

The Pontic Alps

Magical Lazistan

A Greentours Tour Report

23rd May – 5th June 2014

Led by Ian Green & Seda Soylu

Day 1 May 23rd to Trabzon

Departures were from various points through Istanbul where we all met up at the gate for the flight to Trabzon which went very smoothly. Once there we met our drivers and drove up to the hotel where we settled into the hotel.

Day 2 May 24th Sumela Monastery

Due to the late evening arrival we decided to have a relaxed start this morning with a nine o'clock breakfast and a ten o'clock departure. Breakfast proved to be an extensive spread and was much enjoyed and the environs of the hotel looked lovely, our tall modern hotel standing proud of a number of lush hazelnut plantations by a rushing river. David had already been out back and had found *Dictamnus albus*, the Burning Bush. Indeed once on the road, this was the first plant we stopped for. It is a spectacular species with tall wands of unusually shaped pink-red blooms. Ravens and Crag Martins flew overhead as we also admired our first orchid, *Ophrys caucasica*, and a brightly coloured Clark's Lizard.

We parked up about a kilometre from Sumela Monastery. It was a Saturday and there were many visitors, the vast majority fairly local, but with at least one other group with similar interests to ours. The skies were now clouding up a little but it was still a fabulous scene all around. The euxine temperate rainforests here are stunning. The variety of shades of green beggars belief and is a consequence of the rich variety of tree species present, as well as a nice mix between conifers and deciduous trees. We noted *Abies nordmanniana*, *Picea orientalis*, *Quercus petraea*, *Acer cappadocicum*, *Acer velutinum*, *Tilia rubra*, *Alnus glutinosa*, *Carpinus betulus*, *Carpinus orientalis*, *Fagus orientalis*, *Castanea sativa*, *Juglans regia*, *Cornus mas* and *Ulmus glabra*. Our walk took us along to the monastery with some ups and downs, but without the steep walk up that the site is known for! There was an abundance of plantlife of interest to us. Our first *Aquilegia olympicas* were very much enjoyed, so too the *Rhyncocorys stricta*. Orchids included *Listera ovata*, *Neottia nidus-avis* and a telescope view (!) of *Dactylorhiza euxina*. There was plenty of lovely *Centaurea simplicicaulis* on the cliffs as well as *Centaurea hypoleucos*. The mountains across the valley were covered in yellow *Rhododendron luteum*, those nearer at hand by pink *Rhododendron ponticum*, here looking fabulous in its natural setting. Wrens, Coal Tits and Chaffinches were the common birds whilst we had

fabulous views of a Jay, the Turkish race looking rather different from the UK one. Green Warblers were common.

After a look at the murals inside the monastery we headed back to the vehicles and down to a restaurant in the valleys which produced a very tasty lunch of salad, köfte and saç kavurma. Many tried the ayran, a drink made from yoghurt, water and salt.

Now we moved back down the road a few kilometre to Maçka where we spent the afternoon in a roadside hazel grove. Amongst the well-spaced crops was a rich assortment of flowers in herbage kept free of rank grass growth by lots of *Rhinanthus angustifolius*. *Polygala major* in the pink form was abundant and we also found *Lathyrus venetus* and *Trifolium medium*. *Smilax* and *Tamus* twined their way through the plants and there was much elegant *Laser trilobum*. However it was the orchids that held sway here. Particularly *Ophrys oestrifera* which was quite common with some fine many-bloomed plants, and the Bee Orchid, *Ophrys apifera*, here in a variety of shades and forms. The *Ophrys caucasica* was just about holding on, with only one or two plants in good flower. *Cephalanthera damasonium* was found, its cousin *Cephalanthera longifolia* already over. There was much *Epimedium pubigerum* in seed under the nearby trees.

Our last stop of the day was by a cliff where we found some lovely plants of *Campanula betulifolia* with largish hanging white with a hint of pink bells. The strange Bladdernut *Staphylea pinnata* was already developing its bladder nuts, and there was an abundance of *Adiantum capillus-veneris* on the shadier parts of the cliff. Then it was back to the hotel where we had a decent break before dinner.

Day 3 May 25th Hamsiköy & The Zigana Pass

It didn't look too promising at breakfast with sullen grey clouds hanging over the valley and a little rain. However as we drove up the valley it brightened a little... the rain was very light and eased off as we explored a slope amongst scrub and hazelnuts close to the village of Hamsiköy. Here was an abundance of the yellow rattle and of the *Polygala* again, and it was great to see so many *Ophrys oestrifera* and also some very good condition *Ophrys caucasica* too. There were plenty of Toothed Orchid and in drier areas we found the pretty *Centaurea hypoleucos*.

Scarlet Rosefinches were everywhere as we continued to search and a large flock of European Bee-eaters moved overhead, calling all the while. On a bank below the upper road we found our quarry, the gorgeous *Orchis stevenii*. This was an impressive specimen, however there were more to come as David and David unearthed perhaps fifteen more in an open meadow up the road. There were also Twayblades and White Helleborines, and we found a couple of Hooded (or Hazelnut) Orchids too, one a very dark chocolate form.

Then it was up the road towards the pass. Unfortunately the weather intervened for a while as we drove through fog, the dazzling yellow Rhododendrons lining the road in places only temporarily illuminating the landscape. On the 'old' pass we could see little and it was raining quite a bit so we headed for the restaurant and enjoyed an excellent lunchtime meal during which the weather improved a bit. After lunch we stopped by a little damp flush that held a population of *Dactylorhiza umbrosa* mixed with *Primula auriculata* and *Cardamine raphanifolia*. A single *Orchis pallens* bloomed beside it and on a dry bank was lots of stunning *Daphne glomerata*. There were a

number of fungi here including slippery jacks and st george's mushrooms. *Polygala supina* was found and there were *Minuartias*, *Cerastiums* and *Anemone blanda*. Ring Ouzel and Mistle Thrush were seen as we continued along the road to a spot where orchids included many *Dactylorhiza flavescens* of both the yellow and red forms and there were some nice clumps of *Daphne pontica* in flower. Further along we stopped by a little stream. Rain intervened here but those that got out enjoyed a fine show of *Viola altaica* in both yellow forms (that's pale and very bright) and also a deep purple form too. The 'hairy' heads of *Pedicularis wilhelmsiana* were enjoyed and we saw our first *Gentiana verna* and lots of butter-yellow *Primula veris* subspecies *columnnae*. Water Pipits were common.

Now we explored a little road that took us high up onto the ridge, to around 2600m, well above the pass. Here the turf was littered with *Viola altaica* as well as our first *Anemone narcissiflora*. Drifts of yellow *Draba hispida* on dry valleys grew alongside drifts of *Primula auriculata* in wet ones.

Botrychium lunaria grew in tight alpine turf that had *Muscari aucheri* and the unusual *Jurinella moschus* subspecies *pinnatisecta*. Little carpets of tiny *Antennaria dioica* were a delight and here we found the uncommon little pink *Pedicularis pontica*. There were some wonderful groups of *Gentiana verna*, the local *pontica* subspecies being a particularly intense blue. *Androsace albana* had little pink drumsticks and we found plenty of the diminutive but perfectly formed *Cyclamen parviflorum*. The views down over the mountains to the north were sublime.

Day 4 May 26th Yanbolu Cayi and Ovit Pass

Close to the river mouth at Yanbolu we stopped by a rather unexciting looking piece of land that overlooked the sea. What was immediately obvious though was a fabulous population of the local endemic tongue orchid *Serapias feldweggiana*. There were hundreds of them growing in swathes through a damp area, indeed the central reservation was full of them too! Though unexciting looking this is a tiny enclave of Mediterranean vegetation so over the next hour we saw very many plant species we would not see elsewhere on the tour, Mediterranean shrubs such as *Cistus*, *Mespilus germanica*, *Erica arborea* and *Laurus nobilis* and climbers such as wild grape, *Clematis vitalba*, and the lovely *Periploca graeca*. The wet areas that were so full of the tongue orchids also held much *Ranunculus marginalis* and *Oenanthe fistulosa* as well as a little *Lotus ornithopodoides* and the yellow bartsia *Parentucellia viscosa*. Drier banks above had myriad flowers with *Lotus suaveolens*, *Lathyrus nissolia*, *Dorycnium hirsutum*, white and pink *Coronilla varia*, and a whole range of different clovers – *Trifolium resupinatum*, *dubium*, *campestre*, *nigrescens*, and the elegant pinky-red *angustifolium*. There were both *Scrophularia peregrina* and *Scrophularia umbrosa*, *Centaurea pecho* and *Reichardia glauca*, and especially colourful were bright pink *Centaureum erythraea* and the really red *Silene armeria*. Cormorant and Little Egret were offshore and there were distant views of the local race of Harbour Porpoise.

Then it was time to head for the heights! This we did without stopping and an hour later we were exploring the slopes next to a little village which was still emerging from the winter snow. In the yayla we found some great birdlife. Tessa had already photographed Twite in the village before we watched a family of Snowfinches at close range. An Alpine Accentor allowed a couple of us to photograph it while a Northern Wheatear was even more obliging. A fabulous male Semi-collared Flycatcher was much enjoyed, the drabber Spotted Flycatcher less obviously so. Behind the

houses there were some great displays of little pink *Primula algida* and we found just a few plants of *Fritillaria caucasica* on the slopes. There were some truly gorgeous little groups of deep-purple *Primula elatior* subspecies *meyeri*. We found both *Gentiana pyrenaica* (sometimes separated as *djimilensis* in this region) and *Gentiana verna*, adding their distinctively different blues to the wonderful pastiche of colourful flowers. The strangely beautiful yellow heads of *Scrophularia chrysantha* crouched next to little granitic rocks and we also found the pretty little blue bells of *Scilla sibirica* subspecies *armena* here.

We headed back up to the top of the pass stopping pretty much on the top itself and walking off across the very arctic looking landscape as Arif brewed tea. There was a lot of snow here, and a lot of streams, but if one walked about a bit a surprisingly large number of flowers turned up. Notable were *Scilla winogradowii*, some fine fresh *Fritillaria latifolia*, and some stunningly coloured *Corydalis narinianna*. Once again *Primula veris* subspecies *columnnae* and lots and lots of *Gagea fistulosa*. Shorelarks were common and Twite too. Back at the vehicles we enjoyed the tea before descending to meadows close to Ikizdere. The two tone blue and white flowers of *Aquilegia olympica* quicken the heart whenever one sees them – in high summer this lovely flower decorates the highest subalpine meadows but at this season it can be enjoyed in places such as the roadside meadow in which we spent an hour late afternoon. These were great with a rich assortment of flowers. The impressive umbellifer *Xanthoglossum purpurascens* dwarfed the swarms of *Cardamine raphanifolia* that populate the wet areas of which there were many. Both spotted orchids *Dactylorhiza saccifera* and *Dactylorhiza urvilleana* were common in these areas whereas drier parts of the meadows had much *Campanula sibirica* and *Trifolium ochroleucum* and just a little flowering *Daphne mezereum*. Woodpeckers and Jays called as the afternoon closed around us and it was time to go back to the Ridos Thermal and, for some, to enjoy the hotel's spa facilities.

Day 5 May 27th Anzer Yayla

It was a bright and sunny morning as we partook of the Ridos's extravagantly varied breakfast. The Muhlama, made of cheese and butter, was very light and fooled a number of us into thinking that it was scrambled egg.

