

Butterflies INEUROPE

WHERE TO FIND :: RECORDING & CONSERVATION

EIG Anniversary Magazine :: MAY 2017

*Including an updated
checklist of species*



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Front cover:
Spanish Fritillary (*Euphydryas desfontainii*),
photographed in Andalusia, Spain,
by Nigel Peace.

Welcome

Welcome to the EIG's Anniversary Magazine. The first EIG Newsletter was issued in April 2007, and has been published electronically every six months since then. There is a wealth of information in the Newsletters, and apart from the most recent they are available on the EIG website. However we wonder whether members refer back to electronic issues after their initial browse. So this time we have decided to mark our tenth anniversary by publishing a magazine. We hope it will endure a bit longer and find a place on members' bookshelves.

The object of the magazine is to reflect the EIG's work over the first ten years, and to provide guidance on where it is possible to see a good proportion of Europe's butterflies. There are articles on many of the best butterfly regions in Europe, arranged geographically in an arc from Greece in the south east to Spain in the south west.

There is also an up-to-date checklist of European butterfly species which incorporates the latest taxonomic changes. 'New' species include the race *feisthamelii* of Scarce Swallowtail and the race *beckeri* of Marsh Fritillary, both attractive taxa found in Spain and Portugal and now elevated to full species status.

The magazine not only provides a steer on where to look for Europe's butterflies, it also reflects two important roles of EIG, namely surveying, and supporting conservation. For example, EIG survey work has been the first step towards conserving the Danube Clouded Yellow (*Colias myrmidone*) in Romania, and EIG members took part in fieldwork which was the basis for Species Recovery Plans for endangered endemics in the Sierra Nevada in southern Spain. Both projects are reported on in this magazine. We always encourage members to submit their records, and full information on how and where to do so can be found on the country pages of the EIG website (www.bc-eig.org.uk).

We hope to enthuse you about Europe's butterflies,



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GREECE



GREECE

The rare Lycaenids of the Peloponnese

by Simon Spencer

The Peloponnese, the large peninsula of southern Greece, is actually an island as the Corinth canal, joining the Aegean Sea to the Gulf of Corinth, separates it from the rest of Greece. It has a high diversity of butterflies and along with the Alps and the Pyrenees is one of the areas of Europe with the highest species diversity.

No less than 109 species of butterflies have been recorded above 1500 m on Mount Chelmos and sites with more than 80 species are found in many areas in the Peloponnese. It is particularly notable for its Lycaenids (33 or 34 species). One is a Peloponnesian endemic, the **Odd-spot Blue** (*Turanana taygetica*), which is now recognised to be a different species from the similar species found further east in Turkey. Several others have their European range mostly confined to the Peloponnese. These include the **Chelmos Blue** (*Polyommatus iphigenia*), the **Pontic Blue** (*Neolysandra coelestina*), which is also found in Attica, and the **Fiery Copper** (*Lycaena thetis*), which is also found on the other side of the Gulf of Corinth.

The **Greek Mazarine Blue** (*Cyaniris semiargus helena*), which has bright orange submarginal lunules, is not recognised as a separate species in the latest revision, nor is the **Taygetos Blue** which is now considered to be a local race of **Eros Blue** (*Polyommatus eros menelaos*). The **Eastern Brown Argus** (*Kretania eurypilus*), another Asiatic species, is also found in its most westerly site on Mount Taygetos in the south of the Peloponnese, but also occurs on Samos. The **Grecian Copper** (*Lycaena ottomana*) which is confined to the Balkans and Turkey is quite widespread in the Peloponnese. The very local **Bavius Blue** (*Pseudophilotes bavius*), which flies earlier in the year, can be found on some of the Peloponnesian mountains.



▲ *Acantholimon androsaceum* on Mount Chelmos.

Habitat

At high altitude on the mountains of Mount Chelmos and Mount Taygetos there is an unusual habitat of *Acantholimon androsaceum* which grows in dwarf cushions amongst the rocks. It is able to withstand extreme desiccation and high winds as well as browsing goats. It is the larval food-plant of both **Fiery Copper** and **Odd-spot Blue** which occur together in the few hectares where the habitat is found. These species are two of the few European species vulnerable to collectors who regularly visit the Chelmos site which is now in a National Park.

The **Chelmos Blue** feeds as a larva on Sainfoin (*Onobrychis alba*), a

plant that is much loved by sheep and goats. Many authors have commented in the past on the overgrazing of Mount Chelmos by goats and the threat this poses to the species. Sainfoin uses the protection of spiny plants such as *Astragalus thracicus parnassi* to survive and must have coexisted with sheep and goats throughout history.

EIG surveys

EIG surveyed Mount Chelmos in 2008 targeting **Odd-spot Blue** and also **Chelmos Blue**. Both species were successfully recorded although the latter was hard to find. Grazing by goats had recently reduced but grazing by cattle had increased.

In 2017 the author and other EIG colleagues will work with Lazaros Pamperis, the author of the Butterflies of Greece, to survey Mount Taygetos for habitat and record the butterflies. It is a wonderful area and in a previous visit 62 species were seen on one walk. They will also visit Mount Chelmos to assess the **Odd-spot Blue** population and see how the grazing pressures have changed.

The Peloponnesian mountains are very rich in wildlife. They are changing rapidly as they are being abandoned by shepherds after thousands of years, although with Greece's economic problems this trend may be reversing. In recent years there have been devastating fires as abandoned pastures that have reverted to scrub catch alight in the summer heat. •

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Photos by John Salmon (Chelmos Blue and *A. androsaceum*) and Nigel Peace.

This is a summary and update of an article which appeared in the first EIG Newsletter in April 2007.



▲ **Odd-spot Blue** (*Turanana taygetica*)



▲ **Chelmos Blue** (*Polyommatus iphigenia*)



▲ **Taygetos Blue** (*Polyommatus eros menelaos*)



▲ **Grecian Copper** (*Lycaena ottomana*)



GREECE



GREECE

Tzoumerka National Park, NW Greece

by John Salmon



◀ Kryakouras and Tzoumerka from south of Prodomos.

Hesperiidae

12 species of Skipper were seen, not all easy to identify! Noteworthy records included **Persian Skipper** (*Spialia phlomidis*) and **Yellow-Banded Skipper** (*Pyrgus sidae*), with its striking underside.

Papilionidae

The spectacular **Apollo** (*Parnassius apollo*) was seen only on the last day of our trip in July 2014, when the season was late; but its relative the **Clouded Apollo** (*Parnassius mnemosyne*) was quite numerous in early June 2016. We saw neither **Southern Festoon** (*Zerynthia polyxena*) nor **Eastern Festoon** (*Zerynthia cerisy*). One **Southern Swallowtail** (*Papilio alexanor*) was seen, and **Scarce Swallowtail** (*Iphiclidides podalirius*) was common, especially in July.

EIG members have recently surveyed the Lakmos/Tzoumerka National Park in Northwest Greece, with the invaluable help of the Park's conservation officer Rika Bisa and Lazaros Pamperis, author of the splendid *The Butterflies of Greece* (2nd edition 2009).



▲ Yellow-Banded Skipper (*Pyrgus sidae*)



▲ Clouded Apollo (*Parnassius mnemosyne*)



▲ Plaka Bridge over the River Arachthos.



▲ Twin-spot Fritillary (*Brenthis hecate*)



▲ Blue Argus (*Aricia anteros*)



▲ Russian Heath (*Coenonympha leander*)

Pieridae

Clouded Yellow (*Colias crocea*) rivalled the **Common Blue** (*Polyommatus icarus*) as the most frequent species. Many **Whites** (*Pieris* spp.) were also common. Among the more interesting records were **Mountain** and **Southern Small Whites** (*Pieris ergane*, *P. manni*) and **Greek** and **Berger's Clouded Yellows** (*C. aurorina*, *C. alfajariensis*).

Lycaenidae

No less than 32 species were recorded. **Zephyr Blues** (*Kretania sephirus*) often mud-puddled on July afternoons, **Mazarine Blues** (*Cyaniris semirargus*) were abundant in 2015, and other highlights recorded quite commonly included **Turquoise Blue** (*Polyommatus dorylas*), **Amanda's Blue** (*P. amandus*), and **Blue Argus** (*Aricia anteros*).

Nymphalidae

Apart from the ever-present **Painted Lady** (*Vanessa cardui*), we saw many handsome **Southern White Admirals** (*Limenitis reducta*), but no **White Admirals** (*L. camilla*). **Southern Commas** (*Polygonia egea*) were fewer than **Commas** (*P. c-album*). **Camberwell Beauties** (*Nymphalis antiopa*) and **Large Tortoiseshells** (*N. polychloros*) were occasional. Despite the presence of suitable habitat, we found none of the Greek **Purple Emperors** (*Apatura metis*, *ilia* and *iris*) – perhaps only because the season was late in 2014. We caught two brief glimpses of the magnificent **Two-Tailed Pasha** (*Charaxes jasius*).

Among 14 species of fritillary, my personal favourite was the fresh **Twin-spot Fritillary** (*Brenthis hecate*) shown above. **Silver-washed Fritil-**

lary (*Argynnis paphia*), **Lesser Spotted Fritillary** (*Melitaea trivia*) and **Heath Fritillary** (*M. athalia*) were the most numerous species.

Satyrinae

Russian Heath (*Coenonympha leander*) was at three Park sites, and **Balkan Heath** (*C. orientalis*) was a good record at the Katara Pass (outside the Park). **Pearly Heath** (*C. arcania*) and **Small Heath** (*C. pamphilus*) were both common in July. **Northern Wall Brown** (*Lasiommata petropolitana*) was another species found only in the Katara Pass. We recorded only two Ringlets – **Woodland Ringlet** (*Erebia medusa*), which appeared in both June and July, and **Ottoman Brassy Ringlet** (*E. ottomana*) at one site in 2014.

Our final site in July 2014 was near the remarkable bridge of Plaka, which was sadly washed away in early 2015 by heavy winter waters; it is expected that it will eventually be rebuilt. •

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Photos by John Salmon except Blue Argus by Nigel Peace.

This is a short summary of articles in EIG 16, 18 & 20.

Bulgaria

by Nick Greatorex-Davies

I first led a butterfly tour to Bulgaria in 2003. I have had the privilege of leading one or more butterfly (and moth) tours there for the British-Bulgarian Society almost every year since.

The Pirin Mountains. ▼

Bulgaria is a relatively small mountainous country (bigger than Scotland, smaller than England) and it has a declining human population, currently a little over seven million. It is rich in wildlife and wild places with nearly 34% of the country designated under the Natura 2000 network. This includes 50 Prime Butterfly Areas. It is possible to walk almost anywhere in rural areas without restriction, taking care of course not to trample crops which are an important part of the livelihood of local subsistence farmers.

Although agriculture has intensified there are still areas where traditional farming methods are practiced and species-rich grassland habitats have been maintained. However many of these are under considerable threat due to abandonment and the subsequent take-over by scrub. The country is about 40% forested and this is likely to increase.

Bulgaria is one of the butterfly hotspots of Europe. 216 butterfly species have been reliably recorded, of which about 45 species are more or less restricted in Europe to Eastern Europe. Seven of these are endemic to the Balkan Peninsula and a further 17 only occur there in Europe.

June and July are the peak months. Generally on a 12 day tour in July one can expect to see between 130 and 140 species. Certain sites can produce a total of 80 or more species in a day! Sometimes butterflies occur in large numbers, for example some woodland clearings may be teeming with fritillaries, sometimes numbering in their thousands with 10 or more species present. I have seen **Black-veined Whites** (*Aporia crataegi*) so numerous that they appeared as large flakes of snow everywhere one looked. In hot dry weather butterflies can be found in groups, 'puddling' on tracks, damp river beds etc., sometimes in hundreds with many species present.



▲ Nicholl's Ringlet (*Erebia rhodopensis*)



▲ Bosnian Blue (*Plebejus dardanus*)

Mountains

Substantial parts of the country are mountainous - over 27% of the land area is over 600m, more than 12% over 1000m. The Rila and Pirin Mountains in the south-west both rise to over 2900m. Rila hosts the highest peak in the Balkans (Musala 2925m). To the east of these lie the western and eastern Rhodopi mountains which occupy about a seventh of Bulgaria's land area. The Stara Planina or Balkan Mountains run as a spine across the country, north of the centre, from east to west rising to over 2300m in the central part.

Alpine zone

A variety of alpine butterflies occupy the highest parts of the mountains. Fourteen species of Ringlet (*Erebia* spp.) occur in Bulgaria, and 13 of these can be found at various levels in the Rila Mountains. In the alpine zone can be found two near endemics, **Bulgarian Ringlet** (*E. orientalis*) and **Nicholl's Ringlet** (*E. rhodopensis*),

which can both be found on Rila, Pirin and the highest parts of the Stara Planina; **Black Ringlet** (*E. melas*) is more widespread occurring on high rocky slopes, crests and screes. Other alpine species include the beautiful **Cynthia's Fritillary** (*Euphydryas cynthia*) (widespread on Rila and Pirin), **Shepherd's Fritillary** (*Boloria pales*), **Balkan Fritillary** (*B. graeca*) (usually at lower altitudes than Shepherd's Fritillary), **Dusky Grizzled Skipper** (*Pyrgus cacaliae*), and on the marble limestone of Pirin, **Alpine Grizzled Skipper** (*P. andromedae*).

Sub-alpine and Montane zones

On some of the high marble limestone peaks of central Pirin and on Alibotush at around 2000m can be found the **Bosnian Blue** (*Plebejus dardanus*). This species is restricted in Europe to a few marble peaks in the Balkans. Also high in the limestone can be found two Balkan endemics, **Higgin's Anomalous Blue** (*Polyommatus*

nephoiptamenos) and at slightly lower levels the **Grecian Anomalous Blue** (*P. aroaniensis*). In the non-calcareous parts of Rila, Pirin and Osogovska Planina can be found another Balkan endemic, **Balkan Clouded Yellow** (*Colias caucasica*), which occurs on open slopes where its foodplant the broom-like *Chamaecytisus absinthioides* grows in abundance.

