

Butterflies and Botany of the Kackars in Turkey

Holiday report 15-23 July 2017

Led by Yiannis Christofides and Martin Warren



Ionian Emperor © Martin Warren

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Introduction

This was a new tour designed to see the wonderful array of butterflies and plants in the Kaçkar mountains of north-east Turkey. These rugged mountains rise steeply from Turkey's Black Sea coast and are an extension of the Caucasus mountains which are considered by the World Wide Fund for Nature to be a global biodiversity hotspot. The Kaçkars are thought to be the richest area for butterflies in this range, a hotspot in a hotspot with over 140 resident species.

The valley of the River Çoruh lies at the heart of the Kaçkar and the centre of the trip explored its upper reaches at altitudes of 1,300—2,300m. The area consists of steep-sided valleys with dry Mediterranean vegetation, typically with dense woodland and trees in the valley bottoms interspersed with small hay-meadows. In the upper reaches these merge into alpine meadows with wet flushes and few trees. The highest mountain in the range is Kaçkar Dağı with an elevation of 3,937 metres

The tour was centred around the two charming little villages of Barhal and Olgunlar, the latter being at the furthest end of the valley that you can reach by car. The area is very remote and only accessed by a narrow road that winds its way up the valley providing extraordinary views that change with every turn. The tour started and ended at the city of Erzurum, itself located at 1757 meters and surrounded by a flat plain before the high mountains start. The five guests joining our two guides were Catherine Dijon, Andrew Burns, Mark Cwynarski, Ian Lockwood Hall, and Nick Freeman. Also on the tour were Yasemin Konuralp, who admirably arranged all the logistics, and the excellent minibus driver, Rafik.

Butterfly names are in English after Ahmet Baytas (2007) Field Guide to Butterflies of Turkey. A full checklist of localities sightings with Latin names is available as a separate document.



View along Olgunlar valley to high Kackar mountains © Catherine Dijon

Day 1: 15 July 2017

After collecting the guests at Erzurum airport early in the day, we travelled north to visit the beautiful Gungormez valley. Here there were extensive lush pastures and hay meadows with scattered scrub but little woodland.

We were immediately greeted by large numbers of butterflies, including Balkan Marbled White, Black-veined White, Glanville Fritillary, and a wide variety of blues and skippers. The occasional Swallowtail and Scarce Swallowtail graced us with a sweeping flypast. Further down the valley, a wet flush provided an opportunity for us to view the blues more closely as they congregated in large numbers on the wet mud at the edge of a farm track. Among scores of Zephyr Blues and Silver-studded Blues (and the almost identical Idas Blue), were occasional Odd-spot Blue, Leow's Blue, Meleager's Blue, Aedon Blue and Amanda's Blue. However, the star of the show was the fabulous Cardinal, several of which were seen close up feeding on pale yellow flowers of Scabious, looking like a huge greenish Silver-washed Fritillary.



Odd-spot Blue © Nick Freeman



Cardinal © Martin Warren

Amongst the wonderful display of flowers there were *Alkanna leptophylla*, *Salvia verticillata*, *Verbascum armena* yellow *Opopanax hispidus* and *Coronilla varia*. An interesting member of the Asteraceae, *Gundelia glabra*, with a middle-eastern distribution was seen growing on the slopes. *Centaurea glastifolia* with yellow flowers and hyaline bracts was also common here.



Alcon Blue © Martin Warren



Anchusa leptophylla and *Dactylorhiza urvillea*
© Catherine Dijon

Further down the valley we were lucky to see a single, rather worn Alcon Blue laying eggs on the leaves of a small plant, which we assume must be a type of gentian. This butterfly uses gentians as an initial food-plant before the larvae drop to the ground and are adopted by a species of *Myrmica* ant, where they spend the rest of their lives as "cuckoo" species being fed directly by the ant workers. We were also thrilled to see Purple-shot Copper and Scarce Copper, as well as the regional speciality Rebel's Hairstreak (confined to this small part of north-east Turkey). All in all we saw over 45 species, not bad for the first day.

Day 2: 16 July 2017

Today was transit day from the hotel in central Erzurum past Tortum to Yusufeli and then along the Çoruh river valley to the picturesque village of Barhal. We left Erzurum early in the morning, travelling through the flat plain that surrounds the city. The area consisted of cultivated fields but the verges were full of colourful flowers. There were blue *Echium vulgare*, purple *Salvia nemorosa*, pink *Epilobium*, white *Cirsium erinus*, mounds of white *Crambe orientalis*. We started climbing gently through the *Palandöken* range and went through a small low-level pass at 2040m before descending into a valley between mountains. The landscape changed now to rolling hills mostly used for haymaking. We then went through a dramatic landscape of deep gorges through barren-looking hills. A stop to see *Capparis ovata* growing on a rock face also produced *Centaurea virgata*, *Clematis orientalis* and *Peganum harmala*.



Alcides Blue © Catherine Dijon



Orange Hermit © Nick Freeman

Further on, we stopped at some roadside woodland near Uzundere and were treated to a surprising array of butterflies against a backdrop of constant piping by Golden Oriole's. The biggest excitement an Orange Hermit which posed conveniently for a few moments before skipping off. There were a few Dusky Meadow Browns, Anatolian Satyr, and a single Alcides Skipper, a species with a primarily Asian distribution. We were surprised to see a few Marsh Fritillary, in a very un-British like dry habitat. As there were no scabious species at the site, we assumed the breeding areas were somewhere in adjacent hillsides. Other sightings included a few Wood Whites, pottering slowly in the shady areas, and our first encounters with the spectacular Tree Grayling and Southern White Admiral.



