



#### **CONTENTS**

Chairman's Introduction	2-3
EIG AGM 2014	2
Contact Details	3
EIG Projects and Events	4
Notices	5-6
2015 EIG Calendar Competition	
EIG Polo Shirts	
The Marsh European Award 2013	
EIG now on Facebook!	
News	7-10

Spain's Butterfly Monitoring Scheme

From José Miguel Barea

Butterfly Monitoring in Romania

Butterfly Atlas for the Midi-Pyrénées France

11-13
14-15
16-17
18-19
20-24
25
26-28



Welcome to the new look European Interests Group eNewsletter. We hope you like the new layout. We thought that a new professional look would increase its impact and readability. There is lots of interest this time and several book reviews of important butterfly books. In the news section EIG is now on facebook and also making an important contribution to butterfly atlases in Europe. We now have a Country page for France on <a href="https://www.bc-eig.org.uk">www.bc-eig.org.uk</a> and a report of a new butterfly species for Europe — *Polyommatus celina*.

Happy butterfly hunting and send us reports of your travels for the next edition in the autumn.

Don't forget to download species recording forms and to send your butterfly records to recording schemes in places you visit. Enjoy!

# Chairman's Introduction

#### **EIG AGM 2014**

Joint AGM with Hampshire Branch of Butterfly Conservation to be held at Littleton Memorial Hall in Littleton just north of Winchester

#### Saturday 25th October 2014.

Please see website: www.littletonvillagehall.hampshire. org.uk/ for directions, car parking etc.

#### 12.00

EIG meet for lunch at Running Horse in Littleton www.runninghorseinn.co.uk/ Pre booking available and recommended.
Contact Anne Spencer (rhoslan.anne@gmail.com) for orders.

#### 1.00 - 1.45

EIG AGM and Hants &loW AGM's running in parallel

#### 1.45 - 2.00

Mingling/reorganisation

#### 2.00 - 3.00

Butterfly Conservation Europe: 10 years of progress (Martin Warren)

#### 3.00 - 3.45

Refreshments/H&IoW photographic competition

#### 3.45 - 4.15

Butterflies of Bulgaria (Nick Greatorex-Davies)

#### 4.15 - 4.30

Dukes on the Edge (Dan Hoare)

#### 4.30 - 5.00

Results of photo competition and wind-up/closing remarks

Those of you planning your holidays may have noticed that the www.bc-eig.org.uk website now has a section on France with regional butterfly guides to Hautes Pyrenees, the Lot, La Brenne, Poitou Charentes, the Loire Valley, Dordogne, Var and Vaucluse. There is also an introduction covering the whole country. There are several gaps. We need more regional guides to lots of places which are good for butterflies such as the Auvergne and the Alps. A big thank you to our representative in France, Jude Lock who put it all together and the several other contributors. If you can contribute a butterfly guide to a region of France please get in touch with me.

ollowing the success of the Digne conference last year we are building closer links with French butterfly organisations, and I was intrigued to discover that EIG was the biggest contributor to the Butterfly Atlas for the Midi-Pyrénées area of France as reported in Jude's article on page 9. It is 60 years since I first visited France with my parents and to me it seemed like paradise – there were just so many butterflies! With 240 odd species compared to our 57 it is not surprisingly a popular destination for butterfly enthusiasts from the UK. I also hope that **Tristan Lafranchis'** excellent new book on the 'Papillons de France', which very helpfully also includes all the day flying moths, will stimulate the recording of butterflies in France – by the French!

Tristan is also working on a much larger book "La Vie des Papillons" which is due to be published at the end of 2014 and will describe in detail the life history and ecology of all France's butterflies. Both these books are in French. See Jude Lock's review page 26.

#### Join us

Those of you who would like an introduction to this paradise can join Anne and I and a few others at Valjouffrey on the edge of the Écrins national park south of Grenoble. We will be camping in our little camper van. There should be plenty of space on the camp site but there is very little accommodation available locally. The campsite itself has a huge list of butterflies and **Apollos** (*Parnassius apollo*) regularly drift across it. We will be there from 14th July for about a week. See page 4. It will be a great opportunity to get to learn to identify French butterflies some of which can be quite a challenge.

#### So many difficult groups

I suspect one of the differences between France and the UK in terms of recording effort is that in France there are so many difficult groups like *Pyrgus* Skippers whereas here we only have a few pairs of butterflies that are difficult to separate. Small and Green-veined Whites (*Pieris rapae & P. napi*) are easy if settled and the two Pearl-bordered Fritillaries (*Boloria selene and B. euphrosyne*) •



▶ require a bit of practice but if you get a good view of the underside they can be done with confidence. France has several 'Heath Fritillaries' (*Melitaea species*) that can be difficult in the field and *Erebias* in the mountains can also be a challenge. The transition from novice to expert takes quite a long time.

#### **Contact details**

Chairman: Simon Spencer Email: cerisyi@btinternet.com Tel No: 01691 648339

#### Vice-Chairman/

Field Trip Organiser: Mike Williams Email: mike@stagborough.fsnet.co.uk Tel No: 01299 824860

**Secretary:** Mike Prentice **Email:** mike.prentice@cbre.com

#### **Membership Secretary:**

Anne Spencer Email: Rhoslan.anne@gmail.com Tel No: 01691 648339

Website Manager: Mike Haigh Email: webm@bc-eig.org.uk

Website content to: Simon Spencer Email: cerisyi@btinternet.com Tel No: 01691 648339

> Treasurer: Nigel Peace Email: liz-nigel@hotmail.co.uk Tel No: 01420 85496

#### **Newsletter Editors:**

Simon & Anne Spencer - as above

#### **Other Committee Members:**

Dudley Cheesman
Email: Dudley.cheesman@talktalk.net
Nick Greatorex-Davies
Email: nickgdlepman@googlemail.com
Neil Thompson
Email: neilt@ukgateway.net
Martin Davies
Email: mdavies854@btinternet.com

#### EIG WEBSITE: www.bc-eig.org.uk

Please email any thoughts, ideas or whatever you want included in the newsletter to Simon Spencer Email: cerisyi@btinternet.com

#### Pollard walk

A further challenge in France is that 'transects' i.e. the standard Pollard walk are impossible anywhere where butterfly abundance and diversity is really high. **Graham Hart** pointed this out at the Southampton Butterfly Conservation Symposium last month, saying that when he moved to the Ariège he tried to do transects because that was what he was used to doing in the UK. He soon gave it up. You only have to walk past a puddle and a cloud of butterflies get up.

It was an excellent symposium. Martin Warren, BC's CEO, described it as exhilarating, exhausting and exciting. Exhilarating because there were 238 delegates from 28 countries from around the world; exhausting because there were 80 fascinating talks packed with new information on butterflies and moths, as well as discussions late into the night; exciting because we heard of many wonderful projects that are either helping us understand the ecology of butterflies and moths, or successfully saving threatened species. You can download the Symposium abstracts from <a href="http://butterfly-conservation.org/3114-5568/how-science-is-helping-us-save-butterflies-and-moths.html">http://butterfly-conservation.org/3114-5568/how-science-is-helping-us-save-butterflies-and-moths.html</a>. EIG hosted the wine reception before the dinner which allowed us to say a few things about what EIG does. It was great to see so many old friends and to discuss future projects with colleagues from all over the world.

#### An experiment

We are going to try an experiment with the EIG AGM this year. We are going to have a joint meeting with the Hampshire Branch on Saturday October 25th at the Littleton Memorial Hall outside Martin Warren Winchester. Martin Warren will speak on 'Butterfly to speak at Conservation Europe: 10 years of progress'. See page 2 our AGM on for details. To be honest it all arose out of a bit of a mistake Saturday October 25th and Martin suggested we use this hall which Hants usually uses for their AGM. Rather unfortunately we 2014 booked the hall before them on their preferred date so we ended up with a joint meeting. As our theme for this year is to recruit more EIG members it will be an opportunity to show what EIG does. We have approximately 260 members out of a total Butterfly Conservation membership of 23000 which is only just over 1%. Room for improvement. With additional revenue we could do more in terms of supporting important butterfly activities in places like Romania.

#### **Apologies**

We apologize for the lateness of this newsletter but hope you will like its new format. We are very grateful to Trish Connolly Morgan of Morgan Creative for doing a really professional job. Trish also does the 'Comma' for BC West Midlands. •

#### Simon Spencer

Chairman EIG



#### **2014 EIG Projects**

**EIG Butterfly Camp 14-20th July at Camping Les Faures, Valjouffrey** on the edge of the Écrins National Park. Two hours south of Grenoble, France.

The intention is to get a mix of experts and novices so everyone can improve their butterfly ID skills. The campsite itself has a rich butterfly fauna and there are a range of altitudes rising to over 2000m nearby. We will also do some research on whether standard transects work in an area of very high butterfly abundance with many similar species.

More details and expressions of interest to Simon Spencer email: <a href="mailto:cerisyi@btinternet.com">cerisyi@btinternet.com</a>
Tel No: 01691 648339

This trip is designed to be a cheap butterfly holiday for young people. The campsite does pizza some evenings. There is very limited hotel accommodation locally contact Office de Tourisme du Valbonnais (ot.valbonnais@wanadoo.fr). This was our base for the EIG 2007 survey for **Balkan Fritillary** (**Boloria graeca**). There is no charge but participants will make their own travel arrangements and will pay the campsite directly. I will need to know numbers to make the booking. •

**Simon Spencer** 

#### **2015 EIG Projects**

#### An Update on Danube Clouded Yellow (Colias myrmidone)

I said in the editorial to the last EIG Newsletter that I expected the **Danube Clouded Yellow** (*Colias mymidone*) to become extinct in the EU27 countries fairly soon. On the Red List it is Endangered in Europe and Critical in the European Union. It has already been lost from several countries such as Czech Republic, Hungary, Austria and Germany.