A good variety of species can typically be found along forest tracks and in flowery glades in the mountains. These include **Clouded Apollo** (*Parnassius mnemosyne*), **Balkan Copper** (*Lycaena candens*), **Poplar Admiral** (*Limnitis populi*) (especially on tracks, often along with **Purple Emperor** (*Apatura iris*)), several Ringlets, especially **Woodland Ringlet** (*Erebia medusa*), and other satyrines such as **Eastern Large Heath** (*Coenonympha rhodopensis*).

Forested foothills and into the Montane zone

Again a wide range of species can be found here, but worth particular



mention are **Common Glider** (*Neptis sappho*) and **Hungarian Glider** (*N. rivularis*), which are widespread but rarely common. **The Russian Heath** (*Coenonympha leander*) is also widespread but very local, though it appears to be more common in northwest and west Bulgaria. The **Lesser Lattice Brown** (*Kirinia climene*), another species with a very restricted distribution in south-east Europe, occurs sporadically in central west Bulgaria.

Common Glider ▼
(*Neptis sappho*)



The Arda River in the eastern ▼
Rhodopi mountains.



Calcareous rocks, especially karst and marble limestone

There are many calcareous hills and mountains in Bulgaria, present in or adjacent to most of the high mountain ranges. Pirin's highest peak Vihren (2914m) is itself marble limestone. These tend to provide the richest habitats for butterflies. At moderately high altitudes the **Apollo** (*Parnassius apollo*) can be found cruising low over the terrain, sometimes in numbers. Of the 42 "blues"



▲ **Spinose Skipper**
(*Muschampia cribrellum*)

that occur in Bulgaria, 17 of them occur solely or usually on calcareous terrain. A few of the rarer species have already been mentioned in the previous section. Another rare Balkan endemic, **Kolev's Anomalous Blue** (*Polyommatus orphicus*) occurs only in the western Rhodopi mountains, in a very restricted area. Other "calcareous blues" include the **Blue Argus** (*Aricia anteros*) and the **Zephyr Blue** (*Kretania sephirus*).

In the south-west of Bulgaria where south Pirin meets with Alibotush several interesting species occur on the rocky marble slopes. They include **Eastern Greenish Black-tip** (*Euchloe penia*), **Gruner's Orange-tip** (*Anthocharis gruneri*) and **Dil's Grayling** (*Pseudochazara orestes*), a very rare Balkan endemic with a very restricted range. Eastern Greenish Black-tip is however more easily found over the border in Northern Greece.

I cannot leave this section without mentioning the **Spinose Skipper** (*Muschampia cribrellum*), recently re-discovered in Bulgaria, in the karst area of the Western Stara Planina.



▲ **Freyer's Purple Emperor** (*Apatura metis*)

Hot rocky hills, gorges and river valleys

These are frequent habitats in many parts of Bulgaria mostly south of the Stara Planina and particularly in the south – for example the Struma valley, south of and including Kresna Gorge, and parts of the eastern Rhodopi mountains, especially in the Arda River valley. Many species are found here including some notable Pierids - **Small Bath White** (*Pontia chloridice*), **Kruper's Small White** (*Pieris krueperi*) on the barer steeper slopes and cliffs, and **Eastern Wood White** (*Leptidea*

duponcheli). Other species include **Grecian Copper** (*Lycaena ottomana*), **Little Tiger Blue** (*Tarucus balkanicus*), **Balkan Marbled White** (*Melanargia larissa*), **Freyer's Grayling** (*Hipparchia fatua*), **Lattice Brown** (*Kirinia roxelana*) and **Sandy Grizzled Skipper** (*Pyrgus cinarae*).

Several species occur only in the Struma valley, some reaching as far as Kresna Gorge. These include **Powdered Brimstone** (*Gonepteryx farinosa*), **White-banded Grayling** (*Pseudochazara amalthea*), and a number of skippers including **Inky Skipper** (*Erynnis marloyi*).

◀ Eastern Festoon (*Zerynthia cerisy*)

Willow-lined rivers and valleys

The **Freyer's Purple Emperor** (*Apatura metis*) is widespread and often frequent in these habitats. Like other purple emperors it often comes down onto tracks or dry river beds. The **Large Copper** (*Lycaena dispar*) is widespread in Bulgaria and is often found in damp habitats near rivers, as is the **Provencal Short-tailed Blue** (*Cupido alcetas*). Also in this habitat the widespread **Southern** and **Eastern Festoons** (*Zerynthia polyxena* and *Z. cerisy*) may be frequent or common.

Miscellaneous others

Finally mention should be made of two other butterfly species. In the north-east of Bulgaria in the area known as the Ludogorie is a stronghold for the **Scarce Fritillary** (*Euphydryas maturna*), which is quite widespread in the area and relatively easy to find. **Freyer's Fritillary** (*Melitaea arduinna*) has a very restricted distribution in south-east Europe, but it is widespread in north-west Bulgaria and sometimes the commonest fritillary on the wing. It also occurs along the Black Sea Coast in south-east Bulgaria. •

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All photos by the author.

A much fuller account of the butterflies of Bulgaria can be found on the BC-EIG country pages at <http://www.bc-eig.org.uk/countries.html#bulgaria>.

Conserving the Danube Clouded Yellow in Romania

by Martin Davies



◀ Danube Clouded Yellow (*Colias myrmidone*), male

Working out how to make such a plan effective on the ground is challenging however and needs a carefully co-ordinated approach.

Establishing a baseline, 2014

EIG supported work to gather data on the species' current status in the key Romanian sites. In 2014 EIG helped fund a student, Robert Waltz, supervised by Matthias Dolek and Safian Szabolcs, to survey some of the Romanian sites in the Gheorgheni area. Matthias Dolek was supported by ANL, the Bavarian Academy for Nature Conservation and Landscape Management. This fieldwork provided an invaluable baseline reference.

Searches in 2015

Mike Prentice and I also gathered together other published and unpublished data from various sources regarding sightings in the Apuseni and Gheorgheni areas. We were helped in particular by Safian Szabolcs, Csaba Vizauer, Levi Szekeley, Andrei Crisan, Paul Kirkland and Vlad Dinca. Then in 2015



◀ Danube Clouded Yellow (*Colias myrmidone*), female

Larval food plant

Most of the eggs we found appeared to be freshly laid, always on *Chamaecytisus* species. The plants in the Gheorgheni area appeared to be *Chamaecytisus triflorus*. However at least two other different species of *Chamaecytisus* were noted but identification to specific level is challenging. Most of the broom plants were in full flower in May, but were in seed in July/August. Danube Clouded Yellow lay their eggs only on the younger and re-sprouting shoots, never the older branches. The eggs are usually positioned within 3-10 cms of the tip of the young shoots which unfortunately makes them very susceptible to damage from grazing.

Local agricultural systems

The agricultural system in the Apuseni mountains is largely low-intensity grazing, with small mixed herds of cattle, goats and horses,

we attempted to visit as many known sites as possible in these two areas. Danube Clouded Yellow is bivoltine in Romania and we therefore made trips in May and August to coincide with the flight times of the two broods. In August we were joined by two other EIG members - Simon Spencer and Kevin Tolhurst. By coincidence, another EIG member Dave Plowman also separately visited the Gheorgheni area in August 2015 and sent us his sightings.

Mike and I spent one week in Romania in May reconnoitring the sites for more intensive efforts when we returned to the same areas in August. On both visits, we searched the two key areas where the butterfly had been seen in recent years - in the Apuseni mountains west of Cluj and then further east in the hills north of Gheorgheni and Lazarea. Adult Danube Clouded Yellows were seen

on both trips, with some 40+ adults noted in 3 days in May but an amazing 485+ on 7 days in August; it seems that the second brood is very much more numerous than the first. In August, we observed eggs being laid on shoots of the larval food plant, *Chamaecytisus* (broom) species, and we also searched for eggs, locating at least 40 during our 7 days in August. We gathered GPS fixes and habitat data for all the locations where we saw adults or found eggs, using data protocols proposed by Matthias Dolek.



Chamaecytisus species, ▶ probably *C. triflorus*.

The Danube Clouded Yellow (*Colias myrmidone*) once occurred across a range of countries in eastern and central Europe but has everywhere been in rapid decline.

It has apparently now disappeared completely from Austria, Bulgaria, Czech Republic, Germany, Hungary, Latvia, Lithuania and Slovenia. The only known current or recent records in Europe come from two sites in Poland, a few local areas in Slovakia and Belarus and two areas of Romania. A European Action Plan to conserve the species was compiled by Pavel Marhoul and Matthias Dolek and has now been adopted by the European Union.



► Egg of **Danube Clouded Yellow** (*Colias myrmidone*)



▲ **Danube Clouded Yellow** habitat – hill-slope with flowering *Chamaecytisus* species.

tended by a few herders. The hay-fields are often cut by hand scythe and gathered with hay rakes by the families working together, producing characteristic small domed hay stacks. The *Chamaecytisus* itself is highly susceptible to grazing pressure and mainly now remains only on the steeper slopes, less accessible to the cattle. It also occurs in the edge of the surrounding woodland, growing in amongst the Birch and Aspen trees and scrub which has a tendency to invade the grassland areas unless kept in check.



▲ **Low-intensity grazing in the Apuseni Mountains: good management in a good site for Danube Clouded Yellow.**

In part of the Apuseni that we visited in May, the scrub was being cleared by hand with a team of local people cutting the individual small saplings, presumably to maintain the openness of the area for the grazing animals. However in the Gheorgheni area in particular, some parts were subject to much more intensive sheep or cattle grazing and on the shallower slopes some of the fields appeared to have been re-seeded.

Alarmingly, some of the currently best sites for Danube Clouded

Yellow in the Gheorgheni area had recently been planted with young Sitka Spruce saplings across the entire hillside, augmented with Sycamore and Larch saplings in the gullies. Such afforestation was focussed on the steeper slopes of little or no value for grazing, but it is these same areas that are of highest value for the butterfly. Good numbers of Danube Clouded Yellow were seen on some of the recently afforested slopes. However, this is false comfort. Whilst the butterfly might seem even to benefit in the short-term through the

land edge situations as well as in the open grasslands and Matthias Dolek has commented that it should perhaps be considered as a species of light woodland. However, the extent to which the butterfly is able to hang on within small open patches within a more heavily forested landscape is unknown.

Rapid progress

We collated all the data from our 2015 fieldwork and, at their request, sent it through to our contacts in the Romanian government. They were in the process of defining new areas for Natura 2000 designation to help protect the Danube Clouded Yellow and so greatly welcomed our data. We expected the designation process to be long and drawn-out. Imagine our amazement therefore when we were informed just three months later that four new designated sites had been officially approved using our information, with two of them based largely on the data we had sent through! This was a hugely gratifying result and just goes to show what can be done if we focus on collecting the right information and put it into the right hands.

However, we realised that collectively we all needed to gain a much better understanding of how the landscapes are currently owned and farmed, and the economic drivers that are either supporting the existing system or bringing pressures for change. In 2016 EIG committed some funding to support Matthias Dolek and Jacqueline Loos, and their work with Czaba Vizaeur and Romanian colleagues I Goia, A Kastal, H Hedrich, L Rakosy

and F Pacurar, which helped further fieldwork and established good liaison with the local farming communities. A trip by another EIG member, Mike Williams, in 2016 also investigated Danube Clouded Yellow sites in Belarus and found several colonies.

Future Plans

In mid August 2017 several of us plan to explore areas of possibly suitable habitat in Bulgaria, a country from where the species supposedly disappeared many years ago (but could just be hanging on somewhere).

An important new project is planned in Romania for 2017-2019, hopefully with financial support from the German Umweltbundesamt (Federal Environment Agency). If this funding is secured, EIG has committed to provide some matched funding. The project will include additional field work on the ecology of Danube Clouded Yellow, close contact with local administration and land-owners and land-users, and provide suggestions for management plans of the Natura 2000 sites, based on a cooperative approach and hopefully acceptance by land-users and owners. Designation of the key sites is one thing, but only when the future management of these areas is secured can we reasonably hope to safeguard the last few remaining populations of this beautiful yet endangered butterfly for the long-term. •

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All photographs by Martin Davies.
This is an updated version of the report in EIG 18.



ESTONIA



ESTONIA

Surprising Estonia

by Tony Hoare



◀ Scarce Fritillary (*Euphydryas maturna*)

on the list with which Adrian supplied us, notably the **Poplar Admiral** (*Limenitis populi*), **Pallas's Fritillary** (*Argynnis laodice*) and **Scarce Fritillary** (*Euphydryas maturna*) together with a variety of other northern Fritillaries, the **Yellow-legged Tortoiseshell** (*Nymphalis xanthomelas*), the **Woodland Brown** (*Lopinga achine*) and a species that has long eluded me, the **Cranberry Blue** (*Plebejus optilete*).



▲ Scarce Fritillary (*Euphydryas maturna*)



▲ Chestnut Heath (*Coenonympha glycerion*)

butterfly on our first stop, what a fantastic start!

The others had already seen both **Poplar Admiral** and **Woodland Brown** and so I was very keen to get going next day. We drove to a site new to the others which was known to have both species and the **Woodland Brown** soon made its appearance but proved very difficult to photograph as it always stopped flying under cover. A number of **White Admirals** (*Limenitis camilla*) flew down the track raising hopes of **Poplar Admiral** but we saw none of that butterfly. We did see numbers of **Broad-bordered Bee Hawk Moths**

(*Hemaris fuciformis*) nectaring at the abundant flowers along the forest track. Further stops provided us with ample chances to photograph **Lesser Marbled Fritillary** (*Brenthis ino*), **Heath Fritillary** (*Melitaea athalia*), **Chestnut Heath** (*Coenonympha glycerion*) and both **Purple-edged Copper** (*Lycaena hippothoe*) and **Large Copper** (*L. dispar*). **Chestnut Heath** and **Lesser Marbled Fritillary** were to become familiar butterflies and were widespread while we were in Estonia. Towards the end of the day the others agreed to make another try for **Poplar Admiral** and we were at last successful, giving me my second life butterfly of the trip.

my special wish, the **Scarce Heath**. I had feared that we might be too late for the butterfly and so it proved – the **Chestnut Heath** was abundant and we found a mated pair of **Mazarine Blues** (*Cyaniris semiargus*) but no **Scarce Heath**. We spent that night and the next in an immaculately kept holiday house just outside the little town of Tori in the province of Pärnumaa, to the south-west of the country, known for its horses. On both mornings we were entertained by a pre-breakfast visit from the **Yellow-legged Tortoiseshell** which gave us a keen appetite!

