conservation Camp for Students, Young Scientists, and Enthusiasts

<u>Place:</u> Kercaszomor, Őrség National Park (Western Hungary) <u>Date:</u> 26th July - 1st August 2012 <u>Main target species:</u> THE FOUR EUROPEAN LARGE BLUES (*Maculinea spp.*) <u>Organizer:</u> Hungarian Natural Heritage Trust, Kercaszomor, Hungary.

See separate CampAdvert.pdf

Or contact: safian@bcghana.org Or matronula@gmail.com

Further information will also be published on the Facebook page of the event: <u>http://www.facebook.com/events/238580402823874/</u>

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