Hi Blue © Ian L-Hall

Later we stopped at Tortum waterfall, the largest in Turkey. As we followed the crowds down and then up the steps, we diverted to some nearby dry grassland where some of us spotted a rare endemic, the Hi Blue. This is one of the *Agrodiaetus* subgenus of blues, all of which have a whitish stripe through the under hindwing. There are 30 species in Turkey, many of which are extremely difficult (if not impossible) to identify in the field. Fortunately, this one has a large black spot in the central cell on the underside forewing which sets it apart. The Hi Blue is classed as Endangered in the Turkish Red List.

After a picnic we stopped at a small side road going to Dereici. Here we found the exquisitely marked Little Tiger Blue and Europe's smallest butterfly: the Jewel Blue (aka Grass Jewel). Among a wide range of other species, we had our first sighting of two regional specialities, the White-bordered Grayling and the spectacular Ionian Emperor. We had good views of fresh Aedon Blue, one of the largest blues in Turkey with uppers coloured like a Chalk Hill Blue but with no chequered fringe and no orange spots on the hindwing. In total we saw over 40 species in the day, with a few question marks over two unidentified *Agrodiaetus* blues, possibly Riparts Blue. We also saw several new plants in the valley, including *Paliurus spina-Christi*, *Rhus coriaria*, *Colutea arborescens* and *Cotinus coggygria*.

We ended the day near Barhal, at the beautiful Karahan Pensyon, perched above the road in wooden chalets, where a fine home-cooked meal awaited us. Like many small-holders, the owner made his own honey from bees around the house as well as in hives moved into summer pastures. His family also gathered hay into rustic barns which adorned the hillsides throughout the region.

Day 3: 17 July 2017

Once again we started early to catch butterflies before they became too active during the heat of the day. This and most other days reached the mid 30s Celsius so butterflies tended to nectar mainly in the early morning and evening. During the middle part of the day they were far more active and difficult to photograph. Fortunately large numbers then congregated on muddy areas, avidly drawing up salts and water, forming spectacular displays for which the Kaçkars are famous. We soon became good spotters of muddy patches as well as patches of cement and gravel that sometimes attracted huge gatherings.



Blue Argus © Nick Freeman



Aedon Blue © Nick Freeman

We drove up the road above the Pensyon and walked down through a series of small meadows and lush woods alongside the noisy stream. The sheer numbers of fritillaries was astounding, with Silver-washed soaring around at every turn, mixed with a scattering of Heath, Caucasian Spotted, Pearl-bordered, Marbled, Dark Green and Glanville Fritillaries. A great favourite amongst these butterflies were the tall flowers of European Dwarf Elder *Sambucus edulis*, which hosted good numbers of Ilex Hairstreak as well as fritillaries and Scotch Argus. This plant also attracted several burnet moths as well as the black and white Nine-spotted moths, *Syntomis phegea* (or something very similar). Other favourite plants for nectaring were Hemp Agrimony *Eupatorium cannabinum*, the large yellow flowers of Giant Scabious *Cephalaria gigantea* and *Lythrum salicaria*. We also spotted a wide variety of blues on mud, including our first sighting of Eastern Baton Blue and Blue Argus. The occasional Apollo floated by.



Silver-washed Fritillary © Andrew Burns



Origanum rotundifolia © Catherine Dijon

New plants for today included *Sempervivum* species growing on rocks, a bush with four-sided fruit proved to be *Euonymus latifolius*. *Origanum rotundifolium* was very common on the rocky slopes, as was *Campanula troegerae* a beautiful member of the Campanulaceae with open bells. Other plants seen were *Geranium ibericum*, *Dianthus orientalis* and *Silene armena*.

Day 4: 18 July 2017

After a hearty breakfast, we travelled a short distance to the start of the Taskiran valley where we once again saw a range of skippers and blues, including the Little Tiger Blue again. We then drove up the valley to around 1600m where there was a mix of meadows and woodland. There were vast numbers of Dark Green Fritillaries here and our first sighting of a High Brown and Twin-spot Fritillaries. Among the bewildering array of blues we spotted an Eros Blue amongst the hundreds of Silver-studded/Idas Blues, Meleagers' and Amanda's Blues. In a high meadow we also found the brilliant white eggs of the Alcon Blue studded on the flowers and leaves of Cross-leaved gentian *Gentiana cruciata*. The intrepid Nick also saw and photographed a Eastern Wood White, recognisable in the second brood by its creamy white undersides with faint gray marks characteristic of the "ordinary" Wood White.



Amandas Blue © Andrew Burns



Eastern Wood White © Nick Freeman

There were several bright yellow Clouded Yellows zooming around and some lemon yellow ones which we assumed were Bergers Clouded Yellow. There was also a solitary Nettle-tree butterfly feeding on the mud, immediately recognizable by its long "snout" which are in fact modified palps.