We left at nine, driving down a steep-sided valley cloaked in fabulous euxine forest at once shimmering various greens in the morning sun and glistening from the moisture on the leaves from last night's rain. The river roared downwards, and flowers hung enticingly from the cliffs on the other side of the road. Grey Wagtails were busy everywhere. We called a photo halt by a tiered cluster of beehives being tended by a man who may well have lived in the house below. It was a thoroughly idyllic scene. The road to Anzer Yayla was very similar, beautiful, quiet, and full of luxuriant greenery. We drew to a halt next to rock that marked the joining of two exuberant rivers and had several clumps of the very blue large-flowered *Campanula aucheri* on it. There were also a few *Hypericum orientale* and by the rock a single Greater Butterfly Orchid. Upstream we encountered great displays of purple *Rhododendron ponticum* and yellow *Rhododendron luteum* sitting just above the very white water. Green Warblers sang from the treetops.

Further uphill we stopped where a series of jagged rocks jutted through the by now dwarfing forest. The *Campanula* was again on the roadside and we could see the yayla pastures now not far above. The rest of the morning was spent stopping in these. The flowers were amazing.

Primula auriculata was magnificent and fresh in pink along the streams, open ground was dotted with big 'drumsticks' of *Primula veris macroclayx*. Great yellow pompoms of *Arnebia pulchra* were an altogether subtler yellow than *Trollius ranunculinus*'s strident tones. There were some neat spires of yellow and white *Pedicularis condensata* and a few whorled yellow heads of *Pedicularis comosa*, but it was the wine-red long-bracted blooms of *Pedicularis wilhelmsiana* that really stood out. Orchids were plentiful. We'd enjoyed some fine *Dactylorhiza urvilleana* lower down, but up here it was the turn of the squat and heavily dark-flecked (leaves and stem) of *Dactylorhiza euxina*. This came in the nominate form and the strongly marked *markowitsii* form too. There was a little *Dactylorhiza flavescens* of a particularly pleasing shade of reddish, as well as *Orchis mascula*, and in one small area, around two hundred blooms of *Orchis pallens*. *Anemone narcissiflora* was in fabulous condition and amongst them David found a single large bright orange bloom – *Geum coccineum*. Scarlet Rosefinches were noticeable as we pottered amongst the flowers. Other fine plants here were white *Potentilla rupestris*, various yellow or yellow-orange *Potentillas*, *Sedums*, *Polygalas*, and *Caltha polypetala*. There were a good number of butterflies here including Wood White, Mountain Small White, Dalmatian Ringlet, Small Tortoiseshell, Green Hairstreak, and Twin-spot Fritillary.

Rain was starting so we headed on into Anzer Yayla itself where we found a handy roofed picnic shelter with seats and a spring. Typical Turkey! As the rain now came down in earnest we partook of an excellent spread with bean dishes, a freshly prepared salad, aubergine salad, various cheeses and olives, fresh fruit, fruit juices, and of course a big demlik of çay brewed up by ever helpful Arif, our driver. A Lammergeier sailed past and we watched White Wagtail, Black Redstart and Corn Bunting as we ate.

The rain didn't improve so we abandoned our plan of looking at the snowmelt areas above the yayla and instead headed downhill. We made a stop by a bridge and walked down for half an hour, encountering all manner of new blooms. There were fabulous clumps of *Silene lazica* on the cliffs, the deeply-cut white blooms with a lime green back! *Nonea versicolor* was very pretty. *Heracleum* looked spectacular on the riverbank. There were some photogenic *Aquilegia olympica* to enjoy, also some great clumps of very dark flowered *Vincetoxicum scandens*, and also many Deadly Nightshade. Other good plants included *Lathyrus laxiflora*, *Lathyrus aureus*, lots of *Lathyrus roseus*, some *Cephalanthera longifolia*, and also several *Verbascums*. Down along the main road we stopped for some fine meadows as Arif brewed us another cuppa. Here were wonderful displays of *Geranium psilostemon*, the magenta blooms with an almost black centre, as well as lots of *Campanula sibirica*. There were numbers of *Dactylorhiza urvilleana*, as well as plants such as *Heracleum apiifolium* (surprisingly dainty) and *Orobanche pubescens*. Then it was back up to the hotel stopping briefly for a Dipper which posed well on rocks in the middle of the stream.

Day 6 May 28th along the Çoruh Valley to Yusufeli

Today we headed over the pass and thence down to the Çoruh Valley and along it to Yusufeli. Our first stop was a few kilometres downhill where we chanced upon an amazing display of Peonies! These were *Paeonia mascula* and there were many of them just a little up the slope from the parked minibuses. This proved a very diverse spot with all manner of unusual flowers seen.

Further down the road we stopped by a roadside cliff where wands of *Eremurus spectabilis* were

poking out of the rocks. Also here were gorgeous plants of *Campanula seraglio*, a choice white saxatile bellflower and the almost equally pretty *palmipartitus* subspecies of *Geranium cinereum*.

We moved down to the Ispir Gorge and stopped for a picnic. Black Kite and Long-legged Buzzard moved overhead. On rocks across the river were very many clumps of the even more gorgeous *Campanula troegerae*, another white saxatile bellflower with even large pink-tinged blooms literally covering the rocks. Nearby we photographed Eastern Short-tailed Blue which appears to be a very good record as it is only known from a few spots from the centre-west of the country. We soon found ourselves gorging on very many new plant species and butterflies and dragonflies too became noticeable. But in the end we just had to move on to Yusufeli, or base for the next three nights.

Day 7 May 29th Tortum and the Narman Pass

It was bright and warm in Yusufeli as we breakfasted on the top floor of the hotel, with fabulous views of the town around us and down the Barhal River to the confluence with the Çoruh River a kilometre downstream. Yusufeli is surrounded by colourful dry mountain slopes that rise steeply to jagged ridges, the often steeply inclined strata topped with lush green as the mountains reached the very blue sky.

We headed downhill today. Not far out of town we stopped for a display of brilliant red-pink *Pelargonium endlicherianum* growing on inhospitable-looking screes above the river. This stunning plant is very showy and here it showered parts of the scree slope with its intense colour. Also growing here were *Sobelowskia clavata* and the fern *Cheilanthes marantae*. A Buzzard and two Ravens departed as we arrived.

Downstream we went through the new tunnels before following a tributary up the road towards Tortum. This took us through a memorable gorge, huge walls of largely bare and very colourful rocks reaching to the sky. The strata was incredible, the folding extreme, the bedding any which way, even turning a full oval shape on one cliff, and with completely vertical strata on another. Blue Rock Thrushes, Crag Martins and Alpine Swifts were the perhaps predictable avian inhabitants of this stunning place. Butterflies were many and varied – it was very warm, there was water, and a big range of plants! Black-veined White, Balkan Marbled White and Nettle-Tree Butterfly were seen, and an Ionian Emperor came and perched on Effie's hat allowing much close up photography! It took off and flew around, looking at other hats, but none were as good as Effie's. There were plenty of smaller butterflies, notably three species of Hairstreak – Ilex, Orange-banded, and Gerhard's Black Hairstreaks. A gorgeous Turkish Fiery Copper perched atop an *Achillea*. Tall *Trachometrum venetum* flowered pink along the riverside whilst amongst the roadside weeds were *Linaria corifolia* and *Cynoglossum creticum*.

Moving on we reached the lake at Tortum, stopping for views back down the valley and noting the Eastern Baton Blue on the abundant *Centranthus*. We spent a happy half an hour walking around the dry hillside that formed a peninsula on which was a tea house where we enjoyed a cuppa or a cold drink. The dry steppe was adorned with the almost invisible, but spectacular once you knew it was there (!) *Hedysarum cappadocicum*. We also spotted *Astragalus asicocalyx*, an *Allium*, *Vaccaria hispanica*, *Helianthemum nummularium* and *ledifolium*, and *Ornithogalum schelkownikovii*. Butterflies here were Osiris Blue, Oberthür's Grizzled Skipper, and Grüner's

Orange-tip.

Tea finished we moved along stopping for a field of *Consolida orientalis* just as the rain came. Luckily this eased and so some way up the valley we stopped for a picnic with lush meadows and poplars on one side and on the other arid, gravelly looking hillsides. We explored the former first, finding a single *Iris taochia* in flower, as well as lots of *Pedicularis* and *Rhinanthus* in the grasses and *Myricaria germanica* down by the river. On the dry slopes we found a fantastic flora. Rock Buntings watched us as we admired the star plant, the strange *Campanula macrochlamys*. There were so many other good plants. *Asyneuma lobelioides* formed good clumps as did a prickly mound-forming *Astragalus*. There was lots of a mystery *Polygala*, also *Campanula stevenii*, some gorgeous *Hedysarum elegans*, a *Senecio* of fine proportions, *Bungea trifida*, a bright yellow *Centaurea sesselis* or two, and an *Ornithogalum* coming close to *alpigenum*. We also found *Chesneya elegans*. Here a stunning Turkish Fiery Copper allowed close-up photography.

Now we reached the turn-off for Narmam which we then followed up to a 2415m pass. This was a great route with superb scenery all the way. We drove to the top and walked around up there for twenty minutes. There were loads of flowers, just not much variety. Water Pipits and Skylarks sang as we looked at *Bellevalia pycnantha*, *Muscari aucheri* and *Muscari armeniacum*, *Drabas*, *Pedicularis caucasica*, *Ranunculus grandiflorus*, and *Nonea caspica*. Moving down a bit we were caught in a short-lived rain storm but still managed some decent time with *Iris caucasicus*. Two Golden Eagles and a buzzard flew overhead. We finished with a half hour stop at a very rich site. Here there were a good number of *Iris taochia* in flower, showing both the yellow forms and plum-coloured forms. There were the tight heads of *Rindera lanata*, and there were *Linaria armeniaca*, fabulous stands of *Lamium glalactophyllum*, the leaves laced strongly with white or pink. *Vicia canescens* was seen and to complete a fine day for the pea family we added *Astragalus campylosema* to the list. Black-eared Wheatears marked our progress as we drove down.

We stopped to buy some cherries off some kids on the roadside and we enjoyed these so much we stopped some kilometres further down and made one of the local kids very happy by purchasing a bowl full of white mulberries. These were exceedingly succulent. Then it was back to the hotel with a decent break before an excellent dinner featuring trout, and then checklists, which lasted a while due to the immense range of species we'd encountered over the past two days.

Day 8 May 30th Barhal & Yaylalar

This morning was very warm and sunny as we drove up the initially very barren-looking valley above Yusufeli. Barren-looking it was on the steep rocky mountainsides but along the river it was lush and green. Quite a contrast. We stopped soon enough. A cliff (where wasn't there cliffs?) overhanging the roadside had a number of fine clumps of *Campanula troegerae*, a stunning large open flowered white bellflower, the flowers deeply cut and so wide they were almost plate-like! On the other side of the road there was butterfly heaven. This is really a little early in the season for butterflies here however we still managed to see at least fifty species today - in late June one might get close to double this in a day. We started with easy ones like Powdered Brimstone, a Niobe Fritillary, and a bright Southern Comma. A European Swallowtail sped past. Tessellated Skipper posed on something yellow, Ilex Hairstreak sat on some leaves. A dry area with lots of flowers attracted so many coppers. The largest was a shimmering Purple-shot Copper in

immaculate condition. There were any number of Lesser Fiery Coppers and a few Balkan Coppers too. Surprisingly we also found the rather rare Large Copper here. There were Amanda's, Common and Chapman's Blues, but by far the best blue was the gorgeous Little Tiger Blue, a tiny butterfly with the most striking markings. An Ionian Emperor came and perched on Jane's bottom! It flew off before lots of photos were taken!

We drove on uphill, the landscape getting flowerier and flowerier and butterflies speeding off the road. We stopped to admire some mud-puddling skippers – Persian, Orbed Red-underwing, Mallow and Marbled Skippers all together with a skipper-like moth! Small Tortoiseshells were common here too. Yet another copper appeared, a fine male Anatolian Fiery Copper. Loew's Blue was also photographed. On the cliffs we found another white bellflower, this time *Campanula betulifolia* whilst at the foot of the rocks was *Asyneuma linifolium* and *Dactylorhiza umbrosa*. Further along we stopped for a sitting Scarce Swallowtail and as we drove on saw no less than ten Camberwell Beauties drifting up and down the road – no time to stop now, we had to get to the higher areas.