#### How can we help

Since then we have been trying to work out what to do, develop local partnerships and attempt to find a way forward to stop its extinction. On the fringes of the Southampton symposium a group of us met to discuss it: Paul Kirkland, Jacqueline Loos and Mathias Dolek, Szabolcs Sáfián (Safi) were all there as was Márti Ferenz from Romania and several people from EIG.

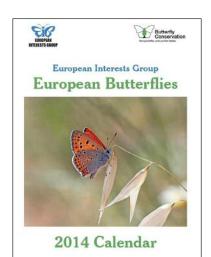
#### Romania

Since then we have been in contact with several people in Romania. Romania is a big country, the areas that need surveying are rather remote and there is no immediate source of funding. There are two generations a year and the flight period can vary quite a lot from year to year. EIG has information on where it has been found in the past for example by the EIG trip in 2013 and we know of other locations that it would be worthwhile surveying. Hopefully we will see some local initiatives develop shortly. We would also like to organise a small EIG survey team for 2015 probably starting in late July. If you are minded to see all the butterflies of Europe in your lifetime you better get on with it and tick this one fast. •

We would like to organise a small EIG survey team for 2015 probably starting in late July

**Simon Spencer** 

# Notices



Our 2014 Calendar proved a big hit!

To be in with a chance, send your photos to Anne Spencer email: <a href="mailto:rhoslan.anne@gmail.com">rhoslan.anne@gmail.com</a> before 1st September 2014

#### 2015 EIG Calendar Competition

We have produced an EIG Calendar now for 6 years which is very popular and we shall be producing another one for 2015. The competition is open to all EIG members and it would be nice if more members sent

Enter
our Calendar
Competition
for a chance to
see your photo
in print

in their photos so get your cameras out and send your photos to Anne Spencer email: <a href="mailto:rhoslan.anne@gmail.com">rhoslan.anne@gmail.com</a> before 1st September 2014. The following is the format etc., required for the photos:

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 are unlikely to 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. Please also give EIG permission to use the photographs on its website and in its publications with suitable credits. •



To order you Polo shirt please contact Anne Spencer email: rhoslan.anne@gmail.com

#### **EIG Polo Shirts**

EIG have produced a lovely grey polo shirt with one top pocket and an embroidered EIG logo. We still have some left. The cost is £15 each – sizes available: M, L, XL, XXL. Please order from: Anne Spencer email: <a href="mailto:rhoslan.anne@gmail.com">rhoslan.anne@gmail.com</a> •

#### The Marsh European Award 2013

The Marsh European Award for a Lifetime Contribution to Lepidoptera Research and Conservation was awarded at the last BC AGM in November to **Professor Ilkka Hanski** of Helsinki University, Finland, who is one of the foremost biologists working in the field of ecology of our age. His research has focussed on population regulation, cyclic population dynamics, mechanisms of coexistence in communities, and especially metapopulation biology.

He is best known, of course, in Butterfly Conservation circles for his superlative research on the Åland islands; it has been to our good, great fortune that he chose butterflies, specifically the **Glanville Fritillary**, as a model animal for his research, to develop the concepts and practical applications for metapopulations.

#### Metapopulation Research Group

This vitally important work, referred to as the Metapopulation Research Group [MRG], represents a massive paradigm shift from previous approaches; has enabled conservation organisations to develop firm management plans for  $\vee$ 



Let change to animal populations in the face of biotope fragmentation and degeneration, and climate change. This work has required immense technical expertise, careful exacting research, imaginative experiments, and it has been sheer fortune that someone of Professor Hanski's brilliance emerged to take up the challenge.

Nominations for the 2014 Marsh European Award to the EIG Chairman Simon Spencer email: cerisyi@btinternet.com by 1st September 2014.

#### A prominent figure

Exceptionally gifted, his career to date is embellished with a long list of academic awards and prizes, and he is a prominent figure in numerous committees, meetings and conferences world-wide. He has been responsible for the career development of numerous academics, many now with international reputations in their own right; to his name are over 300 publications of the highest rank. •



#### EIG now on Facebook!

The committee recently decided to enter the world of social media and have therefore set up a Facebook page for EIG.

It is hoped that it will become a useful and dynamic tool for spreading news about EIG and its activities, ultimately to attract more members to the group.

#### A logical progression

The type of thing we'll publish will be photos and video clips about particular species or habitats and locations, events and appeals and so on. It certainly fits as a method for delivering key parts of our mandate; circulate information, publicise and encourage recording. There are already numerous other associated groups using Facebook, such as Butterfly Conservation head office and local branches, Butterfly Conservation Europe and also specialist and popular website communities, such as UK Butterflies. Therefore, it seems a logical progression for EIG to join in and interact with an ever growing online audience.

#### Tell your friends

The page will go live to coincide with the launch of this edition of the newsletter so please take a look and tell all your friends and contacts to do the same.

#### The web address is: <a href="https://www.facebook.com/BC.EuropeanInterestsGroup">www.facebook.com/BC.EuropeanInterestsGroup</a>

If you are already a Facebook user just search for BC.EuropeanInterestsGroup and you should find the page. Please remember to click the 'like' button to ensure you are connected to the page and receive all our updates.

Please remember to click the 'like' button to ensure you are connected to the page and receive all our updates.

#### Share with us

Finally, if you have anything you feel would be of interest that you'd like to share on the page please contact Simon using the usual methods. As a guide text should be no more than approximately 100 words for a post. •



Charity registered in England & Wales (254937) and in Scotland (SCO39268) Company limited by guarantee, registered in England (2206468) Registered office: Manor Yard, East Lulworth, Wareham, Dorset BH20 5QP. Email: <a href="mailto:info@butterfly-conservation.org">info@butterfly-conservation.org</a> Website: <a href="mailto:www.butterfly-conservation.org">www.butterfly-conservation.org</a>



#### Spain's Butterfly Monitoring Scheme (BMS Spain)

There is a lot of progress and a lot of activity related to the emerging BMS Spain. Miguel Munguira reports that on the 15th February a meeting was held in Madrid to discuss several topics related to the organization of the scheme, protocols and possible sources of financial support. Twelve people attended from the different areas in which recording is already taking place. Miguel Munguira was very pleased with the nice atmosphere and collaborative attitude of all the people attending. The Doñana Biological Station, a research institute based in Seville, is providing support to gather and process the incoming data and will have David Paz almost fully involved in the BMS. They are also preparing the necessary forms and tables for data input.

#### 80 transects

All the already existing local or regional schemes (excluding for the moment Catalonia) are joining the scheme and that means that they will start with around 80 transects. An article on the scheme published in the popular journal Quercus, was well received and around 20 people have now shown interest in starting a transect. Therefore the total number of transects being walked this year is likely to be around 100. This is a fantastic start, although the transects are not evenly spread over all the Spanish regions. Effort is concentrated in the National Parks (in fact the network of National Parks is eager to spread their coverage), in Western Andalusia, the north of Castilla and the Basque Country with several other spots scattered over a huge territory.

Miguel Munguira is the inspiration for this increase in activity despite being a full time university lecturer and chairing Butterfly Conservation Europe. Spain has made huge progress in recent years and the information will give us a much clearer picture of trends in Spanish butterflies. •

**Simon Spencer** 

If you have a house in Spain, or know butterfly friends who live there or visit there often, please get them to contact

Miguel Munguira

email: munguira@uam.es
and volunteer to do a transect.

#### From José Miguel Barea

I'm José Miguel Barea and I work in the Environment and Water Agency of Andalusia (Regional Ministry of Environment of the Junta de Andalucía). Currently my work is focused in the Sierra Nevada Global Change Observatory, which is intended to put together useful and relevant information regarding the ecological systems and the socioeconomics of Sierra Nevada (South East of Spain).

This project has four fundamental parts to fulfill its overall objectives:

- 1. a monitoring program to collect socioeconomic data;
- 2. an information system for appropriate data management;
- 3. a series of mechanisms that enable the effective transfer of the results on adaptive management; and
- 4. an outreach, dissemination and reporting system.

One of the main biological indicators employed to achieve the goals of the Sierra Nevada Global Change monitoring program are butterfly communities, giving special attention to endemic and endangered species such as **Nevada Blue** (*Polyommatus golgus*) and **Zullich's Blue** (*Plebejus zullichi*), for example. •



to attend the 7th Butterfly Conservation Symposium (3rd to 6th April 2014 at Southampton University). I and my collaborators presented at the Symposium the following poster papers:

 Known and potential distribution of the endangered butterfly Zullich's blue (Plebejus zullichi): lessons for its conservation under a global change scenario. Barea-Azcón, J.M.; Benito, B.M.; Olivares, F.J.; Ruiz, H.; Martín, J.; García, A.L. & López, R.

▶ Butterfly Conservation's European Interests Group (EIG) recently supported me

- Butterflies (and other arthropods) conservation at the Sierra Nevada protected area (SE Spain): monitoring, adaptive management and information actions. Henares, I.L.; Barea-Azcón, J.M.; Aspizua, R.; Ramos, B. & Sánchez, F.J.
- Ecology and conservation of relict **Apollo** (*Parnassius apollo*) butterfly populations in the southern range of its distribution area. Martínez, J.G.; Tinaut, J.A.; Díez, G.; Mira, O.; Sánchez-Prieto, C. & Barea-Azcón, J.M.

These contributions are a summary of the majority of the work that we are currently undertaking with Sierra Nevada butterflies. To date 121 butterflies species have been recorded in Sierra Nevada. Seven more species, whose presence is probable or doubtful, should be added to this check list. This is a high percentage (85%) of the 140 species recorded in Andalusia and more than the half of the species recorded in Spain (n= 250). The origin of these communities is diverse, since in this mountain range there are glacial relic species, tropical relic species (relics of ancient Miocene), species shared with the north African arid environments, and species with an Asia-South Europe disjunt distribution.