We started the next day with a walk through some woods where, to my joy and relief, we found a couple of **Scarce Fritillaries** for everyone to see and photograph. My joy was even greater when we found a magnificent male **Large Copper** as well, together with a **Purple Emperor** (*Apatura iris*) which posed helpfully on the ground and **Titania's Fritillary** (*Boloria titania*) as well. The afternoon was spent in a completely different habitat, among the sand dunes of

Ever since I can remember I have wanted to see the Scarce Heath (*Coenonympha hero*), one of Western Europe's rarest butterflies. So when my friend Adrian Hoskins, who has been responsible for most of my finest butterfly experiences, announced that he was going to Estonia to see the species I did not hesitate to sign up for the trip.

I will admit however that I knew almost nothing of Estonia except for its location on the Eastern shore of the Baltic and was somewhat sceptical as to what else we might see. On looking it up I discovered that I was right about its location on the south side of the Gulf of Finland, situated uneasily just to the west of St Petersburg. This implied that it had very cold winters by our standards and that it would be light nearly all night at the time of our visit in early July. It is a small country but its one and a quarter million inhabitants, who speak a language closely allied to Finnish, live mainly in the towns, leaving plenty of room for extensive forests. It also appeared to be pretty flat and to have lots of wetlands. As well as the **Scarce Heath** there were a number of other desirable species

Offshore on Saaremaa

I had to miss the first two days of the trip but arranged to meet the others on Saaremaa, Estonia's largest off-shore island. I was met at the bus station and we set off in the minibus towards the manor house that was our accommodation. On the way there we stopped in a woodland meadow to have a quick look at some Mulleins to see if we could find any larvae of the **Mullein Moth** (*Cucullia verbasci*). Despite the late hour there was still some butterfly activity, mostly **Black-veined Whites** (*Aporia crataegi*) but I was astonished suddenly to come across a **Scarce Fritillary**. I called the others over and made a dash for my camera which was still packed for travelling but the butterfly had flown before the others could get a good view. A life



▲ Estonian forestry track.

Tori, south-west Estonia

We left Saaremaa for the mainland and once there we visited a woodland site to look for **Arran Brown** (*Erebia ligea*) which provided us with our first sightings of **Wood White** (*Leptidea sinapis*) and **Geranium Argus** (*Aricia eumedon*) but only fleeting possible glimpses of our target through the trees. Then it was on to a site known to have



ESTONIA

Rannametsa and the Tolkuse bog, where we went looking for **Moorland Clouded Yellow** (*Colias palaeno*) and **Cranberry Blue**. However all the blues that we found proved to be **Silver-studded Blues** (*Plebejus argus*) and we saw no **Clouded Yellows** of any kind. The afternoon was not wasted as we saw a lovely Pool Frog (*Pelophylax lessonae*) which posed most obligingly beside our path.

Eastern Estonia

After our two nights in Tori we moved on to our final location,

▼ **Lesser Purple Emperor** (*Apatura ilia*)



▶ **Large Chequered Skipper** (*Heteropterus morpheus*)



Lokko Talu farmhouse in eastern Estonia, stopping in woods on the way. For two days we were regally entertained with an abundance of **Purple Emperors** and **Lesser Purple Emperors** (*Apatura ilia*) flying along the forest tracks and stopping to feed on droppings or carrion. We must have seen about twenty or thirty on the ground. We also had good sightings of the very charismatic **Large Chequered Skipper** (*Heteropterus morpheus*) with its utterly distinctive dipping flight.

Laeva forestry

Our second day in the woods of Laeva forestry brought the **Yellow-**



◀ Tolkuse raised bog.



▲ **Purple-shot Copper** (*Lycaena alciphron*)

◀ **Yellow-legged Tortoiseshell** (*Nymphalis xanthomelas*)

afternoon of the second day in the woods he took us to a further site which was alive with *Argynnis* Fritillaries and I saw my third life butterfly of the trip that afternoon, **Pallas's Fritillary**.

Eastern border

Having started the trip in the western islands we finished on the eastern border, very close to Russia. A transect has been walked in the nature reserve of the Piusa caves for some time and Andro hoped to show us some of the local specialities.

He was spectacularly successful! We saw five of the smaller Fritillaries, **Knapweed Fritillary** (*Melitaea phoebe*), **Glanville Fritillary** (*M. cinxia*), **Heath Fritillary**, **Queen of Spain Fritillary** (*Issoria lathonia*) and

Weaver's Fritillary (*Boloria dia*), and the **Large Blue** again but the absolute star of the show was **Purple-shot Copper** (*Lycaena alciphron*) which in this location had such a heavy purple suffusion that the underlying copper was barely visible. Another item that caught our attention was the caterpillar of the **Alder Moth** (*Acronicta alni*) with its extraordinary filamentous appendages. We even saw the **Moorland Clouded Yellow** at last but only as a fly-by.

A memorable trip

We never did see the **Scarce Heath**, the butterfly that had brought me to Estonia and I only saw three species that were entirely new to me, so why was the trip as memorable as it was? Firstly we were very lucky with the weather, which was sunny throughout, secondly the excellence of our local guides, who were very knowledgeable about the butterflies and their whereabouts, thirdly the high standard of our accommodation where all our food was home cooked and of a very good quality. But above all it was the country itself with its abundance of flowers, wildlife and butterflies that give the butterfly photographer so many opportunities. It's a surprising place, Estonia, and I am so pleased that I went. •

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All photos by Tony Hoare.

This is a shortened version of an article in EIG 16.

Scandinavian Arctic

by Bernard Watts



◀ Open tundra near Alta.

Butterflies

I was amazed when I first learned that there are sixteen butterfly species that can only be found in Europe in the Arctic. I had thought that inhospitable climate and habitat would make butterflies scarce – at best!

On reflection, however, I realised that the short, cool summers and harsh habitat in the Arctic at low altitude are like those in the Central Alpine Chain at high altitude. And, of course, many specialised species are known there, so why not in the Arctic too?

Thus it is the case that several species or sibling species are found in both biotopes, but do not fly in the intervening country of northern Europe, north and south of the Baltic Sea.

It is, therefore, tempting to imagine that as the last ice-age receded, cold-loving species migrated from lowland regions of Europe upwards in the Central Alps and northwards to the Arctic. However, although this may be true in some cases, it is a doubtful explanation for those sixteen species not found elsewhere in Europe.

A more likely scenario is less parochial: probably many of the



▲ Northern Clouded Yellow (*Colias hecla*)



▲ Arctic Fritillary (*Boloria chariclea*)



▲ Polar Fritillary (*Boloria polaris*)



▲ Dusky-winged Fritillary (*Boloria improba*)

Scandinavia - here treated as being Norway and Sweden plus the narrow intrusion of Finland in the far north between them - is about 2000 km long from the southern coast of Sweden on the Baltic Sea to the Northern coast of Norway on the Barents Sea.

Of this, about 500 km lies north of the Arctic Circle, which itself is a little north of the northern coast of the Gulf of Bothnia where Sweden meets Finland. There is a spine of mountains in the west along much of the length of Scandinavia.

The large range of latitude and altitude creates great climatic and habitat diversity: gentle farmland in the south and much of the central part away from the mountains, with lakes and coniferous forest, to bleak tundra in the far north with Birch trees in the lowland and in sheltered gullies. Everywhere, bogs are common.

current true northern species spread into Arctic Scandinavia via western Russia and Finland from refugia in Asia or the Middle East.

Sibling Species

The following are found in Arctic Scandinavia (some also further south in Scandinavia) and in the mountains of southern Europe:

Mountain Fritillary (*Boloria napaea*), only in mountains
Thor's Fritillary (*Boloria (exClosiana) thore*), distinctive subspecies
Norse Grayling (*Oeneis norna*), genetically similar to Alpine Grayling (*O. glacialis*)

Arctic Woodland Ringlet (*Erebia polaris*), former subspecies of Woodland Ringlet (*E. medusa*)
Dewy Ringlet (*Erebia pandrose*)
Northern Wall Brown (*Lasiommata petropolitana*), throughout Scandinavia
Alpine Grizzled Skipper (*Pyrgus andromeda*).

Arctic species

The following are restricted to Arctic Scandinavia and, in some cases, farther south in Scandinavia:
Northern Clouded Yellow (*Colias hecla*), open tundra or mountains
Pale Arctic Clouded Yellow (*Colias nastes*), sheltered bogs or nearby

open slopes
Northern Glandon Blue (my name) (*Argiades aquilo*), rocky outcrops
Arctic Fritillary (*Boloria (exC.) chariclea*), open tundra or mountains
Polar Fritillary (*Boloria (exC.) polaris*), open tundra or mountains
Dusky-winged Fritillary (*Boloria (exC.) improba*), open tundra or mountains
Frejja's Fritillary (*Boloria (exC.) frejja*), sheltered bogs or nearby open slopes
Frigga's Fritillary (*Boloria (exC.) frigga*), bogs
Lapland Fritillary (*Euphydryas iduna*), sheltered bogs or nearby open slopes



ARCTIC

- Arctic Grayling** (*Oeneis bore*), open tundra or mountains
- Norse Grayling** (*Oeneis norna*), bogs or nearby open slopes, often in mountains
- Baltic Grayling** (*Oeneis jutta*), sheltered bogs, southward to central region
- Arctic Ringlet** (*Erebia disa*), boggy areas in mountains
- Lapland Ringlet** (*Erebia embla*), lowland bogs, usually among trees
- Arctic Woodland Ringlet** (*Erebia polaris*), lowland woods
- Northern Grizzled Skipper** (*Pyrgus centaureae*), bogs, southward to central region.

Arctic Grayling ▼
(*Oeneis bore*)



▲ Sheltered gully below open tundra, near Alta.



Flora on south-facing slope, ► open tundra near Alta.



and road access make Mt Njulla a favourite place to look for them. Numerous bogs around the village add to the range of species found in this one location. The Kungleden, a great long-distance path, starts southward in Åbisko. It is worth taking this path for the sight of the river surging through rocky gorges and because after a kilometre or two in Birch woodland with the river to the right one comes across an open bog on the left. Most of the bog species fly here. One may wander up the slope onto other bogs.

Getting to Åbisko via Kiruna

About one hour's drive east of Åbisko is Kiruna, a town dedicated to iron ore which is taken to Narvik on the Norwegian coast by train via Åbisko. Often I've sat on the high ground and counted the invariable 78 trucks.

There is accommodation in Åbisko, but it is not inconvenient to stay in Kiruna and do the drive to Åbisko each day – the chair lift doesn't start until 0930 and although it may be light all night one needs the sun to rise a little higher in the sky before looking for butterflies. Arctic species fly, like alpine species, when the sun shines regardless of temperature, but disappear when it stops.

To get to Kiruna, it is best to take a late flight to Stockholm from Britain, stay overnight in a nearby hotel and then take an early morning flight to Kiruna and pick up a hire car. You can usually get in quite a decent day's butterflying on the day you arrive, including Åbisko, though the bogs etc. around Kiruna are rewarding too. It's also worth driving to Gällivare, stopping off en route and, in particular, looking near the bogs within 10 km of Gällivare by the road eastward to Luleå.

Bogs

Bogs are very treacherous. Once I was photographing a **Large Heath** (*Coenonympha tullia*) on a bog and having been still for a minute or so realised I had sunk nearly to my knees. It was a very delicate operation to extract myself and manoeuvre to dryer ground. But one can often find the bog species by the roadside nearby in ditches or on waste ground where there are flowers in abundance in high summer.

(2) Alta

The second location is Alta on the Norwegian coast, a day's drive to

the north of Kiruna. If, as is likely, you are driving from Kiruna, you can take the coastal road from Narvik along the Norwegian coast, but it is better to take the more direct route northward across an arm of Finland and then onward across Finnmark, the bleak northern region of Norway. At Alta on the coast the climate and habitat are ameliorated by the Gulf Stream.

The most notable place is on and around Mt Grønnåsen, near the hamlet of Gargia a little inland from Alta. Here there is true tundra at altitudes of no more than about 350 metres at most, open and exposed. In this respect it is similar to the habitat at higher altitude on Mt Njulla in Sweden. Melted snow runs off in small valleys and gullies, where the shelter lets them become nice and warm on sunny days, and the vegetation is relatively verdant, with Birch trees not far off normal height. The higher, open tundra is rarely so warm, but it is there that several Arctic species fly and it only needs the sun to come out for them to appear. Open bogs lie among the trees at lower altitude and they too are very good for other butterfly species.

Good and entirely different habitat may be explored by the coastal road south of Alta by the fjord. In particular, there is a disused copper mine with obvious outcrops of excavated stone whose grey colour matches the wing-colour of **Northern Glandon Blue** (*Agriades aquilo*) found there. •

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All photos by Bernard Watts.

ExClossiana Species

Current PC (pure cladistic) taxonomy lumps former genera *Clossiana* and *ProClossiana* into *Boloria*. Of the ten *exClossiana* (*exC.*) species (Pearl-bordered Fritillary and relatives), eight are found in the Arctic, while at most five can be found in the Alps and only three at low altitude in southern Europe. Among all European butterfly groupings, the *exClossiana* (along with *Oeneis*, arguably) show the

most remarkable bias towards northern habitats.

Two Arctic Locations: (1) Åbisko

Åbisko is a village in the northernmost part of Sweden, lying along the southern shore of a vast lake, Torneträsk. Slightly to the west of the main village is Mt Njulla where most of the true arctic species fly. Also, no doubt, they fly in other mountains in this region, but a chairlift part way up the mountain



The Alps – endemics and others

by Marian Thomas

When, in the late 1980s, I acquired a copy of Higgins and Riley's *A Field Guide to the Butterflies of Britain and Europe*, I was immediately fascinated by the distribution maps. Especially, I saw that one recurring pattern marked the arc of the Alps, and so began an ambition to see the huge diversity of butterflies there.



Small Apollo ▲
(*Parnassius phoebus*)



False Mnestra Ringlet ►
(*Erebia aethiopella*)

The species diversity in the Alps is impressive, reflecting differences in geology, altitude and climate, and also the evolutionary legacy of glaciation cycles. Butterflies are often abundant, as much favourable habitat remains.