We drove up through Yaylalar admiring the old houses with a mix of stone and wood construction on the steep hillsides, one or two good-looking new pansiyons too. Then it was up the last four kilometres of track to the last summer village at Olgunlar. Here we were already above the tree line, the mountains ahead of us streaked with snow and looming large. The rivers as ever in this part of Turkey were rushing tumultuous ribbons of violent water, the slopes ablaze with flowers. We asked the Kaçkar Hotel if we could have our picnic under the shelter or their outdoor restaurant bit and make us tea too – it was a great spot for a picnic! Afterwards we had a couple of hours to enjoy this high alpine scenery. Several of the group opted to go down and hobnob with the locals or do some shopping and drink tea down in Yaylalar and others of us decided to walk up the valley towards Dilber Düzü. The grasslands were ablaze with flowers. Wet areas had fine shows of mixed purple *Dactylorhiza euxina*, pink *Polygonum bistorta* subspecies *carneum*, a white *Allium*, pink *Geranium palustre*, blue *Muscari armeniacum*, yellow *Caltha*, and best of all, the brilliant orange *Geum coccineum*. Drier sward had massed displays of primrose *Arnebia pulchra*, and also primrose *Primula veris* subspecies *columnnae*. There were few butterflies at this altitude however we did see a single *Erebia melancholica*, a local species of ringlet. We met a young Belgium couple who told us they had been watching bears both in the afternoon and the morning from the same spot, less than a km up the valley so we hot-footed it to the spot and sure enough there they were. Quite high on the opposite slope (about 500m from us!) we could see the female quite clearly. She was moving about in a gully seeking out some choice morsels, and had quite pale fur making her easy to pick out against the hillside. It took us a while to realise that she had two tiny cubs with her – these were such a dark colour it was almost impossible to see them. We took distant photos and watched them for a few minutes but then a strong rain storm came down, cue for us to retreat. This cleared after a short while allowing us one last bash at some good flora across the river. Here there was a fine population of *Paeonia mascula* subspecies *arietinum* in flower. Also on these slopes was a cherry, purple *Marrubium parviflorum*, *Allium decipiens* and a white pinnate-leaved *Potentilla*. Others found the peony below the village as well as the very beautiful *Dracocephalum ruyschiana*. Two Golden Eagles sailed over and a group of Alpine Choughs followed us for a while, Whinchat was seen too.

We all met up and started the drive back, stopping briefly a couple of times to photograph bellflowers and orchids. Our last stop of the day (apart from a number of pull-ins for cars as we

met the Yusufeli rush hour traffic coming out of town!) was at the Georgian Church in Barhal. This immense building is really more of a cathedral. Built over a thousand years ago it has no apparent earthquake damage, a tribute to its builders. Already finished bellflowers hung from the stones outside and in the surrounding fields was a marvellous display of *Campanula latifolia*. Then it was back into Yusufeli with half an hour to spare before dinner!

Day 9 May 31st Kafkasör & to Laşet

Another bright and sunny morning saw us saying farewell to the Almatu Hotel, a good hotel with helpful staff and very good food. We headed down the Çoruh Valley to Artvin, stopping once en route as we spotted the strange tall Eastern Chatterbox (Marsh) Orchid (Helleborine) flowering on a wet flush dripping down the roadside. There were several of these metre tall orchids. There was also some Celery *Apium graveolens* and a single flowering plant of *Lythrum salicaria*.

We drove up through the many layers of Artvin to Kafkasör, nearly 1500m above the valley floor, but hardly out of town. We stopped for a fine display of red *Silene compacta* and then for a field covered in *Serapias feldweggiana*. This also had a little *Orchid picta* more or less over, and a few plants of Red Helleborine too.

Up at Kafkasör we passed the bull ring where preparations were well underway for the next big five day festival which would take place twenty days after our visit. We spent the rest of the morning exploring some meadows above the road. These were full of flowers. Birdsfoot Trefoil and *Polygala papilionacea* made the bulk of colour, the later mostly pink, but sometimes blue. There were some bright cerise *Gladiolus kotschyanus*, and an elegant *Campanula*, also little patches of white *Psoralea acaulis*. There were orchids too, quite a large number of Frog Orchids, a few Greater Butterfly Orchids, the odd Twayblade, a single Birdsnest Orchid, a few Fragrant Orchids, and a good number of *Dactylorhiza urvilleana*. Mistletoe clung to ancient apple trees. Crossbills flew over and an Orphean Warbler sang from cover. A faded Blue Argus was photographed.

We took lunch at a little roadside restaurant above Artvin. The views were great and the food even better. As we supped Ayran (a yoghurt and water drink) and nibbled on home-made breads and a tasty salad the şiş kebabs arrived. Tasty though these were they were eclipsed by the succulent köfte served next. Tea arrived in two silver samovars! *Achillea biserrata* and *Galega orientalis* were noted outside, and David found a diminutive helleborine, *Epipactis pontica*.

The drive to Şavşat took up most of the afternoon. We made stops to buy fruit and veg and to see a variety of plants that included a fine stand of *Astragalus galegiformis*, the large blue-flowered *Salvia pilulifera*, and the fleshy-leaved red-topped *Euphorbia marschalliana*. Our last stop above Şavşat was to admire the orange *Rhynchospora orientalis*. We were by now passing into a most beautiful pastoral scene, the dry valleys replaced with grassy meadows and pretty villages, and patches of forest, all rising up to the mighty 8500 foot ridge of mountains that lay above our hotel at Laşet. A beautiful setting indeed.

Day 10 June 1st Cam Pass

It was really surprisingly warm at breakfast and though sunny the air was very hazy, a shame as the views around Laşet are stunning. David went for an early morning walk and saw eight species of orchid including *Orchis coriophora*. After an excellent and varied breakfast we headed uphill. The Cam Pass rises to 2500m or so and the trip up from Laşet, which only takes a quarter of an hour takes one up through lush green meadows, floriferous cliffs, dark *Picea orientalis* forest and then on to the top itself, the wide open grasslands of the Cam Mountains. Not a fence in sight for many a mile, and at this season hardly a grazing animal either. The grasslands, snow-burnt and rather reminiscent of a Scottish moorland, look hardly enticing for the botanist but appearances are deceptive for this is an amazing place for flowers.

Our first stop, very close to the top of the pass, introduced us to *Scilla roseni*. This beautiful plant has sky/powder-blue and white blooms with strongly recurved petals and likes company, here we found a few hundred, then up the slope a few thousand. By the streams it was growing with a high altitude form of *Ranunculus constantinopolitanus* and *Ranunculus oerophilus*. Further up the slope by some snow we found the little *Scilla monanthos* too. *Caltha polypetalata* lined the streams and there were memorable plants of *Pimula elatior* subspecies *pallasii* and *Gentiana verna* about too. White *Pedicularis caucasica* was common. Water Pipits were everywhere. Across the road we found a mass of *Fritillaria latifolia*. A Honey Buzzard flew past, a late migrant, and then a Lesser Spotted Eagle soared overhead.

The bulk of the morning was spent just downhill where most of us went on a two hour walk across the steppe to some snow slopes and then downhill a kilometre or so to meet the bus again. This really was a superb walk with so many flowers. We found many more populations of *Fritillaria latifolia*, some small, others with thousands, and so many were in perfect condition. There were magnificent swathes of *Anemone narcissiflora*, colouring areas of mountainside white, and in other places we found large colonies of *Doronicum oblongifolium*, other areas had the stunning pink or white flowered *Centaurea cheiranthifolia* with heads three inches across. There were plenty more of the primulas and we also found *Androsace armeniaca* with pink drumstick heads. *Gentiana verna* was in good patches and we found a swathe of *Pulsatilla albana*, mostly over but with a few flowers. We found *Arnebia pulchra*, and down by the stream was massed displays of *Primula auriculata*, and quite a number of freshly emerged *Dactylorhiza osmanica*. Other snow slopes had a little *Corydalis angustifolia*, and some simply stunning *Corydalis narinniana*, just a little *Scilla monanthos* too. All the while Water Pipits and occasional Shorelarks and Northern Wheatears popped up, and raptors went past too, mostly Long-legged Buzzards.

We drove back over the pass to the conifer forests on the Western slopes for our picnic, the weather looking a little inclement at this point, however any rain didn't amount to much. Nearby we searched under the trees for Coralroot Orchid and duly found a few, a little group of three in perfect flower. Yellow Birdsneests and Birdnest Orchids were just emerging. A Robin's nest with six eggs was found. After lunch we headed back uphill to a spot where the forest ended and the alpine slopes began. The views from here are normally superb but it was so hazy today. We could see the slopes of the Yalnızçam Mountains stretching northwards before us, the screes and upper slopes with a light cover of *Betula litvinovii* forest with the odd Rowan, Aspen and Acer too. *Trollius ranunculinus* was in flower on the slopes and on a rocky outcrop we found some beautiful *Corydalis alpestris*. Then it was back down to the hotel with plenty of time before dinner.

Day 11 June 2nd Cam Pass & Kurt Kale

We started the day in bright sunshine again and were soon on our way up over the Cam Pass. We managed it up and over the pass today without stopping, making for the far side where we searched for *Iris caucasica*. A large population of this little yellow juno iris blooms on the eastern slopes but this year was mostly over. We had to be satisfied with just a few blooms until we found a little stoney area with around a hundred in bloom. Scarlet Rosefinches sang from the birches as we photographed our first *Echium russicum*, a most strange and beautiful reddish bugloss. There were also a few *Rinderas* and various knapweeds and lots of a white starry *Minuartia* which we eventually worked out was *Minuartia juniperina*. Long-legged Buzzard flew over and a Rock Thrush was seen across the road.

We headed down to the valley bottom where a stream provided us with some rather fine plants. By the roadsides were *Dactylorhiza osmanica*, a rather robust and stately marsh orchid. Growing in the same habitat was the impressively large white *Arenaria cucubaloides*. A little up the river was a big clump of *Iris sibirica* with large blue flowers. Two Scarlet Rosefinches sang from a tiny willow, the males seemingly happy to be singing from with a few inches of each other. Stunning shining yellow Black-headed Yellow Wagtails were along the roadside.

Now we headed into Ardahan stopping for a little shopping, and then at the Opet station where we were pleased to find fabulous clean toilets, a nice selection of sweets etc, and best of all, free tea! East of town we stopped by Puzsta Marsh where the broken telescope meant we struggled a bit to get a good look at the few birds there. Eastwards a little and we started spotting Lesser Spotted Eagles over the large tracts of open Scots Pine forests. We spent a while enjoying an area of steppe where the purple blooms of *Iris aphylla* dotted the landscape.

We headed for a high overlook where the views of Kurt Kale, an ancient fortress, were sublime, the wind rather strong though. Below us we could see more of the iris dotting the slopes. The afternoon was spent around Aktaş Lake on the borders with Georgia. Here we found many birds including breeding colonies of both White Pelican and Dalmatian Pelican, as well as a great 'ruderal' flora.

Day 12 June 3rd Bulbulen Pass and to Sarıkamış

After a night of occasionally strong winds we woke to the usual sunny and warm conditions. It was beautiful outside! Common Redstarts, Stonechats, Common Whitethroats and Scarlet Rosefinches all sang in the garden.

David and I decided to try and see if the peony would be in flower above Laşet and set off in haste to see if we could find it. Half an hour of fast walking later we found them, beautiful metre tall plants covered in large pale primrose-coloured blooms. A spectacular sight. As we returned to the hotel the heavens opened and we got wet!