Eastern Rock Grayling © Andrew Burns



Nettle-tree Butterfly © Martin Warren

We then moved along to the nearby Bicakcilar valley near Kadinkisi below Barhal. Once again there was a lovely mix of small hay meadows and riverside woodland. In the first meadow we came to there seemed to be a mass emergence of Purple Hairstreaks as we saw at least 20 freshly emerged on the recently cut grass. A beautiful sight. We also saw our first Pale Clouded Yellow, confirmed by taking bursts of photos in flight. A beautiful fresh Jersey Tiger was also spotted low amongst the trees and one more conveniently feeding on flowers.

As evening approached we walked up the road to the Pensyon as the day cooled and were treated to a splendid display of Silver-washed Fritillaries feeding on the Dwarf Elders, including several of the dark valezina forms. We also saw a Short-tailed Blue and several Ilex Hairstreaks and Purple-shot Coppers.

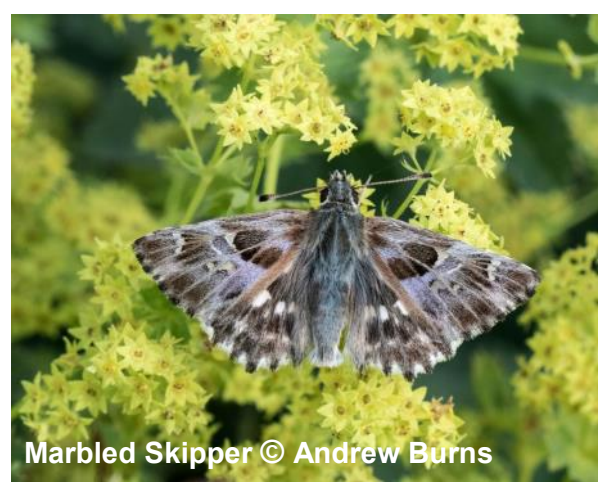
Day 5: 19 July 2017

Today we travelled higher up the Çoruh valley through the charming village of Yaylalar to the end of the road at Olgunlar where the valley broadened out into alpine pastures. Immediately on leaving the Pensyon, we were greeted by the captivating sight of mud-puddling Swallowtails and Scarce Swallowtails. We also explored a small meadow below the Pensyon where a Blue Argus had been seen a few days earlier. We were all rewarded by good views of this wonderful little butterfly with its iridescent blue wings.



We stopped several times along the road up from Barhal and saw a single White-letter Hairstreak feeding amongst numerous Ilex Hairstreaks on the Dwarf Elder. These were joined as usual by many Silver-washed and Heath Fritillaries. After a few more productive stops, we explored some rocky slopes by a small waterfall and were thrilled to get a close sighting of Geyers Tawny Rockbrown. An ordinary looking lay-bye surprised with views of hundreds of mud-puddling blues, joined by several Marsh and Dark Green Fritillaries. We also saw our first Apollo, stopping briefly to feed at the pale yellow flowers of Giant Scabious.

Notable plants growing on the river banks were the masses of yellow *Isatis*, the blue *Campanula lactiflora*, pink *Alcea hohenackeri*, pale orange *Papaver fugax*, stately *Heracleum platytaenium* and *Epilobium angustifolium*.



Late in the day, we arrived at Olgunlar and immediately jumped out to explore a mud puddle in front of the Kackar Pensyon which literally teemed with butterflies. Hundreds of blues were mixed with Dark Green Fritillary, Caucasian Spotted Fritillary, and Black-veined White. Amongst the blues was the beautiful little Bosnian Blue, recognisable by its light blue colour and small spots in each forewing. There were also new species like Osiris Blue, Damon Blue, Mountain Argus (aka Northern Brown Argus) and False Heath Fritillary. Everyone went to bed tired but very happy during a day which clocked up over 60 species!



Day 6: 20 July 2017

We spent the day exploring the beautiful Hasnaf valley running up from the Pensyon where a small group of cattle grazed the extensive pastures. In the distance we could see the jagged peaks of Kaçkar Dağı rising above to nearly 4,000m. Our walk started at 2100m and took us up to a gully at around 2300m. The lower slopes were covered in small boulders which had been moved into low walls to improve the grazing. An impressive feat that may have been done centuries ago. The cattle were tended by a cow-herd who brought them back into the village at night. However, the number of cattle seemed very low (around 20-30) given the huge area of grazing available.



Russian Heath © Andrew Burns



Lederer's Heath © Ian Lockwood Hall

As we walked up, we had close up looks of both Russian and Lederer's Heath, both slightly larger than the Small Heath. The former is distinguished by a silvery border on the outer hindwing and a row of spots with small white eyes. Lederer's lacks the border and its row of spots are blind. We also saw good numbers of coppers, both Scarce and Balkan, as well as the usual array of blues. Dark Greens were abundant, zooming around the hillside interspersed were a few Twin-spot, Heath and Caucasian Spotted Fritillaries.

The other noticeable feature was that the grassland was full of insects of all kinds. They included huge numbers of large crickets, sometimes up to ten in each umbrellifer, and the occasional large beetle. We identified the beautiful large ground beetle, *Carabus (Megodontus) bonvouloiri kaschkarensis*, a subspecies endemic to the region.

The intrepid Nick walked up higher than the rest of us, to around 2700m where he was rewarded by sighting of three montane specialists, all new to the trip: Alpine Ringlet, Caucasian Ringlet, and Caucasian Fritillary. All three of these are either near endemics (ie occur here and adjacent Georgia) or classed as Near Threatened in Turkey.



