

Butterflies and Botany of the Kackars in Turkey

Greenwings holiday report 14-22 July 2018

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White-bordered Grayling © Alan Woodward

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Introduction

This was the second year of a tour 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 160 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 1,750m and surrounded by a flat plain before the high mountains start. This year 12 guests joined our three guides and we again had the excellent services of the minibus driver, Refik.

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



Valley in Kackar mountains © Andrew McCallum

Day 1: 14 July 2018

Most guests travelled through the night via Istanbul and arrived early in the morning at Erzurum airport. Although we were all tired, we were keen to get going and see some butterflies so we travelled north to visit the beautiful Gungormez valley. This lies at around 1500m in an extensive area of lush pastures and hay meadows with scattered scrub but little woodland.

We parked the bus up a farm track and walked down through the meadows looking at the vast array of butterflies. Almost the first one we came to was the tiny but extremely rare Odd-spot Blue *Turanana endymion*. This is now thought to be a different species from the one that occurs rarely in Europe, *T. tygetica*, and may be renamed the Anatolian Odd-spot Blue. It was a hot day and butterflies were very active and rarely settled to be sure of identification. The most conspicuous were the Balkan Marbled White, Black-veined White, and Clouded Yellow. We were treated to the occasional flypast of the stunning Cardinal, which occasionally settled to nectar on the yellow flowers of the Giant Scabious *Cephalaria gigantea*. Further down, several blues and skippers were settling on mud, allowing easier identification. This behaviour is common in hot countries and allows the butterflies to draw up the salts they need for flight activity. Salts are in short supply in the herbivorous diet of the larvae so adults need to supplement them to keep active. The phenomenon is most common in males who need to fly more than females.



Odd-spot Blue © Alan Woodward



Cardinal © Roger Clooney

The most common blues on mud were Eros and Silver-studded Blue, with occasional larger blues such as Meleager's, Aedon and Amanda's. Amongst them were several skippers: Large Grizzled, Sandy, Yellow-banded, Persian and a full suite of Marbled/Mallow Skippers. There was also the occasional bright orange Spotted Fritillary. But perhaps the best find was a single Yellow-legged Tortoiseshell which posed on the track before flying off into some trees. We were able to capture some close up photos of the body showing its distinctive yellowish legs which separates it from the Large Tortoiseshell.



Yellow-legged Tortoiseshell © Martin Warren

After a fine picnic lunch, we wandered further down the track and saw a single Alcon Blue as well as glimpses of Gerhardt's Black Hairstreak and Rebel's Hairstreak. We also saw small numbers of bright Coppers, including Scarce, Sooty, Purple-shot and Lesser Fiery. We also saw the Small Copper but in its Turkish form which is larger, darker and more heavily spotted than the ones we are familiar with in the UK. All in all we saw 53 species, a good total for the first day. Amongst the wonderful display of flowers there were *Alkanna leptophylla*, *Salvia verticillata*, *Verbascum armena* yellow *Opopanax hispidus* and *Coronilla varia*.

Day 2: 15 July 2018

Today we travelled from Erzurum past Tortum to Yusafeli and then along the Barhal 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. We then went through a dramatic landscape of deep gorges and heavily folded rocks, some lifted into vertical layers and some into complete hairpins.



Aedon Blue © Mark Ogden



Niobe Fritillary © Andrew McCallum

Our first stop was along a roadside track through woodland near Uzundere. Here there was a mix of dry, rocky habitats and damper woodland alongside a river. It was surprisingly good for butterflies with several blues including both Anomalous and Ripart's Anomalous and the False Chalkhill Blue. The latter is best described as having a Chalkhill Blue underside with an Adonis Blue coloured upperside with black veins in the wing margins. We also saw a fleeting glimpse of both High Brown and Niobe Fritillaries as well as some nice views of a Southern White Admiral which circled repeatedly around the minibus. We also saw the first Lesser Marbled Fritillaries.

Soon after, we stopped for a picnic along the old road south of Tortum Lake. Here we found several Short-tailed Blues before the rain came and we had to retreat to the minibus. We then drove on to Yusefeli, a large town of 6,000 people that amazingly is going to be submerged in the next few years under a new reservoir being built to generate hydro-electricity. This is a controversial project that will not only displace all these people but will also flood some exceptional wildlife habitats in this biodiversity hotspot.

After Yusefeli, we stopped at a small side road going to Dereici where a tunnel was being excavated to build a new road above the proposed reservoir. Here we found good numbers of the tiny but exquisitely marked Little Tiger Blue as well as Short-tailed and Small Blues. One of our group, Andrew, was lucky enough to see a Turkish Fiery Copper, the only one we were to encounter on the trip. We also had our first sightings of the Southern Small White which is distinguished from the Small White by having the dark forewing tip extending down the outer margin to form a triangular spot (rather than just extending a short way down to form an oblong spot. It is worth getting to know these as they have spread north rapidly through Europe and may well get to Britain in the next decade.

Plants seen included *Centaurea virgata*, *Sambucus ebulus* and *Colutea cilicica*.

We then drove to Barhal to stay at the beautiful Karahan Pensyon, perched above the road in wooden chalets, where a delicious home-cooked meal awaited us. Like many small-holders, the owner makes 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: 16 July 2018

Today we left promptly at 8.30 to catch butterflies before they became too active in the heat. However, we were fortunate that there were patchy clouds so temperatures were only the mid 20s Celsius. Butterflies were already active around the Pensyon and several of us saw both Swallowtail and Scarce Swallowtail gracefully swooping around the track and adjacent fields. We travelled just a few kilometres to the Pisenkaya valley and spent the whole day slowly walking down the road from the upper more alpine reaches to the lower more wooded zone.