Moreover, in Sierra Nevada there are some threatened and/or endemic species such as Nevada Blue (Polyommatus golgus), Zullich's Blue (Plebejus zullichi), Nevada Grayling (Pseudochazara hippolyte), Andalusian Anomalous Blue (Polyommatus violetae), Spanish Zephyr Blue (Plebejus hespericus), Spanish Brassy Ringlet (Erebia hispania) and the Sierra Nevada Apollo (Parnassius apollo nevadensis). In summary we can conclude that Sierra Nevada National Park is one of the main European butterfly hotspots, not only from the diversity point of view but also from the singularity of its communities.

**A. zullichi** Larva Photo © Sara Castro



A. zullichi Male Photo © Neil Thompson



**Zullich's Blue** (Plebejus zullichi) Photo © José Miguel Barea



#### Useful knowledge

Attendance at the symposium has allowed me to acquire useful knowledge about the ecology and conservation of butterflies. From my point of view all conferences have on display remarkable scientific and technical skills. The importance of butterflies in studying climate impacts on ecosystems and habitat fragmentation, is a research topic that gives us the opportunity to understand the dynamics of ecosystems in a changing world. Further opportunities are given by studying the adaptive capacity of species to changes in their ecosystems ▼



▶ and also through habitat restoration carried out to improve landscape connectivity and to enhance resistance and resilience of natural habitats.

I wish to thank Butterfly Conservation's European Interests Group (EIG) for their help and their friendly welcome, especially to Simon Spencer, Neil Thompson, Mike Prentice and Martin Davies for their valuable help. •

#### **Butterfly Monitoring in Romania**

EIG has supported the development of Butterfly Monitoring in Romania. Paul Kirkland says that they now have a Butterfly Action Group blog, which is done by Jacqui Loos: <a href="http://fluturomania.wordpress.com/">http://fluturomania.wordpress.com/</a>

Also, the Romanian Lepidopterological Society (Societatea Lepidopterologica Romana) (SLR) have put their monitoring presentations on their website: <a href="http://www.lepidoptera.ro/evenimente.htm">http://www.lepidoptera.ro/evenimente.htm</a>

The link to the last number of their journal is: Entomologica Romanica 18/2013

#### **Butterfly Atlas for the Midi-Pyrénées France**

#### A brief update

The programme for the atlas commenced at the end of 2008 at which time there were very few records. For example there were approximately 500 records for the Hautes-Pyrénées on the database of the Conservatoire d'Espaces Naturels Midi-Pyrénées (CEN). There were no recent reports for butterflies of the region, the existing atlas's recordings were extremely old (19th and early 20th century) and only covered the area partially, mainly the Pyrenees. At a time when certain species are endangered or in threat of extinction it became important to have a working tool to enable an understanding of butterfly habitats and to facilitate the production of an Atlas.

#### **Objectives**

The objectives of the Atlas programme include producing an inventory of species present in the region but also to encourage an understanding of the ecology, habitat and the evolution of butterfly populations in order to identify threatened species and create a conservation policy.

Since the conception of the project, the Conservatoire d'Espaces Naturels Midi-Pyrénées, who are coordinating the atlas, has aimed to involve a maximum number of contributing regional organisations who in their turn have organized training and field work in order to collect as much data as possible for the atlas.

#### Nature Midi-Pyrénées (NMP)

One of the 9 contributing organisations is Nature Midi-Pyrénées. NMP has recently made it possible for recorders, whilst entering their recordings, to indicate the organisation they work for or to which they give voluntary help. For example the Parc National des Pyrénées, the Conservatoire Botanique National Pyrénées and Midi-Pyrénées, the OPIE - Office Pour les Insects et leur Environment, LPO etc.

NMP have included EIG as one of the organisations and I have indicated **v** 





▶ EIG for all the EIG recordings. There are over 10,200 EIG records across the Midi-Pyrénées from of a total of 29,500 records on the NMP database for the atlas. The EIG records span over a decade and include our butterfly weeks with Mark Brown in the Hautes-Pyrénées, with several BC and EIG members participating, Dudley Cheesman provided over 2,400 records for the department of the Lot alone, where data was lacking, he also has records for the Ariège. Nick Wynn and Bill Raymond contributed and we also have the records from Simon Spencer's EIG trip to the Hautes-Pyrénées and Ariège in 2011.

#### Extremely grateful

As the EIG is the largest contributor (in both the number of records and the number of species recorded) for the Midi-Pyrénées, the EIG logo is featured first on the map below. The data will be of great value, **David Demerges** and we are extremely grateful to you all for your efforts with this project.

#### 104,345 butterfly records

The CEN have incorporated the records from NMP for 2013 into their database, there are 104,345 butterfly records (excluding Burnet moths) across the Midi-Pyrénées to date (March 2014). During the period of preparation there have been sightings for a number of species that were previously unrecorded in one or more departments. The atlas is due to be published in 2014. The CEN is waiting for funding to be able to produce the paper copy of the atlas. In the meantime observations are still very welcome for 2014.

The map below shows the number of species recorded on the NMP database

#### Atlas Papillons de jours (Rhopalocères et Zygènes) Nombre d'observations 🗏 Nombre d'espèces prospectées 🗹 baznat 11 2 1 4 37 16 14 12 2 1 24 26 30 44 28 14 22 40 8 28 9 13 32 19 33 39 50 11 1 12 23 20 11 17 44 36 17 31 10 20 28 76 32 24 26 30 33 46 25 52 37 22 35 35 2 12 30 28 10 31 14 18 15 58 35 41 18 28 54 29 31 26 8 36 10 16 49 42 23 30 33 54 28 40 17 8 26 27 17 55 31 29 34 28 25 29 25 40 36 21 42 11 10 26 73 28 18 45 47 43 25 38 18 21 34 24 27 21 9 19 6 19 51 44 8 47 20 37 21 49 54 55 46 33 29 31 44 34 21 31 22 1 1 22 48 69 68 48 33 55 27 13 5 6 12 27 9 1 31 23 103 60 66 44 42 54 45 9 3 24 15 8 8 25 26 27 CDEFGHIJKLMNO U V W X Y Z AA AB AC AD AE AF Mailles ☑ Départements ☑ Cours d'eau ☑ Préfectures/Sous-préfectures ☑ Noms villes ☑

#### **CEN Website**

The CEN have a new website devoted to the butterfly atlas of the Midi-Pyrénées. This is an excellent and up to date site which has an individual species page for the 189 butterflies to be found in the Midi-Pyrénées. There are photos, departmental distribution maps, information on host plants etc. It is being continually updated. **Highly recommended!** 

You can visit the CEN website here: <u>CEN</u> <u>Butterfly Atlas Midi-Pyrénées</u>

There are many regional and departmental organisations in France operating butterfly recording schemes and or working on a butterfly atlas, see the introductory page on the pages for France on the EIG website for more details. The French are very keen to receive recordings from EIG members to enrich their databases and knowledge of this fascinating group of fauna. •

#### Jude Lock jude.lock@orange.fr



#### Italy – an under-rated butterfly destination

At the recent butterfly symposium in Southampton more than one speaker favourably compared the study of butterflies to the study of birds – 'you can get up late, you don't have to work in the rain and you can be in the pub by 5 o'clock'. Imagine those circumstances with good food and wine and you have looking for butterflies in Italy!

or some reason Italy doesn't get the interest it deserves from British lepidopterists. France, Spain and Greece seem to attract more visitors and yet Italy has more species than any other European country as well as the culinary delights. There also seems to be a dearth of butterfly enthusiasts living in Italy, although perhaps we are just unaware of them. I have written the EIG webpage for Italy (http://www.bc-eig.org.uk/countries.html) and I would be delighted to hear from anyone living in Italy or indeed anyone interested in visiting Italy.

I am by no means an expert on Italian butterflies but I have been lucky enough to visit the country on several occasions including one glorious 4-week visit in 2008. The country has a varied climate and landscape from North to South and a clutch of islands with interesting endemics.

#### Northern border

Part of the reason for the species richness must undoubtedly be the country's long northern border which encompasses almost the entire length of the Alps. In addition to species like **Warren's Skipper** (*Pyrgus warrensis*), which flies in a restricted range in Switzerland and Italy, there are more than 30 species of *Erebia*, a family which many people find difficult (or maybe boring because at first sight they seem so similar). My search for **Ratzers Ringlet** (*Erebia christi*), a species which flies on both sides of the Swiss-Italian border near Simplon, has seen me in the correct place at the right time of year on more than one occasion but with no

Polyommatus humedasae habitat



luck so far. A return trip to this beautiful part of the Alps won't be a hardship and I will keep returning until I find it.

#### National Park of Stelvio

Further to the east the National Park of Stelvio, with its famous pass (often featured in the Giro d'Italia and the second highest road in Europe), is also rich in butterflies with more *Erebias*, including Water Ringlet (*E. pronoe*), Bright-eyed Ringlet (*E. oeme*) and Stygian Ringlet (*E. styx*) as well as being a stronghold of the Little Fritillary (*Melitaea asteria*).



#### **Dolomites**

Yet further east the Dolomites are a beautiful mountain range with yet more *Erebias* including **Styrian Ringlet** (*E. styrius*).