Caucasian Ringlet © Nick Freeman



Caucasian Fritillary © Nick Freeman



Alpine Ringlet © Nick Freeman

The day was much cooler than others, with patches of cloud which provided excellent conditions to see butterflies basking on the mud with wings open, showing a wonderful array of blues and oranges. Many of us spent several hours photographing butterflies on the mud near the Pensyon as we returned. After lunch a few of us also walked the road south of the Pensyon where many butterflies were feeding on the mud or nectaring on adjacent flowers. We had good sightings of Dusky Steppe Brown which looks much like a Meadow Brown with scalloped hindwings, but flies jumpily like a Grayling. Interestingly there seemed to be no Meadow Browns at this altitude. We also confirmed a previous sighting of the False Chalk Hill Blue, which has undersides like a normal Chalk Hill Blue with chequered fringes but the uppers are less chalky with dark margins.

Day 7: 21 July 2017

After an early breakfast we walked down the road from the Pensyon past a series of small hay meadows and rocky scree slopes with patches of scrub. Many butterflies were feeding or basking on the tall grass verges, posing nicely for photos. In addition to several fritillaries we saw both Scarce and Balkan Copper. The most exciting find came when we investigated the numerous hairstreaks buzzing around a patch of Prunus bushes (possibly planted). Most of them turned out to be Sloe Hairstreak, but one had a few black spots on the underside forewing, characteristic of Gerhardts Black Hairstreak.



Gerhardts Black Hairstreak
© Nick Freeman



Balkan Copper © Martin Warren



Scarce Copper © Martin Warren

Around mid morning, we explored the Körahmet valley that runs west below Yaylalar. This steep south-facing slope had been lightly grazed by cattle and was characterised by dry vegetation rich with wildflowers. In the rising heat, Eastern Bath Whites and Clouded Yellows dashed about, settling briefly for nectar and we had fleeting view of one of the Kackars most threatened butterflies, the Caucasian Clouded Yellow. This species has bright orange upper wings, so looks quite different to Clouded Yellow in flight and is listed as Endangered in the Turkish Red List. We only saw two or three but they were unmistakable.

The valley proved full of superb butterflies and we saw a single female Large Blue nectaring on Marjoram flowers as well as several Apollos. The most unusual sighting was of a mating pair of Apollos which posed several times whilst feeding on Giant Scabious. We also found a mating pair of Dark Green Fritillaries, a single Silver-spotted Skipper (no doubt freshly emerged at the start of its flight season), and good numbers of Meleager's and Aedon Blues.



Apollos mating © Nick Freeman



False Chalk Hill Blue © Nick Freeman

In the afternoon, we walked up the Dibedüzu valley west from the Pensyon, which was full of flowers and had a more Mediterranean feel. We saw hundreds of fritillaries: mostly Dark Green and Caucasian Spotted with some Marsh, Heath and Twin-spot. There were the usual array of blues, including Bosnian and False Chalk Hill Blue.

The upper reaches of the Çoruh held similar plants to those seen on as we travelled up but in addition there was yellow *Melampyrum arvense*, *Tanacetum balsamitoides*, *Parnassia palustris*, *Teucrium orientalis* and *Dactylorhiza urvilleana*. The large plants of *Prangos* had gone over, but still interesting because of their inflated fruits.

Day 8: 22 July 2017

Sadly, we had to leave this mountain paradise and make the long journey back to Erzurum. However, we had promised ourselves several stops on the way to ensure that everyone had a chance to see some of the rarities seen briefly on previous days. A few kilometres below Yaylalar we stopped at some wet meadows to see if we could see Anatolian Copper, which Catherine had photographed earlier. We had several possible sightings and a likely female was photographed. They are very hard to separate from Balkan Coppers but have a slight tail on the hindwing. There was a great range of other coppers on "Copper Corner" including Purple-shot, Balkan, Sooty and Small Coppers. The latter are somewhat confusing in this region because they have far darker forewings than we are familiar with in most of Europe.



Sooty Copper © Catherine Dijon



White edged Grayling © Martin Warren

Later, we stopped again at the side road that leads to Derieci to see if we could see Ionian Emperor. After a few brief sightings one conveniently settled on the road in front of us to allow some great pictures. We also had further views of the White-edged Grayling as well as a range of fritillaries and blues. It was very noticeable that the tiny Little Tiger Blue was far more numerous than on our trip down just six days earlier, showing it was just the start of their emergence.



Little Tiger Blue
© Martin Warren

After lunch on a riverside restaurant in Yusefeli, we stopped by a busy road to take pictures of the stunning scenery and folded rock. On a small patch of Red Clover, we spotted a pristine Orange Hermit feeding so avidly that we could approach closely for photos. This was a species we had only seen fleetingly to date, so was a real bonus.

Our last stop was at the Tortum waterfall where a few of us had photographed the Hi Blue, arguably the rarest butterfly of the trip. Once again Ian quickly sniffed one out, this time a male, which posed nicely for photos despite the wind. We also photographed at least two other species of *Agodiaetus* blues which will need to be examined by an expert for identification. We arrived back at our hotel in Erzurum at 17:30 and after settling in headed around the corner for our final evening in Turkey. The following morning was an early start for the airport and back home.