Before we get on to the true endemics, we should note that there is a set of around twenty characteristic species which are found in various places outside the Alps, but which occur as a complete set only in the Alps. For example, outside the Alps, **Grisons Fritillary** (*Melitaea varia*) occurs only in the Apennines whilst **Blind Ringlet** (*Erebia pharte*) is found only in the Tatras, and so on.

Exactly how many species are considered endemic to the Alps depends on the details of taxonomy – some authorities classify **Darwin's Heath** (*Coenonympha gardetta darwiniana*) as a full species rather than as a subspecies of **Alpine Heath** (*C. gardetta*), whilst it is only recently that the **Alpine Zephyr Blue** (*Kretania trappi*) has been split from other zephyr blues. It also depends on exactly where the Alps begin. **Piedmont Anomalous Blue** (*Polyommatus humedasaе*) (wholly) and **Larche Ringlet** (*Erebia scipio*) (partly) occur in areas which may strictly be "prealpine" rather than in the Alps themselves.

In Europe west of the Urals, **Small Apollo** (*Parnassius phoebus*) lives

only in the Alps, although its range also extends from the Urals to Kamchatka and across to the Rockies.

The above apart, the list of "Alps endemics" comprises **Little Fritillary** (*Melitaea asteria*), **Warren's Skipper** (*Pyrgus warrenensis*) and eleven or so *Erebia* ringlets.

Of those *Erebias*, **Lesser Mountain Ringlet** (*Erebia melampus*) is the most common and widespread, probably followed by **Mnestra** (*E. mnestra*), **Swiss Brassy** (*E. tyndarus*) and **Eriphyle** (*E. eriphyle*). Let's now take a frenetic tour to round up the more restricted endemics and some other species.

South-west

Starting in the south-west, in the French region Provence-Alpes-Côte d'Azur and the Italian sections of the Maritime and Cottian Alps, species diversity is enhanced by typical Mediterranean butterflies (mostly below about 1500m). Higher up, the *Boloria* species **Shepherd's** and **Mountain Fritillaries** (*B. pales* and *B. napaea*), common and characteristic throughout the Alps, are joined by a third, **Balkan Fritillary** (*B. graeca*). Its altitudinal range is lower than, but overlaps with, the other two. **Balkan** is found only in a few areas, however – mostly around the France/Italy border and in the Écrins National Park.

Already in this region our quest for Alpine endemics begins.



▲ Blues congregation, Lac des Dix

Warren's Skipper has scattered colonies. **False Mnestra Ringlet** (*Erebia aethiopella*) is easy enough to find around and below the high passes at, or on either side of, the France/Italy border, from the Mercantour National Park (eg Col de la Lombarde) northwards (eg Col Agnel, Col d'Izoard) and into the area around Briançon. The (semi)-endemic **Larche Ringlet** is less common, and its fondness for bare scree makes it trickier to approach. Col de Larche itself is perhaps one of the more user-friendly sites. The area east of Briançon also affords opportunities for pursuing the **Larche**, but may require even more skill in balancing on scree, before we head out of the Alps towards Turin.

Switzerland (and Italy – and back)

A determined focus on rarer *Erebia* alone might lead us straight to the Milan motorway, but that would forgo the Rhône valley area in Switzerland, so our tour loops around to the Great St Bernard Pass and down to Martigny. The wide valley from here to Brig enjoys sunny and warm conditions, and hosts species more characteristic of southern Europe. A trip up one of the side valleys, passing through a succession of habitats with altitude, can produce a huge range of species. But it's also worthwhile to head straight to the end – for example, to the Lac des Dix at the top of the Val d'Héremence. At peak season here, a walk along the lake can yield plentiful congrega-



▲ Alpine Zephyr Blue
(*Kretania trappi*)



▲ Rätzer's Ringlet
(*Erebia christi*)



▶ Sudeten Ringlet
(*Erebia sudetica*)

tions of blues and fritillaries, together with **Small Apollos**.

A trip from the Rhône valley through the Lötschberg tunnel into the Bernese Oberland leads to the rare **Sudeten Ringlet** (*Erebia sudetica*), found between 1100 and 1900m around Grindelwald. At higher altitude there is a small population of the Alpine endemic **De Lesse's Brassy Ringlet** (*Erebia nivalis*), whose main range is in Austria.

Continuing eastward along the Rhône towards the Visp area brings us into the range of (arguably) the only Alpine endemic blue, **Alpine Zephyr Blue**. One stronghold is above Steg and Ausserberg, where narrow roads wind up the huge south-facing slope of the main valley. A diversion down the Mattertal towards Zermatt takes us to a **Warren's Skipper** outpost, with a hike up to Täschalp perhaps affording the best prospect of success.

Proceeding past Brig and over the Simplon Pass, the route reaches into the territory of **Rätzer's Ringlet** (*Erebia christi*). But this endemic is elusive in the Swiss valleys south of the Simplon, only occasionally

gliding down from the top of inaccessible cliffs. It may be slightly easier to find over the Italian border, in the vicinity of Alpe Veglia and Alpe Devero. Around there, and continuing northwards up Val Antigorio and Val Formazza, steep grassy slopes above 1800m are the habitat of the most westerly populations of another Alps endemic, **Yellow-banded Ringlet** (*Erebia flavofasciata*).

We head back towards Domodossola and eastwards, re-entering Switzerland by the Valle Centovalli road. Some interesting species fly here, including **Chequered Blue** (*Scolitantides orion*), **Large Chequered Skipper** (*Heteropterus morpheus*) and **Hungarian Glider** (*Neptis rivularis*). This canton, Ticino, affords further opportunities for **Yellow-banded Ringlet** (in the high passes in the north, south of the Val Bedretto corridor) and, in the far south, the chance of another endemic, **Stygian Ringlet** (*Erebia styx*).

Moving on into the canton of Graubünden, we have the first chances of seeing **Little Fritillary**, the only Alpine endemic fritillary.



◀ Little Fritillary
(*Melitaea asteria*)

mountains above about 2000m (eg Stubnerkogel).

We must go further east to find our next Alps – and indeed Austrian – endemic, the **White-speck Ringlet** (*Erebia claudina*). Its westernmost population is in the Hohe Tauern, around Mallnitz, then further east, scattered throughout the Niedere Tauern. The males are more restrained than the females in their display of submarginal white spots on the upper hindwing, and it can take a very close approach to realise that you are looking at a **White-speck** rather than a **Blind Ringlet** (the latter are common here).

... and Slovenia

Only **Lorkovic's Brassy Ringlet** (*Erebia calcaria*) remains to complete our quest. There are some colonies in the Austrian Karawanken Alps, but these are rather off-piste, so we cross the border into Slovenia, to find it in the Triglav National Park. •

Marian Thomas

All photos by Marian Thomas.

It is present in scattered populations across the canton (as is **Warren's Skipper**); one of these occurs around the Albula Pass. **Yellow-banded Ringlet** is present in the Oberengadin area.

But we are now suffering from endemics overload, and take a walk from S-chanf up Val Trupchun, which can be most rewarding, especially for the range of blues. The Unterengadin, in which the National Park lies, also holds a population of **Stygian Ringlet** (eg around the Ofenpass).

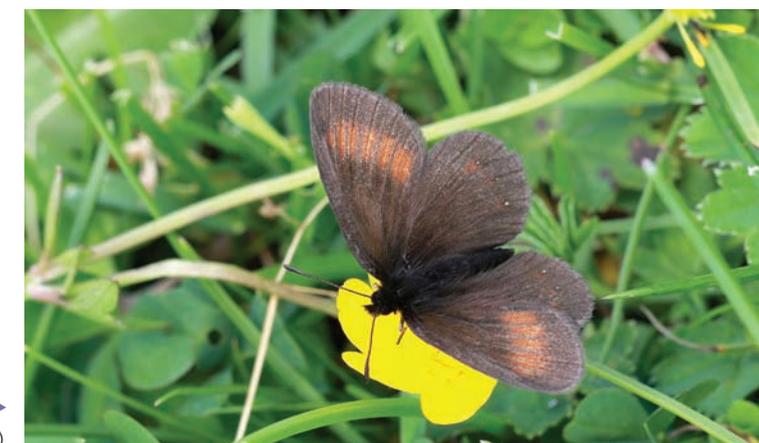
Austria

We could go on into the Südtirol area of Italy and then the Dolomites for more **Stygian**, and for the very similar **Styrian Ringlet** (*Erebia stirus*) – perhaps not strictly an Alps endemic, as its range also extends southwards into the NW corner of Croatia. But we're running out of time, so we head into Austria via the Reschenpass.

Here in the western Tirol, there is a further chance of **Stygian** and possibly **Styrian** (the latter also in

the Karawanken). Past Innsbruck, the mountains around the Zillertal eastwards are a major area for **Little Fritillary**, but perhaps our easiest course is on to the Grossglockner Hochalpenstrasse. This is an expensive and touristy toll road but worth it for the spectacular scenery and butterflies. Along here, near the eastern edge of their range, **Little Fritillaries** are quite easy to find, looking decidedly un-fritillary-like as they buzz low over the sward.

Also on the road, around Franz Josefs Höhe, we may find **De Lesse's Brassy Ringlet** amongst the other high alpine species. From here, its core range extends eastwards, on



▶ White-speck Ringlet
(*Erebia claudina*)



Italy – an under-rated butterfly destination

by Mike Prentice

For some reason Italy doesn't get the attention it deserves from British lepidopterists. France, Spain and Greece seem to attract more interest and yet Italy has more species than any other European country as well as, in my view, the best food in Europe.

Italy's species richness is due in large part to its long northern border which encompasses most 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*. **Ratzer's Ringlet** (*Erebia christi*) is perhaps Europe's rarest species and only flies in a small area either side of the Swiss-Italian border. After searching for it in the correct place at the right time of year on at least 5 occasions without any luck, I was at last successful in 2016!

The *Erebias* are principally confined to the Alps, from **Larche Ringlet** (*E. scipio*) and **False Mnestra Ringlet** (*E. aethiopella*) in the west to **Styrian** (*E. stirius*) and **Stygian Ringlets** (*E. styx*) in the east, with many more in between.



Cogne Valley

Another favourite place in the north of Italy is the Cogne Valley which leads up to Gran Paradiso, Italy's first National Park established in 1922 to protect the Ibex. The valley is home to the **Piedmont Anomalous Blue** (*Polyommatus*



▲ Piedmont Anomalous Blue (*Polyommatus humedasa*) (photo by Mike Prentice)



▲ Autumn Ringlet (*Erebia neoridas*) (photo by Nigel Peace)



▲ Elban Heath (*Coenonympha corinna elbana*) (photo by Nigel Peace)



▲ Sardinian Meadow Brown (*Maniola nurag*) (photo by Nigel Peace)

dolus virgilius), the Gran Sasso which contains the highest peaks in the Appenines, the wild and seldom visited Maiella, and Monte Pollino. The southern half of Italy is also home to the **Italian Marbled White** (*Melanargia arge*).

Endemics

Italy has a large but fluctuating number of endemics (or near-endemics shared for example with Corsica), depending on the taxonomy of the moment. The updated list at the back of this magazine creates one such species – **Italian Festoon** (*Zerynthia cassandra*), now split from **Southern Festoon** (*Z. polyxena*) – but removes another, **Gallo's Anomalous Blue** (now part of *Polyommatus ripartii*). **Elban Heath** (*Coenonympha corinna elbana*) has in the past been treated as a full species but is currently considered part of **Corsican Heath**.

There are several restricted-range members of the *Hipparchia* genus that are endemic to Italy. The **Italian Grayling** (*H. neapolitana*) flies near Naples whilst Sicily has the **Sicilian Grayling** (*H. blachieri*) and offshore the island of Ponza has the **Ponza Grayling** (*H. sbordonii*). **Southern Grayling** (*H. aristaeus*) is now confined to Sardinia and Corsica where it is joined by another

Tyrrhenian endemic, **Corsican Grayling** (*H. neomiris*). Off the north coast of Sicily on the volcanic Eolian islands the **Eolian Grayling** (*H. leighebi*) is probably best seen on the island of Vulcano, a short hydrofoil trip from Sicily.

Sicily

Sicily is a fascinating island with an amazing mix of cultures and culinary influences. It also has a fascinating mixture of butterflies including the endemic **Sicilian Marbled White** (*Melanargia pherusa*), and geographically isolated populations of both **Aetherie Fritillary** (*Melitaea aetherie*) and **African Grass Blue** (*Zizeeria knysna*).

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. Amongst those to look out for are the **Corsican Small Tortoiseshell** (*Aglaia ichnusa*), **Corsican Swallowtail** (*Papilio hospiton*), **Corsican Heath** (*Coenonympha corinna*) and **Sardinian Meadow Brown** (*Maniola nurag*). •

Mike Prentice

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The Heaths (genus *Coenonympha*) of France

by Roger Gibbons

The *Coenonympha* group is sometimes rather under-appreciated and not often high on must-see lists of species for visitors to mainland France.

There are eight species in this group (or nine, depending on taxonomic preference) and they have very different ecological requirements.

They are:

Scarce Heath (*C. hero*)

False Ringlet (*C. oedippus*)

Large Heath (*C. tullia*)

Alpine Heath (*C. gardetta*)

Darwin's Heath (*C. gardetta darwiniana*)

Chestnut Heath (*C. glycerion*)

Pearly Heath (*C. arcania*)

Dusky Heath (*C. dorus*)

Small Heath (*C. pamphilus*)

Several are limited to wetlands: *hero*, *oedippus*, and *tullia*. These are all scarce and very localised, mainly because of the drainage of wetlands. Three are found at high altitude: *gardetta*, *darwiniana*, and (usually) *glycerion*. The other three, *arcania*, *dorus* and *pamphilus*, are generally low to medium altitude species.

The hindwing ocelli (always visible as this genus almost never settles with open wings) may well have an important survival value in that they resemble eyes and thus tempt predators to attack there, as predators generally attempt to disable their prey with a bite at the head. It is not unusual to see *Coenonympha* species with a section of the hindwing missing.