Photo © Mike Prentice

#### Cogne valley

Another favourite place in the north of Italy is the Cogne valley just south of Aosta which leads up to Gran Paradiso, Italy's first National Park established in 1922 to protect the ibex (which now thrives and can be fairly easily seen at altitude). The valley is the only place in the world to find the **Piedmont Anomalous Blue** (**Polyommatus humedasae**) which – once you know where it flies – is easily seen and quite numerous, but inhabits one single slope which, much to the benefit of visiting lepidopterists, is bisected by a convenient path! Further up the main valley, a gentle walk up one of the valleys above either Valnontey or Lillaz is likely to yield more than 45 species in a day in July before returning for a high protein dinner. This mountain area is famed for its game, salami and cheeses often served in mouth-watering combinations.

#### The Italian side of the Alps

The Italian side of the Alps as a whole are home to more than 230 species of butterfly and a wonderful area to visit. A new book has recently been published: *The Butterflies and Burnets of the Alps* by Paolo Paolucci, which covers the whole Alpine region regardless of national borders (see the review on Page 28).

#### Snow in July

However it isn't all plain sailing as the weather even in the middle of summer can be frustratingly poor with rain and thunderstorms quite common and even snow in July! To escape the weather you need to travel down the 'boot' into peninsular Italy, but there are still many butterflies to be seen. In all, Italy has 24 National Parks although not all are necessary designated for their wildlife. However a journey down the main part of the peninsular would allow visits to many wild and beautiful parks such as Monti Sibillini – good for **Autumn Ringlet** (*Erebia neoridas*) and *Furry Blue* (*Polyommatus dolus*), the Gran Sasso, which contains the highest peaks in the Appenines, the wild and seldom visited Maiella and Monte Pollino. This last contains another endemic **Anomalous Blue** this time Gallo's (*P. galloi*).





#### Italy's Islands

The other feature of Italy is her islands: not only the largest, Sicily and Sardinia, but several of the smaller islands are also important for butterflies. Italy has in the order of 26 endemic butterfly species (or near endemics e.g. shared only with Corsica) and the vast majority are island inhabitants.

#### Elba

Working from the North the first island with an endemic is Elba with **Elban Heath** (**Coenonympha elbana**) although this can also be found on the nearby mainland near Grosseto. It is not always considered a true species.





Sicilian Grayling
(H. blachieri)
Photo © Mike Prentice

#### The Hipparchia genus

The taxonomy of the Hipparchia genus in Italy has been through some significant changes over the past few years. As a result there are a number of newly-split species. The **Italian Grayling** (*Hipparchia neapolitana*) as the name suggests flies near Naples, whilst off-shore the island of Ponza also has an endemic grayling (*H. sbordonii*). Southern Grayling (*H. aristaeus*) is now confined to Sardinia and Corsica where it is joined by another Tyrrenian endemic, **Corsican Grayling** (*H. neomiris*). As a result the **Sicilian Grayling** is now known as *H. blachieri* whilst off the north coast of Sicily on the volcanic Eolian or Lipari islands there is another endemic, the **Eolian Grayling** (*H. leighebi*) probably best seen on the island of Vulcano, a short hydrofoil trip from Sicily.

#### Sicily

Sicily is a fascinating island which has been conquered many times over the centuries, which explains the amazing mix of cultures and culinary influences which give Sicily a unique identity. It also has a fascinating mixture of butterflies with an endemic Sicilian Marbled White (*Melanargia pherusa*), and geographically isolated populations of both Aetherie Fritillary (*Melitaea aetherie*) and African Grass Blue (*Zizeeria knysna*), although this is not too surprising given Sicily's proximity to the coast of North Africa.

#### Sardinia

The final stop on our itinerary around Italy takes us to Sardinia, a beautiful island of blue seas, white sands and gently rolling green hills. The island shares with Corsica numerous endemic butterfly species in addition to those mentioned above. Amongst others look out for the Corsican Small Tortoiseshell (Aglais ichnusa), the Corsican Swallowtail (Papilio hospiton), Corsican Heath (Coenonympha corinna) and Sardinian Meadow Brown (Maniola nurag).

The Sicilian Coast



#### An ideal butterfly holiday

I can thoroughly recommend Italy to anyone going on holiday looking for butterflies. There are, as in most countries, a few places without interesting species but with so many species to choose from and such wonderful and varied landscapes and habitats you should always find something to watch. Add to this the delicious food and wine and the friendly people and you have an ideal butterfly holiday destination. I can't wait to return.

# Mike Prentice Prentice, Mike @ London HH mike.prentice@cbre.com

# Polyommatus celina

#### A new butterfly species for Europe and the history of its discovery

The Common Blue (*Polyommatus icarus* Rottemburg, 1775) lives up to its name: it is the most common representative of the blues throughout the Palearctic region and is now also spreading in the Nearctic region – since its recent accidental introduction at Mirabel airport near Montreal in Canada (Hall 2007). Its native range was thought to be from the Canary Islands to Japan and from northernmost Scandinavia to North Africa – at least until about 10 years ago. But no more!

Fig. 1. Male of Polyommatus celina (bred ex ovo from Maguez, Lanzarote, Martin Gascoigne-Pees leg.) Photo © Martin Weimers



The story of one of the latest new butterfly species discoveries in Europe actually started with my PhD thesis on *Agrodiaetus blues* (Wiemers 2003; see also Wiemers & Fiedler 2007). As outgroups, the molecular study also included various specimens of *P. icarus* from parts of Europe (Spain & Greece), Asia (Turkey & Iran) as well as Africa (High Atlas in Morocco) and the analysis of mitochondrial as well as nuclear DNA showed an intriguing pattern. Whereas DNA of Eurasian samples from localities as distant as Spain and Iran turned out to be very similar to each other (p-distance of 1.2% in the COI gene), those from Morocco were very different from Eurasian samples (p-distance of 5.9-6.8%) – to the extent that other *Polyommatus* species (from the *P. eros* (Eros Blue) group) appeared to be much more closely related to the Eurasian *P. icarus* samples.

#### Confirmation

Due to the small number of samples I refrained from taxonomic actions. This was finally done by Vodolazhsky & Stradomsky (2008) who clearly confirmed my results with an extended set of samples from Asia and raised the African celina Austaut, 1879 to species level. This taxon, which differs morphologically by its broader black upperside wing margin and a series of black marginal dots on the hindwings, was originally described as a distinct African species, but ever since considered merely a variation or subspecies of the very variable *P. icarus*.

Fig. 2. Male of Polyommatus celina (bred ex ovo from Maguez, Lanzarote, Martin Gascoigne-Pees leg.) Photo © Martin Weimers



A joint study (Wiemers et al. 2010) not only confirmed its new status with further material from North Africa, but also brought about its discovery for Europe for Fuerteventura in the Canary Islands. This was quite expected, because Fuerteventura is much closer to Africa than to Europe.



More exciting, however, were the results of Dinca et al. (2011), who studied extensive material especially from the Western Mediterranean, and found that *P. celina* is much more widespread in Europe: it seems to replace *P. icarus* on most of the Western Mediterranean islands (i.e. Balearics, Sardinia, Sicily and ▼





Lipari Islands, but not on Corsica), and also occurs in southern Spain (Provinces of Cádiz, Malaga, Granada, and Avila). At some of its localities (e.g. Sierra de la Sagra near Granada) it even flies together with *P. icarus*, further confirming its status as a distinct species. Unfortunately, in southern Spain the morphological differences between both taxa are much less pronounced than elsewhere which makes it almost impossible to distinguish them in the field. For the time being, the only certain way to distinguish them in areas where they fly together is a DNA analysis.

Fig. 3. Larva of Polyommatus celina (bred ex ovo from Maguez, Lanzarote, Martin Gascoigne-Pees leg.) Photo © Martin Weimers



#### Always worth studying

This story shows once more that even very common species can reveal exciting secrets and are worth studying, and that it is still possible to discover new butterfly species in Europe.

#### North America

And what about North America – which of the two species was actually introduced there? An analysis of data in the BOLD database (Ratnasingham & Hebert 2007) shows that these populations belong to *P. icarus* – with haplotypes identical to some of those found in Central Europe (Netherlands, Germany & Austria).

#### **Martin Wiemers**

#### References:

**Dinca, V., Dapporto, L. & Vila, R. 2011.** A combined genetic-morphometric analysis unravels the complex biogeographical history of *Polyommatus icarus* and *Polyommatus celina* Common Blue butterflies. Molecular Ecology 20: 3921-3935.

**Hall, P. 2007**. The European Common Blue *Polyommatus icarus*: new alien butterfly to Canada and North America. News Lepid. Soc. 49 (4): 111.

**Ratnasingham, S. & Hebert, P.D.N. 2007**. BOLD: The Barcode of Life Data System (www.barcodinglife.org). Mol. Ecol. Notes 7(3): 355-364.

Vodolazhsky, D.I. & Stradomsky, B.V. 2008. Исследование филогенеза подрода *Polyommatus* (s. str) Latreille, 1804 (Lepidoptera: Lycaenidae) с использованием маркеров мтДНК. Часть II [Phylogenetic analysis of subgenus *Polyommatus* (s. str) Latreille, 1804 (Lepidoptera: Lycaenidae) based on mtDNA markers. Part II]. — Caucasian Entomological Bulletin 4(2): 237-242.

Fig. 4. Habitat of Polyommatus celina on Fuerteventura near Tindaya, with flowering Lotus lancerottensis, its larval foodplant in the Canary Islands Photo © Martin Weimers

**Vodolazhsky, D.I., Wiemers, M. & Stradomsky, B.V. 2009**. A comparative analysis of mitochondrial and nuclear DNA sequences in blue butterflies of subgenus *Polyommatus* (s. str.) Latreille, 1804 (Lepidoptera: Lycaenidae: *Polyommatus*. – Caucasian Entomological Bull. 5(1): 115-120.

**Wiemers, M. 2003**. Chromosome differentiation and the radiation of the butterfly subgenus *Agrodiaetus* (Lepidoptera: Lycaenidae: *Polyommatus*) – a molecular phylogenetic approach. PhD thesis, University of Bonn. 198 pp. + 2 col. pls.