Departing Laşet and its very green surroundings we headed up over the Cam Pass again. We stopped again at the *Lloydia serotina* site to get herbaria specimens as this plant is previously unknown in Turkey (Andy Byfield discovered it on a Greentours trip here a few years ago). There were also orange *Scrophularia kotschyana* and white *Saxifraga sibirica*. The views were superb this

morning. Then it was up over the pass stopping at various points along the way for photographs. First was the *Scilla rosenii*, next some views, next a Long-legged Buzzard, and a Ruddy Shelduck and its family! We reached the valley floor and were soon in to Ardahan where we made the usual pilgrimage to the Opet Station for free tea! Bread and victuals procured we drove south along the valley floor, following the Kura River upstream. The weather had really closed in and there seemed rain all about. Indeed as we crossed the valley floor towards Yalnızçam we experienced a violent hail storm that left the landscape white. It was still white as we returned from the pass some time later.

The route up the pass took us through sublime scenery. Great tracts of Scots Pine was draped over the slopes of huge rounded mountains, whose tops were coloured with flowers and streaked with snow. We stopped to take pictures of an ancient fortress in the valley below. We soon started seeing snow on the roadsides and stopped after some time to explore. Buzzards and then an adult Lammergeier drifted over. Here we found some great plants littering the alpine turf like so many jewels. *Colchicum szovitsii* was here but they were well outnumbered by the abundant *Merendera trigyna*, this latter of the 'raddeana' form often split by botanists further north and east! *Iris caucasica* was a nice sight as always and there was much *Gagea fistulosa* and some of the more refined *Gagea taurica* too. *Scilla monanthos* was found before it was time to leave and head to territory new. A drive through the most startling upland territory ensued with high bleak plateau and wide uplands valleys. We stopped occasionally for birds as we drove. One long rocky valley proved excellent for raptors with a good number of Lesser Spotted Eagles as well as Imperial Eagle and Long-legged Buzzards. In the late afternoon we arrived at Sarıkamış our ski-centre base for the next day and a half, and settled into our rooms.

Day 13 June 4th Hamamlı & Sarıkamış

The weather looked pretty good this morning and a few of the group were out in the Scots Pine woods noting familiar British birds like Coal Tit and Nuthatch and orchids such as *Orchis mascula* and Frog Orchid.

After breakfast we headed out just a short distance to Hamamlı. Here we explored some roadside turf that had a rich assortment of flowers. Most striking, and closest to the road, were the big red bowls of *Papaver paucifoliatum*, but also much appreciated were the strange almost sci-fi blooms of *Rindera caespitosa*. White wands of *Lathyrus bradypterus* were common and there were several *Astragalus*, *Silene cappadocica*, the white *Linum pycnophyllum*, and three centaureas, the best of which was the stemless pale yellow *Centaurea rhizantha*.

The weather looked a little dodgy so there came a morning of indecision from your leaders and the plan to walk up the mountain was (temporarily as it turned out) abandoned. Instead we headed back to Sarıkamış, stopping to see the very last flowers of sky-blue *Bellevalia forniculata*, growing with lots of *Ranunculus fenzlii* and a little *Arenaria cucubaloides*. Next we found a nice roadside boggy area full of orchids. These were mostly *Dactylorhiza umbrosa*, though there was a population of *Dactylorhiza urvilleana* too, and a striking singleton of *Dactylorhiza incarnata*. Growing amongst all these were the unusual three-lobed leaves and neat buttercups of *Ranunculus strigulosus*. *Triglochin palustris*, *Potentilla erecta* and a swathe of pink *Primula auriculata* completed a floral bounty. Marsh Harrier, Long-legged Buzzard and Lapwing flew past.

We spent an hour searching the ravine below Sarıkamış but as we suspected we were too late for the *Fritillaria michailowskyii*. Here Berger's and Greek Clouded Yellows flew past. There were a bunch of colourful plants on the roadsides here including *Centaurea nigrifimbria* and *Scutellaria orientalis*. However we couldn't find our target so we moved back to Hamamlı and took our picnic in the valley above the village, the weather now looking fairly settled. We were surrounded by *Primula veris macrocalyx* and some strikingly large flowered *Cerastiums*. During the afternoon some walked slowly down to the village, others managed a little exploration up the valley, whilst a group of us took on the steeper alternative, a walk up onto the ridge that overshadowed our picnic site. Skylarks were common and we saw Water Pipits, Tawny Pipits, Black Redstarts whilst overhead flew several raptors, notably a pair of Lesser Spotted Eagles, and several groups of Crossbills. Also noted were Linnets, Serins, and Northern Wheatears. The lower slopes were a little dull but the higher one got, the better the floral show. *Anemone narcissiflora* and *Pulsatilla albana* were both on excellent form. *Androsace intermedia* showed both white and pinkish blooms on the same plant and higher up we came across mats of *Androsace villosa*. *Muscari armeniacum* was abundant and formed swarms in places, higher up it was the turn of *Bellavalia paradoxa*. We found lots of *Alyssums* and *Erysimums* as well as cliff-hugging *Arabis caucasica*, and there were other crucifers too in the shape of the red-pink *Hesperis steveniana*, white *Aethionema cordatum*, and we noted the grossly inflated fruits of *Coluteocarpus vesicaria*. *Vicia alpestris* adorned light screes and there were two nice yellow *Astragaluses*, one like *hirsutus*, the other almost certainly *cylindriacus*. We sought *Fritillarias*, and eventually found them near the top of our walk. They were rather variable and we found plants that could easily individually be assigned to *Fritillarias pinardii*, *assyriaca* and *armena*, but in the end we decided that they must all be under the umbrella of *armena*! Primulas were abundant and we saw lots of *Primula veris macrocalyx*, and quite a few of the elegant *Primula elatior* subspecies *pallasii*. *Gentiana verna* was prolific near the only snow patch still standing. About the only butterfly flying was Small Tortoiseshell though back down at the minibus a Greek Clouded Yellow flew past. Kay and Joan were lucky to see an Eagle Owl fly out of the woods!

Then it was back down to minibus and after a brief wait for Arif to return from delivering some of the group back to the hotel, we too returned to pack and relax before dinner.

Later some of us ventured out with a local guide to look for Brown Bears. This involved a well-known local garbage site a few kilometres away. Bears there were – we saw well into double figures! It was a bizarre sight. Parked up in the middle they were all around us, and very close too! Pity it was such a smelly place.

Day 14 June 5th to Ağrı and departure

A warm and sunny morning with a little fog in the valley. Breakfasted and packed we were off at eight. Our route took us over a pass just near the hotel and down a long valley to Horasan, the valley occupied by the headwaters of the Aras River which drains much of Eastern Transcaucasia before emptying into the Caspian Sea. It was a peaceful valley with rocky walls and plenty of green too, hardly a person about, just one cafe, and a couple of bee farmers was all we saw in thirty kilometres, nary a village or farm in sight. There were flowers everywhere and this valley would repay further investigation, but no time for us to stop today, we just admired the scenery and flowers as we drove along. Egyptian Vulture, Rock Sparrow, Spanish Sparrow, Short-toed

Eagle and European Bee-eaters were noted along the route. At Horasan we joined the main trunk route to Ağrı and thence to the Iranian border. We rose up through fields and steppe now really colourful with flowers and could hardly avoid stopping. We had a fifteen minute break in a fallow field where abundant *Papaver rhoeas* made a fabulous show amongst yellow crucifers such as *Boreavia orientalis* and *Neslia paniculata*. The superb pink and white *Wiedimannia multifida* was a delight. Also here were *Hyoscyamus reticulata* and *Lallemantia iberica*.

Moving on we were on our way up a pass when a fantastic sight drew us to a halt! A little plateau of rock on the slope opposite held forty or so blooms of the fantastic *Iris iberica*, an iris of exquisite beauty and whose perfection is difficult to believe. The huge flowers are around 12cm across and high, and the lined purple-grey falls, topped with shimmering faintly-lined white standards, made everyone gasp with pleasure. There were another forty or so down in the gully and on top next to them the superb large-flowered *Salvia pachystachys*. Brilliant scarlet *Phelypaea tournefortii* bloomed amongst other fine plants such as the sub-shrubby *Aethionema grandiflora*. A truly superb little spot. Golden Eagle marked our progress over the green pass and we descended again alongside meadows replete with *Dactylorhiza* orchids for mile after mile. We couldn't stop now, a pity as we passed so many wonderful things, banks of *Eremurus spectabilis* growing on rocks with loose cushions of *Silene araratica* and a campanula too. Near Ağrı we passed a few *Iris spuria* subspecies *musulmanica* with a few in bloom.

Then it was to the airport pretty much exactly on time. We said goodbye to our drivers and checked in at the tiny terminal building. One of the security staff joined us for group pictures! Our take-off took us directly westwards so unfortunately no views of Ararat today. We arrived into Istanbul just a few minutes late and there said our farewells, several going into Istanbul with others flying on to New Zealand or Britain.

Systematic List Number 1 Flora

The majority of the taxonomic order and nomenclature has been taken from the Turkish Flora (edited by P H Davis) although the more recent treatment of the orchids in *Die Orchideen der Turkei* (C. A. J. Kreutz) has been preferred for that group. Grateful thanks in particular to Rodney Burton, Peter Sheasby and Adil Guner for much of the original identifications and to Mervyn Southam for providing us with so much useful information on the umbellifers. Non-woody dicot and monocot species are in flower unless otherwise stated. This list refers only to flora seen on the Spring 2014 tour and is in flower unless otherwise stated.

Equisetaceae

<i>Equisetum hyemale</i>	Yanbolu
<i>Equisetum telmateia</i>	Trabzon area

Lycopsidaceae

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

<i>Adiantum capillus-veneris</i>	scattered
<i>Asplenium adiantum-nigrum</i>	Trabzon area
<i>Asplenium ruta-muraria</i>	Olgunlar
<i>Asplenium scolopendrium</i>	Sumela
<i>Asplenium septentrionale</i>	scattered
<i>Asplenium trichomanes</i>	widespread
<i>Athyrium distentifolium</i>	scattered
<i>Athyrium filix-foemina</i>	Sumela
<i>Botrychium lunaria</i>	Zigana Pass
<i>Ceterach officinarum</i>	locally frequent
<i>Cheilanthes marantae</i>	Tortum and Narman
<i>Cystopteris fragilis</i>	widespread
<i>Dryopteris affinis</i>	widely scattered
<i>Dryopteris felix-mas</i>	scattered – other <i>Dryopteris</i> species present too
<i>Matteucia struthiopteris</i>	locally common north side of the divide
<i>Phegopteris connectilis</i>	Sumela
<i>Polypodium australe</i>	Sumela, Zigana etc
<i>Polypodium vulgare</i> agg	scattered
<i>Polystichum aculeatum</i>	Çam Pass
<i>Polystichum braunii</i>	Yanbolu
<i>Polystichum lonchitis</i>	Yanbolu
<i>Pteridium aquilinum</i>	locally common
<i>Pteris cretica</i>	Ortan

Cupressaceae

<i>Juniperus communis</i>	locally frequent
<i>Juniperus oxycedrus</i>	Çoruh Valley
<i>Juniperus sabina</i>	high altitudes

Ephedraceae

<i>Ephedra major</i>	probably this species in the Çoruh Valley
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Pinaceae

<i>Abies nordmanniana</i>	locally dominant e.g. Cam pass
<i>Picea orientalis</i>	very common and widespread, the dominant coniferous species
<i>Pinus sylvestris</i>	scattered

Aceraceae

<i>Acer campestre</i>	widespread
<i>Acer cappadocicum</i>	widespread in north
<i>Acer hyrcanum</i>	Hamsiköy area
<i>Acer divergens</i>	Tortum
<i>Acer platanoides</i>	widespread in river valleys
<i>Acer velutinum</i>	Sumela