The valley was alive with butterflies with large numbers of Scotch Argus and a wide range of fritillaries: Silver-washed, Dark Green, High Brown, Marbled, Lesser Marbled, Heath, False Heath and the bright orange Caucasian Spotted Fritillary. We saw many Heath Fritillaries, a highly variable species, as well as False Heath Fritillaries with their dark hind wings. Many butterflies were seen feeding on the European Dwarf Elder *Sambucus ebulis*, giving good views and easy photography. We saw our first Ilex and Sloe Hairstreaks that were easy to approach while they

gorged on the Elder flowers. Also on the Elder were numerous Nine-spotted Moths with their distinctive black wings and white spots, as well as Burnet moths, both Cream-spot and Jersey Tiger moths, and numerous green Rose Chafers *Cetonia aurata*.



Caucasian Spotted Fritillary © Jillean Macready



Caucasian Spotted Fritillary © Peter Chadd

A huge number of blues were seen puddling along the track edges including Zephyr, Silver-studded, Blue Argus, Mazarine, Turquoise, Aedon, Eros, Meleager's and Amanda's. We also saw the beautiful form of the Blue Argus with its row of marginal red spots against its electric blue wings. Amongst these were several skippers, fidgeting to get a good position on the mud. They included Large Grizzled and Sandy Skippers, as well as the smaller Red Underwing Skipper. We also saw our first Great Banded Grayling and Eastern Rock Graylings which skipped erratically from rock to trees and back.



Scarce Copper © Andrew McCallum



Sooty Copper © Mark Ogden

More challenging were the coppers that rarely stayed still enough to be identified. However we did manage to identify Scarce and Purple Shot, while Sooty Coppers were easier to see on the Dwarf Elder. The most exciting sightings of the day were a few Apollos that swooped gracefully along the mountain sides, a single Large Blue, and an Ionian Emperor that did not stay long to be photographed. We also saw our first few Marsh Fritillaries, a butterfly that was abundant last year but seemed past its main flight period this year. Overall it was a splendid day with over 70 species seen.

Plants seen included: *Pelargonium endlicherianum*, *Eupatorium cannabinum*, *Inula helenica*, *Arctium lappa*, *Geranium platypetalum* and *Carlina biebersteinii*.

Day 4: 17 July 2018

After our usual splendid breakfast, we travelled a short distance back towards Yusufeli to explore the Bicakcilar valley (meaning valley of the knife makers). Once again, we walked down the road exploring the vegetation on either side. The butterfly community was very similar as the previous day with abundant Scotch Argus, Fritillaries and Hairstreaks on the Dwarf Elder. Among the Scotch Argus were a few Woodland Ringlets, almost identical except for the hind wing which has far less red, only ringing the smaller eye-spots. We had good sightings of Swallowtail and Scarce Swallowtail, and our first record of Twin-spot Fritillary.



As on the previous day we saw one or two worn Pearl-bordered Fritillaries as well as a few Wood Whites with their characteristic feeble flight, never faster than walking pace. We were pleased to see our first Geyer's Tawny Rock-brown, with its hindwings veins etched with white. The intrepid Ben found a False Grayling, very similar to the Grayling we get in the UK but with elongated eye-spots and whitish veins on the hindwing. We also saw a few Silver-spotted Skippers feeding amongst the blues on the mud. However the highlight of the day was a sighting of the brilliant orange Caucasian Clouded Yellow which buzzed a few times up and down the riverside. We were fortunate to see a female butterfly laying eggs on a large *Astragalus* plant.

In the valley, we saw several interesting insects apart from the butterflies, including an exotic-looking bright yellow Owlfly (probably *Libelloides macaronius*), a large stonefly (possibly *Perla grandis*), and several crickets including Great Green Bush-cricket and Wart-biter. Although we saw few birds on the trip, here we saw Red-fronted Serins.

After our picnic we drove back up the Barhal valley and walked a few kilometres back down to our Pension. The heavily wooded stream is a good habitat for woodland species like the Silver-washed and Hairstreaks, while the small meadows contain occasional blues and coppers. It was a delightful walk and we were able to add the White-letter Hairstreak to our list. We also had a good view of a Southern Comma, a brighter orange version of the ordinary Comma which coexists here in the same areas.

Plants seen included: *Origanum cordifolium*, *Trifolium pratense*, *Lathyrus pratensis*, *Clinopodium vulgare*, *Lysimachia verticillaris*, *Dianthus calocephalus* and *Scutellaria albida*.

The evening was far warmer than the previous two and during supper on the open veranda, we were bombarded by the occasional large speckled beetle, probably the pine feeding *Polyphilla fullo*. This impressive beast caused quite a stir as it crashed around the lights before settling on some wood to be photographed. Also crashing about were several smaller beetles and a few moths which were attracted to the low voltage lights, which must seem like a city in the pitch darkness of this remote valley.



Geyer's Tawny Rockbrown © Mark Ogden



Polyphilla fullo © Martin Warren

Day 5: 18 July 2018

Today we left the lovely wooded valley of Barhal to head further up the Barhal valley up through the mountain village of Yaylalar right to the end of the road at Olgunlar. On the way we stopped at several places to look for butterflies. Our first stop was next to a group of new houses where we saw several Great-banded and Eastern Rock Graylings as well as several fritillaries and blues. On the elders and brambles were a good range of hairstreaks, Sloe, Ilex and White-letter. However, the big surprise was a Brown Hairstreak which sat conveniently (but not very photogenically) on one of the white houses.