**Wiemers, M. & Fiedler, K. 2007**. Does the DNA barcoding gap exist? - a case study in blue butterflies (Lepidoptera: Lycaenidae). - Frontiers in Zoology 4: 8.

Wiemers, M., Stradomsky, B. V. & Vodolazhsky, D. I. 2010. A molecular phylogeny of *Polyommatus* s. str. and *Plebicula* based on mitochondrial *COI* and nuclear *ITS2* sequences (Lepidoptera: Lycaenidae). – Eur. J. Entomol. 107: 325-336.

If anyone would like a full version of the references with active hyperlinks please contact Simon Spencer - email: <a href="mailto:cerisvi@btinternet.com">cerisvi@btinternet.com</a>



### No Stress on Cres

#### Visit to a Croatian island

Three of us visited the island of Cres from 20 to 25 July 2013, as much for relaxation as to see butterflies: the local tourist board has recently adopted the slogan 'no stress on Cres' (the initial 'C' is pronounced as a sibilant). I visited for the first time in 1981 and again in 1984. I rediscovered the island in 2005, when I found Hotel Kimen in Cres Town, where I have stayed on an almost annual basis since. This time it was a first visit for my brother, Tony. We had some relaxing swims in various parts of the island and on the adjoining island of Lošinj, a sort of southern extension of Cres reached via a swing-bridge.



A30-minute journey by car ferry from Brestova, on the mainland of Istria, takes you to Porozina on the northern part of the island. Cres is formed from limestone rock, with its highest point at 648 metres. The main vegetation is, perhaps surprisingly, mature oak (Quercus pubescens) and hornbeam (Carpinus orientalis) woodland, with open sheep pastures and stony garrigue. On Lošinj, the vegetation is lusher, with extensive areas of Mediterranean maquis

#### Hot and sunny

We picked up our friend and BC member, **Neil Hailey**, at Pula airport, which has direct flights from various UK airports. For the next five days the weather was hot and sunny. On our first morning, we walked south around Cres Bay, past the harbour and marina. Near the hotel were **Orbed Red-underwing Skipper** (*Spialia orbifer*) and **Mallow** 

Skipper (Carcharodus alceae), as well as Wood White (Leptidea sinapis). Further round the bay, butterflies included Eastern Bath White (Pontia edusa), Swallowtail (Papilio machaon), Scarce Swallowtail (Iphiclides podalirius), Southern White Admiral (Limenitis reducta), Cardinal (Argynnis pandora), Niobe Fritillary (Argynnis niobe), Nettle-tree Butterfly (Libythea celtis) Wall Brown (Lasiommata megera) and Grayling (Hipparchia semele). In the afternoon, we travelled a few kilometres north to the tiny village of Filozići tucked away in wood pasture, dominated by old oaks and wandering sheep. We saw Silver-studded Blue (Plebejus argus), Marbled White (Melanargia galathea), Grayling, the large Woodland Grayling (H. fagi) and The Hermit (Chazara briseis), the first seen on the island since 1984.

#### The island of Lošini

A walk round Cres Bay the next morning produced much the same list of species. We then drove down to the island of Lošinj. A roundabout at the entrance to Veli Lošinj, planted with flowers and lavender, produced **Southern Comma** 



▶ (Polygonia egea), Painted Lady (Vanessa cardui), Red Admiral (Vanessa atalanta), Scarce Swallowtail and Mallow Skipper. We walked down to the coast and were disappointed not to see Two-tailed Pasha (Charaxes jasius) sitting on its favourite Strawberry Tree (Arbutus unedo). However, as we took a swim in the secluded rocky bay, we saw Southern White Admiral, Nettle-tree Butterfly and the yellow and orange Cleopatra (Gonepteryx cleopatra) settling on the stony beach. That evening we enjoyed a meal at one of the restaurants by the harbour in Cres Town; their custom of a free glass or two of local schnaps after the meal is very relaxing!

The Hermit
(Chazara briseis)
in July 2013
Photo © David Withrington



#### Ustrine

There were still more parts of the island to explore the next day. Near Ustrine in the middle of the island is an extensive area of walled sheep pastures, some of which are being invaded by juniper bushes (Juniperus oxycedrus). Eleven Griffon Vultures cruised overhead. The usual **Adonis Blues** (**Polyommatus bellargus**) and **Brown Argus** (**Aricia agestis**) were supplemented by a new species for me for the island, **Chequered Blue** (**Scolitantides orion**). A bit further north, near Valun on the west coast, we visited a favourite spot: sheep pasture in a dell surrounded by oaks. We were disappointed to find that the grassland had been largely overrun by yellow thistles, presenting an impenetrable barrier for Neil who was wearing shorts. Nevertheless, we did find **Grayling** and **Woodland Grayling** gathering on the tree trunks, several **Silver-washed Fritillaries** (**A. paphia**), and a **Queen of Spain Fritillary** (**Issoria lathonia**) on the seaward side of the road.

#### South of Merag

Our last full day started with a visit to an area of sheep pasture south of Merag in the east. It is surrounded by rocky hillsides, oak and mulberry trees. A substantial pond survives in one corner: a **Green Sandpiper** (*Tringa ochropus*) flew off when we arrived, and a **Ruddy Darter** (*Sympetrum sanguineum*) was basking on rush stems. As well as the usual set of species, including **Holly Blue** (*Celastrina argiolus*) and **Small Copper** (*Lycaena phlaeas*), we saw **Grayling** settling on the ground, a brightly-coloured **Meadow Brown** (*Maniola jurtina*) - not a common butterfly on the island - and the beautifully-marked **Southern Gatekeeper** (*Pyronia cecilia*). Our final port-of-call was Punta Križa, at the southern end of Cres. There is a large inlet nearby at UI on the east coast, where there is a jetty and we had a swim. There were more than 40 **Painted Ladies** and another **Southern Gatekeeper**.

Wood pasture near Filozići, island of Cres Photo © David Withrington



#### 80 species

The end of July is not the best time to visit Cres, a month earlier would produce more butterflies (and fewer tourists). A total of 80 species of butterfly has been recorded from Cres and Lošinj (I have just completed a review with *Toni Koren* from Croatia, which we intend to publish). For a wider review, please refer to Withrington, D. & Verovnik, R. 2008. Butterflies (Rhopalocera) of the Croatian islands. *Entomologist's* Gazette 59:3-25. The total of 77 species for Cres alone makes it the Adriatic island with the second highest butterfly diversity. The most butterfly-rich island is neighbouring Krk, with a total of 104 recorded species (Verovnik, R. 2011. Butterflies (Lepidoptera: Rhopalocera) of the Croatian islands: an update on published records and new surveys of Pašman and Ugljan. *Entomologist's* Gazette 62 (4): 251–263. 2011). You can easily visit Krk: it is half-an-hour on the car ferry from Merag. •

## **Macedonian Grayling**

At last, the Macedonian Grayling (Pseudochazara cingowskii).

On 19th July 2010 Bernard Watts, Roland Rogers and myself boarded the plane bound for Thessaloniki, planning to travel on by rail to Skopje the following day. Our key 'target' on this trip was to see and photograph the highly localised Macedonian grayling (*P. cingowskii*). Bernard and I have both spent many summers travelling to the remotest and often very beautiful parts of Europe in our quest to see and photograph all the continent's species in their natural habitats. The Macedonian grayling was one of a very small number of species that had so far eluded the camera. We had rather little information to go on, and were unsure whether we had even got the dates right.

he journey was somewhat eventful, but at last we were on the road in a hire car that Bernard had booked, and arrived at our destination – the village of Pletvar – at around 2.30 on the 20th July. The 1745 metre peak of Mt. Kozjak overlooks the road to the north, and the lower slopes are easily accessed from the roadside. Nearer the road the grassland was more rank and showed signs of past cultivation. This area abounded with common butterflies and other insects (including, as Roland discovered, fine Ascalaphids and ant-lions), but a steeper and higher band of more sparse grassland with rocky outcrops and sparse low-growing juniper bushes attracted our attention. It was here that we found our first examples of cingowskii. In common with other 'browns' that occur on scree and similar rocky habitats, *cingowskii* seems to be very alert for sounds, and my first attempts at photography failed – probably due to the insects taking fight at the sound of the camera shutter. Two females of *cingowskii* were noticed nectaring from a species of *Dianthus* and these proved more accommodating. Other species flying in this habitat included other 'browns' such as the Great Banded Grayling (Brintesia circe) the Hermit (Chazaria briseis) the Large Wall Brown (Lasiommata maera)

(*Cingowski*)
Photo © Ted Benton



the Grayling (Hipparchia semele) the Marbled White (Melanargia galathea) and the Balkan Marbled White (M. larissa). Also flying here and on the lower slopes were the 'Anomalous Blues' (Agrodiaetus admetus and ripartii) the Eastern Baton Blue (Pseudophilotes vicrama) Chalkhill Blue (Lysandra coridon) Adonis Blue (Lysandra bellargus) Clouded Yellow (Colias crocea) Eastern Wood White (Leptidea duponcheli) Eastern Small White (Pieris ergane) several Pyrgine Skippers and other species.