Epilogue

This first Greenwings trip to the Kackars was a great success in many ways. The two main Pensyons were in superb locations, the food was excellent and the owners extremely hospitable. The views and the scenery were spectacular and we had a unique window onto the way of life of the mountain people. We also had the privilege of seeing a wonderful range of beautiful plants, a host of insects and birds, and a confirmed 128 species of butterfly. Among these were some of Turkey's rarest and most threatened species like the Hi Blue and Caucasian Clouded Yellow (both Endangered endemics), and European threatened species like the Alcon and Large Blues. We also saw vast numbers of fritillaries, browns and coppers. However, perhaps the most memorable sight, for which the Kaçkars are famous, was the sheer abundance of butterflies mud-puddling to get salts in the hot weather. We were fortunate to see this on almost every day of the trip and witness one of nature's most spectacular butterfly phenomena. The data we gathered will also be very useful and will be sent to the Nature Conservation Centre (Doğa Koruma Merkezi), the Butterfly Conservation Europe partner in Turkey, and made available for research and conservation.

Picture Galleries

Blues



Boshian Blue © Catherine Dijon



Hi Blue © Mark Cwynarski



Iphigenia (Chelmos) Blue © Nick Freeman



Eastern Brown Argus © Nick Freeman



Blues on mud © Martin Warren

Coppers



Fiery Copper © Catherine Dijon

Swallowtails



Scarce Swallowtail on mud © Martin Warren

Whites



Southern Small Whites © Martin Warren



Caucasian Clouded Yellow? © Catherine Dijon

Fritillaries



High Brown Fritillary © Andrew Burns



Dark Green Fritillaries © Martin Warren



Caucasian Spotted Fritillary © Andrew Burns



Browns



Northern Wall Brown © Andrew Burns



Dusky Steppe Brown © Martin Warren



Scotch Argus on *Cephalaria gigantea*
© Yiannis Christofides



Anatolian Satyr © Martin Warren



Marbled Skipper © Mark Cwynarski



Large Grizzled Skippers © Andrew Burns

Moths



Philareta treitschkii © Catherine Dijon



Mocha © Catherine Dijon



Eurrhysis pollinalis © Yiannis Christophides



Jersey Tiger © Martin Warren



Currant ? Clearwing © Martin Warren



Broad-bordered Bee-hawk Moth © Martin Warren



Nine-spotted Moth type © Martin Warren

Other insects



Plants



Gundelia glabra © Catherine Dijon



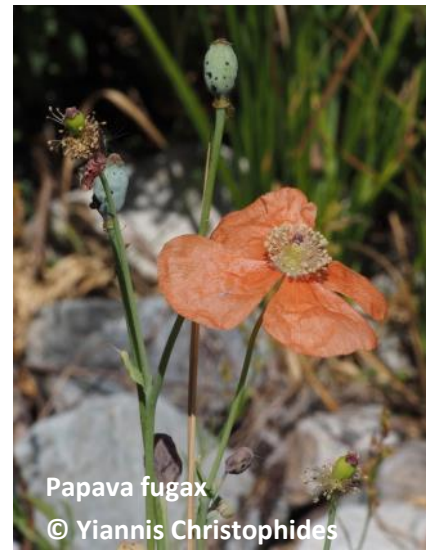
Dactylorhiza urvillea ssp © Catherine Dijon



