

# Pontic Alps

## *Summer on Lazistan's High Passes*

20<sup>th</sup> July - 2<sup>nd</sup> August 2018

### **A Greentours Trip Report**

Led by Ian Green

#### **Day 1      July 20<sup>th</sup>      to Trabzon**

Some of the group were already in Trabzon having spent a couple of days looking around the area and others arrived late evening in the quiet little airport. We were soon at the Horon getting some sleep!

#### **Day 2      July 21<sup>st</sup>      Ikizdere**

We started late this morning convening at the hotel's top floor breakfast pad and enjoying a decent selection whilst looking over the Black Sea's calm waters. We left at ten taking in a bit of shopping for future picnics as we left. The new(ish) highway that occupies the land closest the sea all the way along the coast to Georgia took us speedily eastwards. Inland was apartment block after apartment block, but never was there more than a short distance before the next bit of lush greenery. Offshore Cormorants and Yellow-legged Gulls lounged. After nearly an hour we turn inland following a lush valley up into the mountains. Immediately the main crop changed from Hazelnuts to Tea. The landscape became a patchwork of forest and tea, interrupted by beautiful houses perched on increasingly vertiginous slopes. The river rushed faster and faster by our side. We passed several tea processing plants and watched the ladies hard at work picking the leaves. The forest became more diverse and the tea became less and the slopes steeper, but still the houses perched.... Now they were getting very high above the roads and wires started to appear reaching down from the houses to the road, these to deliver the tea and to bring up the shopping.

Eventually we stopped by some lush roadside cliffs where we looked at the two common bellflowers here, white *Campanula alliarifolia* and purple *Campanula rapunculoides*. Silver-washed Fritillaries, Bath White, Large Skippers and Southern Commas were noted, the fritillaries posing nicely on some flowering *Sambucus*.

We headed up to Sivri Kaya for lunch stopping at small road-and-riverside eatery which had only two things on the menu. Trout and Muhlama. The latter is a kind of cheese fondue, a local speciality. We had both. It was a very tasty meal served with bread and salad. By the restaurant the gorgeous deep pink black-centred *Geranium ptilostemon* flowered profusely. Afterward we took a walk up a track. The slopes above were awash with tall *Campanula lactiflora*. Brilliant pink *Silene compacta*, blue

*Cicerbita bourgaei* and tall wands of the local foxglove *Digitalis ferruginea* were seen. Hummingbird Hawkmoths, all manner of odonata, and some brilliantly coloured beetles told of the insect diversity. Overhead were Ravens and Green Warblers sang from the forest. There were the last flowers of *Dactylorhiza euxina*, lovely little *Saxifraga cymbalaria*, and lots of *Sedum hispanicum*. We made a brief stop for *Eryngium giganteum* and then it was down to the side road for the hotel. We took a walk along here for the wonderful forests, cascading river and roadsides cliffs, made for alluring habitat and we couldn't resist. Grey Wagtails were common. The sun had gone in but still we saw Short-tailed Blue. On the roadside cliffs were all manner of interesting flora. There was an allium, the naturalised Virginia Pokeweed, the fine *Ferulago rigidula*, and lovely *Impatiens noli-tangerae* with hanging yellow flowers.

We checked into the amazingly situated hotel, deep in a verdant valley with traditional houses dotting the slopes above – it hardly seemed the sort of place for such a large modern hotel, but here it was... I took a walk up the road finding a population of the lovely Marsh Helleborine and also some *Lilium ponticum* in seed. Dippers were by the river. Deadly Nightshade, *Carlina vulgaris* and *Campanula sibirica* were noted

All that was left was to partake in the richly diverse offerings at the buffet dinner....

### Day 3      July 22<sup>nd</sup>      Ovit Pass

It was a little dull this morning at Ridos so we were not sure what the day up the Ovit Pass would bring. We drove uphill soon reaching Sivri Kaya where we found the 'old' road over the pass blocked on this side though some helpful tunnel workmen told us that we could access it from the other side. So we drove out of the cloud and into the tunnel – 14km of it! Every few kilometres paired green and blue rings of light told us we were still in Rize Province – they are the local colours! Exiting the tunnel we found ourselves in bright sunshine but we knew not to take anything for granted still. We soon found our way back up to the pass and things looked pretty good – the cloud was hanging around just below the pass regularly sending out feelers to see what it was like!

We walked steadily up the gentle slope. The short alpine turf already covered in pale sheets of eyebright dotted with rich cerise of *Geranium collinum* subspecies *subcaulescens*. Soon the first of the days gentian was spotted, this the large flowered *Gentiana septemfida*. We soon found *Gentiana pyrenaica* too and this went on to be very common dotting the ground alongside a stream with its deep blue stars. At one point we found a small group of the rarer *Gentiana nivalis* too. Water Pipits were all around us and Kestrel and Hobby flew over. Butterflies were out too notably a few Caucasian Ringlets. Banded Frogs hopped away from us as we continued, stopping for some fine *Rhyncocorys elephas*, with its striking elephant-like yellow blooms, and for our first Primulas, these *auriculata*. Soon we found big blue *Geranium ibericum* and then pale pink *Geranium asphodeloides*. Streamsides had *Pinguicula balcanica* and we checked out their insect-catching abilities. Dry turf was sporting *Campanula aucheri* with large purple-blue bells and the delicate *Pedicularis pontica*. Further and we found another short *Campanula* with large blue blooms – this *tridentata*. Rocks had much *Minuartia recurva* as well as fine groups of *Draba rosularis* and a little cushion forming *Draba bruniifolia*, on the turf was *Draba nemorosa*. Green Sandpipers flushed from the little lakes in between

rocky knolls. We found a fantastic group of a hundred or so *Crocus scharojanii* glowing in the now slightly foggy light – for the cloud was now sending over whole clouds to check out the valley and visibility was getting less than perfect! Cotton Grass grew with shining pink *Pedicularis nordmanniana*. A wet flush held lots of the rather cute dwarf *Heracleum apiifolia* and another one some superb *Swertia iberica* with spikes covered in steel-blue starry flowers. Rocks here had *Saxifraga sibirica*, *Saxifraga cartilaginea*, the lovely yellow-flowered houseleek *Sempervivum minus* and the gorgeous little pale pink *Allium olympicum* growing in swarms. Chives were flowering in the water as was the curious little buttercup *Ranunculus lateriflorus*. Other buttercups up here included *Ranunculus brachylobus* and *Ranunculus caucasicus*. We reached a couple of snow patches where we found the hoped for *Primula meyeri* a superb blue-purple species. Several Twite were spotted, Northern Wheatears and a couple of Shorelarks. The cloud was now getting thick and there was a little rain in the air so we felt it wise to descend hard though it was to drop from such a fine place. Other plants of note this morning were *Hedysarum hedysaroides*, *Coronilla orientalis* subspecies *balcanica*, *Trifolium rhytidsemium* of the white form, *Gagea glacialis*, blue and pink *Centaurea nigrifimbriata*, and the large white feathery blooms of *Centaurea appendicigera*.

Bekir, our driver, had made the tea and we set about our picnic. It was pretty cold up here – probably only 8°C or so. As we finished it started to rain a little – good timing! We headed back through the tunnel and stopped above the village of Sivri Kaya and explored the area up above the road. It took us a long time to leave the roadside so amazing were the flowers – the hillsides above and below the road were ablaze with all colours! There were drifts of deep pink *Dianthus carmelitum*, huge creamy heads of *Trifolium pannonicum*, the rosy many-pointed stars of *Astrantia maxima*, and the huge yellow heads of *Centaurea helenioides*. Bellflowers were abundant, lots of *lactiflora*, some *sibirica*, and the impressive *latifolia*. *Dactylorhiza euxina* was here in good condition and a single Frog Orchid was found. The *Cephalaria giganteas* were simply gigantic! Their relatives *Scabiosa columbaria* (pink) and *Knautia involucrata* (white) were everywhere. The *Digitalis ferruginea* was in superb form. We found *Pedicularis condensata* still blooming and there was also *Silene pungens*, *Rhynchosyris stricta*, and *Carduus acanthioides* was everywhere. It was raining lightly so butterflies were very few – just the odd Scotch Argus. Several Red-backed Shrikes were seen and a few fine male Common Rosefinches as well as Whinchat and Tree Pipit.

We descended to Çamlık and took a brief look under some large *Picea orientalis* trees finding quite a population of the Creeping Lady's Tresses *Goodyera repens*. Also here was Yellow Birdnest, *Galium rotundifolium* and a fine Bullfinch! Then after a stop to admire the Seljuk bridge further down the valley we headed back to the hotel...

## Day 4      July 23<sup>rd</sup>      Anzar Yayla

It was a beautiful sunny morning as we breakfasted and then headed down to İkizdere to buy bread en route to the high alpine meadows of Anzar Yayla. Our driver though knew without even seeing that there was cloud/fog on the tops and sure enough as we drove uphill we could see it ahead. During the day though we managed, pretty much, to keep it above us and even got close to the top of the pass.

The road to Anzar takes one up through a most stunning landscape. Forested slopes descending to the rushing river soon give way to high alpine pastures though between the two there was a fascinating area of rocky pinnacles sticking up through a mixed low woodland of *Corylus* and *Acer*. We stopped on the way up for some fine *Alcea hohenackeri* but didn't stop for the last *Campanula betuliflora* blooms on some rocks.

Passing the first yayla, Çiçekli (with flowers...), we soon stopped because of the sheer abundance of roadside blooms. Billowing masses of mixed *Inulas*, *Centaurea helenioides*, red *Lathyrus tuberosus*, and frilly white *Silene multifida* mixed with *Stachys macrantha* and wonderfully impressive displays of *Campanula lactiflora*. With these were our first *Delphinium formosum*, a staggeringly beautiful delphinium with large vibrant blue flowers. Soon these were occurring in spades too! Several Mountain Chiffchaffs were in the bushes by the road giving excellent views. There was also Common Whitethroat and any number of Common Rosefinches. *Acer trautvetteri* made a fine sight by the track.

Now we moved up to Balikoy and thence into alpine meadows rather than subalpine ones! We stopped to admire some fine yellow *Linaria grandiflora* and found with it a large red *Allium* and the stunning white with a hint of blue *Delphinium dasystachyum*. There were plenty of butterflies on the wing here for the clouds lifted and parted just at the right moment. Fritillaries were noticeable and we saw Queen of Spain, Spotted and Caucasian Spotted Fritillary here. There were also Purple-shot Copper, Sooty Copper and the first of so many Blue Arguses we were to see on this tour.

Moving up further we explored an area of low alpine turf reaching up to some scree and low cliffs. The poppy *Papaver lateritium* was in fabulous form here. We took our picnic in this spectacular spot, wondering whether the weather would allow us onwards.

In the event it did though it was still quite murky when we drew up next to a fabulous bowl, the glaciated valley dropping sharply from the peaks. We spent the rest of the afternoon walking up the valley which here was only gently sloping. There were marvellous shows of the marsh orchid *Dactylorhiza euxina* all along the stream matched by the vibrant blue *Gentiana septemfida* which was everywhere, and scattered plants of *Primula auriculata* adding its pink to the show. The sun shone briefly and both Peak White and Mountain Green-veined White flew about. Pale Clouded Yellow was also seen. As we rose up the valley the Primula was in better and better condition and those that walked up the steep ground at the head of the valley found some gorgeous *Primula longipes*, a lilac-mauve species with a large round head of blooms on very mealy stems. There was also some fine *Anemone narcissiflora* in bloom here and the very large leaved (and flowered) *Ranunculus brutius* too. On one primula a Sooty Copper posed on one side and Geranium Argus on the other. There were some magnificent shows of *Centaurea helenioides* here the large brilliant yellow heads quite a sight blooming with large pink *Stachys macrantha* and a huge form of *Valeriana alliarifolia* with lilac-pink heads!

It was time to return but it was difficult to leave this place!

## Day 5      July 24<sup>th</sup>      Mor Yayla

We awoke to a gorgeous warm sunny morning, the forests surrounding the hotel shining in the morning sun. Leaving the hotel John spotted a Hoopoe. We drove up to the Ovit Tunnel and were soon through the other side. We turned uphill again and found ourselves traversing superbly colourful hillsides. There are few trees on this side, just a scattering of Aspen groves, the rest is open montane steppe cloaking the mountainsides. We passed all manner of nice things including lots of orange *Papaver fugax*, and could have stopped anywhere. Eventually it was all too much and dry knoll promised species new... there was *Vicia cancescens*, *Vicia alpestris* and another *Vicia* in fine form. Mats of *Teucrium orientale* were beautiful and the mats of thyme were being visited by many butterflies, especially Silver-studded Blues. Dark Green Fritillary and Spotted Fritillary were posing well and so too were some Apollos. A Great-banded Grayling flew in and allowed us to photograph it. Quail called below. There were some striking seeding *Rindera lanata* here. Just before leaving we photographed a Marbled White and Richard had already seen a Balkan Marbled White.

We continued up to the village of Mor Yayla, stopping just before it. There were some fabulous clumps of Grass of Parnassus here and the orchids looked to be *Dactylorhiza saccifera*. The butterflies here were exceptional. Twin-spot Fritillaries flew back and forth. In one spot there was around a hundred blues. Most were Silver-studded Blues but we also saw Alcon Blue, and Zephyr, Idas, Chapman's, Meleager's and Damon Blue as well as Eastern Brown Argus. Both Mallow and Olive Skippers were noted and a number of brilliant coppers were active.

We now determined that we should really aim for the pass and so we chugged steadily uphill past fine *Anchusa leptophylla* and the magnificent *Centaurea macrocephala*, Bekir doing a sterling job. We passed through a strongly overgrazed area dominated by a spectacular show of *Verbascum armenum*. In the middle of it we came across the shepherd's camp. These people spend four or five months up here every summer and autumn before descending to spend the winter in Ispir. They were busy milking the sheep as we went past. We had a brief wait as a grader made the impassable passable. Then it was up to the top of the pass. This was an amazing spot. 3200m up we could see south into Anatolia for huge distances across the Çoruh valley below us. But the view to the north was really something. A high plateau, surrounded by jagged peaks, was dotted with seven lovely small lakes. Given the road we were surprised to find quite a few more people on the pass too!

An immature Black Vulture had sailed over as we arrived and as we set off a young Golden Eagle did the same. We walked along the ridge reaching 3400m though not quite to the top of the peak to the west. It was certainly in the 'tundra' zone up here and there was much bare gravel and rock. Dotted all over it were some lovely blooms, perhaps the finest the squat but large flowered *Delphinium linearilobum*. This gorgeous plant does not do below 3000m! There was also a clump or two of the fine *Viola odontocalycina*. Abundant *Dianthus multicaulis* and *Oxytropis albana* made for a fine show. Both *Campanulas aucheri* and *tridentata* were here, the latter causing confusion due to its small size. *Drabas* included *brunnifolia* and *nemorosa*. The little white flowered *Heldreichia bupleurifolia* was here and so too bright blue *Dracocephalum aucheri*. Surprisingly there were butterflies – Greek Clouded Yellows, Small Tortoiseshells, Peak Whites and Caucasian Ringlets. Two Alpine Choughs flew over and there were several Black Redstarts but birds were few until we were returning when Shore Larks, several Crimson-winged Finches and a pair of confiding Snowfinches turned up. Other

fine plants up here included *Astragalus cylindriacus*, *Gypsophila nabelekii*, *Cerastium gnaphaloides*, and some fine *Senecios*. *Saxifraga juniperifolia* had just finished blooming on the rocks and there was an unusual patch-forming *Teucrium* with pinky-purple flowers and the thick indumentum of a true high alpine – its identity is a mystery at the moment.

Picnicked, we took a walk down to a snow patch! Close by was a fine display of *Gentiana verna*. There were two nice buttercups, *Ranunculus buhsei* and *Ranunculus dissectus* subspecies *glabrescens*, in the grass down there and birds including an Alpine Accentor.