Brown Hairstreak © Peter Chadd



Great-banded Grayling © Jillian Macready

Further along we stopped by some small but very rich meadows by a bridge. Here we saw a huge number of species including Scarce, Sooty and Purple-edged Copper. We also saw a large group of Southern Small Whites, huddled together on a patch of mud. Surprisingly, this was the only time when we saw whites feeding on mud in any number.

Further on we stopped at a large layby for our picnic. While we waited for our lunch, we were greeted by our first seriously large display of butterflies on mud. Several hundred butterflies were gathered on a dung pile that had conveniently (for us) been left by the side of the road alongside a seepage of water. The display was breath-taking, especially when the clouds briefly covered the sun and all the blues opened their wings, creating an azure spectacle. Among the blues we saw numerous Mountain Argus (aka Northern Brown Argus), Common Blue, Eros and Iphigenea Blue (aka Chelmos Blue). The latter is one of the *Agrodiaetus* family most of which have a prominent white stripe on the under hindwing. There are over 30 species in Turkey, many of them very similar making identification almost impossible in the field. However, the Iphigenea Blue is recognizable by its brilliant iridescent blue uppers cut with dark veins. We also noticed that groups of Small Skipper sat together on the dung heap, while Large Grizzled Skippers and Mallow Skippers held their own patch.



Shortly after we left the picnic stop, Yiannis shouted for the driver to stop and we all piled out to see a Camberwell Beauty soaring around a cliff where water was cascading down. We watched for many minutes but it refused to settle and be photographed. It was the only one we saw on the trip but we all had good views and will have to hold it in our memory rather than on screen.



After another hours drive we finally arrived at the tiny village of Olgunlar and settled into our hotel. Although it was around 4pm, the day was still hot so we quickly explore the lower reaches of the valley. Huge numbers of butterflies were puddling just outside the hotel, putting themselves at the mercy of the occasional car that came by. Some hungry White Wagtails were seen picking a few of them off before we disturbed them. Here we saw a huge number of species, notably blues feeding on the mud. We identified our first Bosnian Blue (very similar to the Gavnaric Blue), a small species with chalky upper wings with tiny spots in the centre of each.

Plants seen included: *Sedum spurium*, *Lythrum persicaria*, *Arnebia pulchra* and *Dactylorhiza urveliana*.

It was a brilliant day, when we must have seen several thousand butterflies. Martin described it as a heady Stendhal type experience, after the art critic who fainted with the sensory overload of going round a top art gallery. It was nature at its finest.



Day 6: 19 July 2018

Today we walked out of the Kackar Pensyon and had a full day exploring the wonders of the Hastaf Valley. We walked through the rustic village of Olgunlar, over a bridge and out onto the open pastures that run from 2,100 m all the way up to the summit of Kackar Dagi, the highest point of the Kackars at 3,937m. The valley has an alpine feel with open pastures and few trees. Around the village are hay meadows, which are cut by hand and the hay transported on people's backs or on mules into the wooden barns. As last year, we saw only a few cattle, around 20 grazing the vast main valley. Many of the lower hay meadows looked abandoned with tall grass and invading scrub. At one time the area must have been intensively grazed or cut for hay and there were signs of old field systems where boulder had laboriously been moved into rows to create better grazing. However, it is clear that this hard way of life is disappearing as young people throughout Turkey head for the cities to easier jobs with more pay.

The lower pastures by the pounding river are still quite heavily grazed but they are interspersed by wetter areas that the cows largely avoid. So the slopes are a mosaic of short and tall grassland, wet and dry: ideal conditions for a full range of butterflies. The variety of insect life here is enormous. We saw at least 59 species of butterfly and many large crickets, including the black endemic species *Phonochorion* cf. *Artvinensis*. There were also lovely grey coloured crickets (*Poecilimon* cf. *variicercis*) as well as green ones (*Isophya* cf. *zernovi*).



Balkan Copper © Alan Woodward

The butterfly list was similar to the previous day but we had closer looks at the lovely little Bosnian Blue and Osiris Blue as well as both Lederer's and Russian Heath. The latter are very similar but the Russian Heath has a far brighter row of eyespots on the hindwing. We had two species new to the trip when Yiannis spotted a single Mountain Green-veined White and on the way back Martin saw a single Pontic Blue. The highlight of the walk was a Balkan Copper which posed for many of us before flying off. We also spotted many flowers including the beautiful deep blue trumpet gentian *Gentiana septemfida* and the orchid like *Swertia iberica* with its pale blue flowers.



Cricket *Isophya* cf. *zernovi* © Jillean Macready

Additional plants seen included: *Epilobium angustifolium*, *Epilobium hirsutum*, *Geum coccinea*, *Geranium ibericum*, *Campanula rapunculoides*, *Papaver lateretium*, *Scabiosa columbaria*, *Helichrysum armenium*, *Erigeron caucasicum*, *Cirsium trachylepis*, *Circepitta racemosa*, *Salvia staminea*, *Tanacetum balsmanina*, *Parnasia palustis* and *Sempervivum staintonii*.

While we were walking up the main valley, Ben took a hike up a side valley to almost 3,000m. Here he saw several Caucasian Ringlets, a montane species that flies 2,400 – 3,300m. Around mid-afternoon, the weather closed in and it poured with rain with the odd clap of thunder. Fortunately by then, we were all very tired from the walk and were happy to take a long rest before it cleared by early evening.