Anacardiaceae

<i>Cotinus coggygria</i>	Smoke bush, Barhal and Çoruh areas
<i>Pistacia terebrinthus</i>	Hamsiköy
<i>Rhus coriaria</i>	widespread, long, wide pinnate leaved shrub/tree

Apiaceae

<i>Anthriscus sylvestris</i>	scattered
<i>Bupleurum schistosum</i>	Çoruh Valley and Tortum
<i>Chamaesciadium acaule</i>	most high passes
<i>Eryngium campestre</i>	seed heads noted Tortum
<i>Eryngium giganteum</i>	Superb big silvery species only noted in seed near Hamsiköy
<i>Ferula orientalis</i>	Sarıkaş area
<i>Ferula rigidula</i>	Cam Pass
<i>Ferulago</i> sp	scattered
<i>Grammosciadium daucoides</i>	Çoruh Valley
<i>Heracleum antasiaticum</i>	Kafkasör
<i>Heracleum apiifolium</i>	Anzer
<i>Heracleum crenatifolium</i>	frequent Sumela and Hamsiköy
<i>Heracleum platytaenium</i>	Anzer
<i>Laser trilobum</i>	scattered in the north
<i>Malabaila lasiantha</i>	Çoruh Valley below Artvin
<i>Oenanthe fistulosa</i>	Yanbolu
<i>Pastinaca armenum</i>	probably this species near Sarıkamış

<i>Prangos pabularia</i>	Çoruh Valley
<i>Sanicula europaea</i>	Sumela and Hamsiköy
<i>Scaligera tripartita</i>	Sumela
<i>Seseli petraeum</i>	in leaf Macka area
<i>Xanthoglossum purpurascens</i>	Meadows near Ikizdere

Aquifoliaceae

<i>Ilex colchica</i>	Sumela and Kafkasör
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Araliaceae

<i>Hedera colchica</i>	Sumela and Anzer
<i>Hedera helix</i>	Sumela

Asclepiadaceae

<i>Periploca graeca</i>	Yanbolu. Also Çoruh Valley
<i>Trachomitum venetum</i>	Çoruh Valley
<i>Vincetoxicum scandens</i>	dark brown-black swallowwort. Scattered south of Trabzon

Asteraceae

<i>Achillea biebersteiniana</i>	tight yellow corymbs. Çoruh Valley and Tortum
<i>Achillea biserrata</i>	Kafkasör
<i>Achillea latiloba</i>	large yarrow. Valleys below Şavşat
<i>Achillea millefolium</i>	scattered
<i>Antennaria dioica</i>	Zigana Pass and above Hamamlı
<i>Anthemis marschelliana</i> ssp <i>pectinata</i>	golden-yellow daisy, fine-cut soft grey leaves. Kafkasör
<i>Arctium minus</i>	scattered
<i>Bellis perennis</i>	Trabzon area
<i>Bellis sylvestris</i>	Hamsiköy
<i>Centaurea carduiformis</i>	spikey involucre, pink. Çoruh Valley and Tortum
<i>Centaurea cheiranthiifolia</i>	abundant on the Cam Pass
<i>Centaurea dealbata</i>	yellow. Hamsiköy
<i>Centaurea depressa</i>	blue conflower. Between Horasan and Ağrı
<i>Centaurea hypoleuca</i>	pink. Frequent south of Trabzon
<i>Centaurea nigrifimbria</i>	Blue alpine cornflower, black-edged phyllaries. Tortum, Narman
<i>Centaurea pecho</i>	Yanbolu
<i>Centaurea rhizantha</i>	stemless, yellow. Above Hamamlı
<i>Centaurea sessilis</i>	stemless, yellow. Tortum
<i>Centaurea simplicicaulis</i>	pink with filigree foliage, saxatile. Sumela
<i>Centaurea virgata</i>	much-branched, tiny purple blooms. Sumela
<i>Cicerbita racemosa</i>	lilac-blue sowthistle. Anzer
<i>Cichorium intybus</i>	chicory. Widespread
<i>Cirsium arvense</i>	Çoruh Valley
<i>Cirsium echinus</i>	spiny thistle with creamy nodding flowers. Below Şavşat
<i>Cirsium hypoleucum</i>	deep pink thistle of woodland edge, nodding flowers. Anzer

<i>Cirsium obvallatum</i>	Similar to <i>echinus</i> but flowers upright. Anzer
<i>Cnicus benedictus</i>	Tortum
<i>Doronicum oblongifolium</i>	Cam Pass
<i>Doronicum orientale</i>	Zigana
<i>Jurinella moschus pinnatisecta</i>	scattered – Oivit Pass and Zigana
<i>Leucanthemum vulgare</i>	Yanbolu
<i>Mycelis muralis</i>	Hamsiköy
<i>Onopordum acanthium</i>	Impressive, huge thistle with large grey leaves and very large purplish flowers. Çoruh Valley below Artvin
<i>Petasites albus</i>	in seed, Hamsiköy
<i>Reichardia glauca</i>	Yanbolu
<i>Senecio hypochionaceus</i>	saxatile. Anzer
<i>Senecio lorentii</i>	Tortum
<i>Senecio vernalis</i>	frequent in the Çoruh Valley and Tortum
<i>Senecio vulgaris</i>	Anzer
<i>Tanacetum macrophyllum</i>	Fine white flowered species. Anzer
<i>Taraxacum officinale</i>	scattered
<i>Tragopogon crocifolius</i>	Yanbolu. Also near Göle
<i>Tussilago farfara</i>	Narman
<i>Xanthium strumarium</i>	in seed. Barhal

Balsaminaceae

<i>Impatiens noli-tangere</i>	valleys near Ikizdere
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Berberidaceae

<i>Berberis crataegina</i>	widespread
<i>Epimedium pubigerum</i>	in seed. Sumela

Betulaceae

<i>Alnus glutinosa glutinosa</i>	widespread
<i>Betula litvinowii</i>	widespread in high altitude rocky grassland in the Cam Pass area
<i>Betula pendula</i>	scattered at altitude

Boraginaceae

<i>Anchusa arvensis</i>	Aktaş
<i>Anchusa azurea</i>	tall blue 'borage'. Scattered throughout
<i>Anchusa leptophylla</i>	more slender with deeper blue flowers. Çoruh Valley
<i>Anchusa pusillum</i>	Barhal
<i>Arnebia pulchra</i>	prophet flower. Zigana and Ovit Passes
<i>Asperugo procumbens</i>	Anzer
<i>Cerinthe minor</i>	Tortum
<i>Cynoglossum creticum</i>	blue flowers. Tortum
<i>Cynoglossum montanum</i>	reddish flowers, spiny disc-like fruits. Scattered
<i>Echium italicum</i>	Tortum

<i>Echium russicum</i>	beautiful red-flowered species. Cam Pass area, Aktaş, Ardahan etc
<i>Echium vulgare</i>	widespread
<i>Lappula squarrosa</i>	Çoruh Valley
<i>Lithospermum officinale</i>	mountains south of Trabzon
<i>Lithospermum pupureocaeruleum</i>	Macka
<i>Myosotis alpestris</i>	widespread in mountains
<i>Nonea caspica</i>	Tortum
<i>Nonea intermedia</i>	Bulbulen Pass
<i>Nonea macranthera</i>	?above Hamamlı
<i>Nonea pulla</i>	small dark flowered Nonea. Scattered
<i>Nonea pulmonarioides</i>	large dark flowers. Widespread in Camp Pass and Ardahan region
<i>Nonea versicolor</i>	multi-hued flowers. Ovit Pass and Aktaş
<i>Onosma sericea</i>	Çoruh Valley
<i>Paracaryum artvinense</i>	lovely bright rich blue flowers. Scattered in the Çoruh Valley
<i>Rindera cespitosa</i>	above Hamamlı
<i>Rindera lanata</i>	Tortum
<i>Symphytum asperum</i>	widespread, blue flowers
<i>Trachystemon orientale</i>	in seed at Sumela

Brassicaceae

<i>Aethionema arabica</i>	Çoruh Valley
<i>Aethionema cordata</i>	Sarıkaş
<i>Aethionema grandiflorum</i>	between Horasan and Ağrı
<i>Anchonium elichrysifolium</i>	above Hamamlı
<i>Arabis caucasica</i>	scattered
<i>Arabis sagittata</i>	scattered in the north
<i>Arabis turritis</i>	Barhal
<i>Aradopsis thaliana</i>	Barhal Valley
<i>Alyssoides utriculata</i>	in seed at Sumela
<i>Alyssum artvinense</i>	frequent in the dry valleys
<i>Barbaris minor</i>	frequent in damp areas in the north
<i>Boreavia orientalis</i>	between Horasan and Ağrı
<i>Bunias orientalis</i>	Anzer
<i>Capsella bursa-pastoris</i>	scattered
<i>Cardamine impatiens</i>	Hamsiköy
<i>Cardamine raphanifolia</i>	wet areas, scattered
<i>Cardamine tenera</i>	Anzer
<i>Cardamine uliginosa</i>	Narman Pass
<i>Coluteocarpus vesicaria</i>	above Hamamlı
<i>Conringia grandiflora</i>	Tortum
<i>Conringia planifolia</i>	scattered in dry valleys
<i>Crambe orientalis</i>	Tortum
<i>Dentaria bulbifera</i>	in seed at Sumela
<i>Descuraina sophia</i>	scattered at low altitudes
<i>Draba brunnifolia</i>	scattered at altitude

<i>Draba hispida</i>	Zigana Pass
<i>Draba nemorosa</i>	Cam Pass
<i>Draba polytricha</i>	Zigana and Anzer
<i>Draba siliquosa</i>	Zigana Pass
<i>Eruca sativa</i>	Tortum
<i>Erysimum repandum</i>	Tortum – othr Erysimums seen but not identified
<i>Hesperis armena</i>	Anzer
<i>Hesperis buschiniana</i>	?Cam Pass
<i>Hesperis matronalis</i>	Anzer area and Cam Pass
<i>Hesperis steveniana</i>	Sarıkaş
<i>Lepidium vesicarium</i>	between Horasan and Ağrı
<i>Jonthonia clypeola</i>	Tortum
<i>Neslia paniculata</i>	between Horasan and Ağrı
<i>Pachyphragma macrophylla</i>	in seed at Sumea
<i>Raphanus raphanistrum</i>	Sumela
<i>Ricotia aucheri</i>	Çoruh Valley
<i>Sobolewsia clavata</i>	Çoruh and Barhal Valleys
<i>Thlaspi arvense</i>	Tortum
<i>Thlaspi perfoliatum</i>	Anzer

Buxaceae

Buxus sempervirens North facing woods – e.g. below Anzer

Camelliaceae

Thea sinensis Widespread in plantations - Tea

Campanulaceae

<i>Asyneuma lobelioides</i>	?Tortum
<i>Asyneuma linifolium</i>	Barhal
<i>Campanula alliarifolia</i>	tall white species. Lower parts of the Ovit Dag
<i>Campanula aucheri</i>	large blue bell in alpine turf, pale centres. Just starting to flower on the Ovit Pass and the Cam Pass
<i>Campanula betulifolia</i>	the most widespread white saxatile bellflower. Macka and Sumela
<i>Campanula choruhensis</i>	Beautiful. Çoruh Valley
<i>Campanula lactiflora</i>	tall with huge heads of pale lilac to mid-blue flowers – only in bud at this season
<i>Campanula latifolia</i>	tall with large hairy bells. Barhal
<i>Campanula macrochlamys</i>	capitate heads, large bracts. Tortum
<i>Campanula olympica</i>	Tortum & Sarıkamış
<i>Campanula rapunculoides</i>	tall, slender with lilac top purple bells in spikes. Çoruh Valley etc
<i>Campanula seraglio</i>	another white saxatile species, smaller than troegerae. Rocks above Ispir
<i>Campanula sibirica</i>	Rather wiry, species with sparse spikes, flowers generally held Upright. Scattered