Scarce Heath (*C. hero*)

An increasingly rare butterfly of the wetlands. It now occurs in very few places in eastern France, and its future existence is threatened by the continued destruction of its habitat, despite the fact that the butterfly itself is protected. It is a beautiful butterfly for which photographs can only just begin to do justice. The male is appreciably darker than the female, so the



▲ Large Heath (*Coenonympha tullia*)



▲ Chestnut Heath (*Coenonympha glycerion*)

sexes are quite easy to identify in the field.

False Ringlet (*C. oedippus*)

This is a very appealing member of the *Coenonympha* genus, despite its erroneous name: the English names given by the early entomologists were adopted in the books of the time and have remained unchanged. It is a species of the wetlands and is highly localised in France and across Europe, the strongholds being in south-western France and in northern Italy.

It is threatened because of drainage of the wetlands, even though the species is now protected. Its habitat is damp meadows adjacent to scrubland, and always close to open water. The photo was taken at an isolated and protected site in Isère which I was very kindly shown by the local conservation organisation. The ecological requirements in terms of dampness seemed to be very

precise for *oedippus*, as evidenced by the fact that it confined itself to regions of specific dampness, not too dry and not too wet, making it something of a Goldilocks butterfly.

Large Heath (*C. tullia*)

A species of the wetlands of the northern areas of Europe, with very limited distribution in north-eastern France. The Lafranchis distribution map (<http://diatheo.weebly.com/coenonympha-tullia.html>) shows it as occurring in a few small and separated colonies in eastern France. It occurs in the UK only in parts of the north of England and in Scotland. The variation, even within small colonies, may be quite marked in terms of the hindwing ground colour, ocelli, and discal line.

It is widespread but localised across Europe, with several distinct subspecies. According to Tolman and Lewington, the subspecies that occurs in France is *tiphon*. Other works differ, and there appears to

be no clear agreement on the taxonomy of the various subspecies in Europe.

It could be confused with the more widespread **Chestnut Heath** (*C. glycerion*) with which it sometimes flies, but the distinguishing characteristic is that the white discal line reaches the hindwing costa in *tullia* but not in *glycerion*.

Alpine Heath (*C. gardetta*)

This is an Alpine altitude specialist occurring at altitudes over 1500m, normally over 2000m. It is relatively easy to identify, in France at least, because the bold black rings are (usually) all inside the white band. There is, however, considerable scope for confusion between *gardetta*, *darwiniana* and *arcania*, because of interbreeding, although an authoritative source states that *arcania* does not fly above 1700m so any putative *darwiniana* significantly above that level should be just that.



▲ Scarce Heath (*Coenonympha hero*)



▲ False Ringlet (*Coenonympha oedippus*)



FRANCE

FRANCE

Darwin's Heath
(*Coenonympha gardetta darwiniana*) ▶

Alpine Heath ▼
(*Coenonympha gardetta*)



Darwin's Heath (*C. gardetta darwiniana*)

This is a localised butterfly of the Alps. Its taxonomy is uncertain, and it is likewise difficult to identify with certainty because of its similarity to *arcania* and *gardetta*, the natural variability of all three taxa, and the interbreeding that occurs in certain locations.

These are some of the key identification points:

1. hindwing white band: the *darwiniana* band is a similar shape to *arcania* but less dentate, and narrower, in the centre, whereas the *gardetta* white band is of broadly constant width.
2. hindwing ocellus in space 6: in *darwiniana* it is inside the band at the internal edge, whereas for *gardetta* it is toward the outer edge of the band, and in *arcania* it is generally just outside the band. This is however subject to much variation, especially in *gardetta*, where all the ocelli may be located centrally within the band.
3. colour of ocelli: the *arcania* ocelli outer rings are generally orange, whereas for *darwiniana* they are yellow, and for *gardetta*

◀ **Pearly Heath**
(*Coenonympha arcania*)



▲ **Small Heath (*Coenonympha pamphilus*)**

very pale.

However... it is known that hybridized populations of *darwiniana* and *gardetta* (and sometimes *arcania*) occur in the region around the Col de Larche on the France/Italy border. These are known as the form *philedarwiniana*.

Chestnut Heath (*C. glycerion*)

This is a very widespread species, encountered at most high altitude locations, even though it is not exclusively a high altitude species. There is a large degree of variation between individuals, even within the same locality, from strong ocelli

to none at all, as well as variation in colouration - in fact the majority of individuals could not be described as chestnut. The books usually say that *glycerion* can be identified by the series of post-discal spots with brilliant white pupils. However, this is somewhat unhelpful given that the form *bertolis*, which has no ocelli at all, is not uncommon at high altitudes.

There is a very similar taxon of uncertain taxonomical status, the **Spanish Heath (*C. glycerion iphioides*)** which flies in northern Spain and does not occur in France. In some works it is classified as a

◀ **Dusky Heath**
(*Coenonympha dorus*)

separate species, while in others it is classified as a subspecies of *glycerion*. There is also some uncertainty relating to the taxonomic status of the populations that occur on the French side of the Pyrénées, which may constitute a third taxon: *C. g. pseudoamytas*.

Pearly Heath (*C. arcania*)

Arcania is an attractive butterfly, with bright orange-ringed ocelli when fresh, and often very common and widely distributed in southern France.

Dusky Heath (*C. dorus*)

A heat-loving butterfly limited to the far south-east (in France), sometimes quite common. It is quite intricately marked and can vary between quite richly coloured, to quite "washy" even when fresh. The underside silvery submarginal band is usually visible, and it is hard to imagine what survival value this may have for *dorus*.

Small Heath (*C. pamphilus*)

This species is common in the UK, but although widespread in France, it does not seem quite so numerous, even in the south. There does appear to be quite a lot of variation, with some (very) vestigial post-discal spots on the hindwing. The southern form *lyllus* is much lighter and more sandy-coloured, and the discal line is more complete and with strong contrast either side. •

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All photos by Roger Gibbons.

Looking for the elusive Lefèbvre's Ringlet (*Erebia lefebvrei*) in the Pyrénées

by Jude Lock

My local area is known as the Pays Toy which comprises the valleys of Barèges and Luz-Saint-Sauveur and continues to the Spanish border at Gavarnie. It is the most southerly part of the Hautes-Pyrénées department.

The Hautes-Pyrénées is home to 159 butterfly species, fourteen of which are from the genus *Erebia*. The geographic isolation of the Pyrénées from other mountain ranges, the remarkable diversity of habitats, the geology, and wide range of climatic conditions together with a rich and specific plant life, has facilitated the development of such a large number of species.

The Pays Toy is the entry point for the Pyrénées National Park and the Néouvielle Nature Reserve. It contains some of the most spectacular scenery of the range including the Cirque de Gavarnie (a UNESCO World Heritage Site) and Mont Perdu, one of the highest Pyrenean peaks at 3355m.

Mountain butterflies

Mountain butterflies have developed efficient thermo-regulation strategies which enable them to survive in relatively 'marginal' conditions, with a short flight period in what can be unstable and variable weather conditions. The lying snow at higher altitudes throughout the winter months serves as protection by forming an insulating cover from the cold and wet. Air temperatures can fall as low as -25°C at 3000m.

Ringlets

Ringlets are difficult, if not almost impossible to identify on the wing, as the butterflies are predominantly dark brown in coloration, albeit with a few diagnostic coloured



▲ Winter beneath the Pic du Midi.



▲ Lefèbvre's Ringlet (*Erebia lefebvrei*), male



▲ Lefèbvre's Ringlet (*Erebia lefebvrei*), female



▲ Col de Tentes with lac des Espézières in the foreground.

bands and spots on the uppersides and undersides of the wings.

Fortunately for identification, not all mountain Ringlets emerge at the same period and some high-flying species, particularly those above 1800m, are only found within a specific habitat of rocky scree and low density flora. Butterfly populations of Ringlets here can vary greatly from year to year, depending on the climatic conditions. Poor weather in the early spring can

result in low butterfly numbers emerging in the summer.

Lefèbvre's Ringlet (*Erebia lefebvrei*)

One of our local species is the iconic Lefèbvre's Ringlet, a European endemic, present in the Pyrénées and the Cantabrian mountains. It was captured by Alexandre Lefèbvre near Barèges in the Hautes-Pyrénées and described by Boisduval in 1828.

The species is listed as Least Concern in the 2010 IUCN European Red List, and NT: quasi menacée in the 2012 Red List for France. Although considered rare in the Midi-Pyrénées, it is present in the Hautes-Pyrénées and Ariège, and can be locally abundant.

It is interesting to read from the handwritten script of the "Monographie de la vallée de Barèges", 1907 by J.P. Rondou, the Pyrénéen entomologist from the



Tourmalet. ►



▲ Lefèbvre's Ringlet (*Erebia lefebvrei*), male (photo by Nigel Peace)

local village of Gèdre, that he regarded *E. lefebvrei* as « assez commun », i.e. 'fairly common'.

You can find the species on the wing from late June until August, on rocky, rough grazing slopes and shale scree, often on limestone. These areas of sparse vegetation can be found at high altitudes. The butterflies fly rapidly and close to

the ground. I often observe specimens settled on sun-warmed rocks, or tucked into sheltered areas of scree. They raise their body temperature in cool weather by dorsal basking. The dark undersides also serve to absorb the warmth of the heat-retaining rocks. The males appear almost black, and both sexes have pronounced white pupils.

Identification notes by B.C.S. Warren

B.C.S. Warren, in his Monograph of the Genus *Erebia* (1936 British Museum), notes the following about *E. lefebvrei lefebvrei* (Boisd):

"The two chief characters of typical *lefebvrei* are the presence of the red-orange bands on the upper side of the forewings, and the large size of the black spots, which vary in number from three to five on both fore- and hindwings.

"An infallible test for the males, but one that can be observed only

in absolutely fresh specimens, is that all over the central area of the upper side of the forewings a dense mass of androconial scales can be seen.

"Typical *lefebvrei*, as a radical form, is confined to the Hautes-Pyrénées. Here it is widely distributed and probably occurs in all suitable localities, as well as in the adjoining mountains on the Spanish side of the range."

Where to see them

Lefèbvre's Ringlets are relatively sedentary, found within small pockets and do not disperse over large distances. Many sites are in inaccessible locations, so are not threatened by human development, with the exception of some of the ski areas. In addition the limited distribution area makes the species susceptible to longer-term threats, including reduced snow coverage and the disruption of eco-systems.

Most of the sites at altitude



▲ Web'obs species page for *Erebia lefebvrei*.

involve stiff rough walking. However, there are sites with easy access in the Barèges valley, on the rocky hillsides around the Col du Tourmalet (2115m). Another site with road access is above Gavarnie village, at the Col de Tentès (2208m), in the Parc National des Pyrénées. These areas are also rich for other alpine species.

Working towards a Butterfly Atlas for Occitanie

Occitanie is a new administrative region of France created in 2016 from the former regions of Midi-Pyrénées and Languedoc-Roussillon. Butterfly atlas work is ongoing and a printed atlas covering the new region will be published by the CEN-LR (Languedoc-Roussillon) in due course. In the meantime on-line atlases are well advanced.

Midi-Pyrénées

The atlas programme for the Midi-Pyrénées started at the end of 2008, and is coordinated by David Demergès from the Conservatoire d'espaces naturels Midi-Pyrénées (CEN MP), and EIG partner. 'L'Atlas des Rhopalocères et Zygènes de Midi-Pyrénées, un outil des sciences participatives', was presented at the EIG - Proserpine conference

in Digne-les-Bains, in 2013. The on-line atlas can be consulted at the CEN MP's website Web'obs (<http://www.webobs.cen-mp.org/>). It covers the eight departments of the former Midi-Pyrénées region: Ariège, Aveyron, Haute-Garonne, Gers, Lot, Hautes-Pyrénées, Tarn and Tarn-et-Garonne.

It comprises records from three databases, those of the CEN MP, Nature Midi-Pyrénées and the Association Naturalistes de l'Ariège. Each of these databases also regroups the records of many local naturalists and different organisations, including EIG. It is being continually fed with new records. There is a monograph for each species, detailing the number of records, the villages concerned, distribution before 1950 up to the present day, flight period, etc.

Languedoc-Roussillon

The online atlas covers the departments of the Aude, Gard, Hérault, Lozère and the Pyrénées-Orientales. The website is <http://www.libel-lules-et-papillons-lr.org/atlas/> •

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All photos by Jude Lock except where indicated.



Montes Universales, Spain

by Dudley Cheesman



◀ A view of Albarracin.

The first visit was from 27 July to 3 August 2013 and we were fortunate to have Paul Browning (author of *Butterflies of the Iberian Peninsula*) with us. Target species included **Hermit** (*Chazara briseis*), **Southern Hermit** (*C. priouri*), **Striped Grayling** (*Hipparchia fidia*), **Mother-of-Pearl Blue** (*Polyommatus nivescens*), **Spanish** and **Azure Chalkhill Blues** (*Lysandra albicans* and *L. caelestissima*), and **Spanish Argus** (*Aricia morronensis*). **Zapater's Ringlet** (*Erebia zapateri*) was also a target although the timing of the visit was early for this late-flying species.

The team was based in Albarracin, at the eastern edge of the Reserva. Albarracin is a delightful historic fortified Moorish town and a National Monument, at an elevation of c.1000m. The town has both hotel accommodation and a campsite. The main sites we visited are described in the following paragraphs.

The 'Dried Pond' Barranco, near Albarracin

This location comprises a former pond and wet area, dried out as a result of road improvements, a few km from Albarracin on the road to Pozondon, with a barranco leading northwards. On the team's first visit in warm sunshine butterflies

The Reserva Nacional de Montes Universales lies in central-eastern Spain between Teruel and Cuenca. The range of mountains embraces the Sierra de Albarracin and runs roughly south-east to north-west.

It is an area of some 1000 square km with an elevation between 1000 and 1900m, made up of patches of arable land in the low-lying areas mainly used for grain, and arid scrub, poplars, junipers and pine forest with occasional oak woods. The Tagus River rises here but there are many dry riverbeds, filled only by storms and late winter snow-melt. Summer temperatures are very high with little rain.

The Reserva and immediate area is said to hold some 140 butterfly species. EIG teams led by Simon Spencer visited the area in 2013 and 2016 in order to search for and map the distribution of some more notable ones.

◀ The Rambla de Monterde in overcast weather.