Sedum spurium
© Yiannis Christophides



Digitalis schischkinii
© Yiannis Christophides



Papava fugax
© Yiannis Christophides



Geranium sanguineum
© Yiannis Christophides



Rhynchocorys elephas
© Yiannis Christophides



Helichrysum plicatum
© Yiannis Christophides



Paliurus spina-christi, T. balkanicus
© Yiannis Christophides



Campanula troegerae
© Yiannis Christophides



Campanula lactiflora © Martin Warren

People and places



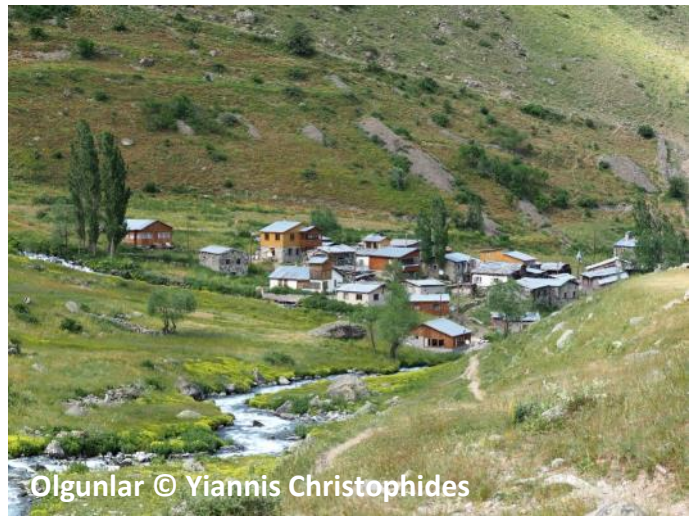
Gungormez Valley © Martin Warren



Taskiran Valley © Martin Warren



Pisenkaya Valley © Martin Warren



Ogunlar © Yiannis Christophides



Breakfast is served at Karahal Pensyon © Martin Warren



Yiannis + Martin © Catherine Dijon



Yiannis + Yasemin © Martin Warren

Kaçkar butterflies checklist 15-22 July 2017			1	2	3	4	5	6	7	8
(see end for key to locality numbers)			15/7	16/7	17/7	18/7	19/7	20/7	21/7	22/7
Papilionidae										
1	Swallowtail	<i>Papilio machaon</i>	1			2,3	1	1	1	2
2	Scarce Swallowtail	<i>Iphiclides podalirius</i>	1	4	1	1,2	1,2			
3	Apollo	<i>Parnassius apollo</i>			2		3	1	1-3	
Pieridae										
4	Black-veined White	<i>Aporia crataegi</i>	1		1-3	3	1-4	1	1-3	
5	Large White	<i>Pieris brassicae</i>	1		2,3	3	1			
6	Small White	<i>Artogeia rapae</i>	1	1,4	2	2,3	3	1		
7	Southern Small White	<i>Pieris mannii</i>			1-3	2,3	1	1		2
8	Mountain Small White	<i>Pieris ergane</i>	1	2			3?			
9	Green-veined White	<i>Pieris napi</i>							3	
10	Eastern Bath White	<i>Pontia daplidice</i>	1	1	2	2	3	1	2,3	
11	Small Bath White	<i>Pontia chloridice</i>	1?					1		
12	Clouded Yellow	<i>Colias crocea</i>	1	2,4	2	1	2,3	1	1,2	1,2,4
13	Balkan Clouded Yellow **	<i>Colias caucasica</i>							2	
14	Pale Clouded Yellow	<i>Colias hyale</i>				3				
15	Southern Clouded Yellow	<i>Colias alfacariensis</i>					2,3?		2	
16	Brimstone	<i>Gonepteryx rhamni</i>		4	2	2	3			2
17	Wood White complex	<i>Leptidea sp</i>		1,4	2,3	2,3	1-3			1,2
18	Eastern Wood White	<i>Leptidea duponcheli</i>				2				
Lycaenidae										
19	Purple Hairstreak	<i>Quercusia quercus</i>		4	1,2	3	1,2			
20	Sloe Hairstreak	<i>Satyrium acaciae</i>				4		1	1,2	
21	Ilex Hairstreak	<i>Satyrium ilicis</i>			1-3	2,3	1-3			2
22	Blue-spot Hairstreak	<i>Satyrium spini</i>			2	4	2			
23	White Letter Hairstreak	<i>Satyrium w-album</i>			1,2		2			
24	Gerhard's Black Hairstreak	<i>Satyrium abdominalis</i>						1		
25	Riley's Hairstreak	<i>Satyrium marcidum</i>						1?		
26	Rebel's Hairstreak	<i>Satyrium myrtale</i>	1							
27	Green Hairstreak	<i>Callophrys rubi</i>					2			1
28	Small Copper	<i>Lycaena phlaeas</i>	1		1,2					1
29	Scarce Copper	<i>Lycaena virgaureae</i>	1		1,2	2		1	1	1
30	Sooty Copper	<i>Lycaena tityrus</i>			1-3	1-3	1		3	1,2
31	Purple-shot Copper	<i>Lycaena alciphron</i>	1		1-3	1,2	1,2			1
32	Lesser Fiery Copper	<i>Lycaena thersamon</i>		4??						
33	Balkan Copper	<i>Lycaena candens</i>						1		
34	Anatolian Fiery Copper	<i>Lycaena asabinus</i>					1?			1?
35	Little Tiger Blue	<i>Taurus balkanicus</i>		4		1				2
36	Short-tailed Blue	<i>Cupido argiades</i>		3,4	3	3	1			2,3
37	Little/Small Blue	<i>Cupido minimus</i>					4			
38	Osiris Blue	<i>Cupido osiris</i>					4	1	1	