Day 7: 20 July 2018

Once again we made an early start to catch butterflies while they were basking before the day became too hot. We walked down the road from the Pensyon through small hay meadows and steep banks which were a blaze of flowers and butterflies. We saw the usual array of blues and skippers with the occasional fritillary pausing briefly to sip nectar from the abundant flowers. We had good views of both Scarce and Purple-shot Coppers that had been more flighty in the heat of previous days. The beautiful Alpine Ringlet also posed on the trackside mud, allowing us to clarify the difference between it and the Scotch Argus.

We then travelled in the bus a few kilometres down through the village of Yaylalar to the base of a side valley by a picturesque pack-horse bridge. The name Yayla refers to summer pastures and many people traditionally used to

move here from lower villages to take advantage of the abundant grass to make hay. It still seemed a thriving village even though some meadows are clearly becoming abandoned. The side valley where we stopped leads to a tiny village called Korahmet and has a very steep south facing slope with hot dry vegetation, even though it is at 1900m. We saw several Apollos floating down the slopes as well as one or two of the orange-coloured Caucasian Clouded Yellow. The main blues were False Chalkhill, Amanda's and Iphigenia Blue, but there was no mud to attract big numbers. However, we did have a good view of a Small Bath White and someone saw an Eastern Dappled White.



Dusky Steppe Brown © Mark Ogden



Alpine Ringlet © Martin Warren

After an hour or so, we travelled further down the valley for a picnic in the layby where we had stopped at on the way up. Once again there were impressive displays of blue butterflies on the damp dung heaps, with scattered groups of Essex Skippers and Marbled/Mallow Skippers. At lunch we were buzzed by a large Oak Eggar moth which repeatedly zoomed round the rubbish bag. Maybe there was a female nearby or maybe there was something in the rubbish that was attracting it. We also saw single Dusky Steppe Brown and Geyer's Tawny Rockbrown, both of which posed nicely for photos. Although this was the first day of the trip when we did not discover a new species, it was a good opportunity to brush up on identification and take photos of species that had eluded us earlier.

Plants seen included: *Sempervivum staintonia* and *Coronilla varia*.



Pontic Blue © Ben Greenaway



Caucasian Spotted Fritillary larva about to pupate © Martin Warren

Day 8: 21 July 2018

Sadly, this was our last day in the mountains and we had to make the long, 6 hour journey back to Erzurum, but we broke the journey up into regular stops at places where we knew there were species that had eluded us so far. The first stop was below Barhal, at the turning to Dereici by the new tunnel. We walked up and down the road hoping to see the White-bordered Grayling that we had seen here the previous year. Once again we saw numerous Little Tiger Blues buzzing around flowers and mud. We also had fleeting glimpses of Ioanian Emperor and Southern White Admiral but no Graylings. Then in a small cultivated field Martin thought he had seen one and called people over. It looked very similar, but turned out to be Freyer's Grayling. Not quite as impressive but still new to the trip.

Our next stop was well past Yusufeli by the old road past Tortum lake where we stopped for lunch. By now the temperature had soared to the mid 30s Celsius and butterflies had mostly hidden in the shade. There were a lot of dragonflies to keep us occupied as well as frogs that jumped energetically into the stream when disturbed. Martin also spotted a grass snake swimming across the stream, no doubt eating froglets that must be abundant here.



After lunch we enjoyed the air conditioning of the minibus to travel through the amazing gorges and canyons on the way to Erzurum. Our last stop was by the river near Uzundere where we had stopped on the way down. Once again, butterflies seemed scarce because of the extreme heat but we persisted in looking in the more shady areas. A shout came up from Yiannis: he had found exactly what we had been looking for but at a completely different site – a White-bordered Grayling! It fidgeted around for ages on mud in the dappled shade, occasionally flicking its wings open to reveal the conspicuous white borders. Everyone was able to see it close up and get some wonderful photos of both the beautiful upper and underside. We thought it was a most exquisite butterfly and a superb way to end the trip.

We then travelled the last 45 minutes back to the bustling city of Erzurum where we checked into the hotel and prepared for the long trip home the next day. Once again we ate dinner in the excellent restaurant that Yasemin had taken us to on the first night and reminisced on an incredibly productive week.

Epilogue

This was another highly successful trip to the remote and beautiful Kackar mountains. We stayed in some beautiful hotels, with wonderful home cooked meals, and the owners and their families were extremely welcoming and went to great lengths to make us feel at home.

Once again we were privileged to see the stunning scenery and magnificent butterflies of this biodiversity hotspot, as well as having a unique glimpse into the way of life of the mountain farmers. It was noticeable that most of the farmers were elderly and many fields were abandoned, so we may be the last generation to witness this traditional way of life. For now, the habitat remains extremely good for butterflies as abandonment is in its early stages. The steep slopes and harsh winters may also slow down scrub and tree encroachment, and scree slope will always remain open. So hopefully most butterflies will survive even if the species composition changes.

In all, we saw a total of 135 butterfly species, a few more than last year. New ones included Freyer's Grayling, Lesser Latticed Brown, Persian Skipper, Chequered Blue, Reverdin's Blue and Bavius Blue. They may have been around last year and we missed them, but it may have been because the season seemed more advanced than last year. There were definitely more False Chalkhill Blues about and fewer Silver-washed Fritillaries. Marsh Fritillaries were also few and mostly worn, whereas last year we saw large numbers of fresh individuals. It was especially noticeable this year that the season in the mountains must be very condensed as spring flying species such as the Pearl-bordered Fritillary and Marsh Fritillary were flying with summer ones such as Silver-washed and Dark Green Fritillary. In the UK these rarely overlap but they do here in the mountains with its short season.