◀ Southern Hermit (*Chazara priouri*)

Rambla de Monterde

The Rambla de Monterde is a dry watercourse that heads northwards from a lay-by on the south side of the main road from Albarracin to Gea de Albarracin. The lay-by is above a triple tunnel built to allow melt or floodwaters to run into the Rio Guadalaviar. Scrub vegetation along banksides provided a distinct scent with forms of santolina and thyme amongst the diversity of plants. **Bath White** (*Pontia daplidice*) was much in evidence, and **Silver-spotted Skipper** (*Hesperia comma*) was identified in the dry riverbed. The butterfly fauna was similar to that seen at the previous site but it was along this rambla we discovered what was to be our only sighting of **Southern Hermit** (*C. priouri*); sharp-eyed readers will notice that one antenna tip was missing!

Noguera and Bronchales

On the basis of information received from a chance encounter with some Dutch butterfly enthusiasts, a trip was made to Noguera north-west of Albarracin on the A1512 road to search for the **Spanish Sooty Copper** (*Lycaena bleusei*). It was extremely cold in the early morning before the sun had risen above the mountains. We never did find the copper (unlike the team that visited the area in 2016), but this was an extremely rich area with considerable species diversity. High-lights included **Dark Green Fritillary** (*Argynnis aglaja*), **High Brown Fritil-**



▲ Striped Grayling (*Hipparchia fidia*)



▲ Spanish Chestnut Heath (*Coenonympha glycerion iphioides*)

Chapman's Blue (*P. thersites*) and **Spanish Chalkhill Blue**. Later, dozens of male Lycaenids were found on the outside of the culvert wall taking salts.

In the adjacent 'Dried Pond' area records included **Black Satyr** (*Satyrus actaea*), **Hermit**, **Striped Grayling** and **Sage Skipper** (*Muschampia proto*), but not **Southern Hermit**.

All three gatekeepers – **Gatekeeper** (*Pyronia tithonus*), **Southern Gatekeeper** (*P. cecilia*), and **Spanish Gatekeeper** (*P. bathseba*) – were seen throughout the week, together with **Grayling** (*Hipparchia semele*), **Rock Grayling** (*H. alcyone*), and **Great Banded Grayling** (*Brintesia circe*). **Tree Grayling** (*H. statilius*) and **False Grayling** (*Arethusana arethusa*) were also seen on occasion.

were everywhere. A large culvert beneath the road built to allow melt waters to clear provided initial excitement with an **Oberthür's Anomalous Blue** (*Polyommatus fabressei*) together with many blues 'puddling' in damp soil, including



SPAIN

lary (*A. adippe*), **Large Tortoiseshell** (*Nymphalis polychloros*), and **Mother-of-Pearl Blue**.

We explored higher ground that opened into a wide valley with grazing grassland. **Silver-washed Fritillary** (*Argynnis paphia*) was nectaring on flowers along the stream bottom together with **Cardinal** (*A. pandora*); **Spotted Fritillary** (*Melitaea didyma*), **Small Tortoiseshell** (*Aglais urticae*) and **Southern White Admiral** (*Limenitis reducta*) were also noted.

▼ **Azure Chalkhill Blue** (*Lysandra caelestissima*) (photo by Nigel Peace)



Spanish Chalkhill Blue ► (*Lysandra albicans*) (photo by Nigel Peace)



The road continues to Bronchales and near Fuente del Canto we had the opportunity to photograph **Purple-shot Copper** (*Lycaena alciphron*) and fresh **Lesser Marbled Fritillary** (*Brenthis ino*); **'Spanish' Chestnut Heath** (*Coenonympha glycerion iphioides*) was also present.

On a subsequent visit we made a stop on the Sierra Alta near Bronchales in the hope of finding **Zapater's Ringlet** (*Erebia zapateri*), but without success. We did however see **Tree Grayling** flying amongst the pines.

Griegos area, including the Museum of Butterflies

To the west of Albarracin, accessed via Tramacastilla and Villar del Cobo, is Griegos set in a high level valley and backed by the massif of Muela San Juan. We drove up to the mirador where we had our closest views of **Apollo** (*Parnassius apollo*), but none would settle for photographs. The habitat was a mixture of grassland and pinewood, so there was a reasonable mix of species. Dropping back down into the village we were directed to the Museum of Butter-

flies where the collection included more than local species and was a worthwhile stop.

Moscardon

The area around Moscardon proved to be very productive and we found a **Twin-spot Fritillary** (*Brenthis hecate*) along with good numbers of **Azure Chalkhill Blue** and all five of the *Argynnis* fritillaries, including **Niobe** (*A. niobe*). Here, too, a solitary example of Spanish Rusty Foxglove (*Digitalis obscura*) was seen, and an Ocellated Lizard (*Lacerta lepida*).

Tragacete, Cuenca Province

Tragacete is a known site for **Zapater's Ringlet**. The route was via Calomarde and Frias de Albarracin over a high pass with spectacular views. We were able to park on a dead-end track adjacent to the mixed grassland and pinewood habitat north of Tragacete, and quickly found a good range of species, including **Azure Chalkhill**

▼ **Zapater's Ringlet** (*Erebia zapateri*) (photo by Nigel Peace taken later in August)



Blue and various graylings, plus another **Twin-spot Fritillary**. Male and female **Hermit**, and a **Large Tortoiseshell** were seen. It was a rewarding habitat and seemed perfect for our target species, but no **Zapater's Ringlet**. We had to draw the conclusion that we were too early in this late season year.

So concluded the first EIG visit: about 90 species seen, with a good record of **Southern Hermit**, and a number of 'firsts' for many of the team.

Second visit, 4-13 June 2016

The second EIG survey trip took place from 4-13 June 2016 and was prompted by Miguel Munguira, our BCE colleague in Spain, who requested help in surveying the **Spanish Zephyr Blue** (*Kretania hesperica*).

The challenge for the team was separating the many blues that were flying at the time of the visit: **Escher's Blue** (*Polyommatus escheri*) in particular due to similar underside markings, but also **Turquoise Blue** (*P. dorylas*), **Mother-of-Pearl Blue**, **Adonis Blue** (*Lysandra bellargus*), **Mazarine Blue** (*Cyaniris*

semiargus), and **Idas Blue** (*P. idas*). **Osiris Blue** (*Cupido osiris*), **Chapman's Blue** (*P. thersites*), and **Common Blue** (*P. icarus*) were all present as well!

The survey did produce positive results. Searches for *Astragalus turolensis*, the food plant of **Spanish Zephyr Blue**, showed that it continues to flourish in the area. The target species was discovered at 8 sites and, in total, 83 species were recorded generating over 600 records for the Spanish database.

In addition to the **Spanish Zephyr Blue**, of particular note was a confirmed record of **Iberian Sooty Copper** (*Lycaena bleusei*). •

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All photos by Dudley Cheesman except where stated.

This is a shortened version of articles in EIG 14 and 20.

▼ **Spanish Zephyr Blue**

(*Kretania hesperica*) (photo by Kevin Tolhurst)





Sierra Nevada, Spain

by Mike Prentice

One of the (many) joys of studying European butterflies is the beautiful places you need to visit. When I was given the opportunity to spend 3 weeks in the summer of 2013 in the Sierra Nevada mountains of southern Spain, I jumped at the chance.



▲ Zulich's Blues (*Agriades zullichi*) (photo by José Miguel Barea)

Miguel Munguira, the leading expert on Spanish lycaenids, was leading a project on four endangered endemics and EIG had already helped with fieldwork in 2012. Volunteers were needed for further work and I was one of five EIG members who flew out from the UK to assist. I was fortunate to

be able to spend 3 weeks on the project whereas everyone else could only spare a week. Our task was to assist with the surveys for the three summer-flying species: Nevada Blue (*Polyommatus golgus*), Zullich's Blue (*Agriades zullichi*), and Andalusian Anomalous Blue (*Polyommatus violetae*). The fourth species, Spanish Greenish Black-tip (*Euchloe bazae*), flies in the spring and I had been lucky enough to see that earlier in the year despite unseasonably poor weather.

Nevada and Zullich's Blues

My trip started in early July and fortunately (unlike the previous year) the three target species were already on the wing. On the first day we visited the north side of Mulhacen (the highest peak in the

▼ Nevada Blue (*Polyommatus golgus*), female (photo by José Miguel Barea)



▲ Andalusian Anomalous Blues (*Polyommatus violetae*) (photo by Juan Pablo Cancela)

Iberian peninsula at 3479m) and found both *A. zullichi* and *P. golgus* as well as Spanish Argus (*Aricia morronensis*), another Spanish endemic – in fact we saw 49 species of butterfly on the first day in a combination of high altitude and low-land species. What a start!

The first week was spent mainly at altitude searching for *A. zullichi* and *P. golgus*, counting numbers of adults in transects and counting larval foodplant in a 10m quadrat. *P. golgus* has a subspecies *sagratrox* which flies on La Sagra, a beautiful isolated mountain about 80km north of the Sierra Nevada range, and this too needed to be visited. A stiff early morning climb from the track where we left the cars at 1650m to the summit at 2384m yielded a fantastic view of the surrounding area, 20 *sagratrox*, numerous other hill-topping butterflies and Griffon Vultures and Red-billed Choughs flying around us.

Andalusian Anomalous Blue

Weeks 3 and 4 were mainly spent searching for Andalusian Anomalous Blue (*P. violetae*). Miguel had

organised a number of Spanish volunteers to augment his students and the EIG team and we covered a vast area looking for the adults and larval foodplant on both existing known sites and anywhere else that the habitat looked suitable.

Two interesting diversions were trips back to the Sierra Nevada to check out reports of *P. violetae* in the Sierra Nevada National Park where there had been no previous records and thus the species was not included in the superb book on the butterflies of the Park. Two of the authors of the book were with us and were delighted when we found thriving colonies of *P. violetae* – something to be included in the next edition of the book!

Other highlights

The trip was a fantastic combination of hard work (temperatures at times in the field were in the high 30s) and the opportunity to enjoy the beautiful surroundings and numerous other sights. Butterfly highlights included Nevada Grayling (*Pseudochazara mercurius*), Spanish Brassy Ringlet (*Erebia hispania*) and

Black Satyr (*Satyrus actaea*), together with a whole variety of birds including Short-toed Eagles, Griffon Vultures, Alpine Swifts and Black-bellied Sandgrouse. Evenings were spent mainly outdoors in a beautiful warm climate eating delicious food in good company!

Species Recovery Plans

Miguel and his team went on to do further fieldwork and then produced for each species a Species Recovery Plan which included sections on the species' identification, distribution, habitat, population size and an action plan. The whole project was sponsored by Butterfly Conservation Europe and generously sponsored by MAVA, Fondation pour la Nature. •

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This project was previously reported in EIG 14.



▲ Species Recovery Plan Booklets

Updated Checklist of European Butterfly Species

The following list of 454 species has been compiled by a committee of taxonomic experts chaired by Rudi Verovnik and incorporates the latest taxonomic changes. Full committee membership is given on the last page. The new list replaces the one published by Rudi Verovnik and Martin Wiemers in EIG 8 (October 2010). Species which only occur east of the European Union (in Russia, etc) are not included.

The list includes the following new species:

New species	History	Distribution
<i>Spialia rosae</i>	Split from <i>S. sertorius</i> (Red-underwing Skipper)	Spain
<i>Zerynthia cassandra</i>	Split from <i>Z. polyxena</i> (Southern Festoon)	Italy
<i>Iphiclides feisthamelii</i>	Split from <i>I. podalirius</i> (Scarce Swallowtail)	Spain, Portugal, France
<i>Leptidea juvernica</i>	New species within <i>L. sinapis</i> (Wood White) group	Widespread
<i>Azanus jesous</i>	Seems to be established	S. Spain (Cadiz)
<i>Iolana debilitata</i>	Split from <i>I. iolas</i> (Iolas Blue)	Spain
<i>Polyommatus celina</i>	Split from <i>P. icarus</i> (Common Blue)	Spain, Portugal, Italy
<i>Euphydryas beckeri</i>	Split from <i>E. aurinia</i> (Marsh Fritillary)	Spain, Portugal
<i>Melitaea nevadensis</i>	Split from <i>M. athalia</i> (Heath Fritillary). The name <i>nevadensis</i> replaces <i>celadussa</i>	Portugal, Spain, France, Switzerland, Italy
<i>Pseudochazara amalthea</i>	Split from <i>P. anthelea</i> (White-banded Grayling)	Bosnia, Albania, Greece, Macedonia, Bulgaria
<i>Erebia arvernensis</i>	Split from <i>E. cassioides</i> (Common Brassy Ringlet)	Spain, France, Italy, Switzerland
<i>Erebia neleus</i>	Split from <i>E. cassioides</i> (Common Brassy Ringlet)	Bosnia, Albania, Montenegro, Macedonia, Greece, Bulgaria, Romania

One species is 'lost': *Polyommatus galloi* (Gallo's Anomalous Blue) is now regarded as part of *P. ripartii* (Ripart's Anomalous Blue).