39	Holly Blue	<i>Celastrina argiolus</i>		4	2,3	3	1,2			1,2
40	Alcon Blue	<i>Maculinea alcon</i>	1			2eggs				
41	Large Blue	<i>Maculinea arion</i>							2	
42	Eastern Baton Blue	<i>Pseudophilotes vicrama</i>			1,2					
43	Odd-spot Blue	<i>Turanana endymion</i>	1							
44	Jewel Blue	<i>Chilades trochylus</i>		4						
45	Zephyr Blue	<i>Plebejus pylaon</i>	1		2		2,4	1	1	
46	Eastern Brown Argus	<i>Plebejus eurypilus</i>	1							
47	Loew's Blue	<i>Plebejus loewii</i>	1							
48	Silver-studded Blue	<i>Plebejus argus</i>	1	4	1,2	1-3	2-4	1	1	4
49	Idas Blue	<i>Plebejus idas</i>	1	4	1,2	1-3	2-4	1	1	4
50	Bosnian Blue	<i>Plebejus dardanus</i>					4	1	1,3	
61	Brown Argus	<i>Plebejus agestis</i>		1	2,3	1-3	1			1,2,4
52	Mountain Argus	<i>Plebejus artaxerxes</i>					4	1	1,3	
53	Geranium Argus	<i>Plebejus eumedon</i>						1		
54	Blue Argus	<i>Plebejus anteros</i>			3		1,2,4	1	3	
55	Mazarine Blue	<i>Polyommatus semiargus</i>			2	1	2,4	1		
56	Turquoise Blue	<i>Polyommatus dorylas</i>		4?					1	
57	Meleager's Blue	<i>Polyommatus daphnis</i>	1	1,4	1,2	1-3	1-4	1	1,2	
58	Amanda's Blue	<i>Polyommatus amanda</i>	1		1,2	1,2	2,4	1	1,2	
59	Aedon Blue	<i>Polyommatus aedon</i>	1		2		2-4	1	1-3	
60	Common Blue	<i>Polyommatus icarus</i>	1	1,4	1-3	1-3	1,2	1	1	1,4
61	Eros Blue	<i>Polyommatus eros</i>				2		1	1	
62	Adonis Blue	<i>Polyommatus bellargus</i>	1			1				
63	False Chalk Hill Blue	<i>Polyommatus corydonius</i>							1,3	4
64	Ripart's Anomalous Blue	<i>Polyommatus ripartii</i>		1?	2?				1	
65	Hopffer's Blue *	<i>Polyommatus hopferii</i>								4?
66	Firdussi's Blue	<i>Polyommatus firdussii</i>	1?							
67	Hi Blue **	<i>Polyommatus merhaba</i>		2						4
68	Actis Blue *	<i>Polyommatus actis</i>								4?
69	Iphigeneia (Chelmos) Blue	<i>Polyommatus iphigenia</i>	1				4			
70	Damon Blue	<i>Polyommatus damon</i>			1?	2?	4	1	1	
	Libytheidae									
71	Nettle-Tree Butterfly	<i>Libythea celtis</i>			2	3				
	Nymphalidae									
72	Ionian Emperor	<i>Thaleropsis ionia</i>		4						2
73	Southern White Admiral	<i>Limenitis reducta</i>		1,4	1,2	1-3	2			2
74	Camberwell Beauty	<i>Nymphalis antiopa</i>				3				
75	Red Admiral	<i>Vanessa atalanta</i>			2	1-3			2	
76	Painted Lady	<i>Cynthia cardui</i>		2						
77	Comma	<i>Polygonia c-album</i>			2,3	2,3	2			2
78	Southern Comma	<i>Polygonia egea</i>		4		1		1	1,3	
79	Small Tortoiseshell	<i>Aglais urticae</i>	1	4		1		1	1,3	
80	Marsh Fritillary	<i>Euphydryas aurinia</i>		1	2		2-4	2	3	

81	Glanville Fritillary	<i>Melitaea cinxia</i>	1		1		3		1	
82	Heath Fritillary	<i>Melitaea athalia</i>			1-3	1-3	1-4	1	1-3	1,2
83	Spotted Fritillary	<i>Melitaea didyma</i>		1?			2,3	1		
84	Lesser Spotted Fritillary	<i>Melitaea trivia</i>								2
85	Caucasian Spotted Fritillary	<i>Melitaea interrupta</i>	1		1,2	2,3	1-4	1	1-3	1,2
86	Cardinal	<i>Argynis pandora</i>	1			3				
87	Silver-washed Fritillary	<i>Argynnis paphia</i>			1-3	1-3	1-3	1		2
88	Dark Green Fritillary	<i>Argynnis aglaja</i>	1		1-3	1-3	1-4	1	1-3	
89	High Brown Fritillary	<i>Argynnis adippe</i>			2	2				
90	Niobe Fritillary	<i>Argynnis niobe</i>	1		2					
91	Queen of Spain Fritillary	<i>Issoria lathonia</i>	1		2			1	1,3	
92	Twin-spot Fritillary	<i>Brenthis hecate</i>			3	2		1	3	
93	Marbled Fritillary	<i>Brenthis daphne</i>			1,2	2	1,2			1
94	Caucasian Fritillary *	<i>Boloria caucasica</i>						2		
95	Pearl-bordered Fritillary	<i>Clossiana euphrosyne</i>			1	3	3			1
	Satyridae									
96	Marbled White	<i>Melanargia galathea</i>				2				
97	Balkan Marbled White	<i>Melanargia larissa</i>	1	4						
98	White-bordered Grayling	<i>Hipparchia parisatis</i>		4,5						2
99	Eastern Rock Grayling	<i>Hipparchia syriaca</i>			2	2				
100	Great Banded Grayling	<i>Brintesia circe</i>		1,4	2	2,3				1
101	Orange Hermit	<i>Chazara bischoffii</i>		1						2,3
102	Geyer's Tawny Rockbrown	<i>Pseudochazara beroe</i>					3	1	1	
103	Tawny Rockbrown	<i>Pseudochazara mniszechii</i>				2				
104	Great Sooty Satyr	<i>Satyrus ferula</i>		1						
105	Scotch Argus	<i>Erebia aethiops</i>			1-3	2,3	1-4	1	1-3	1
106	Alpine Ringlet *	<i>Erebia melancholica</i>						2		
107	Caucasian Ringlet	<i>Erebia graucasica</i>						2		
108	Meadow Brown	<i>Maniola jurtina</i>	1	4	1-3	1-3	1-4			1,2
109	Eastern Meadow Brown	<i>Maniola telmessia</i>	1							
110	Dusky Steppe Brown	<i>Maniola lycaon</i>		1				1	1-3	
111	Oriental Steppe Brown	<i>Hyponephele lupina</i>						1		
112	Small Heath	<i>Coenonympha pamphilus</i>	1					1		
113	Russian Heath	<i>Coenonympha leander</i>						1	3	
114	Lederer's Heath	<i>Coenonympha symphita</i>	1				2	1	2	
115	Speckled Wood	<i>Pararge aegeria</i>		1,3	3	3	1			1,2
116	Wall Brown	<i>Lasiommata megera</i>		4						4
117	Large Wall Brown	<i>Lasiommata maera</i>	1	1	2			2		
118	Northern Wall Brown	<i>Lasiommata petropolitana</i>			2			1		
	Hesperiidae									
119	Large Grizzled Skipper	<i>Pyrgus alveus</i>	1				4	1	1,3	
120	Olive Skipper	<i>Pyrgus serratulae</i>						1		
121	Oberthur's Grizzled Skipper	<i>Pyrgus amicanus</i>	1							
122	Sandy Grizzled Skipper	<i>Pyrgus cinarea</i>	1							