#### Pletvar

On July 23rd, after exploring some of the many superb montane habitats in Macedonia, we returned to Pletvar



(*Cingowski*) Male Photo © Ted Benton



▶ for another look at *cingowskii*. After heavy rains on the previous day, numbers seemed to be down, but we still had no difficulty locating good numbers. Females seemed to divide their time between ovipositing among rocks, resting on rocks, and nectaring on flowers – most often on Dianthus sp., but also on a pale greenish scabious, and a yellow composite (Asteraceae) flower with entire pale green leaves whose dense hairs gave it a silver-white appearance. On settling they occasionally flicked open their wings briefly to reveal the 'typical' grayling pattern, but with pale cream-yellow post-discal bands whose pale colour is held to distinguish this species from very close relatives that occur locally in Greece and the Balkans. Males were more inclined to perch on exposed rocky outcrops, and appeared to be territorial, flying up to intercept other males that strayed into their 'air-space'. Both sexes tended to seek shelter among rock crevices or under shrubs in the heat of the day. Very noticeable was a particular pattern of wing-damage that particularly afflicted males. This took the form of a large chunk missing from the anal angle of both hind wings. We had noticed a number of lizards (presumably the common wall lizard – Podarcis muralis) lurking among the rocks, and speculate that these lizards are predators of the butterflies, particularly exploiting the territorial behaviour of the males.

#### Return rail journey

The complexities of our outward journey were as nothing compared with the return. Roland and I had bought our tickets for the return rail journey to Thessaloniki at Skopje station. We were duly on the station platform at 6.00am for our train south. Numerous other benign and helpful Macedonians waited with us until the train finally arrived around 7.30 am. About half an hour into our journey the train guard arrived. After sadly inspecting our tickets and shaking his head he departed, only to return some time later with an English-speaker. He informed us that our tickets were bus tickets, and this was a local train going no further than the border with Greece. However, we were in luck as an 'express' train would arrive at the border soon afterwards and we could transfer to that. At the border we were introduced to the station-master, who explained that the

Cingowski Habitat Photo © Ted Benton



express train was currently running four hours late. However, he could (and did!) find us a taxi. We were driven at breakneck speed through a storm to end all storms down to Thessaloniki airport, where we discovered our flight was suspended because of an air-traffic controllers' strike. Astonishingly, this was eventually resolved, and we in fact got home both safely and on time!

Much more goes into getting some photographs than just pointing the camera! •

**Ted Benton** 

# A Letter to the Editor

Checkerspots, Fritillaries and Large Blues – a plea for the use of scientific methods and names in butterfly conservation biology and for the rejection of vernacular names.

An open letter to the editors of British journals "Butterfly" and the "EIG Newsletter", both published by Butterfly Conservation.

Sir,

Almost exactly 256 years ago, a Swedish genius Carl von Linne (1707 – 1778), then the professor of botany at the University of Uppsala, published the tenth edition of Caroli Linnaei Systema naturae. The true publication date according to the ICZN: 1 January 1758. Carl von Linne is the author of the universal system of scientific names applied now in zoology and botany world wide. His system of names is governed by the International Commission on Zoological Nomenclature (ICZN) and anchored in the International Code of Zoological Nomenclature (Code) which facilitates the study of zoology. Without Carl von Linne, there would have never been Charles Darwin because he would not have been able to make unmistakeable reference to the objects of his studies. Not only Charles Darwin, but any other zoologist after Carl von Linne! The study of zoology in all its facets would be impossible without a general system of names understandable throughout the world, each name objectively defined by its name-bearing type. The rich type collection is the highlight of the collections of the British Museum Natural History. Furthermore, Linnaean classification allows the names to form a scientific system of species, genera and higher categories to indicate their mutual taxonomic relationships, thus resulting in a natural system or classification.

Can you imagine that The Times reporting on an issue concerning Buckingham Palace and involving the Head of State would refer to the Queen by her nickname followed by "Her Britannic Majesty Queen Elizabeth II" placed in parenthesis? Leaving aside possible royalist or republican sympathies or the specific inclinations of the writer of that report, the article would doubtless constitute a flagrant insult of the Head of State. Such an outrage could perhaps have appeared once upon a time in a dubious scandal sheet, but certainly not in a serious newspaper.

Vernacular names of butterflies are nothing more than nicknames substituting the scientific names. It may be assumed that these nicknames are better understandable to the general public than scientific names. Nonetheless, it is pertinent to ask how many butterfly species are there and how many of them are known and can be recognised by an uninformed layman. The use of vernacular names for butterflies in scientific and applied publications is a very bad and dangerous habit which has nowadays become a fashion.

Vernacular names may be, under certain circumstances, useful to denote a few well known species the general public may be aware of in an article written specifically for the general public and for communication among laymen. Forster & Wohlfahrt (1952-1955) in their standard work on the butterflies and moths of Central Europe used vernacular names for 56 of the 229 butterfly species inhabiting ▼



▶ Central Europe, i.e. for 24.4 % of species they recognised. These species are usually common and widespread or otherwise attractive to laymen. Higgins & Riley (1970) have apparently given in to the pressures of their commercially oriented publishers and fabricated artificial vernacular names for every European butterfly species dealt with in their book. The purpose of the English vernacular names and the needless inclusion of the word "Britain" in the title of the book was intended to increase the sales and improving profits. So far as I can remember, L.G. Higgins and N.D. Riley have always used scientific names in communication.

In his short paper on the butterflies of Armenia [Brereton] (2013) makes reference to the following species: Azerbaijan Brown Argus, Gavarnie Blue, Kurdish Copper, Mountain Alcon Blue (is there also Lowland Alcon Blue, are they two distinct subspecies of the same species called Alcon Blue?), Persian Fritillary, Persian Skipper and Southern Swallowtail. I do not know and have never read or heard of these names before. I have no idea whatsoever what they mean although I probably know all these species by their scientific names. I wonder how many British readers understand all the above names or at least what can they imagine when coming across these names. I venture to suspect that for many readers they are something like pretty exotic unidentifiable flying objects (cf. UFOs). Or am I thoroughly mistaken in assuming that the purpose of the article mentioned above is to communicate information to the readers? Communicating information the persons addressed cannot understand makes no sense. I assume that I know and can identify more butterfly species than an average reader of the journals concerned or an average member of Butterfly Conservation can do. I therefore wonder what an average reader understands reading these names.

Vernacular names of species are arbitrary nicknames selected and applied at random or as they have evolved over decades of laymen communication. Traditionally, they are used in any country in the language of the country for communication among laymen, not only in Great Britain. Therefore vernacular names may be useful for those butterfly species, more or less every layman can easily recognise in the field. Are the members of Butterfly Conservation in their majority laymen? Like nicknames, vernacular names are not binding and exist without system or rules. Vernacular names are not unequivocal. On the one hand there are several butterfly species called Large Blue and on the other butterflies called Fritillaries in England turn out to be Checkerspots on the other side of the Atlantic Ocean. The Cabbage White in Britain is *Pieris brassicae* (Linnaeus, 1758), but some call this species Large White. In N. America the same vernacular name, Cabbage White, denotes *Pieris rapae* (Linnaeus, 1758)), called in Britain Small White. Zoologists call this homonymy; it is prevented by the Principle of Homonymy of the Code. The Green Veined White is Pieris napi (Linnaeus, 1758) in Britain, but not in N. America, where the same vernacular name is applied to a few closely related species. Some vernacular names used in England are utilised in India for entirely different species (Z. Fric pers. comm.). The advocates of vernacular names claim that vernacular names are stable whereas the scientific names keep changing. They are comparing the incomparable and their claim cannot be taken seriously.

German vernacular names are not less illogical than English and can also be very amusing. Here are a few examples of many. *Colias hyale* (Linnaeus, 1758) is called Gemeiner Heufalter whereas Kleiner Heufalter is *Coenonympha pamphilus* 



▶ (Linnaeus, 1758). *Aglais urticae* (Linnaeus, 1758) is called Kleiner Fuchs whereas Mauer-Fuchs is *Lasiommata megera* (Linnaeus, 1758). *Lasiommata maera* (Linnaeus, 1758) is called Braunauge.

There is no objective definition of the meaning of any vernacular name, a fact most users of vernacular may not realise or appreciate since taxonomy is for them a strange topic. There may be at least as many names for the same species as there are languages. Or should Europe or the World be colonised by English vernacular names?

Whereas scientific names express the taxonomic status and relationship of the species, vernacular names ignore this. Since a scientific name expresses the taxonomic status of the species concerned, the name can change as the result of research and discoveries. Carl von Linne placed all butterflies in a single genus: *Papilio* Linnaeus, 1758. At the beginning of the 18th Century the situation has started to change. Now the genus *Papilio* sensu Linnaei covers five butterfly families. This can be illustrated by the following example.

It has been discovered a few years ago that butterfly species placed formerly in two genera, *Phengaris* Doherty, 1791, and *Maculinea Eecke*, 1915, are congeneric (Fric et al. 2007). Following the Principle of Priority, all species placed in the genus *Maculinea* must be placed in the genus *Phengaris*. The act expresses the research results and shows the taxonomic status and relationship of the species concerned. Some conservationists reject this fact on ideological grounds (Balletto et al. 2010) and request the ICZN to suppress the generic name *Phengaris*, which they dislike, overlooking or intentionally ignoring the following Principles of zoological nomenclature (Code, Introduction, p. XIX):

- "(1) The code refrains from infringing upon taxonomic judgement, which must not be made subject to regulations or restraint." And further
- "(2) Nomenclature does not determine the inclusiveness or exclusiveness of any taxon, nor the rank to be accorded to any assemblage of animals, but, rather, provides the name that is to be used for a taxon whatever taxonomic limits and rank are given to it."

It appears that these conservationists misuse zoological nomenclature for their ideological ends. Curiously, the choice of this procedure may be interpreted as a compliment for Fric et al. (2007) and an indirect confirmation of the results published by them. The "*Maculinea* champions" are unable to reject *Phengaris* on taxonomical grounds. However, the request made by Balletto et al. (2010) and later supported by Paclt (2012) can be easily rejected on nomenclatorial grounds as well (Fric et al. 2010). Suppression of a valid name in favour of a junior synonym can be done by the Commission using its plenary powers following a 2/3 majority vote by Commissioners only (P. Stys pers. comm.). At present no majority for the suppression of *Phengaris* can be expected. It appears that the Commission therefore hesitates to submit the application to the Commissioners, obviously owing to successful lobbying of the "*Maculinea* champions". Does delaying the decision benefit the stability of zoological nomenclature?