We also saw an impressive array of other insects which we scarcely looked at as there were so many butterflies to keep us occupied. The large crickets at Olgunlar were the most spectacular, but there were large numbers of dragonflies, day-flying moths, hoverflies and bugs of many sorts. The weather was mainly cooler than last year, so most days were in the pleasant mid 20s Celsius. We had occasional rain but this usually came in the afternoon by which time we had already had a good day butterflying. We got on well as a group and had a unique experience together that will stay with us for many years to come.



Martin Warren

26th July 2018

Kaçkar butterfly records 14-21 July 2018		1	2	3	4	5	6	7	8
(see end for key to locality numbers)		14/7	15/7	16/7	17/7	18/7	19/7	20/7	21/7
Papilionidae									
Swallowtail	<i>Papilio machaon</i>	1	3		1	1,3	1	1-3	1
Scarce Swallowtail	<i>Iphiclides podalirius</i>	1	1		1	1-3	1	1-3	1
Apollo	<i>Parnassius apollo</i>			1	1	2,3	1	1-3	
Pieridae									
Black-veined White	<i>Aporia crataegi</i>	1		1	1	2,3	1	1-3	
Large White	<i>Pieris brassicae</i>	1	3	1		1	1		1
Small White	<i>Artogeia rapae</i>	1	1	1	1				
Southern Small White	<i>Pieris manni</i>		3	1		1,2	1	2,3	
Mountain Small White	<i>Pieris ergane</i>			1					
Green-veined White	<i>Pieris napi</i>			1		1		3	
Mountain Green-veined White	<i>Pieris bryoniae</i>						1		
Eastern Bath White	<i>Pontia daplidice</i>	1	1	1	1	1-3			1-3
Small Bath White	<i>Pontia chloridice</i>				1			2	
Eastern Dappled White	<i>Euchloe ausonia</i>		1					2	
Eastern Orange-tip	<i>Anthocaris damone</i>		1?						
Clouded Yellow	<i>Colias crocea</i>	1	1	1	1	1-3	1	1-3	1-3
Balkan Clouded Yellow **	<i>Colias caucasica</i>				1			2	
Southern Clouded Yellow	<i>Colias alfacariensis</i>	1	1	1	1	1,2	2	2,3	
Brimstone	<i>Gonepteryx rhamni</i>		1		1	2		2,3	
Powdered Brimstone	<i>Gonepteryx farinosa</i>				1				
Wood White complex	<i>Leptidea sp</i>			1	1,2	1			
Lycaenidae									
Purple Hairstreak	<i>Quercusia quercus</i>			1	2				
Brown Hairstreak	<i>Thecla betulae</i>					1			
Sloe Hairstreak	<i>Satyrium acaciae</i>			1		1	2	1-3	
Ilex Hairstreak	<i>Satyrium ilicis</i>			1	1,2	1		2	
White Letter Hairstreak	<i>Satyrium w-album</i>				2	1			
Gerhard's Black Hairstreak	<i>Satyrium abdominalis</i>	1							
Rebel's Hairstreak	<i>Satyrium myrtale</i>	1							
Green Hairstreak	<i>Callophrys rubi</i>			1					
Small Copper	<i>Lycaena phlaeas</i>	1	1	1			2	3	2
Scarce Copper	<i>Lycaena virgaureae</i>	1		1	1,2		1,2	1-3	1
Sooty Copper	<i>Lycaena tityrus</i>	1	1	1	1,2	1,2		2,3	3
Purple-shot Copper	<i>Lycaena alciphron</i>	1	1	1	1,2	1,2	1	1-3	3
Lesser Fiery Copper	<i>Lycaena thersamon</i>	1							
Balkan Copper	<i>Lycaena candens</i>					2?	1		
Turkish Fiery Copper	<i>Lycaena ochimus</i>		3						
Little Tiger Blue	<i>Taurus balkanicus</i>		3						1
Short-tailed Blue	<i>Cupido argiades</i>		2,3	1	2	1			1,2
Little/Small Blue	<i>Cupido minimus</i>	1	1,3	1					
Osiris Blue	<i>Cupido osiris</i>					1,3	1	1-3	