Campanula stevenii
Campanula troegerae

Delicate pale blue species on long wiry stems. Alpine turf. Scattered stunning large white pink flushed bells. Large group on rocks across river in Ispir Gorge

Cannabaceae

Cannabis sativa Ayder
Hunulus lupulus Ayder, Sarnavan, etc

Capparaceae

Capparis spinosa dry valleys etc
Cleome steveniana dry valleys e.g. Çoruh and Barhal

Caprifoliaceae

Lonicera iberica Çoruh Valley
Lonicera xylostemum Fly Honeysuckle. Sumela
Sambucus edulis in leaf e.g. Sumela
Sambucus nigra widespread
Viburnum lantana scattered
Viburnum opulus Cam Pass

Caryophyllaceae

Arenaria cucubaloides below Sarıkamış
Arenaria dianthoides Hamamlı
Cerastium armeniacum widespread in higher areas
Cerastium dahuricum Anzar
Cerastium purpurascens scattered at altitude, e.g. Zigana and Narman Passes
Dianthus calocephalus above Ispir on cliffs
Dianthus orientalis above Ispir on cliffs
Gypsophila elegans dry areas such as the Çoruh Valley
Gypsophila nabelekii Cam Pass
Minuartia aizoides widespread in higher areas, particularly Cam Pass area
Minuartia circassica Scattered, similar to *juniperina*, but distinct greyish leaves and broader petals
Minuartia juniperina Fine-leaved tallish species on alpine tundra in the Cam Pass area
Minuartia scleranthus mainly lower altitudes
Moehringia trinervis Sumela
Saponaria prostrata calvertii common in the drier lower valleys
Silene alba Trabzon area
Silene armeria Yanbolu. Magenta flowers in dense broad corymb
Silene bupluroides Tortum and Barhal
Silene cappadocicum Sarıkamış
Silene compacta similar to *armeria*, but this species was common Barhal and Kafkasör
Silene dichotoma Tortum
Silene italica Çoruh Valley

<i>Silene lazica</i>	Anzer
<i>Silene otitis</i>	scattered
<i>Silene spergulifolia</i>	scattered in the lower valleys
<i>Silene vulgaris</i>	widespread in the north
<i>Stellaria nemorum</i>	Sumela
<i>Stellaria persica</i>	scattered in the Laşet area
<i>Vaccaria hispanica</i>	Tortum and on the way to Ağrı

Chenopodiaceae

<i>Chenopodium vulvaria</i>	Çoruh Valley
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Cistaceae

<i>Cistus creticus</i>	northern valleys
<i>Cistus salvifolius</i>	northern valleys
<i>Helianthemum ledifolium</i>	Tortum
<i>Helianthemum nummularium</i>	widespread rockrose

Convolvulaceae

<i>Convolvulus arvensis</i>	Çoruh Valley
<i>Convolvulus lineatus</i>	Tortum
<i>Convolvulus pseudogrammica</i>	Çoruh Valley
<i>Convolvulus stachydifolius</i>	Barhal
<i>Calystegia sylvatica</i>	scattered in scrubby areas, a bindweed

Cornaceae

<i>Cornus mas</i>	scattered throughout
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Corylaceae

<i>Corydalis betulus</i>	Sumela
<i>Carpinus orientalis</i>	common on northern slopes e.g. Sumela
<i>Corylus maxima</i>	northern slopes

Crassulaceae

<i>Sedum pallidum</i>	Anzer
<i>Sedum spurium</i>	Anzer

Cucurbitaceae

<i>Bryonia cretica</i>	scattered in the north
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Dipsacaceae

<i>Dipsacus laciniatus</i>	in seed in the Çoruh Valley
<i>Scabiosa rotata</i>	scattered in lower valleys

Ebenaceae

Diospyros lotus Çoruh Valley near Artvin

Elaeagnaceae

Eleagnus angustifolius widespread

Hippophae rhamnoides Sarnavan

Ephedraceae

Ephedra spp between Horasan and Ağrı

Ericaceae

Arbutus andrachne Sumela

Empetrum nigrum in seed on the Zigana Pass

Erica arborea Yanbolu

Rhododendron caucasicum Higher slopes where often the dominant shrub and in good flower

Rhododendron luteum widespread in stunning flower

Rhododendron ponticum widespread

Vaccinium arctostaphylos Kafkasör

Vaccinium myrtillus scattered

Euphorbiaceae

Andracne telephioides scattered

Euphorbia falcata Anzer

Euphorbia helioscopia Cam Pass

Euphorbia marschalliana Şavşat Valley

Euphorbia oblongifolia Anzer

Euphorbia peplus Sumela

Euphorbia pubescens Hamsiköy

Euphorbia szovitsii probably this species Tortum

Euphorbia virgata scattered

Fabaceae

Astragalus asicocalyx Tortum

Astragalus campylosema Tortum

Astragalus cylindriacus Cam Pass

Astragalus fragrans yellow. Widespread

Astragalus galegiformis below Şavşat

Astragalus lineatus frequent, especially in the north

Astragalus tigridius Tortum

Bituminaria bituminosa Sumela

Ceratonia siliqua Çoruh Valley

Chamaecytisus hirsutus Kafkasör and Şavşat area

Chesneya elegans Tortum

Cicer anatolicum frequent in the Çoruh Valley

<i>Cicer pinnatifidum</i>	Çoruh Valley
<i>Colutea cilicica</i>	Çoruh Valley
<i>Coronilla orientalis</i>	widespread at higher altitudes
<i>Coronilla varia</i>	scattered with pink and yellow forms
<i>Dorycnium hirsutum</i>	Yanbolu
<i>Dorycnium pentaphyllum</i>	Sumela
<i>Galega orientalis</i>	above Artvin
<i>Genista lydia</i>	probably this species Sumela
<i>Hedysarum cappadocicum</i>	Tortum
<i>Hedysarum elegans</i>	Tortum – both these <i>Hedysarums</i> are very beautiful!
<i>Lathyrus aureus</i>	Anzer – not to be confused with <i>Vicia crocea</i> !
<i>Lathyrus brachypterus</i>	Sarıkaş area
<i>Lathyrus cyaneus</i>	scattered in subalpine meadows
<i>Lathyrus laxiflorus</i>	widespread in the north
<i>Lathyrus nissolia</i>	Yanbolu
<i>Lathyrus roseus</i>	scattered, mainly north-facing slopes
<i>Lathyrus rotundifolius</i>	widespread
<i>Lathyrus venetus</i>	common in the north
<i>Lotus corniculatus</i>	widespread
<i>Lotus ornithopodoides</i>	Yanbolu
<i>Lotus suaveolens</i>	probably this species Yanbolu
<i>Medicago sativa</i>	scattered
<i>Melilotus officinalis</i>	widespread
<i>Onobrychis cornuta</i>	Tortum and Narman
<i>Oxytropis lupinoides</i>	Tortum
<i>Pisum sativum</i>	Kafkasör
<i>Psoralea acaulis</i>	scattered
<i>Robinia pseudacacia</i>	widespread, planted
<i>Sophora alopecuroides</i>	scattered in the Çoruh Valley
<i>Trifolium angustifolium</i>	Yanbolu
<i>Trifolium argutum</i>	Sarıkaş area
<i>Trifolium arvense</i>	Çoruh Valley
<i>Trifolium boissieri</i>	Cam Pass
<i>Trifolium campestre</i>	Yanbolu
<i>Trifolium medium</i>	Sumela
<i>Trifolium nigrescens</i>	Yanbolu
<i>Trifolium ochroleucum</i>	scattered in subalpine meadows
<i>Trifolium pratense</i>	widespread
<i>Trifolium repens</i>	scattered
<i>Vicia alpestris</i>	Ovit Pass and Olgunlar
<i>Vicia balansae</i>	Barhal
<i>Vicia canescens</i>	Narman
<i>Vicia cracca</i>	Sumela
<i>Vicia crocea</i>	northern slopes at mid-levels in forest
<i>Vicia grandiflora</i>	Barhal

<i>Vicia hirsuta</i>	Çoruh Valley
<i>Vicia sativa</i>	scattered
<i>Vicia sepium</i>	scattered throughout
<i>Vicia tetrasperma</i>	Yanbolu

Fagaceae

<i>Castanea sativa</i>	widespread in forested areas
<i>Fagus orientalis</i>	common in forest on northern slopes – often dominant
<i>Quercus petraea</i>	locally frequent

Fumariaceae

<i>Corydalis alpestris</i>	handsome lilac-blue species in scree. Cam Pass
<i>Corydalis angustifolius</i>	Cam Pass
<i>Corydalis narinniana</i>	Ovit and Cam Passes

Gentianaceae

<i>Centaurea erythraea</i>	Yanbolu
<i>Gentiana cruciata</i>	leaves Zigana etc
<i>Gentiana pyrenaica</i>	small purple species – Zigana and Ovit Passes
<i>Gentiana verna pontica</i>	scattered, deep blue
<i>Swertia iberica</i>	leaves only – Ovit Pass

Geraniaceae

<i>Erodium cicutarium</i>	scattered
<i>Geranium asphodeloides</i>	widespread
<i>Geranium cinereum</i>	subspecies <i>palmipartitum</i> . Beautiful. Above Ispir
<i>Geranium columbinum</i>	Çoruh Valley
<i>Geranium palustris</i>	Barhal
<i>Geranium psilostemon</i>	tall, deep magenta with black-eye – Anzer and valleys below
<i>Geranium pratense</i>	Narman
<i>Geranium purpureum</i>	Sumela
<i>Geranium pusillum</i>	scattered
<i>Geranium pyrenaicum</i>	scattered
<i>Geranium robertianum</i>	widespread in north
<i>Geranium stepporum</i>	Çoruh Valley
<i>Geranium sylvaticum</i>	scattered
<i>Pelargonium endlicherianum</i>	near Yusufeli

Globulariaceae

<i>Globularia trichisantha</i>	Tortum
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Grossulariaceae

<i>Ribes alpinum</i>	Sarnavan
<i>Ribes orientalis</i>	Widespread

Hypericaceae

<i>Hypericum androsaemum</i>	Sumela
<i>Hypericum bupleuroides</i>	in bud. Yanbolu
<i>Hypericum orientale</i>	Anzer
<i>Hypericum scabrum</i>	Corymbs of golden flowers, frequent in drier areas
<i>Hypericum perforatum</i>	scattered

Juglandaceae

<i>Juglans regia</i>	widespread orchard tree
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Lamiaceae

<i>Acinos rotundifolius</i>	between Horasan and Ağrı
<i>Ajuga chamaepitys</i>	Zigana
<i>Ajuga genevensis</i>	Cam Pass
<i>Ajuga orientalis</i>	widespread
<i>Ajuga reptans</i>	Aktaş
<i>Lamium album</i>	widespread
<i>Lamium galactophyllum</i>	Tortum
<i>Lamium gundelsheimeri</i>	Sumela and Çoruh Valley
<i>Lallemantia iberica</i>	between Horasan and Ağrı
<i>Lallemantia peltata</i>	Sarıkamuş area
<i>Mentha longifolia</i>	Çoruh Valley near Artvin
<i>Marrubium parviflorum</i>	Tortum
<i>Nepeta betonicifolia</i>	Aktaş
<i>Nepeta fissa</i>	Çoruh Valley
<i>Nepeta racemosa</i>	Sarıkamuş area
<i>Origanum rotundifolium</i>	large creamy bracts. Tortum
<i>Phlomis armeniaca</i>	Çoruh Valley
<i>Phlomis russeliana</i>	common south of Trabzon
<i>Prunella vulgaris</i>	Anzer
<i>Salvia aethiopsis</i>	Çoruh Valley
<i>Salvia forskahlei</i>	above Ispir
<i>Salvia huberi</i>	Tortum
<i>Salvia hydrangea</i>	Çoruh Valley
<i>Salvia limbata</i>	above Ispir
<i>Salvia nemorosa</i>	scattered
<i>Salvia pachystachys</i>	large white flowers. Mat-forming. between Horasan and Ağrı
<i>Salvia pilifera</i>	Çoruh Valley below Artvin
<i>Salvia pocolata</i>	Çoruh Valley
<i>Salvia rosifolia</i>	beautiful species. Tortum
<i>Salvia sclarea</i>	whitish with sticky pungent leaves. Below Şavşat
<i>Salvia stamineus</i>	frequent in Ardahan and Sarıkamuş area
<i>Salvia verbenacea</i>	Tortum
<i>Salvia verticillata</i>	widespread