Later in the afternoon we descended a little and took a walk along the side of a valley. Here was abundant *Nepeta transcaucasica* and *Papaver lateritium*. Mixed with the blues of *Campanula stevenii* and pinks of *Stachys macranthera* it made for a stunning shot, one that we all tried to capture in various ways. Long-legged Buzzards flew over and there were Finsch's Wheatears, Linnets and Rock Thrushes. Caucasian Fritillary was superabundant this afternoon – it is a very bright orange! There were also Apollos and Tortoiseshells. There was a steady stream of new plants including two very fine *Astragalus*, one bright yellow and one pink. We reached the stream by the road only to discover that very many butterflies were going to roost here. This made them easy to photograph so we spent a happy half an hour sorting through them all. At one point no less than six coppers of three different species sat with their wings open facing the sun on one grass clump. There were a number of Russian Heaths, a Yellow-legged Tortoiseshell and a variety of blues including Mazarine and Chapman's. The Coppers here were Balkan, Lesser Fiery, Sooty, Anatolian Fiery and Purple-shot! There was also a nice population of *Gentiana nivalis*. It was time to go!

Descending we photographed the Verbascums with the stunning westering sun. A stop was prompted by a dead snake – probably *Elaphe sauromates* or Eastern Four-lined Rat Snake. And the last stop was for a bank that had a stunning display of *Sedum sempervivoides*.

## Day 6      July 25<sup>th</sup>      To Barhal

Another fabulous sunny morning saw us on the road at eight-thirty and up to the Ovit Pass and down the other side before we made a couple of stops in the valley. At the first Pied Wheatear, Red-fronted Serins, Blue Rock Thrushes and Western Rock Nuthatch were all seen. The fine *Alcea calvertii* with large yellow blooms was enjoyed. Butterflies were abundant at the next stop with all sorts coming to mud-puddle. There were several Scarce Swallowtails, a European Swallowtail, our only Southern Swallowtail of the trip, several Southern Small Whites and a Krueper's Small White. A lovely Ionian Emperor came in. There were a number of blues including the tiny Grass Jewel and Ripart's Anomalous Blue. Odd-spot Blue was a highlight, one sitting perfectly still allowing close-up photography next to a Silver-spotted Skipper. Down by the river Balkan Marbled White perched on some flowering *Hyssopus officinalis*. Here we saw several Southern White Admirals flying about the walnuts.

We passed Ispir and headed into a spectacular gorge containing the now dammed Çoruh River. An Imperial Eagle soared overhead and there were large numbers of Alpine Swifts above us. Crag Martins too. *Dianthus orientalis* was prolific here and we found the lovely *Cheilanthes marantae* fern growing with Maidenhair Spleenwort and Brittle Bladder Fern, a surprising combination in such a

hot dry place. Down by the Çoruh a tall Loosestrife had three Southern Commas, a Large Tortoiseshell, and Adonis and Anomalous Blues perched on it.

Further downriver we found *Sempervivum davisii*. *Cynanchum acutum* grew by the van and the erect *Trachomitrum venutum* by the river with *Lysimachia punctata*. We found *Lycaena ochimus* the Turkish Golden Copper also right by the minibus. We passed much *Origanum rotundifolium*, *Glaucium corniculatum* and a tall *inula* as we drove. A young male Ibex crossed the road rather sedately and stopped to have his picture taken! Lunch was in a little roadside shelter, it was very hot by now. The warmth though was very much to the liking of all the many Little Tiger Blues that were along the roadside here. We found *Consolida hohenackeri* too.

Then it was on to Yusufeli passing through amazing scenery with the arid-looking mountains either side of the green valley bottom made up of all sorts of strange colours – ochres, maroons, bright yellow, rust, grey.... It looked like there must be all kinds of minerals in them! After a brief supermarket shop we were up the valley towards Barhal. We stopped by the rushing river and ate a few luscious blackberries and admired the mix of plants here including the Silk Vine in seed and *Althaea cannabina*. The unusual damselfly *Epallage fatima* was seen here and Roger photographed *Sympetrum flaveolum*. Further along and we found *Lavatera thuringiaca*.

In Barhal our rooms were not quite ready so we went to the very rustic old teahouse built over the rushing river. We very much enjoyed the cold ayran! Then we visited Barhal's impressive old church only to find that this well-preserved church was ... undergoing serious renovation. Still we enjoyed the Jersey Tiger Moth, a wasp-mimic longhorn beetle, and in a tall *Tilia rubra* tree, Chaffinches and Blue Tits were seen.

I went on a nightwalk and saw a group of four Ibex and later a singleton and a female Nightjar too.

## **Day 7      July 26<sup>th</sup>      Barhal**

It was again warm and sunny at breakfast. It was great to be able to walk directly out of the hotel this morning. We spent the morning walking slowly downhill, the road snaking between rocky bluffs with mixed forest, rock and scree descending to the road and occasionally little roadside meadows that mostly had been recently mown. Dipper and Grey Wagtail were along the river. Overhead an Imperial Eagle sailed past.

Late morning Bekir picked us up and we turned back uphill and spent the afternoon driving up to Olgunlar (it's just an hour direct) stopping often for butterflies and later for plants and of course for a picnic which was in a lovely spot by the river shaded by some Alders.

It was really an amazing day for butterflies. They were everywhere. Straight away we found some mud-puddling just a minute from the hotel, a little group of Scarce Swallowtails, but this hardly compared with the twenty-five Scarce Swallowtails mud-puddling by the river further down. This spot had all sorts of nice species including the only Eastern Baton Blue of the day. In many areas we found that little roadside runnels of water lined with *Lythrum* and *Eupatorium*, attracted so many butterflies. As we neared Olgunlar it became a little crazy for there were many places with water on

the road and these had literally clouds of butterflies at them, the last, just below the hotel had so many we had to walk in front of the minibus waving our arms to scare them off the road!

As well as numerous Scarce Swallowtails we started seeing European Swallowtails the higher we went. Black-veined Whites also appeared and we also saw Large White, Eastern Wood Whites, Brimstones and Clouded Yellows, including Berger's and Greek. Fritillaries were amazing during the day. Silver-washed, Dark Green and latterly High Brown were all quite common and posed very well, often on the Sambucus. We saw a few Cardinals and also Marbled Fritillaries. There were Spotted, Lesser Spotted and brilliant Caucasian Spotted Fritillary, a species that looks like a giant copper so bright is the orange. There were also Heath, False Heath, Pearl-bordered and even Marsh Fritillaries too. Southern White Admirals were quite common and there were also both Comma and Southern Comma. We saw quite a number of browns. There were Meadow Browns, Freyer's Graylings and False Graylings as well as plentiful Scotch Arguses. We saw our first hairstreaks of the trip. First was a Blue-spot Hairstreak and later we saw *Satyrium myrtale*, and the gorgeous White-letter Hairstreak. Several of these fine butterflies were perching on some Sambucus – they are perhaps rarer in Turkey than in the UK! Coppers included Sooty, Lesser Fiery, Small, and a fine Scarce Copper at the end of the day. Skippers. Lots of Essex Skippers and there was also Mediterranean Skipper, quite a few Silver-spotted Skippers, Mallow Skippers, both Tufted and Oriental Marbled Skippers, and Levantine Skipper. There was even Persian Skipper. Blues – well what can we say. They were incredibly numerous and the number of species was exceptional. We saw Holly and Osiris Blues, Adonis, Meleager's and False Chalkhill Blues, there were a few Long-tailed Blues and a Short-tailed Blue. There were beautiful Little Tiger Blues, incredibly tiny Grass Jewels, and Zephyr Blues. We saw Mountain Argus and many Blue Argus. There were lots of Common Blues, a few Chapman's Blues, Amanda's Blues and Mazarine Blues. There were so many *Agrodiaetus* Blues – many of them were Damon Blues, but we also recorded *Polyommatus poseidon* and *Polyommatus ossmar*.

We did not of course ignore the birds but they were few and far between. There was a Great Spotted Woodpecker at the hotel in the morning and latterly we saw quite a number of Red-backed Shrikes. Twice Golden Eagles soared overhead and we found where someone had plucked a female Caucasian Blackcock!

The lower woodland had *Quercus petraea*, lots of *Carpinus orientalis*, and *Acer hyrcanum*. Near the hotel in Olgunlar was *Sorbus umbellatus*. There were some very old walnuts along our route. All day we were seeing hollyhocks and though variable we think all were *Alcea apterocarpa*. We found some *Consolida hohenackeri*, a variety of *Helichrysums*, and some fine *Digitalis ferruginea*. Later there was some fabulous *Gentiana septemfida*.

We checked into our hotel high in the tiny yayla of Olgunlar and enjoyed a very good evening meal. A nightwalk revealed a Red Fox and the fact that butterflies can continue mud-puddling even in the night!



## Day 8      July 27<sup>th</sup>      Olgunlar and Dilber Duzu

An early (though not as early as fifteen Turkish walkers) morning birding walk below the hotel revealed that Red-backed Shrikes were the local bird of choice – they were very common. There were also a bunch of Rock Buntings, a pair of Lesser Whitethroats, and a male Rock Thrush.

After breakfast we left on foot for a day of flowers, birds and butterflies up the valley towards Dilber Duzu. We spent the whole day up here, people turning round when they wanted (or needed!) to, with some of us making it all the way up to Dilber Duzu some 8km up the valley. The walk is on a good path all the way and slopes very gently uphill for the most part. It was warm, even hot, and fully sunny. The sky was a brilliant blue and as we walked up the valley we could see patterns of yellow (lady's mantles) and pink (fireweed) on the scree slopes descending from the ridges either side of the valley. Common Rosefinches and Tree Pipits were everywhere on the lower slopes. The flora changed gradually as we rose up the valley and during the day we saw some marvellous shows. Massed *Astrantia maxima* showered the turf with pink in places, an exceptional sight. Another favourite was the large clumps of orange-yellow *Inula orientalis* with the stream and high mountains for a background. There were wonderful plants of orange *Papaver fugax* and orange *Papaver lateritium*. *Swertia iberica* showered wet flushes with steel-blue. Bright pink *Polygonum bistorta* flowered with gorgeous blue *Gentiana septemfida* and brilliant orange *Geum coccineum*. *Dactylorhiza umbrosa* and Frog Orchid were both common, the latter higher up. *Geranium ibericum* produced quite a show and there was also *Geranium sylvaticum* and *Geranium pyrenaicum*. Butterflies were fabulous again. Fritillaries were everywhere. Especially the brilliant orange twins – Caucasian Fritillary and the almost equally bright Caucasian Spotted Fritillary. Both Dark Green and High Brown Fritillaries were common. There were also quite a lot of Heath Fritillaries, Spotted Fritillaries, Queen of Spain Fritillaries and a few each of False Heath, Glanville and Lesser Spotted Fritillaries. It was a great pleasure to come across lots of Gavarnie Blues. There were also Idas, Silver-studded and Reverdin's Blues, Blue Argus, Amanda's and Chapman's Blues, and the gorgeous Turquoise Blue. This was the first time we came across *Polyommatus aedon*. Photographs among the *Agrodiaetus* blues revealed *Polyommatus alcestitis*, *poseidon* again, and *Polyommatus merhaba*, a species whose specific name means 'hello', probably referring to the effect of finding a new species! A surprise was an Eros Blue. Balkan Copper was frequently seen. Alpine Ringlets were abundant and there were a few Caucasian Ringlets too. Apollos and Clouded Yellows coursed over the sheets of yellow *Cephalarias* and pink *Stachys macranthera*. Both Russian and Lederer's Heaths were common. Especially bright Small Tortoiseshells sat upon *Allium schoenoprasum* subspecies *sibiricum* and we saw our first Peacock of the trip. There were single *Colias chlorocoma* and *Colias thisoa*.

Those that made it up to Dilber Duzu and explored the gullies leading up over 3000m saw the lovely *Campanula troegerae*, many of the large white pink-tinged bells were up the cliffs but some were close at hand. The extremely rare *Cynoglossum holosericeum* was in seed on the screes as was *Corydalis alpestris*. Other fine plants up here included a *Nonea* with large flowers, probably *macranthera*, *Silene lazica*, *Silene sperguliflora*, *Semprevivum glabrifolium* and *Pedicularis condensata*. Grass of Parnassus was everywhere and in the highest areas we found *Primula meyeri* and the lovely little pink *Primula algida*. *Colias chlorocoma* was a good sighting but even better was the Caspian Snowcock that flew by below me, landing on a rocky pinnacle nearby. I was able to watch this wonderful bird for five minutes.

Alpine Accentor, Red-fronted Serins and several immature Dippers, apparently learning their trade in impossibly high icy waters, were the bird highlights. A Lammergeier was seen on the walk down.

After everyone had gone to bed I saw on the news that there was an eclipse of the moon tonight and that it would result in a Red Moon. Many were posting pictures of a slightly red moon on the internet. I popped outside and there it was – and it was really very very red!

## Day 9      July 28<sup>th</sup>      Dupeduz Valley

Wouldn't you know it, another very warm sunny morning! This morning we were again walking out of the hotel but this time up the valley that runs initially at least, north from Olgunlar. The path rises more swiftly in this valley but is again a decent path. To get onto it one has to walk through the paths between the houses, a fascinating experience. After the last house it was straight into mountain meadow. As usual up here there were flowers everywhere, many the same as the day before. We passed *Dactylorhiza umbrosa* and wonderful clumps of *Gentiana septemfida*. There was a very nice powder blue Delphinium and dry bluffs had a colourful mix of *Sedum spurium* and *Helichrysums*.

It didn't take long for the butterflies to start impressing. We started with a mystery *Agrodiaetus* (nothing new there then!) but were soon on more familiar ground with an abundance of other blues. Common Blue was.... common today. There were plenty more Gavarnie Blues, *Polyommatus aedon* was frequent and we saw a few Damon Blues. A highlight was a single Large Blue. We saw the triumvirate of Silver-studded, Idas and Reverdin's Blues, all of them quite common. Geranium, Mountain and Blue Arguses were all seen too. *Agrodiaetus* blues photographed included *Polyommatus menalcas*, *Polyommatus demavendii* and *Polyommatus firdussii*. Fritillaries were again abundant with Dark Green and High Brown to the fore, especially on the walk down when both would form (separate!) groups at mud-puddling sites. There were a goodly number of both Lesser Spotted and Caucasian Spotted Fritillaries and early on Richard found a nice Twin-spot Fritillary. A single Marsh Fritillary was seen and just a few Caucasian Fritillaries too. Skippers included our only Orbed Red-underwing Skippers of the trip, also Large Grizzled Skipper which was common, and both Mallow and Small Skippers were seen. There were many more Apollos around today and later when I walked up onto a high ridge Clouded Apollos became numerous. Geyer's Rock Brown was seen by the village and other 'browns' noted were Dusky Steppe Brown, Russian and Lederer's Heath.

Having just checked out some *Campanula betulifolia* on some rocks we suddenly noticed a Brown Bear on the slopes high above us. She was a long way off but could be seen quite well through the binoculars. We soon realised that she had a little baby with her, it was pretty small and must have been born this spring. Mum was busy digging stuff up on the slope, the baby left to wander around. As we walked slowly up the valley they stayed in view and we could see them for perhaps forty-five minutes before we went out of sight of them round a bend in the valley. A marvellous sighting if too distant for photography.

Red-fronted Serins were seen in the deserted yayla. Flocks of Alpine Chough had been seen several times this morning, Richard spotting the first from the village. We took lunch on a bench above the river bordered by a yellow swathe of lady's mantle. Afterwards I went up onto the ridge where the bear had been but no luck with getting close to them. However I could see at first hand their

diggings and all over the ridges up there were piles of bear poo! Just where the bear had been I found the remains of a recently killed male Caucasian Blackcock complete with all its elegantly curved tail feathers! Nearby was an Eagle Owl's body feather. Any connection is merely circumstantial! A group of Red-billed Chough flew over and a superb pale phase Booted Eagle too. Mistle Thrushes and Finsch's Wheatears were noted up on the main ridge. Here the views along to the Kaçkar and the mountains and valleys in all directions was exceptional. European Swallowtails hill-topped and there were many Geranium Arguses. There were just a few Caucasian Clouded Yellows and I was lucky enough to capture an in-focus image of a male and a female slowly dancing in the air! Here were plenty of the Caucasian Ringlet too. There was an abundance of *Oxytropis lazica* blooming in the alpine turf sometimes with an *Onobrychis* (maybe *montanum*). Gullies were full of *Rhododendron caucasicum*, past flowering. On the rocky peaks up here were lots of *Cerastiums*, *Minuartias* and *Drabas* as well as a *Dianthus* like *micranthus*, and the most marvellously large cream blooms of *Centaurea appendicigera*.

Dinner tonight was trout.