Holly Blue	<i>Celastrina argiolus</i>		3	1	1,2	1			
Alcon Blue	<i>Maculinea alcon</i>	1							
Large Blue	<i>Maculinea arion</i>			1	1?				
Eastern Baton Blue	<i>Pseudophilotes vicrama</i>				1	2			
Bavius Blue	<i>Pseudophilotes bavius</i>	1?		1	1				
Chequered Blue *	<i>Scolitantides orion</i>					2			
Odd-spot Blue	<i>Turanana endymion</i>	1							
Zephyr Blue	<i>Plebejus pylaon</i>		3?	1	1	2,3	1	1-3	
Eastern Brown Argus	<i>Plebejus eurypilus</i>	1							
Loew's Blue	<i>Plebejus loewii</i>	1							
Silver-studded Blue	<i>Plebejus argus</i>	1	1	1	1	1-3	1	1-3	
Idas Blue	<i>Plebejus idas</i>			1					
Reverdin's Blue	<i>Plebejus argyrognomon</i>		1						
Bosnian Blue	<i>Plebejus dardanus</i>					3	1	1	
Brown Argus	<i>Plebejus agestis</i>		1	1		3			1-3
Mountain Argus	<i>Plebejus artaxerxes</i>				1,2	1-3	1	1	
Geranium Argus	<i>Plebejus eumedon</i>			1		3	1		
Blue Argus	<i>Plebejus anteros</i>	1		1	1,2	2,3	1	1,3	
Pontic Blue	<i>Plebejus coelestinus</i>						1		
Mazarine Blue	<i>Polyommatus semiargus</i>	1		1	1	1-3	1	1-3	1
Turquoise Blue	<i>Polyommatus dorylas</i>		1?		1				
Meleager's Blue	<i>Polyommatus daphnis</i>	1	1	1	1	1,2	2	2,3	
Amanda's Blue	<i>Polyommatus amanda</i>	1		1	1?	3?	2		
Aedon Blue	<i>Polyommatus aedon</i>	1		1	1	1,2	1	1-3	
Common Blue	<i>Polyommatus icarus</i>	1	1	1	1	1-3	1,2	1-3	1,2
Eros Blue	<i>Polyommatus eros</i>	1		1	1	1,2	2		
Adonis Blue	<i>Polyommatus bellargus</i>				1				
False Chalk Hill Blue	<i>Polyommatus corydonius</i>		1		1	1,2		1-3	3
Anomalous Blue	<i>Polyommatus admetus</i>		1						3
Ripart's Anomalous Blue	<i>Polyommatus ripartii</i>	1	1			1,2		2,3	
Iphigeneia (Chelmos) Blue	<i>Polyommatus iphigenia</i>				1	2,3	1	1-3	
Damon Blue	<i>Polyommatus damon</i>				2	1,2	1	1-3	
Nymphalidae									
Ionian Emperor	<i>Thaleropsis ionia</i>			1	1				1
Southern White Admiral	<i>Limenitis reducta</i>		1-3	1	2	1		3	1,3
Camberwell Beauty	<i>Nymphalis antiopa</i>					1			
Red Admiral	<i>Vanessa atalanta</i>	1	1	1		1,3	1	3	3
Painted Lady	<i>Cynthia cardui</i>	1		1	1	1-3	1	1,3	3
Comma	<i>Polygonia c-album</i>			1	1,2	1-3	1	2,3	1
Southern Comma	<i>Polygonia egea</i>		1		2				1
Small Tortoiseshell	<i>Aglais urticae</i>	1	1			1,3	1	1-3	
Yellow-legged Tortoiseshell	<i>Nymphalis xanthomelas</i>	1							
Marsh Fritillary	<i>Euphydryas aurinia</i>			1	1	1,2	2	1-3	
Glanville Fritillary	<i>Melitaea cinxia</i>	1							

Freyer's Fritillary	<i>Melitaea arduinna</i>	1							
Knapweed Fritillary	<i>Melitaea phoebe</i>				1				
Heath Fritillary	<i>Melitaea athalia</i>			1	1,2	1-3	1,2	1-3	
False Heath Fritillary	<i>Melitaea diamine</i>			1	1,2	2,3	1,2		
Spotted Fritillary	<i>Melitaea didyma</i>	1			1				2
Lesser Spotted Fritillary	<i>Melitaea trivia</i>								2
Caucasian Spotted Fritillary	<i>Melitaea interrupta</i>			1	1,2	1-3	1,2	1-3	
Cardinal	<i>Argynnis pandora</i>	1		1					
Silver-washed Fritillary	<i>Argynnis paphia</i>		1	1	1,2	1			
Dark Green Fritillary	<i>Argynnis aglaja</i>			1	1,2	1-3	1,2	1-3	
High Brown Fritillary	<i>Argynnis adippe</i>		1	1	1				
Niobe Fritillary	<i>Argynnis niobe</i>		1						
Queen of Spain Fritillary	<i>Issoria lathonia</i>	1	1	1	1,2	1-3	1,2	1-3	
Twin-spot Fritillary	<i>Brenthis hecate</i>				1	2	1,2	1	
Marbled Fritillary	<i>Brenthis daphne</i>			1	2	1,2			
Lesser Marbled Fritillary	<i>Brenthis ino</i>		1	1	1,2	1			
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>			1	1			3	
Weavers (Violet) Fritillary	<i>Boloria dia</i>	1		1					
Satyridae									
Marbled White	<i>Melanargia galathea</i>				1				
Balkan Marbled White	<i>Melanargia larissa</i>	1	1	1	1				3
False Grayling	<i>Arethusana arethusa</i>				1	2			
White-bordered Grayling	<i>Hipparchia parisatis</i>								3
Eastern Rock Grayling	<i>Hipparchia syriaca</i>		1	1	1	1		2	1
Freyer's Grayling	<i>Hipparchia fatua</i>								1
Great Banded Grayling	<i>Brintesia circe</i>		1	1	1	1		2	1
Geyer's Tawny Rockbrown	<i>Pseudochazara beroe</i>				1		1	1,3	
Scotch Argus	<i>Erebia aethiops</i>			1	1,2	1-3	1,2	1-3	
Woodland Ringlet	<i>Erebia medusa</i>			1	1				
Alpine Ringlet *	<i>Erebia melancholica</i>					3	1,2	1	
Caucasian Ringlet	<i>Erebia graucasica</i>						2		
Meadow Brown	<i>Maniola jurtina</i>	1	1	1	1,2	1,2		2,3	3
Dusky Steppe Brown	<i>Maniola lycaon</i>					2	1	3	
Small Heath	<i>Coenonympha pamphilus</i>	1	1				1		2,3
Russian Heath	<i>Coenonympha leander</i>					3	1		
Lederer's Heath *	<i>Coenonympha symphita</i>					3	1	2	
Speckled Wood	<i>Pararge aegeria</i>		2	1	2	1			
Wall Brown	<i>Lasiommata megera</i>		1,3	1	1	1		2	1-3
Large Wall Brown	<i>Lasiommata maera</i>	1		1	1	1,3			
Lesser Latticed Brown	<i>Kirinia clamine</i>		1						
Hesperiidae									
Large Grizzled Skipper	<i>Pyrgus alveus</i>	1		1	1	1-3	1	1-3	1
Sandy Grizzled Skipper	<i>Pyrgus cinarea</i>	1	1	1					
Yellow-banded Skipper	<i>Pyrgus sidae</i>	1				2	2		