HESPERIIDAE

Pyrginae

<i>Erynnis tages</i>	Dingy Skipper
<i>Erynnis marloyi</i>	Inky Skipper

<i>Carcharodus alceae</i>	Mallow Skipper
<i>Carcharodus tripolinus</i>	False Mallow Skipper
<i>Carcharodus lavatherae</i>	Marbled Skipper
<i>Carcharodus flocciferus</i>	Tufted Marbled Skipper
<i>Carcharodus orientalis</i>	Oriental Marbled Skipper
<i>Carcharodus baeticus</i>	Southern Marbled Skipper
<i>Carcharodus stauderi</i>	False Marbled Skipper

<i>Spialia phlomidis</i>	Persian Skipper
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<i>Spialia sertorius</i>	Red-underwing Skipper
<i>Spialia rosae</i> (1)	
<i>Spialia orbifer</i>	Hungarian Skipper
<i>Spialia therapne</i>	Corsican Red-underwing Skipper

<i>Muschampia proto</i>	Sage Skipper
<i>Muschampia tessellum</i>	Tessellated Skipper
<i>Muschampia cribrellum</i>	Spinose Skipper

<i>Pyrgus carthami</i>	Safflower Skipper
<i>Pyrgus sidae</i>	Yellow-banded Skipper
<i>Pyrgus andromedae</i>	Alpine Grizzled Skipper
<i>Pyrgus cacaliae</i>	Dusky Grizzled Skipper
<i>Pyrgus centaureae</i>	Northern Grizzled Skipper

<i>Pyrgus malvae</i>	Grizzled Skipper
<i>Pyrgus malvoides</i>	Southern Grizzled Skipper
<i>Pyrgus serratulae</i>	Olive Skipper
<i>Pyrgus onopordi</i>	Rosy Grizzled Skipper
<i>Pyrgus carlinae</i>	Carline Skipper
<i>Pyrgus cirsii</i>	Cinquefoil Skipper
<i>Pyrgus cinarae</i>	Sandy Grizzled Skipper
<i>Pyrgus armoricanus</i>	Oberthür's Grizzled Skipper
<i>Pyrgus alveus</i>	Large Grizzled Skipper
<i>Pyrgus foulquieri</i> (2)	Foulquier's Grizzled Skipper
<i>Pyrgus warrenensis</i>	Warren's Skipper

Heteropterinae

<i>Heteropterus morpheus</i>	Large Chequered Skipper
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<i>Carterocephalus palaemon</i>	Chequered Skipper
<i>Carterocephalus silvicolus</i>	Northern Chequered Skipper

Hesperiinae

<i>Thymelicus lineola</i>	Essex Skipper
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Thymelicus acteon</i>	Lulworth Skipper
<i>Thymelicus christi</i>	Canarian Skipper
<i>Thymelicus hyrax</i>	Levantine Skipper

<i>Hesperia comma</i>	Silver-spotted Skipper
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<i>Ochlodes sylvanus</i>	Large Skipper
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<i>Gegenes pumilio</i>	Pygmy Skipper
<i>Gegenes nostrodamus</i>	Mediterranean Skipper

<i>Borbo borbonica</i>	Zeller's Skipper
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<i>Pelopidas thrax</i>	Millet Skipper
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PAPILIONIDAE

Parnassiinae

<i>Zerynthia rumina</i>	Spanish Festoon
<i>Zerynthia polyxena</i>	Southern Festoon
<i>Zerynthia cassandra</i> (3)	Italian Festoon
<i>Zerynthia cerisy</i>	Eastern Festoon
<i>Zerynthia cretica</i>	Cretan Festoon

<i>Archon apollinus</i>	False Apollo
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<i>Parnassius mnemosyne</i>	Clouded Apollo
<i>Parnassius phoebus</i>	Small Apollo
<i>Parnassius apollo</i>	Apollo

Papilioninae

<i>Iphiclides podalirius</i>	Scarce Swallowtail
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<i>Iphiclides feisthamelii</i> (4)	Iberian Scarce Swallowtail
<i>Papilio machaon</i>	Swallowtail
<i>Papilio hospiton</i>	Corsican Swallowtail
<i>Papilio alexanor</i>	Southern Swallowtail

PIERIDAE

Dismorphiinae

<i>Leptidea sinapis</i>	Wood White
<i>Leptidea reali</i>	Réal's Wood White
<i>Leptidea juvernica</i> (5)	Cryptic Wood White
<i>Leptidea duponcheli</i>	Eastern Wood White
<i>Leptidea morsei</i>	Fenton's Wood White

Pierinae

<i>Anthocharis cardamines</i>	Orange-tip
<i>Anthocharis euphenoides</i>	Provence Orange-tip
<i>Anthocharis damone</i>	Eastern Orange-tip
<i>Anthocharis gruneri</i>	Grüner's Orange-tip

<i>Zegris eupheme</i>	Sooty Orange-tip
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<i>Euchloe belemia</i>	Green-striped White
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<i>Euchloe eversi</i>	
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<i>Euchloe grancanariensis</i>	
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<i>Euchloe hesperidum</i>	
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<i>Euchloe crameri</i>	Western Dappled White
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<i>Euchloe simplonia</i>	Mountain Dappled White
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<i>Euchloe ausonia</i>	Eastern Dappled White
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<i>Euchloe tagis</i>	Portuguese Dappled White
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<i>Euchloe insularis</i>	Corsican Dappled White
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<i>Euchloe charlonia</i>	Greenish Black-tip
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<i>Euchloe bazae</i>	Spanish Greenish Black-tip
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<i>Euchloe penia</i>	Eastern Greenish Black-tip
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<i>Aporia crataegi</i>	Black-veined White
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<i>Pieris brassicae</i>	Large White
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<i>Pieris wollastoni</i>	Madeiran Large White
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<i>Pieris cheiranthi</i>	Canary Islands Large White
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<i>Pieris krueperi</i>	Krueper's Small White
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<i>Pieris manni</i>	Southern Small White
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<i>Pieris rapae</i>	Small White
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<i>Pieris ergane</i>	Mountain Small White
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<i>Pieris napi</i>	Green-veined White
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<i>Pieris bryoniae</i>	Mountain Green-veined White
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<i>Pieris balcana</i>	Balkan Green-veined White
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<i>Pontia callidice</i>	Peak White
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<i>Pontia daplidice</i>	Bath White
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<i>Pontia edusa</i>	Eastern Bath White
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<i>Pontia chloridice</i>	Small Bath White
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Colotis evagore Desert Orange-tip

Coliadinae

Catopsilia florella African Migrant

Colias phicomone Mountain Clouded Yellow

Colias tyche Pale Arctic Clouded Yellow

Colias palaeno Moorland Clouded Yellow

Colias erate Eastern Pale Clouded Yellow

Colias crocea Clouded Yellow

Colias hecla Northern Clouded Yellow

Colias myrmidone Danube Clouded Yellow

Colias chrysotheme Lesser Clouded Yellow

Colias aurorina Greek Clouded Yellow

Colias caucasica Balkan Clouded Yellow

Colias hyale Pale Clouded Yellow

Colias alfacariensis Berger's Clouded Yellow

Gonepteryx rhamni Brimstone

Gonepteryx farinosa Powdered Brimstone

Gonepteryx cleopatra Cleopatra

Gonepteryx maderensis Madeiran Brimstone

Gonepteryx cleobule Canary Brimstone

RIODINIDAE

Hamearis lucina Duke of Burgundy

LYCAENIDAE

Aphnaeinae

Cigaritis acamas (6) Levantine Leopard

Lycaeninae

Lycaena phlaeas Small Copper

Lycaena helle Violet Copper

Lycaena dispar Large Copper

Lycaena virgaureae Scarce Copper

Lycaena ottomanus Grecian Copper

Lycaena tityrus Sooty Copper

Lycaena bleusei Iberian Sooty Copper

Lycaena alciphron Purple-shot Copper

Lycaena hippothoe Purple-edged Copper

Lycaena candens Balkan Copper

Lycaena thersamon Lesser Fiery Copper

Lycaena thetis Fiery Copper

Thecinae

Thecla betulae Brown Hairstreak

Favonius quercus Purple Hairstreak

Laeosopis roboris Spanish Purple Hairstreak

Tomares ballus Provence Hairstreak

Tomares nogelii (7) Nogel's Hairstreak

Callophrys rubi Green Hairstreak

Callophrys avis Chapman's Green Hairstreak

Satyrium w-album White-letter Hairstreak

Satyrium pruni Black Hairstreak

Satyrium spini Blue-spot Hairstreak

Satyrium ilicis Ilex Hairstreak

Satyrium esculi False Ilex Hairstreak

Satyrium acaciae Sloe Hairstreak

Satyrium ledereri Orange-banded Hairstreak

Polyommatae

Lampides boeticus Long-tailed Blue

Cacyreus marshalli Geranium Bronze

Leptotes pirithous Lang's Short-tailed Blue

Azonus ubaldus Bright Babul Blue

Azonus jesous (8) African Babul Blue

Cylyrius webbianus Canary Blue

Tarucus theophrastus Common Tiger Blue

Tarucus balkanicus Little Tiger Blue

Zizeeria knysna African Grass Blue

Zizeeria karsandra Dark Grass Blue

Cupido minimus Small Blue

Cupido osiris Osiris Blue

Cupido lorquini Lorquin's Blue

Cupido argiades Short-tailed Blue

Cupido decoloratus Eastern Short-tailed Blue

Cupido alcetas Provençal Short-tailed Blue

Celastrina argiolus Holly Blue

Pseudophilotes baton Baton Blue

Pseudophilotes panoptes Panoptes Blue

Pseudophilotes vicrama Eastern Baton Blue

Pseudophilotes abencerragus False Baton Blue

Pseudophilotes barbagiae Sardinian Blue

Pseudophilotes bavius Bavius Blue

Scolitantides orion Chequered Blue

Glauopsyche alexis Green-underside Blue

Glauopsyche paphos Paphos Blue

Glauopsyche melanops Black-eyed Blue

Iolana iolas Iolas Blue

Iolana debilitata (9)

Phengaris arion Large Blue

Phengaris teleius Scarce Large Blue

Phengaris nausithous Dusky Large Blue

Phengaris alcon Alcon Blue

Luthrodes galba (10) Small Desert Blue

Freyeria trochylus (10) Grass Jewel

Turanana taygetica Odd-spot Blue

Kretania sephirus (11) (12) Zephyr Blue

Kretania trappi (11) (12) Alpine Zephyr Blue

Kretania hesperica (11) (12) Spanish Zephyr Blue

Kretania eurypilus (11) Eastern Brown Argus

Kretania psyloritus (11) Cretan Argus

Plebejus argus Silver-studded Blue

Plebejus idas Idas Blue

Plebejus bellieri Bellier's Blue

Plebejus argyrognomon Reverdin's Blue

Plebejidea loewii (11) Loew's Blue

Agriades optilete (11) Cranberry Blue

Agriades pyrenaicus (11) Gavarnie Blue

Agriades dardanus (11) Bosnian Blue

Agriades glandon (11) Glandon Blue

Agriades aquilo (11) Arctic Blue

Agriades zullichi (11) Zullich's Blue

Agriades orbitulus (11) Alpine Blue

Eumedonia eumedon (11) Geranium Argus

Aricia cramera Southern Brown Argus

Aricia agestis Brown Argus

Aricia artaxerxes Northern Brown Argus

Aricia montensis Southern Mountain Argus

Aricia morronensis Spanish Argus

Aricia anteros Blue Argus

Aricia nicias Silvery Argus

Cyaniris semiargus Mazarine Blue

Neolyandra coelestina (13) Pontic Blue

Polyommatus escheri Escher's Blue

Polyommatus dorylas Turquoise Blue

Polyommatus golgus Nevada Blue

Polyommatus nivescens Mother-of-Pearl Blue

Polyommatus amandus Amanda's Blue

Polyommatus thersites Chapman's Blue

Polyommatus icarus Common Blue

Polyommatus celina (14)

Polyommatus eros Eros Blue

Polyommatus daphnis Meleager's Blue

Polyommatus admetus Anomalous Blue

Polyommatus fabressei Oberthür's Anomalous Blue

Polyommatus violetae Andalusian Anomalous Blue

Polyommatus humedasa Piedmont Anomalous Blue

Polyommatus ripartii (15) Ripart's Anomalous Blue

Polyommatus aroaniensis Grecian Anomalous Blue

Polyommatus eleniae Phalakron Anomalous Blue

Polyommatus orphicus Kolev's Anomalous Blue

Polyommatus nephohiptamenos Higgins' Anomalous Blue

Polyommatus dolus Furry Blue

Polyommatus fulgens Catalanian Furry Blue

Polyommatus iphigenia Chelmos Blue

Polyommatus damon Damon Blue

Lysandra bellargus (13) Adonis Blue

Lysandra coridon (13) Chalkhill Blue

Lysandra caelestissima (13) Azure Chalkhill Blue

Lysandra hispana (13) Provence Chalkhill Blue

Lysandra albicans (13) Spanish Chalkhill Blue

NYMPHALIDAE

Libytheinae

Libythea celtis Nettle-tree Butterfly

Heliconiinae

Argynnis paphia Silver-washed Fritillary

Argynnis pandora Cardinal

Argynnis aglaja Dark Green Fritillary

Argynnis adippe High Brown Fritillary

Argynnis niobe Niobe Fritillary

Argynnis elisa Corsican Fritillary

Argynnis laodice Pallas' Fritillary

Issoria lathonia Queen of Spain Fritillary

Brenthis ino Lesser Marbled Fritillary

Brenthis daphne Marbled Fritillary

Brenthis hecate Twin-spot Fritillary

Boloria eunomia Bog Fritillary

Boloria euphrosyne Pearl-bordered Fritillary

Boloria titania Titania's Fritillary

Boloria selene Small Pearl-bordered Fritillary

<i>Boloria chariclea</i>	Arctic Fritillary
<i>Boloria freija</i>	Freija's Fritillary
<i>Boloria dia</i>	Weaver's Fritillary
<i>Boloria polaris</i>	Polar Fritillary
<i>Boloria thore</i>	Thor's Fritillary
<i>Boloria frigga</i>	Frigga's Fritillary
<i>Boloria improba</i>	Dusky-winged Fritillary
<i>Boloria pales</i>	Shepherd's Fritillary
<i>Boloria napaea</i>	Mountain Fritillary
<i>Boloria aquilonaris</i>	Cranberry Fritillary
<i>Boloria graeca</i>	Balkan Fritillary

Nymphalinae

<i>Vanessa atalanta</i>	Red Admiral
<i>Vanessa vulcania</i>	Canary Red Admiral
<i>Vanessa cardui</i>	Painted Lady
<i>Vanessa virginiensis</i>	American Painted Lady

<i>Aglais io</i>	Peacock
<i>Aglais urticae</i>	Small Tortoiseshell
<i>Aglais ichnusa</i>	Corsican Small Tortoiseshell

<i>Polygonia c-album</i>	Comma
<i>Polygonia egea</i>	Southern Comma

<i>Araschnia levana</i>	Map
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<i>Nymphalis antiopa</i>	Camberwell Beauty
<i>Nymphalis polychloros</i>	Large Tortoiseshell
<i>Nymphalis xanthomelas</i>	Yellow-legged Tortoiseshell
<i>Nymphalis vaualbum</i>	False Comma

<i>Euphydryas iduna</i>	Lapland Fritillary
<i>Euphydryas cynthia</i>	Cynthia's Fritillary
<i>Euphydryas intermedia</i>	Asian Fritillary
<i>Euphydryas maturna</i>	Scarce Fritillary
<i>Euphydryas desfontainii</i>	Spanish Fritillary
<i>Euphydryas aurinia</i>	Marsh Fritillary
<i>Euphydryas beckeri</i> (16)	