## Day 10      July 29<sup>th</sup>      to the Black Forest

A sunny and warm morning... after breakfast we packed up and left at nine, saying a sad farewell to wonderful Olgunlar. We had a Dutch lepidopterist in tow as he was very keen to see the White-letter Hairstreaks that we'd seen three days precious. We duly found the spot and took him up the bank to show him and ... they weren't there! There was however a superb Brown Hairstreak which was much enjoyed and soon after the first rather imperfect White-letter Hairstreak duly put in an appearance and so we left a happy Dutchman standing amongst the Ground Elders!

We continued on down to Yusufeli where we stocked up with picnic supplies etc. Then it was down into the hot and really quite arid Çoruh Valley. Nowadays one doesn't get to see much of the valley floor as one is either in a tunnel, on a bridge or driving along next to vast reservoirs! At the main road junction in the valley we noticed people at a bus stop pointing their phones upslope and we correctly surmised they must be photographing Ibex. Sure enough, there were four of them not far above the road. Two adults and two babies. They seemed little concerned with the attention though they did cause quite a bit of 'small' rockfall as they moved across a scree slope.

Down in Artvin we stopped for a lunch at a durum kebab place – this is a kind of takeaway kebab in a pide however we decided to relax and eat in. Very tasty it was too. Then we were on our way to Şavşat, skirting the great dam above Artvin and then rising on the new road into the valleys passing another big reservoir. We stopped to look at some *Alcea dissecta* on the roadside, noting *Diospyros lotus* (date plum) and the brilliant yellow *Centaurea solstitialis*. Further along the valley we stopped for banks covered in Maidenhair Fern and mints. There was a False Chalkhill Blue and a Little Tiger Blue. A roadside fruit market drew us to a halt and we bought some Nectarines and Apples. Then it was into Şavşat for some fuel and then up into the high country beyond. Şavşat itself is at the juncture of the arid valleys and the green highlands and we were soon up into a country where there was a pleasing landscape of little hay meadows and patches of spruce forest backed by the 2600m

Yalnizçam Ridge. It has recently been dubbed the Black Forest as Turkish tourists start to take notice of the natural beauty here and comparisons with some Swiss landscapes are also sometimes made.

Our minibus was having slight difficulty getting up the steep hills so as it rested we wandered a streamside where *Centaurea hypoleuca* and *Inula helenium* were abundant and where we saw Adonis Blue, Sandy Grizzled Skipper and a White Admiral.

Then it was on to the hotel situated on a bluff above the road with quite amazing views northeast towards the great ridge on one side and across meadows and forest towards Karagöl and the Georgian border directly to the north. I popped out for a walk seeing Black Woodpeckers and hearing Corncrakes.

## Day 11      July 30<sup>th</sup>      Çam Pass

This morning (again sunny and warm) we drove the short distance up the Çam Pass. Reaching the tree line we made a brief stop as no fewer than four Lesser Spotted Eagles, a Booted Eagle and a couple of Common Buzzards all thermalled above the Scots Pines. Next was another couple of raptors and also here a Meadows Pipit and several Shorelarks. We then stopped a little way down on the far side. Here the turf was littered with white *Gentiana gelida*, acres of it. Here and there were bluish and quite blue forms and we wondered if they were just colour forms or if they were hybridising with *Gentiana septemfida*. Berger's Clouded Yellows and *Colias chlorocoma* were on the wing here. An Armenian Gull flew over and so too did a Lanner.

The rest of the morning was spent enjoying a fabulous flora and some fine butterflies. We already seen a surprise Camberwell Beauty flying across the open *Nardus stricta* pasturelands and here was another more conveniently perched up in a roadside willow. Marbled White were about and there was also Red Admiral, False Chalkhill Blue and *Polyommatus aedon*. A bank above the road had a memorable display of the large blue *Scabiosa caucasica* joining by pretty in pink *Centaurea pulchellum*. On the cliffs grew the fine *Campanula crispa*, in one spot with the fern *Asplenium septentrionale*. We found *Leonurus quinquelobatus*, a pretty little *Lathyrus* which might have been *cyaneus*. On dry ground there was much *Helichrysum pallasii* and the little *Allium umbellatum*. Linnets of the lovely *bella* race were found here as well as Common Rosefinches. We found our first *Aconitum nasutum* blooming by the cliffs but it was across the road and down by the stream that really held the best of these lovely plants. The rich blue *Aconitum nasutum* was scattered up and down the stream whilst in nearby shrubberies was the yellow *Aconitum anthora* and the taller white *Aconitum orientale*. There were two Delphiniums too – the elegant *Delphinium flexuosum* – and there was lovely *Delphinium schmalhauseni* too. Butter-yellow heads of *Centaurea macrocephala* were quite a sight and there was yellow *Arnebia pulchra* too. The gentian mystery continued with lots of lovely *Gentiana septemfida* and some pale blue ones too – perhaps they were hybrids too. Whinchats and Goldfinches were seen and overhead were several Long-legged Buzzards and one Lesser Spotted Eagle. There were a good number of butterflies here – Twin-spot, Queen of Spain and Dark Green Fritillaries. Several Scarce Coppers and Meadow Browns. More fine plants included a nice form of *Viola arvensis* and Meadowsweet.

We headed back towards the shade of the forested side of the pass and enjoyed a lunch as we watched locals packing up the wooden pavilions erected for an event held there the day before. They

were also doing a sterling job picking up an absurd amount of rubbish. Even during our lunch the vista improved remarkably. Then we ventured into the forest for what turned out to be a rather magical hour. Our target was the charismatic Ghost Orchid and we'd not been in there more than five minutes when one was found. We soon started to find more, though one did have to search, they are not easy to see in the conifer needle floor, the pink, caramel and white blooms surprisingly well-camouflaged. In the end we must have got close to a hundred blooms. There was one startling group of seventeen crammed together but the best ones were a couple of threesomes! The otherwise bare forest floor did hold some other gems too. There were a couple of Yellow Birds-nests, and several *Epipactis persica*, one still having flowers. There was an abundance of fungi, and a great variety too – lots of Russulas, some Boletus... in the trees were birds. We could hear Krüper's Nuthatches and Goldcrests and we saw a couple of Great Spotted Woodpeckers too.

## Day 12      July 31<sup>st</sup>      Aktaş & Seytan Kale

Very early in the morning there was low cloud and mists hanging in the Picea forests above the hotel but by breakfast time it was looking very sunny again albeit rather humid. We set off a little before nine and drove right up over the pass, stopping for one of the many Long-legged Buzzards en route. Then it was down into Ardahan's valley. Here the farmers were already bringing in the hay, some of it made into bales, some the more traditional stooks. We crossed the Kura river which eventually drains, via Georgia and Azerbaijan, into the Caspian. We started noticing Jackdaws and Starlings, here both birds of the montane steppes and not of the Kaçkar! We tried to drive down a steep gorge to Seytan Kalesi but people told us it was no longer allowed (not quite true...) so we left and drove round the mountain through Çildir and up onto the top of the gorge. Here the views were spectacular, not least of the old fortress of Seytan Kale nestled on a promontory below. Many Ravens flew over the gorge and there were also more Long-legged Buzzards and a fine Egyptian Vulture. Linnets were on the very steep slopes below and Skylarks on the gorge rim. *Scutellaria orientalis* dotted the turf on the top with *Onobrychis* amongst many others. On rocks was much *Sempervivum armenum* in fine flower and one great clump of *Acantholimon* studded with pink blooms. *Dianthus crinita* grew here, its white petals deeply fimbriate, and down the slope a little was the lovely large pink *Dianthus seguieri*. In this area was much *Aconitum anthora* and some nice *Lathyrus karsianus*. Apollos sailed back and forth – there were quite a few of these and there were no less than three Marbled Whites, *galathea* (the Common Marbled White) being commonest but we also saw Balkan and, surprisingly, Levantine. Scarce Coppers were common.

After our picnic we headed down to Aktaş lake. Half the lake is in Georgia and half in Turkey, it looked like the many islands were on the Turkish side. These were covered in birds. Nearer at hand though was a shore where we could get a good close look at some Dalmatian Pelicans and large numbers of White-winged Black Terns. There were lots of Ruddy Shelduck on the lake itself along with a few Great Crested Grebes and Black-necked Grebes. Waders on the near shore included several Reeve and Ruff, fifteen Little Stints, several Wood Sandpipers and a bunch of Black-winged Stilts. Sand Martins were abundant and perched on nearby wires. Wagtails were also common along the shore – mostly Black-headed Yellows, but there were a few Citrines too. *Cirsium acaulis* bloomed amongst Celery-leaved Buttercup.

We started back. On the way we stopped to look for the Maculinea blues again but to no avail. There were plenty of frits here though including Lesser Spotted Fritillary. Next we passed the Kura river where several Wood Sandpipers joined a throng of Armenian Gulls, and Flowering Rush *Butomus umbellatus* and the lovely *Consolida orientalis* were noted.

A nightwalk revealed Red Fox and Scops Owl.

## **Day 13      August 1<sup>st</sup>      The upper Kura Valley near Göle and Ani**

A change in the weather! Lots of cloud this morning though still it wasn't raining. We drove up over the Çam Pass to Ardahan and then followed the Kura River further up into its headwaters near Göle. The landscapes were huge! We passed several White Storks near Ardahan and nearing Göle started seeing Black Storks too. In the river flowered the Yellow Water Lily. The other side of Göle we eventually entered a long valley with rocky bluffs on one side and Scots Pine on the other and a little river next to the road. Superb raptor habitat and we saw so many even though we only spent half an hour in the valley! Most common were Lesser Spotted Eagles – we saw around eight including two that were trying to tumble together. There was a single Booted Eagle, this was flying above three of the Lesser Spotted Eagles and as we studied these a Saker Falcon flew through them all. There was also a Common Buzzard and half a dozen Black Kites. Three Black Storks joined them. Nearing the end of the 'treed' part of the valley we stopped for some vultures – five Griffon Vultures and two Black Vultures.

Then it was up onto a high plateau where the sward was tightly grazed and interrupted by occasional fields of oats. We stopped by a small lake for lunch. Down on the water were Ruddy Shelduck, Coot and Garganey in some numbers. There were also a few Mallard and four pairs of Red-necked Grebes, some of these carrying their babies on their backs! A flock of Lapwings flew around and Richard flushed a couple of Great Snipe. A single Whiskered Tern was at the back of the lake. In the turf were Skylarks and in the water was a water crowfoot, *Ranunculus sphaerospermus*.

We now drove purposefully down to Ani, stopping only when we spotted some Rose-coloured Starlings along the roadside. We had two and a half hours to explore Ani. Known in its heyday, when its power and importance rivalled that of contemporary Constantinople and Baghdad, as the 'City of 1001 Churches', Ani stood at the juncture of several important trade routes and had a population approaching 200,000. The grandiose design of some of the buildings and the extent of the ruins are indicative of just how important the place was, and wandering the site now is a rather surreal experience given the vast expanse of unpopulated montane steppe that spreads in all directions. There is no-one around, no-one has lived here for three centuries. Indeed it was Ani's spectacular setting that impressed as much as anything. Two of its three sides are bordered by deep canyons, the eastern side cut by the Akhurian River, a branch of the great Arax River, and the border with Armenia. Ani was built from local volcanic basalt which is easily carved. The stonework in the cathedral features basalt of a variety of colours from rose-red to yellow and black. Ani's best-preserved structure is the Church of St Gregory of Tigran Honents, which has stone carvings of real and imaginary animals on the exterior and inside are beautiful frescoes. A storm was brewing and the winds were funnelling in. We watched as various members of the local 'tumbleweed' plant

community sailed (and tumbled!) over the gorge between Turkey and Armenia. The 'real' purple flowered *Consolida regalis* was common through the site as was a lovely 'pink' *Dianthus zonatus*. *Peganum harmala* flowered profusely and there were stands of *Onoprodum acanthium* as well as flowering *Centaureum iberica*, some white-flowered *Lathyrus brachypterus* and lots of fine deep-pink flowered *Xeranthemum annuum*. It was very dry but there were still some butterflies notably the Hermit, a large satyrid which was very common. There were also a few Grey Asian Graylings. Eastern Bath Whites were common and there were a few Small Bath Whites too. Other butterflies noted were what looks very like Loew's Blue on the photographs, Large Wall Brown and a fine fresh Southern Comma. Birding was rather excellent! A big surprise was a male Levant Sparrowhawk that flew through the site. There was a family of Pied Wheatears off to one side and also there was a fine strongly pink-tinged Lesser Grey Shrike. Eastern Rock Nuthatches called loudly from the site's stonework and other birds noted were Corn Buntings, Isabelline Wheatears and abundant Crag Martins. Cormorants sat on rocks in the River Arax below... An Asia Minor Suslik stood sentry in meerkat-like fashion on some rocks just outside the site.

Driving back we saw more Rose-coloured Starlings, large flocks of Rooks and Jackdaws and two male and a female Lesser Kestrel on wires right by the roadside. Rain fell as we arrived in Kars and checked into our hotel.

## Day 14      August 2<sup>nd</sup>      Kuyucuk Lake & Departure

After saying farewell to Geoffroy and John we headed out of town to a little wetland beyond the airport. This little sedgey lake lies at around 2200m above sea level and the light was glorious when we arrived. We walked around the edge of half of the lake. Four Marsh Harriers had territory here. On the water we watched several families of Black-necked Grebes, and at least two pairs of Ferruginous Ducks, one with lots of babies. There were Pochard, Tufted Duck and a fine male White-headed Duck as well as two females. A Cuckoo flew in and was soon chased off by a combination of black-headed Yellow Wagtails and martins. *Alisma plantago-aquatica*, *Ranunculus sphaerospermus* and *Ranunculus sceleratus* flowered in the water. Dragonflies were everywhere with hawkers, Four-spotted Chasers, Sympetrum, and a variety of damselflies.

We moved off the other side of Kars, stopping not far from the Armenian border at Kuyucuk Lake. It would be no exaggeration to say that there was more than ten thousand birds at this lake. The entire couple of kilometre square surface of the lake was dotted with them, in quite some density! Largest numbers were probably Ruddy Shelduck and Ruff, both with several thousands each present. There were very large numbers of Garganey too. Lots of Greylag Geese. There were several hundred Glossy Ibis and Lapwings and Wood Sandpipers were abundant. A nice find was a couple of Common Cranes, and three Spoonbills. A hundred or so White Storks loafed by the water's edge. Several thousand mixed marsh terns were flying over or at this midday heat stage resting on the water. It was an amazing experience, perhaps one we would have enjoyed more if we'd gone early in the morning! On the dry areas were Bimaculated and Lesser Short-toed Larks and there were Rose-coloured Starlings everywhere. Then it was off to the airport, arriving in plenty of time to check-in and have some lunch – a very fine menemen.