<i>Scutellaria albida</i>	small white flowers on spikes. Barhal
<i>Scutellaria orientalis</i>	Çoruh Valley
<i>Stachys annua</i>	scattered
<i>Stachys atherocalyx</i>	Sumela, Hamsiköy etc
<i>Stachys laetivirens</i>	above Ispir
<i>Stachys lavanduliflora</i>	Sarıkaşım area
<i>Stachys macrantha</i>	loose heads of long-tubed pink flowers – mid altitudes
<i>Stachys sylvatica</i>	Sumela
<i>Teucrium chamaedrys</i>	Çoruh Valley
<i>Teucrium orientale</i>	Pretty blue species. Above Ispir
<i>Teucrium polium</i>	Çoruh Valley
<i>Wiedemanni multifidus</i>	between Horasan and Ağrı
<i>Ziziphora capitata</i>	Çoruh Valley
<i>Ziziphora tenuior</i>	Çoruh Valley

Linaceae

<i>Linum austriacum</i>	large blue-flowered flax. Tortum
<i>Linum bienne</i>	small blue-flowered flax. Yanbolu
<i>Linum catharticum</i>	tiny white-flowered flax. Anzer Yayla
<i>Linum mucronatum</i>	yellow-flowered flax. Tortum
<i>Linum pycnocephalum</i>	medium-sized white-flowered flax. Sarıkaşım area

Loranthaceae

<i>Viscum album</i>	subspecies <i>austriacum</i> near Artvin and subspecies <i>abietinus</i> on pines at Kafkasör
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Lythraceae

<i>Lythrum salicaria</i>	Barhal
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Malvaceae

<i>Alcea calvetii</i>	Çoruh Valley
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Monotropaceae

<i>Monotropa hypopithys</i>	pale yellow saprophyte – yellow bird's nest. Cam Pass
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Moraceae

<i>Morus alba</i>	dry areas, e.g. Çoruh Valley
<i>Ficus carica</i>	widely planted

Morinaceae

<i>Morina persica</i>	leaves only - Tortum
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Oleaceae

<i>Fraxinus excelsior</i>	scattered in damper situations
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<i>Laurus nobilis</i>	Yanbolu
<i>Onagraceae</i>	
<i>Epilobium hirsutum</i>	Kafkasör
<i>Epilobium montanum</i>	Kafkasör
<i>Orobanchaceae</i>	
<i>Orobanche</i> sp	on <i>Rubus</i> . Sumela
<i>Orobanche pubescens</i>	Anzer
<i>Phelypaea tournefortii</i>	a very nice population above Ispir. Also between Horasan and Ağrı
<i>Oxalidaceae</i>	
<i>Oxalis acetosella</i>	Hamsiköy area
<i>Oxalis corniculata</i>	Yanbolu
<i>Papaveraceae</i>	
<i>Papaver fugax</i>	Smallish pale orange flowers en route to Ispir
<i>Papaver lateritium</i>	fine orange flowered species. Zigana and Ovit Passes
<i>Papaver paucifoliatum</i>	Sarıkaş
<i>Papaver rhoeas</i>	between Horasan and Ağrı
<i>Glaucium corniculatum</i>	Çoruh and Barhal Valleys
<i>Glaucium grandiflorum</i>	between Horasan and Ağrı
<i>Chelidonium majus</i>	frequent in north
<i>Paeoniaceae</i>	
<i>Paeonia mascula</i>	some wonderful populations found this year – between the Ovi Pass and Ispir and above Olgunlar
<i>Paeonia wittmanniana</i>	stunning palest yellow goblets above Laşet
<i>Parnassiaceae</i>	
<i>Parnassia palustris</i>	Widespread
<i>Phytolaccaceae</i>	
<i>Phytolacca americana</i>	scattered alien – not flowering at this season
<i>Plantaginaceae</i>	
<i>Plantago lanceolata</i>	widespread
<i>Plantago major</i>	widespread
<i>Plumbaginaceae</i>	
<i>Acantholimon</i> spp	scattered – not in flower
<i>Plumbago europaea</i>	Tortum

Polygalaceae

<i>Polygala alpicola</i>	Zigana Pass
<i>Polygala major</i>	Sumela
<i>Polygala papillionacea</i>	scattered
<i>Polygala supina</i>	Zigana Pass and above Hamamlı
<i>Polygala vulgaris</i>	Anzer Yayla

Polygonaceae

<i>Atraphaxis billardieri</i>	rather pretty little shrub – not at all dock-like! Çoruh Valley
<i>Rumex alpinus</i>	Anzer
<i>Rumex crispus</i>	Anzar Yayla
<i>Rumex scutatus</i>	Scattered

Primulaceae

<i>Anagallis arvensis</i>	scattered in the north
<i>Androsace albana</i>	Zigana Pass
<i>Androsace armeniaca</i>	Cam Pass
<i>Androsace intermedia</i>	above Hamamlı
<i>Androsace villosa</i>	above Hamamlı
<i>Cyclamen parviflorum</i>	var. <i>parviflorum</i> . Zigana, Ovit etc
<i>Primula algida</i>	smaller in stature than <i>auriculata</i> with short calyx. Ovit Pass
<i>Primula auriculata</i>	widespread in mountains
<i>Primula elatior meyeri</i>	handsome deep pink species, rosettes of crinkled leaves, loose heads. Ovit Pass
<i>Primula elatior pallasii</i>	large rather round heads of creamy-yellow flowers. Common in Cam Pass and Sarıkamış region
<i>Primula veris columnnae</i>	frequent in the mountains south of Trabzon
<i>Primula veris macrocalyx</i>	very common in the mountains west of Artvin, also on the Cam Pass
<i>Primula vulgaris</i>	lower parts of the Zigana Pass

Punicaceae

<i>Punica granatum</i>	orchards
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Pyrolaceae

<i>Moneses uniflora</i>	Hamsiköy area
<i>Pyrola minor</i>	Hamsiköy

Resedaceae

<i>Reseda luteola</i>	Sumela
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Ranunculaceae

<i>Adonis aestivalis</i>	frequent east of the Çoruh Valley
<i>Adonis annua</i>	Tortum
<i>Adonis eriocalycina</i>	Tortum

<i>Adonis flammea</i>	Kura Valley
<i>Anemone blanda</i>	Zigana Pass
<i>Anemone narcissiflora</i>	widespread at altitude
<i>Aquilegia olympica</i>	widespread, mostly in the north
<i>Caltha polypetala</i>	widespread at altitude
<i>Clematis vitalba</i>	Yanbolu
<i>Consolida orientalis</i>	mainly Çoruh Valley
<i>Helleborus orientalis</i>	frequent in the north
<i>Pulsatilla albana</i>	Cam Pass
<i>Ranunculus arvensis</i>	Çoruh Valley
<i>Ranunculus brutii</i>	Anzar
<i>Ranunculus buhsei</i>	frequent in the Şavşat and Cam Pass areas
<i>Ranunculus cappadocicum</i>	frequent in woodlands in the Trabzon area
<i>Ranunculus caucasicus</i>	Zigana Pass
<i>Ranunculus cuneatus</i>	Came Pass
<i>Ranunculus constantinopolitanus</i>	frequent in the Şavşat and Cam areas
<i>Ranunculus dissectus</i>	Zigana Pass
<i>Ranunculus fenzlii</i>	Sarıkamış
<i>Ranunculus grandiflorus</i>	Narman Pass
<i>Ranunculus marginalis</i>	Yanbolu
<i>Ranunculus oreophilus</i>	Cam Pass
<i>Ranunculus polyanthemos</i>	frequent in meadows in Trabzon area
<i>Ranunculus rionii</i>	tin-flowered water-crowfoot near Göle
<i>Ranunculus strigosus</i>	near the hotel at Sarıkamış
<i>Ranunculus tempskyanus</i>	Zigana Pass
<i>Thalictrum minus</i>	scattered
<i>Trollius ranunculinus</i>	widespread at altitude

Rhamnaceae

<i>Frangula alnus</i>	Sumela
<i>Rhamnus alaternus</i>	Anzer
<i>Rhamnus imeritanus</i>	Laşet
<i>Rhamnus pallasii</i>	Tortum
<i>Ziziphus lotus</i>	dry valleys

Rosaceae

<i>Aremonia Ağriminoides</i>	Tortum
<i>Alchemilla spp</i>	Various <i>Alchemilla</i> were seen, many of which would have formerly been ascribable to <i>mollis</i> , but splitting has taken it's toll!
<i>Aruncus dioicus</i>	widespread in damper areas
<i>Cotoneaster nummularia</i>	scattered
<i>Cotoneaster integerrimus</i>	Çoruh Valley
<i>Crataegus monogyna</i>	widespread
<i>Filipendula ulmaria</i>	in leaf – Sarıkamış
<i>Filipendula vulgaris</i>	Kafkasör

<i>Fragaria vesca</i>	Widespread
<i>Geum coccineum</i>	bright orange! Anzer
<i>Geum rivale</i>	Sumela
<i>Geum urbanum</i>	scattered in the north
<i>Mespilus germanica</i>	Medlar. Yanbolu
<i>Poterium muricata</i>	scattered
<i>Potentilla crantzii</i>	Zigana Pass
<i>Potentilla erecta</i>	Ovit Pass
<i>Potentilla micrantha</i>	Sumela
<i>Potentilla rupestris</i>	Anzer
<i>Prunus avium</i>	Hamsiköy
<i>Prunus spinosa</i>	Anzer
<i>Pyracantha coccinea</i>	Sumela
<i>Pyrus salicifolia</i>	Taskiran
<i>Rosa canina</i>	widespread
<i>Rosa pimpinellifolia</i>	scattered throughout
<i>Rubus idaeus</i>	in leaf. Sarıkamış
<i>Rubus caucasicus</i> agg.	Sumela
<i>Sanuisorba officinalis</i>	Reddish flowers, Barhal
<i>Sibbaldia parviflora</i>	widespread in mountains
<i>Spiraea crenata</i>	Cam Pass
<i>Sorbus aucuparia</i>	Cam Pass
<i>Sorbus torminalis</i>	Sumela

Rubiaceae

<i>Asperula armenum</i>	Tortum
<i>Asperula orientalis</i>	Çoruh Valley
<i>Asperula setosa</i>	Tortum
<i>Asperula taurica</i>	frequent south of Trabzon
<i>Cruciata laevipes</i>	Zigana
<i>Galium aparine</i>	Sumela
<i>Galium cruciata</i>	Hamsiköy
<i>Galium odoratum</i>	Sumela
<i>Galium rotundifolium</i>	Anzer
<i>Sherardia arvensis</i>	Sumela

Rutaceae

<i>Dictamnus albus</i>	Sumela and Hamsiköy
<i>Haplophyllum armenum</i>	Çoruh Valley
<i>Haplophyllum telephioides</i>	in bud above Hamamlı

Salicaceae

<i>Populus tremula</i>	common and widespread
<i>Populus uzbekistana</i> cf <i>afghanica</i>	widely planted upright tree