<i>Melitaea cinxia</i>	Glanville Fritillary
<i>Melitaea phoebe</i>	Knapweed Fritillary
<i>Melitaea ornata</i> (17)	Eastern Knapweed Fritillary
<i>Melitaea aetherie</i>	Aetherie Fritillary
<i>Melitaea arduinna</i>	Freyer's Fritillary
<i>Melitaea trivialis</i>	Lesser Spotted Fritillary
<i>Melitaea didyma</i>	Spotted Fritillary
<i>Melitaea diamina</i>	False Heath Fritillary
<i>Melitaea deione</i>	Provençal Fritillary
<i>Melitaea varia</i>	Grisons Fritillary
<i>Melitaea parthenoides</i>	Meadow Fritillary
<i>Melitaea aurelia</i>	Nickerl's Fritillary

<i>Melitaea britomartis</i>	Assmann's Fritillary
<i>Melitaea asteria</i>	Little Fritillary
<i>Melitaea athalia</i>	Heath Fritillary
<i>Melitaea nevadensis</i> (18)	

Limnitiidae

<i>Limnitis populi</i>	Poplar Admiral
<i>Limnitis camilla</i>	White Admiral
<i>Limnitis reducta</i>	Southern White Admiral

<i>Neptis sappho</i>	Common Glider
<i>Neptis rivularis</i>	Hungarian Glider

Charaxinae

<i>Charaxes jasius</i>	Two-tailed Pasha
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Apaturinae

<i>Apatura metis</i>	Freyer's Purple Emperor
<i>Apatura ilia</i>	Lesser Purple Emperor
<i>Apatura iris</i>	Purple Emperor

Danainae

<i>Danaus chrysippus</i>	Plain Tiger
<i>Danaus plexippus</i>	Monarch

Satyrinae

<i>Kirinia roxelana</i>	Lattice Brown
<i>Kirinia climene</i>	Lesser Lattice Brown

<i>Pararge aegeria</i>	Speckled Wood
<i>Pararge xiphioides</i>	Canary Speckled Wood
<i>Pararge xiphia</i>	Madeiran Speckled Wood

<i>Lasiommata megera</i>	Wall Brown
<i>Lasiommata paramegaera</i>	Corsican Wall Brown
<i>Lasiommata petropolitana</i>	Northern Wall Brown
<i>Lasiommata maera</i>	Large Wall Brown

<i>Lopinga achine</i>	Woodland Brown
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<i>Ypthima asterope</i>	African Ringlet
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<i>Coenonympha tullia</i>	Large Heath
<i>Coenonympha oedippus</i>	False Ringlet
<i>Coenonympha rhodopensis</i>	Eastern Large Heath
<i>Coenonympha arcania</i>	Pearly Heath
<i>Coenonympha glycerion</i>	Chestnut Heath
<i>Coenonympha gardetta</i>	Alpine Heath
<i>Coenonympha orientalis</i>	Balkan Heath
<i>Coenonympha corinna</i>	Corsican Heath
<i>Coenonympha dorus</i>	Dusky Heath
<i>Coenonympha hero</i>	Scarce Heath

<i>Coenonympha leander</i>	Russian Heath
<i>Coenonympha pamphilus</i>	Small Heath
<i>Coenonympha thyrus</i>	Cretan Small Heath

<i>Pyronia tithonus</i>	Gatekeeper
<i>Pyronia cecilia</i>	Southern Gatekeeper
<i>Pyronia bathseba</i>	Spanish Gatekeeper

<i>Aphantopus hyperantus</i>	Ringlet
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<i>Maniola telmessia</i>	Aegean Meadow Brown
<i>Maniola cypricola</i>	Cyprus Meadow Brown
<i>Maniola halicarnassus</i>	Thomson's Meadow Brown
<i>Maniola nurag</i>	Sardinian Meadow Brown
<i>Maniola chia</i>	Chios Meadow Brown
<i>Maniola jurtina</i>	Meadow Brown
<i>Maniola megalis</i>	Turkish Meadow Brown

<i>Hyponephele lycaon</i>	Dusky Meadow Brown
<i>Hyponephele lupina</i>	Oriental Meadow Brown

<i>Proterebia phegea</i> (19)	Dalmatian Ringlet
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<i>Erebia ligea</i>	Arran Brown
<i>Erebia euryale</i>	Large Ringlet
<i>Erebia eriphyle</i>	Eriphyle Ringlet
<i>Erebia manto</i>	Yellow-spotted Ringlet
<i>Erebia claudina</i>	White-speck Ringlet
<i>Erebia flavofasciata</i>	Yellow-banded Ringlet
<i>Erebia epiphron</i>	Mountain Ringlet
<i>Erebia orientalis</i>	Bulgarian Ringlet
<i>Erebia christi</i>	Rätzer's Ringlet
<i>Erebia pharte</i>	Blind Ringlet
<i>Erebia melampus</i>	Lesser Mountain Ringlet
<i>Erebia sudetica</i>	Sudeten Ringlet
<i>Erebia aethiops</i>	Scotch Argus
<i>Erebia triaria</i>	de Prunner's Ringlet
<i>Erebia embla</i>	Lapland Ringlet
<i>Erebia disa</i>	Arctic Ringlet
<i>Erebia medusa</i>	Woodland Ringlet
<i>Erebia polaris</i>	Arctic Woodland Ringlet
<i>Erebia alberganus</i>	Almond-eyed Ringlet
<i>Erebia pluto</i>	Sooty Ringlet
<i>Erebia gorge</i>	Silky Ringlet
<i>Erebia rhodopensis</i>	Nicholl's Ringlet
<i>Erebia aethiopella</i>	False Mnestra Ringlet
<i>Erebia mnestra</i>	Mnestra's Ringlet
<i>Erebia gorgone</i>	Gavarnie Ringlet
<i>Erebia epistygne</i>	Spring Ringlet
<i>Erebia ottomana</i>	Ottoman Brassy Ringlet
<i>Erebia tyndarus</i>	Swiss Brassy Ringlet
<i>Erebia nivalis</i>	De Lesse's Brassy Ringlet

<i>Erebia calcaria</i>	Lorkovic's Brassy Ringlet
<i>Erebia cassioides</i>	Common Brassy Ringlet
<i>Erebia arvensis</i> (20)	Western Brassy Ringlet
<i>Erebia neleus</i> (20)	
<i>Erebia hispania</i>	Spanish Brassy Ringlet
<i>Erebia rondoui</i>	Pyrenees Brassy Ringlet
<i>Erebia pronoe</i>	Water Ringlet
<i>Erebia lefebvrei</i>	Lefebvre's Ringlet
<i>Erebia scipio</i>	Larche Ringlet
<i>Erebia stiria</i>	Styrian Ringlet
<i>Erebia styx</i>	Stygian Ringlet
<i>Erebia montana</i>	Marbled Ringlet
<i>Erebia zapateri</i>	Zapater's Ringlet
<i>Erebia neoridas</i>	Autumn Ringlet
<i>Erebia melas</i>	Black Ringlet
<i>Erebia oeme</i>	Bright-eyed Ringlet
<i>Erebia meolans</i>	Piedmont Ringlet
<i>Erebia palarica</i>	Chapman's Ringlet
<i>Erebia pandrose</i>	Dewy Ringlet
<i>Erebia sthenno</i>	False Dewy Ringlet

<i>Melanargia russiae</i>	Esper's Marbled White
<i>Melanargia galathea</i>	Marbled White
<i>Melanargia lachesis</i>	Iberian Marbled White
<i>Melanargia larissa</i>	Balkan Marbled White
<i>Melanargia arge</i>	Italian Marbled White
<i>Melanargia occitanica</i>	Western Marbled White
<i>Melanargia pherusa</i>	Sicilian Marbled White
<i>Melanargia ines</i>	Spanish Marbled White

<i>Satyrus ferula</i>	Great Sooty Satyr
<i>Satyrus actaea</i>	Black Satyr

<i>Minois dryas</i>	Dryad
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<i>Hipparchia fagi</i>	Woodland Grayling
<i>Hipparchia hermione</i>	Rock Grayling
<i>Hipparchia syriaca</i>	Eastern Rock Grayling
<i>Hipparchia neomiris</i>	Corsican Grayling
<i>Hipparchia aristaeus</i>	Southern Grayling
<i>Hipparchia senthes</i>	Balkan Grayling
<i>Hipparchia cretica</i>	Cretan Grayling
<i>Hipparchia semele</i>	Grayling
<i>Hipparchia leighebi</i>	Eolian Grayling
<i>Hipparchia sbordonii</i>	Ponza Grayling
<i>Hipparchia neapolitana</i>	Italian Grayling
<i>Hipparchia blachieri</i>	Sicilian Grayling
<i>Hipparchia mersina</i>	Samos Grayling
<i>Hipparchia volgensis</i>	Delattin's Grayling
<i>Hipparchia christenseni</i>	Karpathos Grayling
<i>Hipparchia pellucida</i>	Lesbos Grayling
<i>Hipparchia cypriensis</i>	Cyprus Grayling

<i>Hipparchia statilinus</i>	Tree Grayling
<i>Hipparchia fatua</i>	Freyer's Grayling
<i>Hipparchia fidia</i>	Striped Grayling
<i>Hipparchia maderensis</i>	Madeiran Grayling
<i>Hipparchia azorina</i>	Azores Grayling
<i>Hipparchia miguelensis</i>	Le Cerf's Grayling
<i>Hipparchia wyssii</i>	Canary Grayling
<i>Hipparchia bacchus</i>	
<i>Hipparchia gomera</i>	
<i>Hipparchia tilosi</i>	
<i>Hipparchia tamadabae</i>	
<i>Arethusana arethusa</i>	False Grayling
<i>Brintesia circe</i>	Great Banded Grayling
<i>Chazara briseis</i>	The Hermit
<i>Chazara prieuri</i>	Southern Hermit
<i>Pseudochazara geyeri</i>	Grey Asian Grayling
<i>Pseudochazara graeca</i>	Grecian Grayling
<i>Pseudochazara amymone</i>	Brown's Grayling
<i>Pseudochazara orestes</i>	Dils' Grayling
<i>Pseudochazara mercurius</i> (21)	Nevada Grayling
<i>Pseudochazara tisiphone</i> (22)	Dark Grayling
<i>Pseudochazara cingovskii</i>	Macedonian Grayling
<i>Pseudochazara anthelea</i>	White-banded Grayling
<i>Pseudochazara amalthea</i> (23)	
<i>Oeneis norma</i>	Norse Grayling
<i>Oeneis bore</i>	Arctic Grayling
<i>Oeneis glacialis</i>	Alpine Grayling
<i>Oeneis jutta</i>	Baltic Grayling

FOOTNOTES

- (1) split from *S. sertorius*
- (2) formerly *P. bellieri*
- (3) split from *Z. polyxena*
- (4) split from *I. podalirius*
- (5) new species within group
- (6) formerly genus *Apharitis*
- (7) rediscovered in Romania in 2014
- (8) addition: seems to be established in Cadiz, S Spain
- (9) split from *I. iolas*
- (10) formerly genus *Chilades*
- (11) formerly genus *Plebejus*
- (12) *Kretania pylaon* with which these species were formerly lumped occurs east of our area
- (13) formerly genus *Polyommatus*
- (14) split from *P. icarus*
- (15) includes *galloi*
- (16) split from *E. aurinia*
- (17) not *M. telona*
- (18) split from *M. athalia*. Replacement name for *celadussa*
- (19) formerly *P. afer*
- (20) split from *E. cassioides*
- (21) formerly *P. hippolyte*
- (22) not *P. mnizechii*
- (23) split from *P. anthelea*

Thanks are due to Rudi Verovnik and his committee for preparation of this list. The full committee comprised Rudi Verovnik, Emilio Balletto, Vlad Dinca, Zdenek Fric, Gerardo Lamas, Vladimir Lukhtanov, Miguel Munguira, Chris van Swaay, Roger Vila, Albert Vliegthart, Niklas Wahlberg, and Martin Wiemers.

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May 2017

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Butterfly Conservation's European Interests Group (EIG) promotes the enjoyment, conservation and study of butterflies, moths and their habitats in Europe. Our mandate is as follows:

- To circulate information on European butterflies and moths to members and partners in Europe.
- To encourage recording of butterflies and moths in Europe and facilitate contact with recording schemes and encourage the local atlases that are planned in several parts of Europe.
- To publicise the plight of butterflies and moths in Europe where changes in agriculture, particularly land abandonment, are a huge threat.
- To help set up projects with partners in Europe.
- To provide a skilled volunteer resource for European nature conservation organisations such as national parks.
- To assist the work of Butterfly Conservation Europe (BCE) and act as ambassadors for BC in Europe with partner organisations.
- To work with partner organisations in lobbying in Europe.

EIG website:

<http://www.bc-eig.org.uk>

The EIG website is updated regularly. In addition to news features, it contains a wealth of information about butterflies in individual countries, and a listing of tour operators who provide butterfly holidays.

EIG on social media

Follow the EIG at
<https://www.facebook.com/BC.EuropeanInterestsGroup>.

Membership

The EIG currently has more than 400 members. A members' day is held annually, sometimes jointly with another Butterfly Conservation Branch.

EIG is a branch of Butterfly Conservation and as such membership of EIG is only open to members of Butterfly Conservation. An additional subscription of £10 is payable at the time of a member's normal subscription renewal. For more details, see Butterfly Conservation's website butterfly-conservation.org.

For people who are resident in Europe and do not have a local BC Branch they can have EIG as their local branch if they join Butterfly Conservation, in which case they do not need to pay the additional £10.

Butterfly Conservation Europe (BCE)

The EIG maintains close links with Butterfly Conservation Europe (www.bc-europe.eu), a partnership organisation comprising Butterfly Conservation and representatives of most other European countries. BCE seeks to influence EU policies and to secure funding to undertake work focused on halting and reversing the decline of butterflies, moths and their habitats throughout Europe.

A major aim is to collect data online via its webpage www.butterfly-recording.eu. Other projects include rare species surveys, identifying prime butterfly areas and advising on policy.