## Systematic List Number 1 Flowers

[species in] were not seen this year

### Equisetaceae

<i>Equisetum arvense</i>	Scattered throughout
<i>Equisetum fluviatile</i>	Marshy areas around Kars
<i>Equisetum palustre</i>	Scattered throughout
<i>Equisetum ramossissimum</i>	Çoruh Valley
<i>Equisetum telmateia</i>	Ikizdere area

### Lycopsidaceae

[ <i>Lycopodium clavatum</i>	Ortan where common on mossy banks]
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### Pteridophyta

<i>Adiantum capillus-veneris</i>	Çoruh Valley
<i>Asplenium scolopendrium</i>	Ikizdere
<i>Asplenium septentrionale</i>	Scattered throughout, commonest in East
<i>Asplenium adiantum-nigrum</i>	Common Ikizdere area, scattered further east
<i>Asplenium trichomanes</i>	widespread
<i>Athyrium distentifolium</i>	Scattered above the tree line
<i>Athyrium filix-foemina</i>	Woods throughout
<i>Cystopteris fragilis</i>	Widespread
<i>Cheilanthes marantae</i>	Çoruh Valley & Barhal
<i>Cryptogramma crispa</i>	Above Dilber Duzu, Kaçkar
<i>Dryopteris abbreviata</i>	Widespread
<i>Dryopteris abberviated</i>	Subspecies <i>boreni</i> . Çam Pass
<i>Dryopteris limbosperma</i>	Anzer Yayla, Mor Yayla
<i>Gymnocarpium robertianum</i>	Ikizdere area
<i>Matteucia struthiopteris</i>	Ikizdere area
[ <i>Phegopteris connectilis</i>	Pişenkaya]
<i>Polypodium vulgare</i> agg	Scattered throughout



<i>Polystichum aculeatum</i>	Scattered throughout
<i>Polystichum lonchitis</i>	Scattered throughout in screes above the treeline
<i>Pteridium aquilinum</i>	Scattered throughout
[ <i>Pteris cretica</i>	Sivrikaya]
[ <i>Telypteris phegopteris</i>	Karagol]
<i>Woodsia alpina</i>	Above Dilber Duzu, Kaçkar

### **Cupressaceae**

<i>Juniperus communis</i>	Widespread
<i>Juniperus excelsa</i>	Barhal
<i>Juniperus oxycedrus</i>	Çoruh Valley
<i>Juniperus sabina</i>	Anzar Yayla

### **Pinaceae**

<i>Abies nordmanniana</i>	Locally dominant e.g. Çam Pass
<i>Picea orientalis</i>	Very common and widespread, the dominant coniferous
<i>Pinus sylvestris</i>	Locally common especially east of the Çam Pass

### **Aceraceae**

<i>Acer Çampestre</i>	Scattered throughout
<i>Acer hyrcanum</i>	Barhal
<i>Acer monspessulanum</i>	Çoruh Valley
<i>Acer negundo</i>	Occasionally planted
<i>Acer platanoides</i>	Çoruh Valley and Şavşat area
[ <i>Acer pseudoplatonoides</i>	Pişenkaya]
<i>Acer trautvetterii</i>	Anzar Yayla and Şavşat

### **Anacardiaceae**

<i>Rhus coriaria</i>	Scattered. Pinnate leaved shrub/tree
<i>Cotinus coggygria</i>	Smoke bush, Barhal area

<b>Apiaceae</b>	Many more species of this difficult family were seen but not identified
<i>Anthriscus nemorosus</i>	Çoruh Valley, Barhal etc
<i>Astrodaucos orientalis</i>	Çoruh Valley
<i>Astrantia maxima</i>	Widespread. Lovely pink form
<i>Bupleurum falcatum</i>	Widespread
<i>Bunium microcarpum ssp. bourgai</i>	Ovit Dagi and other yaylas above Ikizdere
<i>Carum meifolium</i>	yaylas above Ikizdere
<i>Chaerophyllum astrantiae</i>	Widespread above the treeline
<i>Chaerophyllum macrospermum</i>	Barhal
[ <i>Conium maculatum</i>	Çıldır Gölü]
<i>Daucus carota</i>	Scattered
<i>Eryngium billardieri</i>	Locally common in the Kars area
<i>Eryngium Çampestre</i>	Frequent on roadsides from Çoruh Valley eastwards
<i>Eryngium giganteum</i>	Superb big silvery species. Scattered
<i>Ferula rigidula</i>	Ikizdere area on cliffs
<i>Foeniculum vulgare</i>	Barhal
<i>Falcaria vulgaris</i>	Scattered throughout
<i>Heptaptera anisoptera</i>	Scattered throughout
<i>Heracleum apiifolium</i>	Dwarf species growing in alpine runnels on Ovit Dagi, Anzar Yayla
<i>Heracleum antasiaticum</i>	Above Barhal
<i>Heracleum crenatiifolium</i>	Above Sivri Kaya
<i>Heracleum platytaenium</i>	Widespread in the Ikizdere area
<i>Heracleum sphondylium</i>	Çoruh Valley
<i>Malabaila lasiocarpa</i>	Anzar Yayla
<i>Pastinaca armena</i>	Aktaş Lake area
<i>Pimpinella saxifraga</i>	Barhal
[ <i>Pimpinella peregrina</i>	Yalnizçam]
<i>Pimpinella rhodantha</i>	Sivrikaya, Ovit Dağı
<i>Prangos ferulacea</i>	Mor Yayla
<i>Prangos platyclaena</i>	Mor Yayla
<i>Sanicula europaea</i>	Scattered in most wooded areas

<i>Seseli libanoticus</i>	Scattered in Ikizdere area
<i>Torilis arvensis</i>	Scattered throughout
<i>Turgenia latifolia</i>	Scattered throughout
<i>Xanthogalum purpurascens</i>	Anzar Yayla and Mor Yayla

### **Apocynaceae**

<i>Nerium oleander</i>	Çoruh Valley
<i>Trachometrum venetum</i>	Çoruh Valley near Ispir

### **Araliaceae**

<i>Hedera colchica</i>	Scattered in Ikizdere area
<i>Hedera helix</i>	Ikizdere

### **Asclepiadaceae**

<i>Cynanchum acutum</i>	Scattered along river valleys
<i>Periploca graeca</i>	In seed below Barhal
<i>Vincetoxicum fuscatum</i>	Ikizdere area
<i>Vincetoxicum tmoleum</i>	Çoruh Valley

### **Asteraceae**

	A superb array of this family was on show
<i>Achillea biebersteinii</i>	Yellow. Şavşat and the Çam Pass
<i>Achillea latiloba</i>	Meadows above Ikizdere
<i>Achillea millefolium</i>	widespread
<i>Arctium platylepis</i>	Meadows above Ikizdere
<i>Arctium minus</i>	Scattered throughout
<i>[Antennaria dioica</i>	Ovit Dağ]
<i>Anthemis marscheilliana ssp pectinata</i>	Locally very common on higher meadows and alpine turf, golden-yellow daisy, fine-cut soft grey leaves e.g Ovit Dağ, Mor Yayla
<i>Anthemis melanoloma ssp melanoloma</i>	Creamy flowers with drooping ligules, unbranched. Anzar Yayla
<i>Anthemis tinctoria</i>	Mor Yayla

<i>[Artemisia absinthium</i>	Çam Pass]
<i>Artemisia vulgaris</i>	Scattered throughout
<i>Aster alpinus</i>	Mor Yayla, higher parts of Kaçkar
<i>Aster amellus</i>	Taller than <i>alpinus</i> with branched inflorescence, alpine meadows
<i>[Aster caucasicus</i>	Mor yayla, Anzer Yayla]
<i>Bellis perennis</i>	Şavşat
<i>Carduus acanthioides</i>	Scattered throughout
<i>Carduus hamulosus</i>	Aktaş Golu
<i>Carduus lanuginosus</i>	Kaçkar
<i>Carduus nutans</i>	Kars area
<i>Carlina biebersteinii</i>	Scattered throughout
<i>Carlina vulgaris</i>	Meadows in forests around İkizdere
<i>Centaurea appendicigera</i>	Gorgeous creamy flowered cornflower, widespread on gravelly slopes or rocks in all mountains areas
<i>Centaurea dealbata</i>	Laset area
<i>Centaurea glastifolia</i>	Bright yellow with slender winged stems. Çoruh Valley and Ardahan area where common
<i>Centaurea helenioides</i>	Large yellow flowers with woolly phyllaries, Anzer Yayla, Sivri Kaya
<i>Centaurea hypoleuca</i>	Anzer Yayla and İkizdere
<i>Centaurea iberica</i>	Kars area
<i>Centaurea macrocephala</i>	Another large yellow species with brownish phyllaries. Mor Yayla and Çam Pass area
<i>Centaurea nigrifimbriata</i>	Blue alpine cornflower, black-edged phyllaries, Anzar Yayla, Ovit Dağ
<i>[Centaurea pseudoscabiosa</i>	Taşkıran]
<i>Centaurea pterocaula</i>	Yellow with winged stems. Mor Yayla
<i>Centaurea pulcherrima</i>	Widespread in alpine meadows, pink with papery pale brown phyllaries
<i>Centaurea rhizantha</i>	Kaçkar
<i>[Centaurea salicifolia</i>	Laset]
<i>Centaurea solstitialis</i>	Yellow. Phyllaries with long spines. Çoruh Valley
<i>Centaurea squarrosa</i>	Scrawny branched species with tiny purple flowers. Çoruh Valley near Ispir

<i>Centaurea triumfettii</i>	Scattered throughout
<i>Centaurea virgata</i>	Scrawny branched species with tiny purple flowers. Scattered
<i>Cicerbita bourgaei</i>	Taller species blue. Forest edge around Ikizdere
<i>Cicerbita racemosa</i>	Shorter species lilac-blue. Anzer Yayla
<i>Cichorium intybus</i>	Abundant along roadsides. Chicory
<i>Cirsium adjaricum</i>	Kaçkar – in higher meadows
<i>Cirsium arvense</i>	Mor Yayla
<i>Cirsium echinus</i>	Widespread spiny thistle with creamy nodding flowers on roadsides
<i>Cirsium hypoleucum</i>	Common deep pink thistle of woodland edge, nodding flowers
[ <i>Cirsium kosmelii</i>	Çam and Yalnizçam Pass]
<i>Cirsium obvallatum</i>	Çam Pass
<i>Cirsium pseudopersonata</i>	Meadows and woodland edge Ikizdere area
<i>Cirsium pubigerum ssp glomeratum</i>	Pale pink flowered, tall. Woodland edge, damp areas, throughout
<i>Cirsium simplex</i>	Small white species of stream edges in alpine turf, throughout
<i>Cirsium vulgare</i>	Throughout – roadsides etc
<i>Cirsium rhizocephalum</i>	Aktaş Lake
[ <i>Crepis willdenowii</i>	Sivrikaya]
<i>Conyza canadensis</i>	Scattered in meadows near Ikizdere
[ <i>Doronicum balansae</i>	Anzer and Mor Yayla]
<i>Echinops orientale</i>	round thistle heads with blue flowers. Scattered
<i>Erigeron acer</i>	Scattered throughout
<i>Erigeron annuus</i>	Tall plant with small white flowers in the shady borders
<i>Erigeron caucasicus</i>	Tall deep pink species. Scattered throughout
<i>Eupatorium cannabinum</i>	Hemp Agrimony, tall with broad white corymbs. Locally common
<i>Galinsoga parviflora</i>	Scattered throughout
[ <i>Gnaphalium supinum</i>	Widespread]
<i>Gnaphalium stewartii</i>	Anzar Yayla
<i>Gnaphalium sylvestris</i>	Ovit Dagi
<i>Helichrysum arenarium</i>	Ani
<i>Helichrysum armenium</i>	Leaves are revolute. Scattered throughout

<i>Helichrysum pallasii</i>	Brilliant pale yellow. Widespread in Kaçkar, Mor Yayla etc
<i>Helichrysum plicatum</i>	Pale yellow with deeper centre. Mor Yayla etc
<i>Inula britannica</i>	Mor Yayla
<i>Inula helenium</i>	Tall Inula with large flowers. Widespread
[ <i>Inula oculus-christi</i> ]	
[ <i>Inula maeri</i>	Barhal]
<i>Inula orientalis</i>	Large orangey-yellow species in tidy clumps, scattered
<i>Inula salicina</i>	Çam Pass
<i>Jurinella moschus</i>	Mor Yayla
<i>Mycelis muralis</i>	Ikizdere
<i>Lactuca serriola</i>	Barhal
<i>Logfia arvensis</i>	Scattered in Kars, Ardahan area
<i>Onopordum acanthium</i>	Kars area
<i>Onopordum taurica</i>	Near Arpacay
[ <i>Onopordum turcica</i>	Ardahan area, Big grey-green plant]
<i>Petasites albus</i>	Widespread, some huge leaves on show
<i>Pilosella hoppeana</i>	Widespread, pale yellow daisy with ovate hairy leaves
<i>Prenanthes cacalifolia</i>	Forest edge in the Ikizdere
[ <i>Prenanthes purpurea</i>	Barhal area]
<i>Reichardia glauca</i>	Scattered throughout
[ <i>Scariola viminea</i>	Yaylalar]
[ <i>Scorzonera cana</i>	Ovit Dağ]
[ <i>Scorzonera tomentosa</i>	Yaylalar]
<i>Senecio pseudo-orientalis</i>	Anzer Yayla and Mor Yayla
<i>Senecio dorio ssp. umbrosus</i>	Mor Yayla
<i>Senecio nemorosus</i>	Aktaş Golu
<i>Senecio othonnae</i>	Very tall. Shrubberies above Sivri Kaya
<i>Senecio pandurifolius</i>	Tall with pinnate leaves. Above the hotel at Laset
<i>Senecio platyphyllus</i>	Anzer Yayla
[ <i>Senecio racemosus</i> ]	
<i>Senecio taraxacifolius</i>	Ovit Dagi

<i>Senecio vernalis</i>	Scattered
<i>Senecio vulgaris</i>	Ikizdere
<i>Solidago virgaurea</i>	Scattered throughout
<i>Tanacetum balsamita</i>	Fine white flowered species in the Kaçkar
<i>Tanacetum macrophyllum</i>	Meadows and woodland edge in Ikizdere area
[ <i>Tanacetum coccineum</i>	Çam Pass]
<i>Tanacetum parthaneum</i>	Meadows and woodland edge in Ikizdere area
<i>Telekia speciosa</i>	Another tall handsome daisy, broad yellow flowers and large, broad leaves. Meadows and woodland edge in Ikizdere area
<i>Tripleurospermum melanolepis</i>	Anzer Yayla
<i>Tripleurospermum oreades</i> var. <i>tchihatchewii</i>	Anzar Yayla and Mor Yayla
[ <i>Tussilago farfara</i>	Sivrikaya, Ovit Dağ]
[ <i>Uechitritzia armena</i>	Yaylalar]
<i>Xeranthemum annuum</i>	Abundant in drier valleys, little pink daisy with pointed petals. Widespread in dry areas
<i>Xanthium spinosum</i>	Ani and Kars area
<i>Xanthium strumarium</i>	Scattered throughout

### **Balsaminaceae**

*Impatiens noli-tangere* Widespread in wet forest areas

### **Berberidaceae**

*Berberis crataegina* Çoruh Valley and the Barhal area

### **Betulaceae**

*Alnus glutinosa glutinosa* Widespread in damp areas

*Betula litvinowii* East side of Çam Pass

*Betula pendula* Scattered throughout

### **Boraginaceae**

*Anchusa azurea* Tall blue 'borage'. Roadsides

<i>Anchusa leptophylla</i>	More slender with deeper blue flowers, Mor Yayla
<i>Arnebia pulchra</i>	Scattered throughout in alpine turf
<i>Cerinth glabra</i>	Anzar Yayla
<i>Cerinth minor</i>	Kaçkar
<i>Cynoglossum holosericeum</i>	Extremely rare high altitude scree endemic in fruit above Dilber Duzu
<i>Cynoglossum officinale</i>	Yaylalar
<i>Cynoglossum montanum</i>	Reddish flowers, spiny disc-like fruits, widespread
<i>Echium italicum</i>	Scattered – roadsides
[ <i>Echium russicum</i>	En route to Çıldır Gölü]
<i>Echium vulgare</i>	Widespread
<i>Heliotropium europaeum</i>	Common in the east
[ <i>Lappula barbata</i>	Demirgören Valley]
<i>Lappula squarrosa</i>	Ikizdere
[ <i>Nonea pulla</i> ssp. <i>monticola</i>	Çam Pass]
[ <i>Nonea versicolor</i>	Mor yayla]
<i>Myosotis alpestris</i>	Widespread in mountains e.g Ovit Dağ, Yaylalar
<i>Nonea pulmonaroides</i>	Çam Pass, probably also Kaçkar
<i>Onosma aucherianum</i>	Mor Yayla
[ <i>Onosma isauricum</i> ]	
[ <i>Onosma tauricum</i>	Yaylalar]
<i>Rindera albida</i>	Mor Yayla. In seed
<i>Rindera lanata</i>	Mor Yayla. In seed
<i>Symphytum asperum</i>	Widespread, blue flowers

### **Brassicaceae**

<i>Anchonium elichrysifolium</i>	The Pudding Plant. Mor Yayla
[ <i>Arabis draboides</i> ]	
<i>Arabis caucasica</i>	Mor Payla
<i>Berteroa mutabilis</i>	Anzar Yayla and the Kaçkar
<i>Bunias orientalis</i>	Scattered in the Ikizdere area
<i>Capsella bursa-pastoris</i>	Scattered throughout