Scientific names of species, a binomen consisting of a combination of a generic name and specific epithet, or a trinomen indicating the subspecies of a polytypic •



#### References

Balletto, E., Bonelli, S., Settele, J., Thomas, J.A., Werovnik, R. & Wahlberg, N., 2010. *Maculinea* van Eecke 1915: proposed precedence over Phengaris Doherty, 1891. *Bulletin of Zoological Nomeclature*, **67**: 129–132.

[Brereton, T,], 2013. Armenia – jewel of the Caucasus – Butterfly **114**:33.

Forster, W. & Wohlfahrt, T.A., 1952-1955. Die Schmetterlinge Mitteleuropas. II. Tagfalter. – Franckh'sche Verlagshandlung, Stuttgart.

Fric, Z., 2013. A reply to Paclt: In defence of the accustomed generic name *Maculinea* Eecke. – Dt. ent. Z. **60**:123.

Fric, Z., Wahlberg, N., Pech, P. & Zrzavy, J., 2007. Phylogeny and classification of the Phengaris – *Maculinea* clade: Total evidence and phylogenetic species concepts. – Systematic Entomology, London, **32**:558-567.

Fric, Z., Kudrna, O., Pech, P., Wiemers, M., Zrzavy, J., 2010. Comment on the proposed precedence of *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera, Lycaenidae). (Case 3508; see BZN 67: 129–132). – Bulletin of Zoological Nomenclature, London, **67**:315-319.

Hanski, I., Breuker, C.J., Schöps, K., Setchfield, R. & Nieminen, M., 2002. Population history and life history influence the migration rate of female Glanville fritillary butterflies. – Oikos **98**:87-97.

Higgins, L.G. & Riley, N.D., 1970. A field guide to the butterflies of Britain and Europe. (1st ed.) – Collins, London.

Kudrna, O. & Fric, Z., 2013. On the identity and taxonomic status of *Lycaena alcon rebeli* Hirschke, 1905 – a long story of confusion and ignorance resulting in the fabrications of a "ghost species". – Nachr. ent. Ver. Apollo **34**:117-124. ▶ species, convey information on the species they denote and the species' place in the system. For every name there is a provision enabling an objective definition of that nominal species, it being the species' name-bearing type. Scientific names form a universal world wide system of reference encompassing all languages, in which every species has only one valid name. Every scientific name can be traced back to the original nomenclatorial act of erecting that nominal species by naming. The whole system of names is governed by the International Commission on Zoological Nomenclature (ICZN) adopted by the International Union of Biological Sciences and residing at the British Natural History Museum (BMNH) in London and in Singapore. The rules are known as the International Code of Zoological Nomenclature.

Regrettably, in the last few years, English vernacular names of butterflies have found their way into scientific literature including the so called high impact and scientific journals of long tradition and high past reputation whereas scientific names are either completely left out or placed in parentheses after the vernacular name, i.e. after the nickname. A few examples: Ecography ((Wahlberg et al. 2002), Journal of Insect Conservation (Verovnik et al. 2013), Oikos (Hanski et al. 2002, Stickzelle et al. 2002).

The now fashionable use of vernacular names turns the wheel of time more than 256 years back, to the so-called pre-Linnaean time. The use of vernacular names as means of communication among lepidopterists is decadent and brings the science of lepidopterology, in particular informed lepidopterological conservation, down to the level of chinwags taking place in English pubs under the strong influence of the for me indigestible English beer thus bringing both disciplines into disrepute. There is also a considerable real danger that the "pest" of vernacular names will soon spill over from butterflies to other popular insect groups such as Buprestidae, Carabidae, Cerambycidae, Scarabeidae (Coleoptera) or Odonata and infest them likewise, causing abuse of entomological scientific nomenclature and communication among entomologists in general. What is the reason behind the plague of vernacular names?

Over decades, generations of butterfly and moths collectors learned to use scientific names, at least in a basic way. Their observations can be traced to voucher specimens now usually deposited in museums. The activities of countless entomologists, professional or amateur, have brought lepidopterology to its present level. Their published results were reproducible in their time and in their majority they are reproducible by our present standards, thus fulfilling the basic premise for scientific work. The present generations of butterfly watchers do nothing like that. Under the false notion of "saving" butterflies, i.e. not killing them, they ignore the reproducibility of their observations.

The significance of voucher specimens may be a strange topic to the present generation of butterfly watchers and requires explanation. Only thanks to extensive examination of voucher specimens and types in several major European museums, going back more than 100 years, Kudrna & Fric (2013) could establish the identity and status of a rare individual form originally named *Lycaena alcon rebeli* Hirschke, 1905, misidentified and for decades mistakenly treated as a distinct species; the authors have demonstrated that ignorance of taxonomy and voucher specimens easily fabricates a "ghost" species. There are many such examples. Has it been ▼



#### References cont.

Paclt, J., 2012. In defence of the accustomed generic name *Maculinea* Eecke. – Dt. ent. Z. **59**:317-320.

Schtickzelle, N., Le Boulenge, E. & Baguette, M., 2002. Metapopulation dynamics of the bog fritillary butterfly: demographic processes in a patchy population – Oikos **97**:349-360.

Spencer, S., 2013. Butterfly conservation abroad. – Butterfly **114**:29.

Verovnik, R., Micevski, B., Maes, D., Wynhoff. I., Swaay, C. van & Warren, M., 2013. Con-serving Europe's most endangered butterfly: the Macedonian Grayling (*Pseudochazara cingovskii*). – J. Insect. Conserv. DOI 10.1007/s10841-013-95-76-6.

Wahlberg, N., Klementti, T. & Hanski, I., 2002. Dynamic populations in a dynamic landscape: the metapopulations structure of the marsh fritillary butterfly. – Ecography **25**:224-232.

#### **Acknowledgements**

I have a pleasure to thank Dr. Z. Fric, Dr. C. Luckens, Dr. S. Spencer and Prof. P. Stys for their information and comments.

#### **Abbreviations**

Code = The international code of zoological nomenclature, 4th edition, published by the International Trust for Zoological Nomenclature, London 1999, valid from 01/01/2000.

Commission, ICZN = The International Commission on Zoological Nomenclature with seat in London and Singapore.

▶ forgotten that a large proportion of old records of *Colias hyale* (Linnaeus, 1758) are now referable to *Colias alfacariensis* Ribbe, 1905, or that those of *Leptidea sinapis* (Linnaeus, 1758) are in fact *Leptidea juvernica* Williams, 1946? The significance of properly preserved, thoroughly examined and identified voucher specimens subsequently deposited in a major museum appears to be much underestimated by some authors of molecular taxonomic studies including "barcoding", too.

The latest ideological outrage of our time, chronologically indirectly related to the use of vernacular names, is the examination in the field of male genitalia for identification purposes by squashing the abdomen of a living individual and subsequently letting the tortured individual die of crushed entrails in his abdomen. Leaving aside the "human" aspect of this kind of "nature conservation ideology", the results are not reproducible and the procedure has therefore nothing in common with science. The "identification" is the expression of the opinion of the butterfly watcher concerned, made at that particular moment under conditions unsuitable for making any statement alone for the lack of optical instruments necessary for the purpose. "Thanks" to the lack of voucher specimens, identification errors cannot be traced and demonstrated, thus they cannot be put right. Ideology offers the butterfly watcher a false "protection" and makes his/hers observations of no scientific value.

Butterfly conservation biology appears to have reached the crossroads. There are several possible ways. The first uses scientific methods including zoological nomenclature and reproducible recording based upon preservation of voucher specimens and leads back to applied science. The other way leads to butterfly watching as mere siteseeing, as a way of passing time. Quo vadis butterfly conservation biology?

In closing this open letter, I hasten to suggest to the editors of the above journals to publish a series of very basic articles on the subject of zoological nomenclature and taxonomy? The articles should be written by an expert, if possible associated with the International Commission on Zoological Nomenclature and the Natural History Museum in London.

Yours faithfully, **Otakar Kudrna** (Schweinfurt, 14/03/2014)

Author's address:

Dr. Otakar Kudrna, Geldersheimer Str. 64, D-97424 Schweinfurt

#### **Editor's Note**

EIG always encourages the use of scientific names especially in the field where we are often working with other nationals for whom the English names are meaningless. The pronunciation of latin names by different nationalities can be a source of confusion and amusement. The use of English names in our newsletter is to make it easier for those not familiar with the European butterfly fauna to read the article. Most of our readers are UK nationals and when they are new to it do not readily adopt scientific names. We always give the scientific name as well.

#### PLEASE NOTE:

If you intend to contact any of these people to offer your assistance as a self-funded volunteer please also copy to me Simon Spencer email: cerisyi@btinternet.com

#### Romania

Marta Ferencz (Ferencz Márta ferenczke@hotmail.com) organises the monitoring in Romania. EIG helped her to come to the Southampton conference. She would like help with her mark and recapture work on *Phengaris arion* this season. People could come for perhaps a week. Her fieldwork has already started.

Sergiu Mihut one of the BCE partners in Romania is involved with two butterfly projects in Romania: one at Siret near the Danube delta and one in Southern Romania. He is looking for a few self-funded volunteers to help with these projects this summer. They basically do alternate weeks in each location. They are involved in monitoring and observing butterflies by day and during the night, with light-traps for the moths. Flights would be best to Cluj-Napoca. Basic accommodation and transport would be provided but food and drink would be extra.