Red Underwing Skipper	<i>Spialia orbifer</i>			1	1	2	1	1-3	1
Persian Skipper	<i>Spialia phlomidis</i>	1				2,3	1		
Mallow Skipper	<i>Carcharodus alceae</i>	1		1		2	1	1-3	
Marbled Skipper	<i>Carcharodus lavatherae</i>	1	2	1	1,2		1	1-3	
Tufted Marbled Skipper	<i>Carcharodus flocciferus</i>	1?			1?	1-3	1	1-3	
Oriental Marbled Skipper	<i>Carcharodus orientalis</i>	1					1	1-3	
Dingy Skipper	<i>Erynnis tages</i>			1	2	2,3	1	1-3	1
Essex Skipper	<i>Thymelicus lineola</i>			1		2,3	1	3	?
Small Skipper	<i>Thymelicus sylvestris</i>	1			1,2	1,3			?
Silver-spotted Skipper	<i>Hesperia comma</i>				1				
Large Skipper	<i>Ochlodes venatus</i>			1	2	1			3
Day-flying Moths									
Nine-spotted moth	<i>Amata (Syntomis) phegea</i>			1	1,2	1			
Burnet with 6 spots	<i>Zygaena sp (ephialtes?)</i>			1	2	1		2,3	
Burnet with white/red spots	<i>Zygaena carniolica ?</i>					1			
Cream-spot Tiger	<i>Arctia villica</i>			1	1,2	1		3	
Jersey Tiger	<i>Euplagia quadripunctaria</i>			1	1,2	3			
Oak Eggar	<i>Lasiocampa quercus</i>							2	
Chimney Sweeper	<i>Odezia atrata</i>						1		
Hummingbird Hawk-moth	<i>Macroglossum stellatarum</i>	1		1	1,2	1-3			
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>				2				

** Threatened species in Butterfly Red List Turkey

* Near endemic or classed as Near Threatened

Key to locations

Date	Site no	Site name	Altitude (m) (approx.)
14/7/17	1	Gungormez valley	1500
15/7/17	1	Uzundere (track by river)	1200
	2	Picnic, old road by Tortum lake	1000
	3	Dereici turn by tunnel	750
16/7/17	1	Valley to Pisenkaya	1400
17/7/17	1	Bicakcilar valley, nr Kadinkisi	1300
	2	Barhal valley to Pension	1300
18/7/17	1	Yaylalar valley (new houses)	1500
	1=	Meadows by Mikelis turn	1700
	2	Picnic in layby with water tap	1750
	3	Olgunlar	2100
19/7/17	1	Hastaf valley, Olgunlar (lower)	2100
	1=	Hastaf valley, Olgunlar(stream)	2300
	2	Ben's walk up valley	2700
20/7/17	1	Olgunlar road down to hut	2100
	2	Korahmet valley below Yaylalar	1900
	3	Picnic in layby with water tap	1750
21/7/17	1	Dereici turn by tunnel (again)	750
	2	Picnic, old road by Tortum lake	1000
	3	Uzundere (track by river)	1200