<i>Cardamine raphanifolia ssp. acris</i>	Wet areas, scattered; common wet meadows above Sivri Kaya
<i>[Cochlearia sintenisii]</i>	
<i>[Coluteocarpus vesicaria</i>	Anzer area]
<i>Conringia orientalis</i>	Barhal
<i>Crambe orientalis</i>	Çoruh Valley and Kars area
<i>[Dentaria bulbifera</i>	Yaylalar]
<i>[Descuraina sopia</i>	Kars area]
<i>Draba brunnifolia</i>	Scattered in the alpine zone on rocks
<i>Draba hispida</i>	Ovit Dağ
<i>Draba nemorosa</i>	Scattered throughout in alpine turf
<i>Draba rosularis</i>	Ovit Pass, Anzar Yayla
<i>Draba siliquosa</i>	White. scattered
<i>Erysimum alpinum</i>	Mor Yayla
<i>Fibigia macrocarpa</i>	In fruits at various localities
<i>Hesperis matronalis</i>	Anzar Yayla and the Çam Pass
<i>Heldreichia bupleurifolia</i>	Mor Yayla
<i>Hutchinsia petraea</i>	Anzar Yayla
<i>Isatis glauca</i>	Scattered. Woad
<i>Lepidium perfoliatum</i>	Ani
<i>Lepidium vesicarium</i>	Ani
<i>[Neslia apiculata</i>	Sivrikaya]
<i>Rorripa sylvestris</i>	Ikizdere area
<i>Sterigostemon incanum</i>	Ani – in fruit
<i>[Thlaspi arvense</i>	Sivrikaya, Anzer Yayla]

## **Buxaceae**

*[Buxus sempervirens]*

## **Camelliaceae**

*Thea sinensis* Widespread in plantations – Tea e.g Güneyce

## Campanulaceae

<i>Asyneuma amplexicaule</i>	Slender purplish-blue spikes in meadows, clasping leaves, widespread
<i>Asyneuma filipes</i>	Slender purplish-blue spikes on rocks, more delicate than previous species, Çam Pass
<i>Asyneuma lobelioides</i>	near Kars
<i>Campanula alliarifolia</i>	Tall white species. Widespread
<i>Campanula aucheri</i>	Large blue bell in alpine turf, pale centres, corolla pubescent outside. Widespread
<i>Campanula betulifolia</i>	Below Anzar Yayla
<i>Campanula choruhensis</i>	in flower just above Olgunlar
<i>Campanula collina</i>	Locally common on higher passes. Spikes of well spaced purplish bells
<i>Campanula crispa</i>	White flowered cliff dweller on Çam Pass
<i>Campanula glomerata</i>	Widespread, dense variably blue flowers, stiff bracts and leaves
<i>Campanula lactiflora</i>	Locally abundant in meadows, tall with huge heads of pale lilac to mid-blue flowers
<i>Campanula latifolia</i>	Scattered, tall with large hairy bells. Meadows above Ikizdere
[ <i>Campanula persicifolia</i>	Ayder]
<i>Campanula rapunculoides</i>	Locally abundant along roads, tall, slender, lilac/purple bells in spikes
<i>Campanula sibirica</i>	Rather wiry, species with sparse spikes, flowers generally held upright
<i>Campanula stevenii</i>	Delicate pale blue single blooms on long wiry stems. Scattered in turf
<i>Campanula tridentata</i>	Similar to <i>aucheri</i> but more purple and preferring rocks to turf, dark centres. Widespread in mountains
<i>Campanula troegerae</i>	Chasmophyte, the large white blooms strongly tinged pink. Extremely local. Above Dilber Duzu, Kaçkar
[ <i>Jasione supina</i>	Dwarf with round blue 'globularia-like' flowers, Ovit Dağ]

## Cannabaceae

[ <i>Cannabis sativa</i>	Yaylalar]
<i>Humulus lupulus</i>	Barhal

## Capparaceae

<i>Capparis ovata</i>	Çoruh Valley
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[*Cleome steveniana*]

### Caprifoliaceae

<i>Lonicera caucasica</i>	Kars area
[ <i>Lonicera xylosteum</i>	Anzer area]
<i>Sambucus edulis</i>	Widespread and common
<i>Sambucus nigra</i>	Scattered in and above Ikizdere
<i>Viburnum lantana</i>	Laset & Çam Pass areas
<i>Viburnum opulus</i>	Laset & Çam Pass areas

### Caryophyllaceae

<i>Arenaria dianthoides</i>	Aktaş Golu
[ <i>Cerastium armeniacum</i>	Olgunlar]
<i>Cerastium cerastioides</i>	Mor Yayla
<i>Cerastium dahuricum</i>	Anzer and Mor Yayla
<i>Cerastium gnaphaloides</i>	Mor Yayla
<i>Cerastium purpurascens</i>	Çam Pass
<i>Dianthus calocephalus</i>	Mor Yayla
<i>Dianthus crinitus</i>	Long-fimbriate white flowers. Aktaş Golu
<i>Dianthus carmelitarum</i>	Meadows above Ikizdere
<i>Dianthus erythrocoleus</i>	Mor Yayla and Kaçkar
<i>Dianthus micranthus</i>	White flowered species on Çam Pass
<i>Dianthus multicaulis</i>	Pale pink clump-forming species at Mor Yayla
<i>Dianthus orientalis</i>	Fimbriate petals, long wiry stems, on cliffs. On cliffs throughout
<i>Dianthus seguieri</i>	Aktaş Lake
<i>Dianthus zederboueri</i>	Mor Yayla
<i>Dianthus zonatus</i>	Ani
<i>Gypsophila elegans</i>	Scattered throughout
[ <i>Gypsophila glandulosa</i>	Ovit Dağ]
<i>Gypsophila nabelekii</i>	Pretty little scree dwelling species. Mor Yayla
[ <i>Gypsophila silenoides</i> ]	

<i>Herniaria glabra</i>	Ani
<i>Minuartia aizoides</i>	Mor Yayla
<i>Minuartia circassica</i>	Scattered, similar to <i>juniperina</i> , but distinct greyish leaves and broader petals. Frequent in alpine turf above Ikizdere
[ <i>Minuartia erythrosepala</i>	Mor Yayla]
<i>Minuartia imbricata</i>	Ovit dagi
<i>Minuartia juniperina</i>	Fine-leaved tallish species on alpine tundra. Kaçkar
<i>Minuartia recurva</i>	Mat-forming on rocks. Scattered in tundra throughout
<i>Petrohagia prolifera</i>	Aktaş Golu
<i>Sagina saginoides</i>	Ovit Dagi
<i>Saponaria officinalis</i>	Barhal
<i>Silene alba ssp. divaricata</i>	Mor Yayla
<i>Silene armeria</i>	Laset and Çam areas
<i>Silene compacta</i>	Widespread
[ <i>Silene cappadocica</i>	Çam Pass]
[ <i>Silene caryophylloides</i>	En route to Ovit Dağ]
[ <i>Silene dichotoma</i>	Aktaş Lake]
<i>Silene lazica</i>	Kaçkar
[ <i>Silene lucida</i>	deep red calyx, linear leaves less than 1.5 mm. En route to Sivrikaya, Yalnizçam Pass]
<i>Silene multifida</i>	Anzar Yayla
<i>Silene otites</i>	Frequent among rocks in the high tundra above Ikizdere
<i>Silene pungens</i>	Scattered everywhere
<i>Silene saxatilis</i>	
<i>Silene vulgaris</i>	Scattered throughout
[ <i>Stellaria graminea</i>	
[ <i>Stellaria kotschyana</i>	Ovit Dağ]
<i>Stellaria media</i>	Scattered

### **Celastraceae**

<i>Euonymus latifolius</i>	Scattered in woodland
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## **Ceratophyllaceae**

*[Myriophyllum spicatum]*

## **Chenopodiaceae**

*Chenopodium album* scattered

*[Chenopodium foliosum* Mor Yayla, Çıldır Gölü]

## **Cistaceae**

*Helianthemum nummularium* Widespread rockrose

## **Convolvulaceae**

*Convolvulus arvensis* Scattered throughout

*Calystegia sepium* Frequent road and forest edge in İkizdere area

*[Calystegia sylvatica]*

## **Cornaceae**

*Cornus sanguinea* Widespread

## **Corylaceae**

*Carpinus orientalis* Between Yaylarlar and Barhal

*Ostrya carpinifolia* Widespread especially in İkizdere and Barhal areas

*Corylus avellana* common

*Corylus maxima* planted

## **Crassulaceae**

*Sedum album* Scattered throughout

*Sedum hispanicum* Scattered throughout

*Sedum maximum* Pişenkaya, Olgunlar

*Sedum pilosum* Anzar Yayla and Kaçkar

*Sedum pallidum* Common in İkizdere area

<i>Sedum sempervivoides</i>	Stunning scarlet species at Mor Yayla
<i>Sedum spurium</i>	Widespread and very common pink species. White forms on Çam Pass
<i>Sedum stoloniferum</i>	More delicate than <i>spurium</i> , scattered İkizdere area
<i>Sedum tenellum</i>	Common on rocks and turf in alpine zone above İkizdere
<i>Sedum telephium</i>	Barhal area
[ <i>Sedum gracile</i> X <i>pallidum</i> ?	Anzer Yayla]
<i>Sempervivum armenum</i>	Common on rocks and turf in alpine zone everywhere
<i>Sempervivum davisii</i>	Çoruh Valley
<i>Sempervivum glabrifolium</i>	Above Dilber Duzu in the Kaçkar
<i>Sempervivum minus</i>	Ovit Pass

### **Datisceae**

<i>Datisca cannabina</i>	Laset area
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### **Dipsacaceae**

<i>Cephalaria gigantea</i>	Abundant throughout
<i>Dipsacus laciniatus</i>	Çoruh Valley
<i>Knautia involucrata</i>	Scattered throughout
<i>Scabiosa caucasica</i>	Large mid-blue flowers. Locally abundant on higher turf
<i>Scabiosa columbaria</i> <i>ssp.columbaria</i>	Locally common
[ <i>Scabiosa crinita</i>	Yalnizçam Pass]
<i>Scabiosa rotata</i>	Below Mor Yayla

### **Ebenaceae**

<i>Diospyros lotus</i>	Çoruh Valley
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### **Elaeagnaceae**

[ <i>Hippophae rhamnoides</i>	Laset]
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## **Ephedraceae**

*Ephedra major* Barhal and the Çoruh Valley

## **Ericaceae**

*Rhododendron caucasicum* Higher slopes where often the dominant shrub. Seen in flower at Anzer Yayla

*Rhododendron luteum* Widespread. Leaves only

*Rhododendron ponticum* Widespread. Leaves only

[*Vaccinium arctostaphylos*]

*Vaccinium myrtillus* Widespread

*Vaccinium uliginosum* Anzer Yayla

## **Euphorbiaceae**

Didn't do much with this family!

[*Euphorbia macroceras* Sivrikaya]

*Euphorbia myrsinites* Çoruh Valley

*Euphorbia oblongifolia* Meadows above Sivri Kaya

## **Fabaceae**

*Anthyllis vulnerariae* Aktaş Golu

*Astragalus cicer* Aktaş Golu

*Astragalus cylindriacus* Yellow. Mor Yayla

[*Albizia julibrissin* Yaylalar]

*Argyrolobium biebersteinii* Scattered on roadsides in İkizdere area, also Laset

*Coronilla orientalis* Widespread as the cream and yellow balansae form. The nominate form, which is just yellow, was seen only at high altitude (3000m) in the Kaçkar

*Coronilla varia* widespread

*Hedysarum hedysaroides* slender pink sainfoin common in alpine turf above İkizdere

*Lathyrus brachypterus* Kars

*Lathyrus cyaneus* Anzar Yayla

*Lathyrus karsianus* Aktaş Golu

*Lathyrus pratensis* Widespread

<i>Lathyrus rotundifolius</i>	Widespread
<i>Lathyrus tuberosus</i>	Scattered above Ikizdere
<i>Lotus corniculatus</i>	Widespread
<i>Medicago lupulina</i>	Ikizdere
<i>Medicago sativa</i>	widespread
<i>Melilotus officinalis</i>	Widespread
[ <i>Onobrychis transcaucasica</i>	Ovit Dağ]
<i>Onobrychis montanum</i>	Anzer Yayla
<i>Ononis arvensis</i>	Laset area
<i>Oxytropis albana</i>	Mor Yayla
<i>Oxytropis lazica</i>	high areas in Kaçkar
<i>Robinia pseudacacia</i>	Widespread, planted
<i>Trifolium alpestre</i>	Aktaş Golu
<i>Trifolium arvense</i>	Widespread
<i>Trifolium Çampestre</i>	Scattered
<i>Trifolium fragiferum</i>	Ani
<i>Trifolium hybridum</i>	Scattered throughout
<i>Trifolium medium</i>	Widespread
<i>Trifolium ochroleucum</i>	Large white clover. Kaçkar
<i>Trifolium pannonicum</i>	Large creamy-white clover. Meadows above Ikizdere
<i>Trifolium pratense</i>	scattered
<i>Trifolium repens</i>	Widespread
<i>Trifolium rytidosemium</i>	White forms at Ovit Dagi
<i>Trifolium spadiceum</i>	Scattered in meadows above Ikizdere
<i>Trifolium trichocephalum</i>	Large white clover. Çam Pass
[ <i>Vavilovia formosa</i>	Mor Yayla]
<i>Vicia balansae</i>	Anzer Yayla
<i>Vicia alpestris</i>	Scattered in alpine turf above Ikizdere
<i>Vicia canescens</i>	Scattered above Ikizdere
<i>Vicia cracca</i>	Sivri Kaya
[ <i>Vicia truncatula</i>	Ovit Dağ]



*Vicia villosa* Mor Yayla

### **Fagaceae**

*Castanea sativa* Common in forest on northern slopes

*Fagus orientalis* Common in forest on northern slopes

*Quercus macranthera* En route to Laşet

*Quercus petraea* very local in forest on northern slopes

*Quercus branti* Çoruh Valley

### **Fumariaceae**

[*Fumaria procumbens* Anzer Yayla]

*Fumaria scheichleri* Anzar Yayla

*Corydalis alpestris* Anzer Yayla. Leaves only

*Corydalis conrhiza* Ovi Dagi. Handsome lilac-blue species in scree

[*Corydalis rutifolia* ]

### **Gentianaceae**

*Centaurium pulchellum* Scattered

[*Blackstonia perfoliata* Çam Pass]

*Gentiana asclepiadea* Only in northern forests

*Gentiana cruciata* Çam Pass, Aktas

*Gentiana gelida* Handsome creamy-white species, Ardahan-Kars area

*Gentiana nivalis* Ovit Pass, also Anzar and Mor Yaylas

[*Gentiana olivierii* ]

*Gentiana pyrenaica* widespread small purple species

*Gentiana septemfida* Widespread in higher areas. large trumpets on long, leafy stems

*Gentiana verna* Mor Yayla, deep blue

*Gentianella caucasica* Soft-pink gentian, Çam Pass

*G.gelida x G.septemfida* Çam Pass

*Swertia iberica* widespread

## Geraniaceae

<i>Geranium asphodeloides</i>	Mor Yayla, also pink form near Ardahan
<i>Geranium cinereum</i>	Both the dark eyed and white centred forms were seen. Widespread and locally common e.g. Ovit Dağ, Mor Yayla
[ <i>Geranium collinum</i>	Çildir Lake]
<i>Geranium divaricatum</i>	Aktas
<i>Geranium ibericum</i>	Widespread and common at higher levels especially e.g. Anzer Yayla, Mor Yayla
<i>Geranium psilostemon</i>	Widespread e.g. en route to Ovit Dağ, Anzer Area, tall, deep magenta with black-eye
<i>Geranium pyrenaicum</i>	Scattered below Sivri kaya pas
<i>Geranium robertianum</i>	Ikizdere and Sivri Kaya
<i>Geranium sanguineum</i>	Anzar Yaylar
<i>Geranium sylvaticum</i>	Mor Yayla
<i>Pelargonium endlicherianum</i>	near Barhal

## Grossulariaceae

[ <i>Ribes alpinum</i>	Demirgören Valley]
<i>Ribes orientalis</i>	Above Barhal

## Hippuridaceae

[ <i>Hippuris vulgaris</i>	Çıldır Gölü]
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## Hypericaceae

[ <i>Hypericum androsaemum</i>	]
<i>Hypericum armenum</i>	Anzer Yayla
<i>Hypericum hyssopifolium</i>	Sivri Kaya
<i>Hypericum lydiun</i>	Olgunlar area
<i>Hypericum orientale</i>	Ovit Dağ
<i>Hypericum linaroides</i>	Çam Pass
<i>Hypericum scabrum</i>	Corymbs of golden flowers, Mor Yayla
<i>Hypericum perforatum</i>	widespread in meadows

*[Hypericum venustum* Olgunlar]

## **Juglandaceae**

*Juglans regia* widespread orchard tree

*[Pterocarya fraxinifolia* ]

## **Lamiaceae**

*Ajuga orientalis* widespread especially in the western part of the tour

*Ajuga reptans* Hotel by Laset

*[Ballota rotundifolia* Yaylalar]

*[Calamintha grandiflora* Woodland edge, large, long tubed pink flowers, scented leaves]

*Calamintha sylvatica* Ikizdere

*Clinopodium vulgare* widespread

*Dracocephalum aucheri* Mor Yayla

*Galiopsis ladenum* Ikizdere area – maybe this species?