123	Aegean Skipper	<i>Pyrgus melotis</i>	1							
124	Hungarian Skipper	<i>Spialia orbifer</i>	1		2	1,3	4	1	1,3	2
125	Mallow Skipper	<i>Carcharodus alceae</i>					1			
126	Marbled Skipper	<i>Carcharodus lavatherae</i>	1	4	2	2	3	1	1,3	
127	Tufted Marbled Skipper	<i>Carcharodus flocciferus</i>				3?	3?,4	1	1	
128	Oriental Marbled Skipper	<i>Carcharodus orientalis</i>				3?	3?	1		
129	Dingy Skipper	<i>Erynnis tages</i>		4	2	1			3	2
130	Essex Skipper	<i>Thymelicus lineola</i>					2	1		1
131	Small Skipper	<i>Thymelicus sylvestris</i>	1		1,2	2	1-4	1	1-3	1
132	Silver-spotted Skipper	<i>Hesperia comma</i>						1	2	
133	Large Skipper	<i>Ochlodes venatus</i>	1	4	1-3	3	1,2			
134	Alcides Skipper	<i>Eogenes alcides</i>		1						
	Day-flying Moths									
1	Nine-spotted moth	<i>Amata (Syntomis) phegea</i>	Seen in many places, esp nr Barhal							
2	Burnet with 6 spots + red belt	<i>Zygaena sp (ephiates?)</i>	Seen in many places, esp nr Barhal							
3	Cream-spot Tiger	<i>Arctia villica</i>	Seen in many places, esp nr Barhal							
4	Jersey Tiger	<i>Euplagia quadripunctaria</i>				3				
5	Black micro with white spots	<i>Eurrhysis pollinalis</i>			1					

** Threatened species in Butterfly Red List Turkey

* Near endemic or classes as Near Threatened

Date	Site no	Site name	Altitude (m) (approx.)
15/7/17	1	Gungormez valley	1500
16/7/17	1	Uzundere (track by river)	1200
	2	Tortum waterfall	1000
	3	Tekkale (lunch stop in orchard)	700
	4	Road to Dereici	750
17/7/17	1	Above Karahal Pensyon	1500
	2	Valley to Pisenkaya	1400
	3	Barhal to Karahal Pensyon	1200
18/7/17	1	Start of Taskiran valley	1100
	2	Upper Taskiran valley	1900
	3	Bicakcilar valley, nr Kadinkisi	1300
	4	Barhal to Karahal Pensyon	1200
19/7/17	1	Karahal Pensyon to Barhal	1200
	2	Yaylalar valley (several stops)	1500
	2=	Turning to Mikelis (by bridge)	1700
	3	Scree slopes by small waterfall	1750
	4	Olgunlar	2100
20/7/17	1	Hasnaf valley, Olgunlar (bottom)	2100
	1=	Hasnaf valley, Olgunlar (top)	2300
	2	Nick's walk up valley	2700
21/7/17	1	Olgunlar road down	2100
	2	Korahmet valley below Yaylalar	1900
	3	Dibeduzu valley west Olgunlar	2200
22/7/17	1	Copper Corner (meadows + mint)	1900
	2	Dereici turn (again)	750
	3	View stope below Yusefeli	800
	4	Tortum waterfall (again)	1000

Some moths seen around Pensyon at Barhal

Leopard Moth	<i>Zeuzera pyrina</i>
Mocha	<i>Cyclophora annularia</i>
Dingy Footman	<i>Eilema griseola</i>
Common Footman	<i>Eilema lurideola</i>
Copper Underwing	<i>Amphipyra sp</i>
Dead hawk-moth (pink moth)	<i>Hyles verspertillo</i> <i>Philareta treitschkii</i>

Some insects seen

(courtesy of Catherine)

A neuroptera	<i>Bubopsis hamate</i>
Large Ground Beetle	<i>Carabus (Megodontus) bonvouloiri</i>
Red beetle with black spots	<i>Clytra valeriana</i>
Black and yellow Cricket	<i>Isophya cf. zernov</i>
Black and red Cricket	<i>Phonochorion cf. artvinensis</i>
Grey mottled Cricket	<i>Poecilimon cf. variicercis</i>
Ascalaphid	<i>Libelloides sp</i>

Birds (incomplete)

Golden Eagle
Buzzard
Raven
Chough
Red-backed Shrike
Fieldfare
Common? Rosefinch
Redstart
Grey Wagtail
Pied Wagtail
Wheatear
Chukar
Bee-eater