**Plant gallery of some plants observed
Kackar 2018**

Colutea cilicica



Alcea hohenackeri



Sambucus ebulus



Arctium lappa



Geranium
platypetalum



Carlina
biebersteinii



Origanum
rotundifolium



Campanula
trogerae



Lysimachia
verticillaris



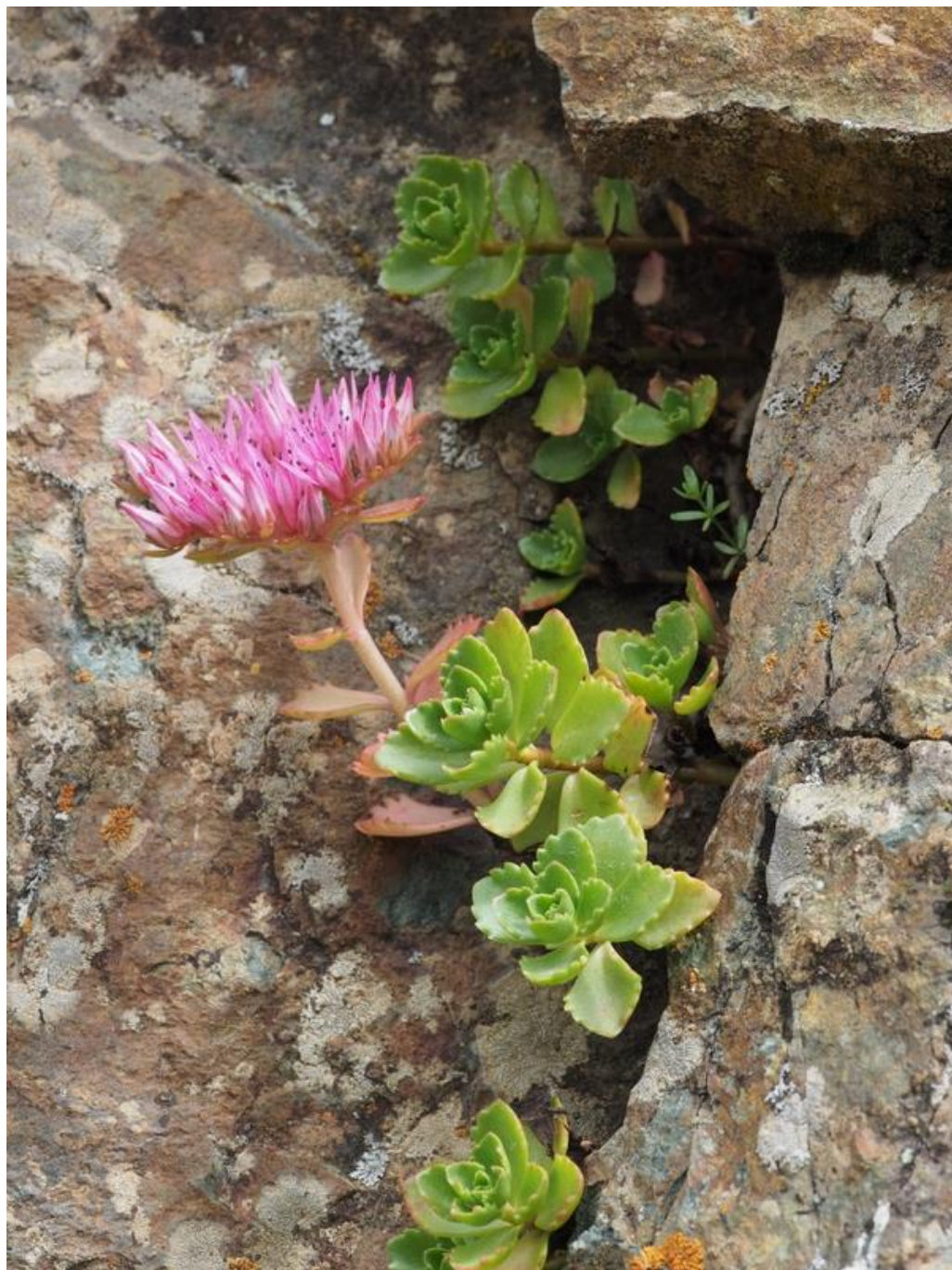
Dianthus calocephalus



Coronilla orientalis



Sedum spurium



Arnebia pulchra



Dactylorhiza
urveliana



Swertia iberica



Gentiana
semprefida



Papaver lateretium



Erigeron caucasicum



Parnasia palustris



Coronilla varia



Kackars Plants checklist 2018	
Pteridophyta	
Asplenium septentrionale	
Apiaceae	
Prangos sp.	
Asteraceae	
Carlina biebersteinii	day 3
Centaurea virgata	day 2
Eupatorium cannabinum	day 3
Inula helenica	day 3
Boraginaceae	
Echium vulgare	daily
Brassicaceae	
Isatis glauca	daily
Campanulaceae	
Campanula lactiflora	day 3
Campanula rapunculoides	daily
Campanula troegerae	day 3
Caprifoliaceae	
Sambucus ebulus	daily
Caryophyllaceae	
Dianthus calocephalus	day 3
Dianthus orientalis	day 5
Silene compacta	day 3
Crassulaceae	
Sedum spurium	day 4
Sempervivum staintonii	day 5
Dipsacaceae	
Cephalaria gigantea	daily
Fabaceae	
Colutea arborescens	day 2
Coronilla orientalis	day 3
Coronilla varia	day 6
Gentianaceae	
Gentiana semptemfida	day 6

Swertia iberica	day 6
Geraniaceae	
Pelargonium endlicherianum	day 3
Geranium platypetalum	day 3
Lamiaceae	
Origanum rotundifolium	day 3
Salvia nemorosa	daily
Lythraceae	
Lythrum salicaria	daily
Malvaceae	
Alcea hohenackeri	day 3
Nitrariaceae	
Peganum harmala	day 3
Onagraceae	
Epilobium angustifolium	daily
Orobanchaceae	
Melampyrum arvense	day 3
Papaveraceae	
Papaver fugax	daily
Papaver lateritium	day 5
Parnassiaceae	
Parnassia palustris	day 8
Primulaceae	
Lysimachia verticillata	day 4
Ranunculaceae	
Clematis orientalis	day 8
Rhamnaceae	
Paliurus spina-christi	day 3
Scrophulariaceae	
Verbascum armenum	daily
Valerianaceae	
Centranthus longiflorus	common
Orchidaceae	
Dactylorhiza	
Dactylorhiza urvilleana	

Kackars 2018

Bird list

(courtesy of Nancy)

Swallow
Grey Wagtail
Robin
Kestrel
Olivaceous Warbler
Great Tit
Magpie
Jackdaw
Jay
Rook
Chough
Cattle Egret
Blackbird
Chaffinch
Wren
Redstart
Dipper
Red-fronted Serin
Scarlet Rosefinch
Black-headed Bunting
Wheatear
Great Grey Shrike
Red-backed Shrike
Swift
Crag Martin