*[Galiopsis bifida* Yalnizçam Pass]

*Hyssopus officinalis* Çoruh and Barhal Valleys

*[Lallemantia canescens* Mor Yayla]

*Lamium album* Widespread e.g. Anzer Yayla, Pişenkaya

*Lamium tomentosum* Mor Yayla

*Leonorus glaucescens* Cam Pass

*Leonurus quinquefolia* Ani

*[Lycopus europaeus* Taşkiran]

*Marrubium astracanicum* Mor Yayla

*Marrubium parviflorum* Ani

*Mentha aquatica* scattered – leaf only

*Mentha longifolia* widespread and common

*Nepeta transcaucasica* Mor Yayla

*[Origanum acutidens* Sivrikaya]

*Origanum rotundifolium* large creamy bracts, Çoruh Valley

*Origanum vulgare* scattered in mountains

<i>Prunella vulgaris</i>	widespread
<i>Phlomis armeniaca</i>	yellow-orange flowers. Çoruh Valley
<i>Phlomis pungens</i>	Scattered – mostly finished flowering
[ <i>Salvia brachycantha</i>	Sivrikaya, Anzer road (deep red flowers)]
<i>Salvia forskahlei</i>	lilac-blue flowers, Ikizdere area
<i>Salvia glutinosa</i>	common in damp woodland edges in Ikizdere area
<i>Salvia nemorosa</i>	Mor Yayla & Çoruh Valley
<i>Salvia poculata</i>	Çoruh Valley
<i>Salvia sclarea</i>	Şavşat
[ <i>Salvia staminea</i>	Çam Pass]
<i>Salvia verticillata</i>	widespread
<i>Satureja hortensis</i>	scattered
<i>Scutellaria albida</i>	small white flowers on spikes, Barhal
<i>Scutellaria galericulata</i>	Cam Pass
<i>Scutellaria orientalis</i>	scattered
[ <i>Scutellaria pontica</i>	Pretty pink species, Ovit Dağ]
<i>Sideritis montana</i>	Ani
<i>Stachys annua</i>	Aktas and Ani
<i>Stachys balansae</i>	
<i>Stachys atherocalyx</i>	Anzer Yayla
<i>Stachys iberica</i>	Kaçkar area
<i>Stachys macrantha</i>	common in higher area, loose heads of long-tubed pink
<i>Stachys officinalis</i>	Dupeduz in Kaçkar also Cam Pass and Aktas
[ <i>Stachys macrastachya</i>	Deep pink dense spikes, Mor Yayla]
<i>Stachys silvatica</i>	scattered
<i>Teucrium chamaedrys</i>	widespread
<i>Teucrium orientale</i>	Pretty blue species at Mor Yayla and Barhal
<i>Teucrium polium</i>	scattered
[ <i>Thymus praecox</i>	Alpine turf e.g. Ovit Dağ]
[ <i>Thymus spyleus</i>	Sivrikaya]
[ <i>Thymus transcaucasicus</i>	Mor Yayla]

## **Lemnaceae**

*Spirodela polyrhiza* Ardahan and Kars area

## **Lentibulariaceae**

*Pinguicula balcanica* Ovit Dag, common in the Kaçkar

## **Linaceae**

*Linum austriacum* Kaçkar area

[*Linum catharticum* Ovit Dağ, Anzer yayla]

*Linum hypericifolium* Anzar Yayla and Çam Pass

[*Linum tenuifolium* Laset]

## **Lythraceae**

*Lythrum salicaria* widespread

## **Malvaceae**

*Alcea apterocarpa* Çoruh Valley and Barhal

*Alcea hohenackeri* Anzer Yayla

*Alcea calvertii* Şavşat and areas east

*Alcea dissecta* Below Barhal

*Althaea cannabina* Barhal

*Lavatera thuringiaca* Below Barhal

*Malva neglecta* widespread

## **Monotropaceae**

*Monotropa hypopithys* Pale yellow saprophyte – yellow bird's nest, woods, Camlik and Çam Pass

## **Moraceae**

*Morus alba* scattered - cultivated

*[Morus nigra* Yusufeli]  
*Ficus carica* widely planted – possibly native in Çoruh Valley?

### **Nymphaeaceae**

*Nuphar lutea* In the upper Kura River between Gole and Kars  
*[Nymphaea alba* Çıldır Gölü]

### **Oleaceae**

*Fraxinus angustifolia* Çoruh Valley  
*Fraxinus excelsior* Cam Gecidi and around Laset  
*Olea europaea* Olive groves in Çoruh Valley

### **Onagraceae**

*[Epilobium alpestre* Ovit Dağ]  
*Epilobium dodonaei* Like a more slender rosebay willowherb, Çoruh Valley, Olgunlar  
*Epilobium hirsutum* scattered  
*Epilobium ponticum* widespread by streams and wet areas  
*Chamaenerion angustifolium* abundant  
*Circaea lutetiana* woods, İkizdere area

### **Orobanchaceae**

*Orobanche alba* Kaçkar – but finished  
*Orobanche lutea* Sivrikaya  
*Orobanche mutelii*  
*Orobanche pubescens* scattered  
*Orobanche ramosa* Mor Yayla

### **Oxalidaceae**

*Oxalis acetosella* woods, e.g. Camlik

## **Papaveraceae**

<i>Papaver fugax</i>	Smallish pale orange flowers in Mor Yayla, Kaçkar etc
<i>Papaver lateritium</i>	Fine orange flowered species in mountains above Ikizdere and Kaçkar
<i>Papaver orientale</i>	In seed only - Olgunlar
<i>Glaucium corniculatum</i>	scattered
<i>Chelidonium majus</i>	Çoruh Valley

## **Parnassiaceae**

<i>Parnassia palustris</i>	widespread
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## **Phytolaccaceae**

<i>Phytolacca americana</i>	alien in wooded parts above Ikizdere
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## **Plantaginaceae**

<i>Plantago lanceolata</i>	widespread
<i>Plantago major</i>	widespread
<i>Plantago media</i>	Cam Pass

## **Plumbaginaceae**

<i>Acantholimon ulicinum</i>	spiny cushions with pink flowers – possibly this species Aktas?
<i>Plumbago europaea</i>	Çoruh Valley

## **Polygalaceae**

<i>[Polygala alpestris</i>	Karagol]
<i>Polygala anatolica</i>	Larger pink species. Kaçkar area
<i>Polygala major</i>	Kaçkar area

## **Polygonaceae**

<i>Oxyria digyna</i>	Kaçkar area
<i>Polygonum alpinum</i>	widespread
<i>Polygonum amphibium</i>	scattered

<i>Polygonum bistorta ssp. carneum</i>	widespread. Deep pink. Long stems.
<i>Polygonum hydropiper</i>	widespread
[ <i>Polygonum minor</i>	]
<i>Rumex acetosella</i>	widespread
<i>Rumex alpina</i>	widespread
[ <i>Rumex angustifolius</i>	Mor Yayla]
[ <i>Rumex maritimus</i>	Çıldır Gölü]
[ <i>Rumex caucasicus</i>	Anzer Yayla]
<i>Rumex cristatus</i>	widespread
<i>Rumex scutatus</i>	widespread

### **Primulaceae**

<i>Lysimachia verticillaris</i>	Widespread in woodland edge, spikes of yellow
[ <i>Lysimachia vulgaris</i>	Barhal]
<i>Primula algida</i>	Kaçkar
<i>Primula auriculata</i>	widespread
<i>Primula elatior ssp meyeri</i>	Handsome deep purple species, rosettes of crinkled leaves, loose heads. Ovit Dağ & Anzer Yayla
<i>Primula longipes</i>	Anzar Yayla
[ <i>Primula veris</i>	]
<i>Primula vulgaris</i>	Leaves only. Sivri Kaya

### **Punicaceae**

<i>Punica granatum</i>	Scattered in Çoruh Valley - cultivated
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### **Pyrolaceae**

[ <i>Pyrola rotundifolia</i>	Woods, Barhal]
<i>Orthilia secunda</i>	Woods Barhal]

### **Ranunculaceae**

<i>Aconitum anthora</i>	Pale yellow species, common on Çam Pass, also Aktas area
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<i>Aconitum nasutum</i>	Tall blue species on Çam Pass, also Aktas area
<i>Aconitum orientale</i>	Whitish to lilac, slender flowers, large dissect leaves, on Çam Pass, also Aktas area
<i>Anemone albana</i>	Scattered in seed
<i>Anemone narcissiflora</i>	In flower Anzar Yayla and Kaçkar area
<i>Aquilegia olympica</i>	Anzar Yayla and Kaçkar area
<i>Caltha polypetala</i>	only in seed
[ <i>Clematis orientalis</i>	Yusufeli]
<i>Clematis vitalba</i>	In flower near Barhal
<i>Consolida hohenackeri</i>	Çoruh Valley and Barhal
<i>Consolida regalis var. divaricata</i>	Ani
<i>Consolida orientalis</i>	Ardahan
<i>Delphinium dasystachyum</i>	The striking plants at Anzer Yayla must be different from the ones seen at Mor Yayla, these latter also in Kaçkar area. Haven't worked out this yet?
<i>Delphinium formosum</i>	Beautiful plant. Anzer and Mor Yayla, in meadows, tall with deep blue flowers, also in Kaçkar area, locally common.
<i>Delphinium flexuosum</i>	Even more stunning than previous species. Cam Pass and Aktas
<i>Delphinium linearilobum</i>	Dwarf but large dusky blue flowered alpine species. Mor Yayla
<i>Delphinium schmalhauseni</i>	Medium-tall delphinium with smaller bright sky-blue flowers and very dissect leaves. Çam Pass
[ <i>Paeonia mascula</i>	Pişenkaya]
<i>Ranunculus brachylobus</i>	Fine golden flowered alpine species. Kaçkar area
<i>Ranunculus brutius</i>	Anzar Yayla
<i>Ranunculus buhsei</i>	Large leaves. Anzar Yayla and Mor Yayla
<i>Ranunculus caucasica</i>	Leaves double-toothed giving a 'frilly' appearance. Frequent in alpine zone on the Ovit Pass and Anzar and Mor Yaylas, also noted Aktas area
<i>Ranunculus dissectus subsp glabrescens</i>	Fine pinnate leaves. Mor Yayla
<i>Ranunculus lateriflorus</i>	Subaquatic species with weird un-divided leaves, the tiny flowers sitting in the leaf base. Rarely recorded. Ponds on the Ovit Dagı Pass
<i>Ranunculus oreophilus</i>	alpine species. Kaçkar area
<i>Ranunculus polyanthemos</i>	a meadow buttercup similar to acris. Laset meadows

<i>Ranunculus repens</i>	leaves in various localities
<i>Ranunculus sceleratus</i>	Aktaş Lake
<i>Thalictrum minus</i>	Sivrikaya, Anzer Yayla
<i>Trollius ranunculinus</i>	leaves only

### **Rhamnaceae**

<i>Frangula alnus</i>	Barhal, Kaçkar and Aktas
<i>Paliurus spina-christi</i>	widespread in low areas – Çoruh Valley mainly

### **Rosaceae**

<i>Agrimonia eupatorium</i>	Slender spikes of yellow flowers, meadows. Widespread
<i>Alchemilla mollis</i>	Yaylalar
<i>Alchemilla sericea</i>	Mor Yayla
<i>Aruncus vulgaris</i>	Sivri Kaya
<i>Cotoneaster integerrimus</i>	Çoruh Valley and Olgunlar
<i>[Crataegus monogyna</i>	]
<i>Crataegus orientalis</i>	Barhal and Olgunlar
<i>Filipendula ulmaria</i>	Aktas and Kars area
<i>Filipendula vulgaris</i>	Çam Pass and Kars area
<i>Fragaria vesca</i>	widespread
<i>Geum coccineum</i>	bright orange flowers. Anzer Yayla, Mor Yayla and Kaçkar
<i>[Geum rivale</i>	Çam Pass]
<i>Geum urbanum</i>	scattered
<i>Laurocerasus officinalis</i>	Ikizdere area
<i>Mespilus germanica</i>	Barhal
<i>[Potentilla adsharica</i>	Mor Yayla]
<i>Potentilla argentea</i>	Olgunlar
<i>Potentilla anserina</i>	scattered
<i>Potentilla crantzii</i>	Ovit Dağ, and probably elsewhere
<i>Potentilla erecta</i>	scattered
<i>Potentilla rupestris</i>	Kaçkar

<i>Potentilla recta</i>	Kaçkar
<i>Pyrus salicifolia</i>	Above Olgunlar
<i>Rosa canina</i>	Olgunlar
<i>Rosa heckeliana</i>	Mor Yayla
<i>Rosa villosa</i>	Olgunlar
<i>Rubus idaeus</i>	delicious! widespread
<i>Rubus sanctus</i>	the widespread bramble
<i>Sanguisorba minor</i>	widespread, white flowers
<i>Sanguisorba officinalis</i>	reddish flowers, e.g. Çam Pass, Aktas
<i>Sibbaldia parviflora</i>	Mor Yayla, Kaçkar area
<i>Sorbus aucuparia</i>	widespread east of Şavşat
<i>Sorbus umbellata</i>	Barhal, Olgunlar
[ <i>Sorbus torminalis</i>	Anzer Yayla]

### **Rubiaceae**

[ <i>Asperula orientalis</i>	Barhal area]
<i>Asperula gracilis</i>	Mor Yayla, mat-forming
[ <i>Asperula pontica</i>	]
<i>Asperula setosa</i>	scattered
[ <i>Cruciata laevipes</i>	]
<i>Cruciata taurica</i>	scattered
[ <i>Galium incanum</i>	Cream flowered Anzer Yayla]
<i>Galium odoratum</i>	White flowered, in the shade. scattered
<i>Galium verum</i>	Yellow flowered, widespread

### **Salicaceae**

<i>Populus tremula</i>	common and widespread
<i>Populus uzbekistana</i>	widely planted upright tree, valleys
<i>Salix alba</i>	scattered
<i>Salix caprea</i>	scattered

## **Santalaceae**

*Thesium procumbens* scattered

## **Saxifragaceae**

[*Chrysosplenium dubium* Scattered]

*Saxifraga cymbalaria* widespread little yellow species, ivy-like leaves

*Saxifraga juniperifolia* Cushion forming high altitude species with tight spikes of yellow flowers, just over this year. 3400m on Mor Yayla!