Contact: Sergiu Mihut sergiu.mihut@gmail.com •

#### **Survey Request**

I have had a message from the Spanish butterfly organisation Zerynthia Asociación zerynthia.org@gmail.com suggesting that it would be great to do a first collaborative project with the EIG with a survey of **Woodland Brown** (*Lopinga achine*) in the Basque Country. The area is around Orduña town south of Bilbao. Regarding accommodation, there are a couple of options:

- The only place in Orduña is expensive <a href="http://goo.gl/gviOvs">http://goo.gl/gviOvs</a>
- Near Orduña, there are cheaper places like this one: <a href="http://goo.gl/P9qSti">http://goo.gl/P9qSti</a> The best date for *L. achine* is mid July.

**Yeray Monasterio** from Zerynthia will go with you on a field trip. It should be on a weekend to guarantee that he will be available. •

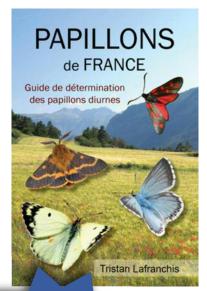
#### A request from Apulia (Italy)

Enrico Altini enricoaltini@yahoo.com is doing research related to the study of host plants and larval ecology of *Melanargia arge* and *Melanargia russiae* in Apulia (southern Italy) and would be happy to work with EIG members. The survey period runs from mid-May to mid-June. The first survey area is in Cisternino, Valle d'Itria in South Apulia and the other one is in the northern part of Apulia, in the Alta Murgia National Park.

# **Niobe Fritillary** (*Argynnis niobe*) and **High Brown Fritillary** (*Argynnis adippe*)

Dan Leština dan.lestina@gmail.com is doing a scientific project in the Czech Republic which focuses on population genetics and phylogeography of *Argynnis niobe* and *A. adippe* in France and other parts of Europe. He is looking for sites where he could find within a few days a sample of several dozens of specimens of one or both of the species for DNA analysis. If you know of any site in France (or possibly Spain) where many specimens of these species can be seen flying at once, or at least where he can reliably find them, then please contact him. •

## **Book Reviews**



Purchase this book in the UK - see following page for more details

#### Papillons de France

Author Tristan Lafranchis, published February 2014.

Text in French. An identification guide to the butterflies and day-flying moths of France with over 1200 colour photos. The format is one species per page with characteristic features clearly marked, it also includes an identification key for difficult groups. There are 270 distribution maps with a section on Burnet and day-flying moths.

Price: 45€ from the publisher Diatheo, email: <u>lafranchis@yahoo.fr</u> 47€ in bookshops. **ISBN 978-2-952-1620-5-0** 

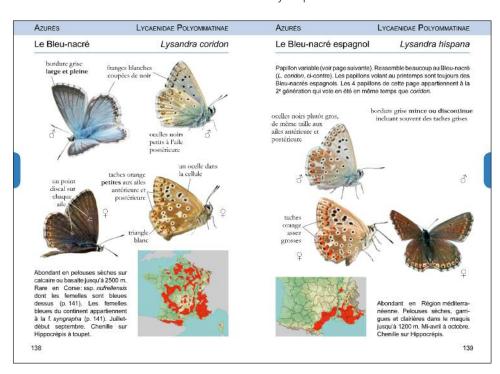
Many users of Tristan's previous book 'Butterflies of Europe' had expressed a desire for an identification guide devoted uniquely to France and which included both butterflies and day-flying moths. His new book fulfils both these wishes.

#### Life-size photographic illustrations

The introductory page for each group of species has life-size photographic illustrations, whilst subsequent photographs have been specifically enlarged to enable the diagnostic features to be more easily identified. The most relevant diagnostic features to help species verification are also highlighted and gender specific criteria are also indicated with gender symbols. The text has been reduced to a minimum to allow a maximum of space for the photographs. The names of host-plants are in French with an appendix of Latin plant and family names.

#### La Vie des Papillons

Ideally Papillons de France is intended to be used in conjunction with "La Vie

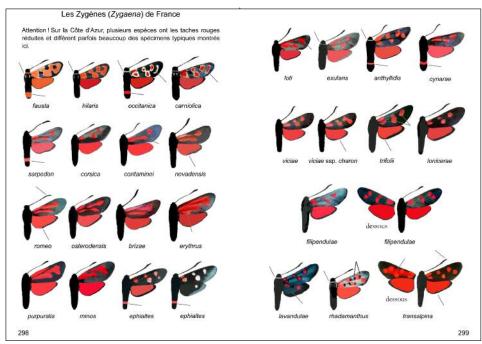


des Papillons" which is due to be published at the end of 2014. This new book "La Vie des Papillons" comprises 750 pages and is devoted to the ecology, biology and understanding of the butterflies of France. The book includes the latest research and discoveries in various related fields - biochemistry, genetics, ecology and biology.

# A section for the more challenging butterfly species

Papillons de France is a useful and timely update to Tristan's previous book Butterflies of Europe and a very welcome aid to all those working in the field in France. ▼





Not only is the identification process more logical with identification keys, the book also includes a section for the more challenging butterfly species such as the *Pyrgus*, *Polyommatinae*, *Melitaea*, and *Erebia* groups with photos of both upperside and underside with a description of the diagnostic features.

#### Burnet moths of France

The book also contains a much needed and very useful identification key to the Burnet moths of France, also with photographs and description. See picture to the left for the Burnet identification key.

Papillons de France in the UK.
In the first instance email Simon
Spencer cerisyi@btinternet.com
AND Tristan Lafranchis
lafranchis@yahoo.fr with your
order and address.
Then send a cheque for £42 made
out to Tristan Lafranchis, to
Simon Spencer, Rhoslan, Brithdir,
Llanfyllin, Powys SY22 5HB. On
receipt of the cheque Simon will
email a reply to all (You & Tristan)
confirming its receipt and Tristan
will post the book.

This offer ends June 30th

#### Day-flying moths of France

In addition there is a section reserved for the day-flying moths of France, more than 150 species including the following families *Erebidae*, *Sphingidae*, *Lasiocampidae*, *Geometridae*, *Sesiidae* etc.

This is an excellent and very useful photographic softback guide book that fits into the rucksack for field trips with information on flight periods, habitat, altitudinal range and distribution maps. The book has been updated to include *Lepitdea duponcheli* which is found in the south east of France and *Leptidea juvernica*. The distribution maps will always be a work in progress as more field work is carried out in France and as more regional atlases are produced providing additional information on previously unrecorded species.

The book is the result of many years spent in the field and shows a great passion and expertise with contributions from fellow experts and enthusiasts.

**Jude Lock** 

# Butterflies of Europe & the Mediterranean area

#### **Other New Books**

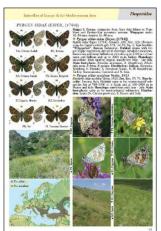
A couple of recent books (available for example from Pemberley Books) may be of interest to readers.

#### **Butterflies of Europe and the Mediterranean Area**

published in English by the Ukrainian author Vadim Tshikolovets.

There is a fantastic amount of information in this well-produced volume covering the whole of Europe (from the Atlantic islands to the Ural mountains), North Africa (from Morocco to Egypt), Turkey, the Caucasus, and the Middle East. 703 species are dealt with on 544 pages. For each species there are photographs of museum specimens (upperside, underside, male, female, subspecies). There are also 2000 photographs of living butterflies and 1000 habitat shots, and more than 700 distribution maps. Subspecies are dealt with comprehensively. The ▼





▶ images are quite small – the downside of keeping the volume to a compact 23cm by 16cm, just larger than A5 – but they are sharp and attractively presented. The text contains information on when the species was first described, and the locality; range; habitat; flight period; and host-plants. It does not however spell out how to identify similar species.

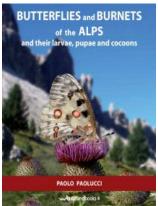
For me, one of the main attractions of the book is seeing the whole of the Western Palearctic butterfly fauna presented in a single volume, and seeing how European species fit into a wider context. Species which are prize sightings for us on the margins of Europe may in fact have quite wide distributions - for example, **Orange-banded Hairstreak** (**Satyrium ledereri**), which in Europe occurs only on the Aegean island of Samos, is widespread in central and eastern Turkey, and **Aetherie Fritillary** (**Melitaea aetherie**), which can be found in the far south of Spain and in Sicily, is widespread in North Africa.

#### *Up-to-date taxonomy*

The taxonomy of the book is up-to-date and it is interesting to see one or two of the author's taxonomic judgements. For example, *Euphydryas glaciegenita*, occurring in the central Alps, is provisionally treated as a separate species from *Euphydryas aurinia* (Marsh Fritillary), although with the comment that the taxonomic status needs further study.

In short this is a veritable mine of information about Western Palearctic butterflies. The price is about £79.

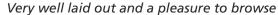
**Nigel Peace** 



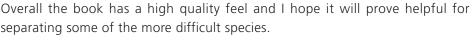
#### **Butterflies and Burnets of the Alps**

published in English by Paolo Paolucci.

This covers 254 species of butterfly and 27 species of burnet found in the Alps. For each species there is a series of illustrations with pointers highlighting identification features. There are also detailed distribution maps and information about habitat, altitude, and flight period. Other features include identification keys (in English and Italian), which contain a lot of information, and pictures of larvae, pupae and their cocoons.



Unlike the Tshikolovets book, this is an identification guide. Size is A5. It is very well laid out and a pleasure to browse. I shall certainly want to have it with me when I next visit the Alps. I have yet to use it in the field and so hesitate to pass comment on how accurate it is overall. It is not without error - I noticed that the page dealing with Southern Small White (Pieris mannii) shows a second image of a female rather than a male as intended. Male and female are however presented correctly in the accompanying key. So this may be an isolated lapse.



The price is about £56.

**Nigel Peace** 