*Saxifraga moschata* Cushion form, small palest green flowers. Mor Yayla

*Saxifraga paniculata* widespread, common on rocks. Lime-encrusted leaves

*Saxifraga rotundifolia* Anzer Yayla and Kaçkar area. Round, hairy leaves

*Saxifraga sibirica* widespread in mountains, white flowers

## **Scrophulariaceae**

*Digitalis ferruginea* widespread and common, tall spikes of rust coloured flowers

*Euphrasia lebadensis* There were at least 3 species of eyebright this year but I didn't check them as to ID! This one previously recorded on the Ovit Pass

*Linaria genistifolia* Anzer Yayla

*Linaria grandifolia* Anzer Yayla

*Melampyrum arvense* widespread and common cow-wheat

[*Odontites aucheri* Slender bartsia with yellow flowers]

[*Pedicularis atropurpurea* tall spikes dark flowers]

*Pedicularis caucasica* white flowers, low growing. Anzar Yayla and Mor Yayla

*Pedicularis comosa* tall white species, Mor Yayla

*Pedicularis condensata* dense heads of creamy flowers, quite widespread

*Pedicularis nordmanniana* small two-tone bright pink species, widespread at altitude

*Pedicularis pontica* small paler pink. Anzer Yayla, Mor Yayla and Kaçkar

*Rhinanthus angustifolius* widespread

*Rhynchocorys elephas* Pretty yellow flowers, wide lip and obvious yellow beak. Widespread

*Rhynchocorys orientalis* Just below hotel at Laset

*Rhynchocorys stricta* Widespread but not as common as elephas. Branched

<i>Verbascum armenum</i>	Abundant at Mor Yayla, Anzer Yayla
<i>Verbascum speciosum</i>	Çam Pass and east
<i>Verbascum trichostylum</i>	Kaçkar area
[ <i>Verbascum pyramidatum</i>	Sivrikaya]
<i>Veronica anagallis-aquatica</i>	widespread
<i>Veronica beccabunga</i>	widespread
<i>Veronica gentianoides</i>	relatively large flowers in spikes, widespread
[ <i>Veronica orientalis</i>	Mor yayla]
<i>Veronica peduncularis</i>	scattered

### **Simaroubaceae**

<i>Ailanthus altissima</i>	Scattered - planted
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### **Solanaceae**

<i>Atropa belladonna</i>	Anzer Yayla and Mor Yayla
[ <i>Physalis alkekengi</i>	Çoruh Valley]
<i>Hyoscyamus niger</i>	Çoruh Valley
[ <i>Solanum alatum</i>	Çoruh Valley]
<i>Solanum nigrum</i>	Çoruh Valley

### **Staphylaceae**

<i>Staphylea pinnata</i>	Montane woods above Ikizdere
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### **Tamaricaceae**

<i>Myricaria germanica</i>	Barhal and along the Kura River
<i>Tamarix smyrniensis</i>	Çoruh Valley

### **Thymelaeaceae**

<i>Daphne glomerata</i>	Didn't see any in flower
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## **Tiliaceae**

*Tilia rubra* Barhal

## **Ulmaceae**

*Celtis glabrata* Barhal

*Ulmus glabra* Çoruh Valley and Barhal

## **Urticaceae**

*Urtica dioica* widespread

*Parietaria judaica* Ani

## **Urticulariaceae**

*Urticularia vulgaris* Lake south of Kars

## **Valerianaceae**

*Centranthus longiflorus* Çoruh Valley and Barhal

*Valeriana alliarifolia* widespread and common, large triangular leaves, huge corymbs of flowers, usually white, sometimes lilac-pink

*Valeriana leucophaea* Entire leaves, small corymbs of white flowers. Alpine. Mor Yayla and Kaçkar area

*Valeriana officinalis* large pinnate leaves, corymbs of white flowers. Anzar Yayla

## **Violaceae**

[*Viola altaica* Anzer Yayla]

*Viola arvensis* Ani

[*Viola dichroa* Mor Yayla]

*Viola odontocalycina* pretty species in scree at Mor Yayla

*Viola tricolor* Cam Pass

## **Vitaceae**

*Vitus vinifera* Grapevine (wild!). Widespread in warm valleys

## **Zygophyllaceae**

*Peganum harmala* Ani

## **Alismataceae**

*Alisma plantago-aquatica* Lake south of Kars

## **Commelaceae**

[*Commelina communis* Sivrikaya]

## **Dioscoreaceae**

*Tamus communis* Scattered in the warmer valleys

## **Butomaceae**

*Butomus umbellatus* Ardahan and Göle

## **Iridaceae**

*Crocus scharojonii* A fine show on the Ovit Pass, also Anzar Yayla and Kaçkar

## **Liliaceae**

*Allium atrovioleaceum* Anzer

*Allium guttatum* White heads, 30cm tall. Barhal

*Allium olympicum* delicate open umbel. Ovit Pass, Mor Yayla

*Allium paniculatum* Kaçkar

[*Allium szovitsii* Anzer yayla]

*Allium schoenoprasum*  
*ssp.sibiricum* The local form of chives. Quite robust. Widespread

*Allium sphaerocephalon* Olgunlar

*Colchicum speciosum* leaves only

[*Gagea villosa* ]

*Gagea glacialis* Ovit Pass and Anzar Yayla

<i>Lilium kesselringianum</i>	only just finished flowering! Around the hotel near Laset
<i>Lilium ponticum</i>	only just finished flowering! Ridos Thermal and Sivri Kaya
<i>Polygonatum orientale</i>	only noted in seed near Ikizdere
<i>[Scilla winogradowii</i>	]
<i>Veratrum album</i>	large ribbed leaves. Anzar Yayla & Mor Yayla

## Orchidaceae

<i>[Cephalanthera rubra</i>	Pisenkaya]
<i>Coeloglossum viride</i>	widespread
<i>Dactylorhiza euxina</i>	widespread
<i>Dactylorhiza iberica</i>	in seed near hotel by Laset
<i>Dactylorhiza osmanica</i>	Anzer area
<i>Dactylorhiza saccifera</i>	low down on slopes of Mor Yayla
<i>Dactylorhiza umbrosa</i>	frequent in the Kaçkar area
<i>[Dactylorhiza urvilleana</i>	slender]
<i>[Epipactis helleborine</i>	Anzer area]
<i>[Epipactis veratrifolia</i>	Anzer Yayla]
<i>Epipactis persica</i>	Cam Pass
<i>Epipogium aphyllum</i>	close to a 100 in flower on the Cam Pass
<i>Goodyera repens</i>	almost open in Camlik
<i>[Limodorum abotivum</i>	Pisenkaya]
<i>[Neottia nidus-avis</i>	Laset]
<i>Gymnadenia conopsea</i>	Anzar Yayla
<i>[Traunsteinera sphaerica</i>	Sivrikaya]
<i>[Platanthera chlorantha</i>	leaves, Pisenkaya]

## Poaceae

<i>[Briza macrowiczii</i>	Ovit Dağ]
<i>[Briza minor</i>	Yaylalar]
<i>Briza media</i>	scattered
<i>[Holcus lanatus</i>	]



<i>Melica ciliata</i>	scattered
<i>Phleum alpinum</i>	mountain meadows, hare's foot, scattered throughout
[ <i>Poa alpina</i>	Anzer]
<i>Stipa arabica</i>	Mor Yayla

### **Potamogetonaceae**

<i>Potamogeton natans</i>	Kars area wetlands
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### **Typhaceae**

<i>Typha latifolia</i>	Çoruh Valley
<i>Typha minima</i>	Çoruh Valley

## Systematic List Number 2      Birds

Great-crested Grebe	<i>Podiceps cristatus</i>	Aktaş Lake
Red-necked Grebe	<i>Podiceps grisegna</i>	Small lake south of Kars
Black-necked Grebe	<i>Podiceps nigricollis</i>	Aktaş and Kuyucuk Lake
Cormorant	<i>Phalacrocorax carbo</i>	Trabzon and lakes
Dalmatian Pelican	<i>Pelecanus crispus</i>	breeding colonies on Aktaş
Little Egret	<i>Egretta garzetta</i>	1 at Aktaş Lake
Grey Heron	<i>Ardea cinerea</i>	3+ Kuyucuk Lake
Black Stork	<i>Ciconia nigra</i>	5 between Gole and Kars
White Stork	<i>Ciconia ciconia</i>	frequent in the Ardahan and Kars areas
Glossy Ibis	<i>Plegadis falcinellus</i>	100+ Kuyucuk Lake
Spoonbill	<i>Platalea leucorodia</i>	3 Kuyucuk Lake
Greylag Goose	<i>Anser anser</i>	1000+ Kuyucuk Lake
Ruddy Shelduck	<i>Tadorna ferruginea</i>	scattered in the eastern part, 2000+ Kuyucuk Lake
Gadwall	<i>Anas strepera</i>	Kuyucuk Lake
Common Teal	<i>Anas crecca</i>	2 Kuyucuk Lake
Garganey	<i>Anas querquedula</i>	1 lake between Gole and Kars, also Kuyucuk Lake where thousands
Mallard	<i>Anas platyrhynchos</i>	lake between Gole and Kars, also Kuyucuk Lake
Common Pochard	<i>Aythya ferina</i>	Kuyucuk Lake
Ferruginous Duck	<i>Aythya nyroca</i>	10+ Kuyucuk Lake
Tufted Duck	<i>Aythya fuligula</i>	Kuyucuk Lake
White-headed Duck	<i>Oxyura leucocephala</i>	2 females, 1 male, Kuyucuk Lake
Black Kite	<i>Milvus migrans</i>	7 between Gole and Kars
Lammergeier	<i>Gypaetus barbatus</i>	1 Dilber Duzu
Egyptian Vulture	<i>Neophron percnopterus</i>	1 Aktaş
Griffon Vulture	<i>Gyps fulvus</i>	5 between Gole and Kars
Black Vulture	<i>Aegypius monachus</i>	an immature over Mor Yayla
Marsh Harrier	<i>Circus aeruginosus</i>	Aktaş Lake, c.10 Kuyucuk Lake
Sparrowhawk	<i>Accipiter nisus</i>	singles twice
Levant Sparrowhawk	<i>Accipiter brevipes</i>	a male at Ani
Common Buzzard	<i>Buteo buteo</i>	scattered throughout – noted on 7 days
Long-legged Buzzard	<i>Buteo rufinus</i>	scattered throughout – noted on 7 days
Lesser-spotted Eagle	<i>Aquila pomarina</i>	c.10 over Çam Pass, c.10 between Gole and Kars, scattered elsewhere in eastern part
Imperial Eagle	<i>Aquila heliaca</i>	Barhal
Golden Eagle	<i>Aquila chrysaetos</i>	scattered – noted on 3 days
Booted Eagle	<i>Hieraetus pennatus</i>	singles on 4 days
Lesser Kestrel	<i>Falco naumanni</i>	3 at Aktaş
Kestrel	<i>Falco tinnunculus</i>	scattered – noted on 6 days
Hobby	<i>Falco subbuteo</i>	1 Ovit Pass
Lanner	<i>Falco biarmicus</i>	1 Çam Pass
Saker Falcon	<i>Falco cherrug</i>	1 between Gole and Kars

Caucasian Blackcock	<i>Tetrao mlokosiewiczi</i>	feathers found below Yaylarlar and Dupeduz but no birds seen
Caspian Snowcock	<i>Tetraogallus caspius</i>	1 seen well Dilber Duzu
Grey Partridge	<i>Perdix perdix</i>	1 Çoruh Valley
Quail	<i>Coturnix coturnix</i>	scattered (heard only)
Corncrake	<i>Crex crex</i>	heard close to the hotel above Şavşat
Coot	<i>Fulica atra</i>	scattered at all lakes
Common Crane	<i>Grus grus</i>	2 Kuyucuk Lake
Black-winged Stilt	<i>Himantopus himantopus</i>	c.10 at Aktaş, many at Kuyucuk
Avocet	<i>Recurvirostra avosetta</i>	100+ Kuyucuk
Lapwing	<i>Vanellus vanellus</i>	scattered in the eastern part
Little Stint	<i>Calidris minuta</i>	c.15 Aktaş
Ruff	<i>Philomachus pugnax</i>	most common at Kuyucuk where thousands
Great Snipe	<i>Gallinago media</i>	2 at lake between Gole and Kars
Redshank	<i>Tringa tetanus</i>	scattered at eastern wetlands
Greenshank	<i>Tringa nebularia</i>	1 Kuyucuk
Green Sandpiper	<i>Tringa ochropus</i>	scattered – noted on 3 days
Wood Sandpiper	<i>Tringa glareola</i>	scattered – noted on 3 days
Common Sandpiper	<i>Actitis hypoleucos</i>	scattered – noted on 2 days
Black-headed Gull	<i>Larus ridibundus</i>	scattered in the eastern part
Yellow-l'ged Herring Gull	<i>Larus argentatus cachinnans</i>	Black Sea Coast
Armenian Gull	<i>Larus argentatus armenicus</i>	locally common eastern part of tour
Whiskered Tern	<i>Chlidonias hybridus</i>	Kuyucuk Lake
White-winged Black Tern	<i>Chlidonias leucopterus</i>	Aktaş Lake, Kuyucuk Lake
Rock Dove	<i>Columba livia</i>	scattered
Wood Pigeon	<i>Columba palumbus</i>	1 on the Çam Pass
Cuckoo	<i>Cuculus canorus</i>	1 over the small lake south of Kars
Scops Owl	<i>Otus scops</i>	singles twice
Eagle Owl	<i>Bubo bubo</i>	feather found Dupeduz
European Nighthawk	<i>Caprimulgus europaeus</i>	a female at night at Barhal
Common Swift	<i>Apus apus</i>	a few, most common in east
Alpine Swift	<i>Apus melba</i>	Çoruh Valley
Hoopoe	<i>Upupa epops</i>	1 Mor Yayla
Black Woodpecker	<i>Dryocopus martius</i>	2 near the hotel above Şavşat
Great Spotted Woodpecker	<i>Dendrocopus major</i>	2 in woods on the Çam Pass
Bimaculated Lark	<i>Melanocorypha bimaculata</i>	Kuyucuk Lake
Lesser Short-toed Lark	<i>Calandrella rufescens</i>	Kuyucuk Lake
Skylark	<i>Alauda arvensis</i>	scattered in the east – noted on 3 days
Shore Lark	<i>Eremophila alpestris</i>	frequent at altitude – noted on 5 days
Sand Martin	<i>Riparia riparia</i>	wetlands. Very common Kuyucuk Lake
Crag Martin	<i>Ptyonoprogne rupestris</i>	widespread
Swallow	<i>Hirundo rustica</i>	only noted in the east – 3 days
House Martin	<i>Delichon urbica</i>	scattered – noted on 5 days
Tawny Pipit	<i>Anthus campestris</i>	Kuyucuk Lake
Tree Pipit	<i>Anthus trivialis</i>	widely scattered – noted on 5 days
Meadow Pipit	<i>Anthus pratensis</i>	Çam Pass
Water Pipit	<i>Anthus spinoletta</i>	frequent at altitude – noted on 5 days
Black-headed Wagtail	<i>Motacilla feldegg</i>	scattered in the east – noted on 3 days

Citrine Wagtail	<i>Motacilla citreola</i>	scattered in the east – noted on 3 days
Grey Wagtail	<i>Motacilla cinerea</i>	scattered throughout – noted on 8 days
White Wagtail	<i>Motacilla alba</i>	widespread – noted on 8 days
Dipper	<i>Cinclus cinclus</i>	Ikizdere area and the Kaçkar – noted on 4 days
Wren	<i>Troglodytes troglodytes</i>	seen in the Kaçkar, heard more widely
Alpine Accentor	<i>Prunella collaris</i>	1 Mor Yayla and 1 Dupeduz
Black Redstart	<i>Phoenicurus ochruros</i>	widespread – noted on 9 days
Common Redstart	<i>Phoenicurus phoenicurus</i>	1 near hotel above Şavşat
Whinchat	<i>Saxicola rubetra</i>	scattered throughout – noted on 8 days
Isabelline Wheatear	<i>Oenanthe isabellinus</i>	Ani
Northern Wheatear	<i>Oenanthe oenanthe</i>	scattered throughout – noted on 8 days
Pied Wheatear	<i>Oenanthe pleschanka</i>	Ani
Finsch's Wheatear	<i>Oenanthe finschii</i>	Dupeduz
Rock Thrush	<i>Monticola saxatilis</i>	Mor Yayla and the Kaçkar
Blue Rock Thrush	<i>Monticola solitarius</i>	Çoruh Valley and Barhal
Ring Ouzel	<i>Turdus torquatus</i>	1 Anzar Yayla and heard Mor Yayla
Blackbird	<i>Turdus merula</i>	Kaçkar and Çam Pass – noted on 4 days
Mistle Thrush	<i>Turdus viscivorus</i>	1 More Yayla, also Kaçkar – noted on 4 days
Lesser Whitethroat	<i>Sylvia curruca</i>	common in the Kaçkar - noted on 2 days
Common Whitethroat	<i>Sylvia communis</i>	1 Dupeduz and several on the Çamp Pass
Green Warbler	<i>Phylloscopus nitidus</i>	heard around the Ridos Hotel and Sivri Kaya
Mountain Chiffchaff	<i>Phylloscopus sindianus</i>	Anzer Yayla
Goldcrest	<i>Regulus regulus</i>	heard on the Çam Pass
Marsh Tit	<i>Parus palustris</i>	heard near Şavşat
Sombre Tit	<i>Parus lugubris</i>	hotel near Şavşat
Coal Tit	<i>Parus ater</i>	scattered
Blue Tit	<i>Parus caeruleus</i>	scattered in the east
Great Tit	<i>Parus major</i>	scattered Kaçkar and east
Krüper's Nuthatch	<i>Sitta krueperi</i>	heard in woods on the Çam Pass
Eastern Rock Nuthatch	<i>Sitta tephronata</i>	2 at Ani
Western Rock Nuthatch	<i>Sitta neumayer</i>	1 Anzar Yayla and several in the Çoruh Valley
Common Treecreeper	<i>Certhia familiaris</i>	1 in woods on the Çam Pass
Red-backed Shrike	<i>Lanius collurio</i>	widespread and locally abundant – noted on 11 days
Lesser Grey Shrike	<i>Lanius minor</i>	singles twice n Kars area
Jay	<i>Garrulus glandarius</i>	widespread – noted on 11 days
Magpie	<i>Pica pica</i>	locally frequent – noted on 7 days
Alpine Chough	<i>Pyrrhocorax gracilis</i>	2 Mor Yayla and some large flocks in the Kaçkar
Red-billed Chough	<i>Pyrrhocorax pyrrhocorax</i>	Dupeduz
Jackdaw	<i>Corvus monedula</i>	common in the east – noted on 3 days
Rook	<i>Corvus frugileus</i>	locally common in the Kars area – noted on 2 days
Hooded Crow	<i>Corvus cornix</i>	scattered, mostly in the east – noted on 6 day.
Raven	<i>Corvus corax</i>	widespread – noted on 10 days
Starling	<i>Sturnus vulgaris</i>	common in the east – noted on 3 days

Rose-coloured Starling	<i>Sturnus roseus</i>	several near Ani, abundant Arpacay and Kuyucuk Lake area
House Sparrow	<i>Passer domesticus</i>	only noted in Kars area
Rock Sparrow	<i>Petronia petronia</i>	Aktaş and Ani
Snow Finch	<i>Montifringilla nivalis</i>	Mor Yayla
Chaffinch	<i>Fringilla coelebs</i>	only noted in the east on 2 days
Red-fronted Serin	<i>Serinus pusillus</i>	Barhal and both days in the Kaçkar
Greenfinch	<i>Carduelis chloris</i>	1 Ani
Goldfinch	<i>Carduelis carduelis</i>	frequent in the east – noted on 7 days
Siskin	<i>Carduelis spinus</i>	Anzar Yayla and scattered in the Şavşat and Çam Pass areas – noted on 4 days
Linnet	<i>Carduelis cannabina</i>	Mor Yayla, Çam Pass and Aktaş
Twite	<i>Carduelis flavirostris</i>	Ovit Pass
Crimson-winged Finch	<i>Rhodopechys sanguinea</i>	Mor Yayla
Common Rosefinch	<i>Carpodacus erythrinus</i>	locally frequent – noted on 9 days
Bullfinch	<i>Pyrrhula pyrrhula</i>	a female at Genesis, Çamlık
Rock Bunting	<i>Emberiza cia</i>	Olgunlar
Corn Bunting	<i>Miliaria calandra</i>	scattered in the east – noted on 3 days

## Systematic List Number 3 Butterflies

### *Papilionidae*

Swallowtail	<i>Papilio machaon</i>	scattered – noted on 4 days
Southern Swallowtail	<i>Papilio alexanor</i>	1 below Barhal
Scarce Swallowtail	<i>Iphiclides podalirius</i>	frequent – noted on 6 days
Apollo	<i>Parnassius apollo</i>	scattered – noted on 4 days
Clouded Apollo	<i>Parnassius menomosyne</i>	scattered – noted on 4 days

### *Pieridae*

Large White	<i>Pieris brassicae</i>	frequent towards the east– noted on 5 days
Black-veined White	<i>Aporia crataegi</i>	Only Barhal and Olgunlar – noted on 4 days
Small White	<i>Artogeia rapae</i>	Çoruh Valley
Southern Small White	<i>Artogeia manni</i>	scattered – noted on at least 2 days
Green-veined White	<i>Artogeia napi</i>	Ovit Dagi and Dilber Duzu
Krüper's Small White	<i>Artogeia krueperi</i>	one photographed in the Çoruh Valley
Mountain Green-veined White	<i>Artogeia bryoniae</i>	Anzar Yayla
Eastern Bath White	<i>Pontia edusa</i>	widespread – noted on 11 days
Small Bath White	<i>Pontia chlorodice</i>	Ani
Peak White	<i>Pontia callidice</i>	Richard photographed on Mor Yayla
Clouded Yellow	<i>Colias crocea</i>	widespread – noted on 10 days
Greek Clouded Yellow	<i>Colias aurorina</i>	Mor Yayla & Olgunlar
Pale Clouded Yellow	<i>Colias hyale</i>	Anzar Yayla
Balkan Clouded Yellow	<i>Colias caucasica</i>	Dupeduz & Aktaş
Berger's Clouded Yellow	<i>Colias alfacariensis</i>	scattered – noted on 6 days
	<i>Colias chlorocoma</i>	singles photographed Dilber Duzu and Çam Pass
	<i>Colias thisoa</i>	single photographed Dilber Duzu
Brimstone	<i>Gonepteryx rhamni</i>	Barhal
Eastern Wood White	<i>Leptidea duponcheli</i>	Barhal

### *Lycaenidae*

Brown Hairstreak	<i>Thecla betulae</i>	this rare species seen below Yaylarlar
Blue-spot Hairstreak	<i>Satyrium spini</i>	between Barhal and Yaylarlar
White Letter Hairstreak	<i>Satyrium ilicis</i>	this rare species seen below Yaylarlar
	<i>Satyrium myrtale</i>	between Barhal and Yaylarlar
	<i>Lycaena asabinus</i>	lower slopes of Mor Yayla
Small Copper	<i>Lycaena phlaeas</i>	scattered – noted on 3 days
Turkish Golden Copper	<i>Lycaena ochimus</i>	Çoruh Valley
Scarce Copper	<i>Lycaena virgaureae</i>	widespread – noted on 7 days
Sooty Copper	<i>Lycaena tityrus</i>	widespread – noted on 9 days
Purple-shot Copper	<i>Lycaena alciphron</i>	locally very common Sivri Kaya and Mor Yayla
Lesser Fiery Copper	<i>Lycaena thersamon</i>	the most widespread copper
Fiery Copper	<i>Lycaena thetis</i>	Richard photographed 1 in the Çoruh Valley
Balkan Copper	<i>Lycaena candens</i>	locally common Mor Yayla and above Olgunlar

Long-tailed Blue	<i>Lampides boeticus</i>	Barhal
Little Tiger Blue	<i>Tarucus balkanicus</i>	Çoruh Valley & Barhal
Short-tailed Blue	<i>Everes argiades</i>	scattered – noted on 3 days
Osiris Blue	<i>Cupido osiris</i>	scattered – noted on 2 days
Holly Blue	<i>Celastrina argiolus</i>	scattered – noted on 2 days
Odd-spot Blue	<i>Turanana endymion</i>	Çoruh Valley
Alcon Blue	<i>Maculinea alcon</i>	singles Mor Yayla and Çoruh Valley
Large Blue	<i>Maculinea arion</i>	one photographed Dupeduz
Eastern Baton Blue	<i>Pseudophilotes vicrama</i>	Barhal
Grass Jewel	<i>Chilades trochylus</i>	Çoruh Valley & Barhal
Zephyr Blue	<i>Plebejus pylaon</i>	locally common – noted on 5 days
Silver-studded Blue	<i>Plebejus argus</i>	widespread and often abundant
Loew's Blue	<i>Plebejus loewii</i>	what looks like this species photographed at Ani
Idas Blue	<i>Plebejus idas</i>	locally common especially above Olgunlar
Reverdin's Blue	<i>Plebejus argyrognomon</i>	frequent Dilber Duzu and Dupeduz
Eastern Brown Argus	<i>Kretania eurypilus</i>	Mor Yayla
Geranium Argus	<i>Eumedonia eumedon</i>	scattered – noted on 3 days
Brown Argus	<i>Aricia agestis</i>	only noted Barhal
Mountain Argus	<i>Aricia artaxerxes</i>	locally common in the Kaçkar
Blue Argus	<i>Ultraaricia anteros</i>	widespread – noted on 6 days
Gavarnie Blue	<i>Agriades pyrenaicus</i>	locally common above 2000m above Olgunlar
Mazarine Blue	<i>Cyaniris semiargus</i>	scattered – noted on 3 days
Turquoise Blue	<i>Plebicula dorylas</i>	several above Olgunlar and on the Çam Pass
Ripart's Anomalous Blue	<i>Polyommatus ripartii</i>	1 photographed in the Çoruh Valley
Anomalous Blue	<i>Polyommatus admetus</i>	1 photographed in the Çoruh Valley
	<i>Polyommatus aedon</i>	widespread – noted on 5 days
Meleager's Blue	<i>Polyommatus daphnis</i>	widespread – noted on 5 days
False Chalkhill Blue	<i>Polyommatus corydonius</i>	widespread – noted on 6 days
	<i>Polyommatus alcestis</i>	photographed Dilber Duzu
Iphigenia Blue	<i>Polyommatus iphigenia</i>	Richard photographed one Dupeduz
Damon Blue	<i>Polyommatus damon</i>	locally common – the most frequently encountered 'Anomalous' Blue
Chapman's Blue	<i>Polyommatis thersites</i>	scattered – noted on 3 days
Amanda's Blue	<i>Polyommatus amandus</i>	scattered – noted on 3 days
Turkish Furry Blue	<i>Polyommatus menalcas</i>	Duperduz
Poseidon Blue	<i>Polyommatus poseidon</i>	Barhal and Olgunlar
	<i>Polyommatus ossmar</i>	photographs of what appears to be this species from the Çoruh Valley
	<i>Polyommatus demavendii</i>	frequent on both days above Olgunlar
	<i>Polyommatus firdussii</i>	photographed Dupeduz
Adonis Blue	<i>Polyommatus bellargus</i>	Çoruh Valley & Şavşat area
	<i>Polyommatus merhaba</i>	photographed Dilber Duzu – rather haggard specimen but definitely this species!
Common Blue	<i>Polyommatus icarus</i>	widespread and often common
Eros Blue	<i>Polyommatus eros</i>	photographed Dilber Duzu

## ***Nymphalidae***

Ionian Emperor	<i>Thaleropsis ionia</i>	1 in the Çoruh Valley was the only one seen
Southern White Admiral	<i>Limenitis reducta</i>	Çoruh Valley, Barhal and Olgunlar
White Admiral	<i>Limenitis çamilla</i>	1 near Şavşat
Large Tortoiseshell	<i>Nymphalis polychloros</i>	singles Mor Yayla and Çoruh Valley
Çamberwell Beauty	<i>Nymphalis antiopa</i>	Çam Pass
Peacock	<i>Inachis io</i>	Olgunlar
Red Admiral	<i>Vanessa atalanta</i>	scattered – noted on 3 days
Painted Lady	<i>Cynthia cardui</i>	scattered – noted on 5 days
Small Tortoiseshell	<i>Aglais urticae</i>	widespread – noted on 9 days
Comma	<i>Polygonia c-album</i>	Barhal and Olgunlar
Southern Comma	<i>Polygonia egea</i>	scattered – noted on 6 days
Cardinal	<i>Pandoriana pandora</i>	Seen above Barhal
High Brown Fritillary	<i>Argynnis adippe</i>	frequent above Olgunlar
Dark Green Fritillary	<i>Argynnis aglaja</i>	widespread and locally common – noted on 7 days
Silver-washed Fritillary	<i>Argynnis paphia</i>	Ikizdere and Olgunlar
Queen of Spain Fritillary	<i>Issoria lathonia</i>	widespread – noted on 8 days
Twin-spot Fritillary	<i>Brenthis hecate</i>	scattered – noted on 3 days
Marbled Fritillary	<i>Brenthis daphne</i>	above Barhal
Lesser Marbled Fritillary	<i>Brenthis ino</i>	bizarrely my photos show this species at the same locality as the previous species but two days later! Richard photographed 1 at Ani
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Barhal
Caucasian Fritillary	<i>Boloria caucasica</i>	common above 2000m – noted on 5 days
Glanville Fritillary	<i>Melitaea cinxia</i>	1 Dupeduz
Caucasian Spotted Fritillary	<i>Melitaea interrupta</i>	Anzar Yayla and common in Kaçkar
	<i>Melitaea perseia</i>	photographs of 1 from Mor Yayla look very like this species
Spotted Fritillary	<i>Melitaea didyma</i>	frequent – noted on 5 days
Lesser Spotted Fritillary	<i>Melitaea trivia</i>	frequent – noted on 6 days
False Heath Fritillary	<i>Melitaea diamina</i>	above Olgunlar on both days
Heath Fritillary	<i>Mellicta athalia</i>	common in Kaçkar – noted on 4 days
Marsh Fritillary	<i>Euphydryas aurinia</i>	Barhal

## ***Satyridae***

Marbled White	<i>Melanargia galathea</i>	Çam Pass & Aktaş
Levantine Marbled White	<i>Melanargia titea</i>	photographic evidence shows this species at Aktaş - a little out of range!
Balkan Marbled White	<i>Melanargia larissa</i>	Anzar Yayla and Çoruh Valley
Eastern Rock Grayling	<i>Hipparchia syriaca</i>	photographs from the Çoruh Valley
Freyer's Grayling	<i>Hipparchia fatua</i>	Çoruh Valley & Barhal
Tree Grayling	<i>Hipparchia statilinus</i>	Richard photographed 1 at Barhal
Hermit	<i>Chazara briseis</i>	common at Ani
Brown's Grayling	<i>Pseudochazara mamurra</i>	1 photographed in the Çoruh Valley
Tawny Rockbrown	<i>Pseudochazara mnischevii</i>	Richard photographed 1
Grey Asian Grayling	<i>Pseudochazara geyeri</i>	scattered – noted on 4 days



Great Banded Grayling	<i>Kanetisa circe</i>	noted Ikizdere and Anzar Yayla
False Grayling	<i>Arethusana arethusa</i>	Çoruh Valley & Barhal
Scotch Argus	<i>Erebia aethiops</i>	widespread
	<i>Erebia graucasica</i>	frequent – noted on 3 days
	<i>Erebia melancholica</i>	scattered – noted on 3 days
Meadow Brown	<i>Maniola jurtina</i>	widespread
Dusky Meadow Brown	<i>Hyponephele lycaon</i>	Barhal and Olgunlar
Small Heath	<i>Coenonympha pamphilus</i>	Ovit Pass and Arpacay
Lederer's Heath	<i>Coenonympha symphyta</i>	common in the Kaçkar above 2000m
Russian Heath	<i>Coenonympha leander</i>	scattered – noted on 3 days
Speckled Wood	<i>Pararge aegeria</i>	Çoruh Valley
Large Wall Brown	<i>Lasiommata maera</i>	Barhal and Ani

### ***Hesperiidae***

Large Grizzled Skipper	<i>Pyrgus alveus</i>	locally common – noted on 3 days
Sandy Grizzled Skipper	<i>Pyrgus cinarae</i>	Barhal & the Çoruh Valley
Olive Skipper	<i>Pyrgus serratulae</i>	Mor Yayla
Yellow-banded Skipper	<i>Pyrgus sidae</i>	Çoruh Valley
Orbed Red-underwing Skipper	<i>Spialia orbifer</i>	Dupeduz
Persian Skipper	<i>Spialia phlomides</i>	Barhal
Mallow Skipper	<i>Carcharodus alceae</i>	Çoruh Valley
Tufted Marbled Skipper	<i>Carcharodus flocciferus</i>	1 photographed near Barhal
Oriental Marbled Skipper	<i>Carcharodus orientalis</i>	scattered – noted on 3 days
Lulworth Skipper	<i>Thymelicus action</i>	scattered – noted on 3 days
Essex Skipper	<i>Thymelicus lineola</i>	scattered – noted on 3 days
Small Skipper	<i>Thymelicus sylvestris</i>	scattered
Levantine Skipper	<i>Thymelicus hyrax</i>	scattered
Large Skipper	<i>Thymelicus venatus</i>	Ikizdere
Silver-spotted Skipper	<i>Hesperia comma</i>	Çoruh Valley and Ikizdere
Mediterranean Skipper	<i>Gegenes nostrodamus</i>	Barhal