Salix alba scattered
Salix caprea scattered

Santalaceae

Thesium spp noted

Saxifragaceae

Saxifraga cymbalaria widespread little yellow species, ivy-like leaves
Saxifraga exarata Cam Pass
Saxifraga paniculata widespread, common on rocks, encrusted leaves
Saxifraga rotundifolia scattered, round, hairy leaves
Saxifraga sibirica Cam Pass

Scrophulariaceae

Bunaea trifida Tortum
Euphrasia rostkoviana Zigana Pass
Linaria armeniaca Çoruh Valley & Tortum
Linaria corifolia Çoruh Valley & Tortum
Linaria genistifolia scattered to the east, e.g. Aktaş, Göle etc
Melampyrum arvense Çoruh Valley
Parentucellia latifolia Zigana – the yellow form here
Parentucellia viscosa bartsia with yellow flowers - Yanbolu
Pedicularis atropurpurea Largely over, tall spikes dark flowers, Ovit Dag
Pedicularis caucasica white flowers, low growing. Widespread at high altitudes
Pedicularis comosa tall white/cream species. Widespread
Pedicularis condensata dense heads of creamy flowers. Zigana and Ovit Passes
Pedicularis pontica small pink lousewort. Zigana Pass
Pedicularis wilhemlsiana leafy heads with tiny yellow and maroon flowers. Widespread at altitude

Rhinanthus angustifolius widespread and common
Rhyncocorys orientalis Şavşat area
Rhyncocorys stricta Sumela
Scrophularia chrysantha distinctive yellow figwort. Ovit and Cam Passes
Scrophularia ilwensis widely scattered
Scrophularia kotschyana orange flowers. Cam Pass
Scrophularia olympica Anzer
Scrophularia peregrina Yanbolu
Verbascum phoeniceum above Ispir
Veronica anagallis-aquatica Anzer
Veronica beccabunga Anzer
Veronica gentianoides relatively large flowers in spikes. Widespread
Veronica officinalis Sumela
Veronica peduncularis widespread
Veronica persica Yanbolu

Veronica serpyllifolia

Anzer

Simaroubaceae

Ailanthus altissima

Barhal

Solanaceae

Atropa belladonna

scattered - Sumela, below Ovit Pass etc

Hyoscyamus niger

scattered throughout

Hyoscyamus reticulatus

Tortum and between Horasan and Ağrı

Physalis ahlkengi

Çoruh Valley

Solanum nigrum

Çoruh Valley below Artvin

Staphyleaceae

Staphylea pinnata

forests in north, e.g. Sumela

Tamaricaceae

Myricaria germanica

Tortum

Tamarix smyrniensis

frequent along the Çoruh and tributaries

Thymelaeaceae

Daphne glomerata

widespread

Daphne mezereum

Ovit Pass

Daphne pontica

Hamsiköy area

Tiliaceae

Tilia platyphylla

northern forests where frequent at lower altitudes

Tilia rubra

Sumela

Ulmaceae

Ulmus glabra

Sumela

Ulmus minor

probably this species, also at Sumela

Urticaceae

Urtica dioica

widespread

Parietaria judaica

rocks and cliffs e.g. Sumela

Valerianaceae

Centranthus longifolius

scattered in the lower valleys

Valeriana alliarifolia

large triangular leaves, huge corymbs of flowers. Widespread

Valeriana leucophaea

scattered at high altitudes east of Şavşat

Violaceae

Viola alba

Anzer

Viola altaica

Zigana and common Cam Pass

<i>Viola arvensis</i>	scattered
<i>Viola odorata</i>	Cam Pass
<i>Viola sieheana</i>	scattered
<i>Viola tricolor</i>	Cam Pass

Vitaceae

<i>Vitis vinifera</i>	Grapevine. Widespread
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Zygophyllaceae

<i>Peganum harmala</i>	Tortum
<i>Tribulus terrestris</i>	Sumela

Dioscoreaceae

<i>Tamus communis</i>	scattered
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Cyperaceae

<i>Carex pallescens</i>	mountains south of Trabzon
<i>Carex pendula</i>	mountains south of Trabzon

Iridaceae

<i>Gladiolus kotschyanus</i>	scattered
<i>Iris aphylla</i>	aka <i>furcata</i> . Nice population of this little purple iris to the east of Ardahan
<i>Iris iberica elegantissima</i>	wonderful population between Horasan and Ağrı
<i>Iris caucasica</i>	scattered through the mountains
<i>Iris sibirica</i>	Aktaş
<i>Iris spuria musulmanica</i>	seen from the bus as we drove into Ağrı!
<i>Iris taochia</i>	fantastic mixed colour populations on the road up to Narman

Juncaginaceae

<i>Triglochin maritima</i>	Aktaş
<i>Triglochin palustris</i>	Sarıkamış area

Liliaceae

<i>Allium decipiens</i>	Çoruh Valley & Barhal
<i>Allium scorodoprasum</i>	Çoruh Valley below Artvin
<i>Asparagus officinalis</i>	Sumela
<i>Bellevalia forniculata</i>	fantastic sky-blue species. Common Sarıkamış
<i>Bellevalia paradoxa</i>	frequent in the Cam Pass and Sarıkamış areas
<i>Bellevalia pycnantha</i>	locally common Sarıkamış area. Many Turkish botanists place these two under the same species but <i>pycnantha</i> is always robust and grows typically in flat inundated areas, whereas <i>paradoxa</i> is few flowered and grows on rather dry alpine turf
<i>Colchicum szovitsii</i>	Bulbulen Pass

<i>Eremurus spectabilis</i>	roadside rocks above Ispir
<i>Fritillaria armena</i>	variable and common above Hamamlı
<i>Fritillaria caucasica</i>	Ovit Pass
<i>Fritillaria latifolia</i>	Ovit Pass and Cam Pass
<i>Gagea fistulosqa</i>	widespread
<i>Gagea glacialis</i>	Ovit Dag
<i>Gagea taurica</i>	glaucous five-angled hard leaves, pointed tepals. Bulbulen Pass
<i>Lilium ciliatum</i>	Sumela
<i>Lloydia serotina</i>	first found in Turkey at this site on the Cam Pass a few years ago and a good population there still
<i>Merendera trigyna</i>	Bulbulen Pass
<i>Muscari armeniacum</i>	widespread
<i>Muscari aucheri</i>	frequent in the mountains
<i>Muscari caucasasicum</i>	Çoruh Valley and Sarıkamış area
<i>Muscari tenuifolium</i>	Yanbolu
<i>Ornithogalum alpigenum</i>	Tortum
<i>Ornithogalum oligophyllum</i>	widespread in the mountains
<i>Ornithogalum schelkownikovii</i>	Tortum and in Çoruh Valley below Artvin
<i>Ornithogalum umbellatum</i>	scattered south of Trabzon
<i>Paris incompleta</i>	in fruit at Laşet
<i>Polygonatum multiflorum</i>	widely scattered
<i>Polygonatum orientale</i>	lower parts of the Ovit Pass
<i>Polygonatum verticillatum</i>	Cam Pass
<i>Ruscus aculeatus</i>	Sumela
<i>Ruscus colchicus</i>	Sumela
<i>Scilla monanthos</i>	scattered in the Cam Pass, Bulbulen areas
<i>Scilla rosenii</i>	stunning. Forms drifts on the alpine turf of the Cam Pass, and other high areas in the Ardahan region
<i>Scilla sibirica armena</i>	Ovit Pass
<i>Scilla winogradowii</i>	Ovit Pass
<i>Smilax excelsa</i>	Sumela and Yanbolu
<i>Veratrum album</i>	Scattered, large ribbed leaves – no flowers yet!

Orchidaceae

<i>Anacamptis pyramidalis</i>	Pyramidal Orchid. in bud Sumela
<i>Cephalanthera damasonium</i>	White Helleborine. Widely scattered
<i>Cephalanthera longifolia</i>	Sword-leaved Helleborine. Anzer
<i>Cephalanthera rubra</i>	Red Helleborine. Kafkasör
<i>Coeloglossum viride</i>	Frog Orchid. Kafkasör and also Cam Pass and above Hamamlı
<i>Corallorhiza trifida</i>	Cam Pass
<i>Dactylorhiza incarnata</i>	Early Marsh Orchid. Just 1 – near Sarıkamış.
<i>Dactylorhiza euxina</i>	Ovit Pass and Olgunlar. The very heavily spotted Markowitsii form also seen on the Ovit Pass
<i>Dactylorhiza flavescens</i>	Georgian Orchid. Yellow. Locally common
<i>Dactylorhiza osmanica</i>	common in the Laşet, Ardahan and Sarıkamış region

<i>Dactylorhiza saccifera</i>	frequent in wet flushes south of Trabzon and Kafkasor
<i>Dactylorhiza umbrosa</i>	widespread, particularly in the east
<i>Dactylorhiza urvilleana</i>	slender. Widespread
<i>Epipactis helleborine</i>	Broad-leaved Helleborine. In bud. Kafkasör
<i>Epipactis pontica</i>	above Artvin
<i>Epipactis veratrifolia</i>	Eastern Chatterbox Orchid. Çoruh Valley below Artvin
<i>Gymnadenia conopsea</i>	Fragrant Orchid. Kafkasör
<i>Listera ovata</i>	Twayblade. Scattered on meadow-edge throughout
<i>Neottia nidus-avis</i>	Birds-nest Orchid. Scattered in woodland throughout
<i>Ophrys apifera</i>	Bee Orchid. Macka
<i>Ophrys caucasica</i>	frequent Macka and Hamsiköy
<i>Ophrys cornuta (oestriifera)</i>	scattered Macka and Hamsiköy
<i>Orchis coriophora</i>	Bug Orchid. Frequent on the Cam Pass and east and south of there
<i>Orchis mascula pinetorum</i>	Early Purple (Pinewood) Orchid. Widely scattered
<i>Orchis pallens</i>	yellow. Widely scattered, usually in woodland
<i>Orchis picta</i>	Kafkasör
<i>Orchis stevenii</i>	Steven's Orchid. A robust and elegant orchid. We found a good number in the vicinity of Hamsiköy
<i>Orchis tridentata</i>	Toothed Orchid. Hamsiköy
<i>Platanthera chlorantha</i>	Greater Butterfly Orchid. Scattered
<i>Serapias fledwegiana</i>	Yanbolu where numerous and also noted Kafkasör
<i>Steniella satyroides</i>	Hooded Orchid. Hamsiköy area

Systematic List Number 2 Birds

The taxonomy and order of the following list largely follows Voous (1977, List of Recent Holarctic Bird Species). An indication of frequency of sightings is given by the number of days out of 12 a species was seen on – thus 4/12 means a species was noted on four days during the holiday. As we arrived after dark on the first day and departed after breakfast on the last day these (Day 1 and 14 on the daily reports) are not included for this purpose.

Great Crested Grebe	<i>Podiceps cristatus</i>	several at Aktaş
Red-necked Grebe	<i>Podiceps grisegena</i>	lake between Göle and Kars
Cormorant	<i>Phalacrocorax carbo</i>	Black Sea and Aktaş
White Pelican	<i>Pelecanus onocrotalus</i>	breeding colonies on Aktaş
Dalmatian Pelican	<i>Pelecanus crispus</i>	breeding colonies on Aktaş
Night Heron	<i>Nycticorax nycticorax</i>	1 at Aktaş
Little Egret	<i>Egretta garzetta</i>	scattered. 4/12
Grey Heron	<i>Ardea cinerea</i>	Aktaş
White Stork	<i>Ciconia ciconia</i>	Not uncommon around Ardahan with several occupied nests seen. 3/12
Greylag Goose	<i>Anser anser</i>	Aktaş
Ruddy Shelduck	<i>Tadorna ferruginea</i>	Common in the Ardahan area with up to 100 daily. 4/12
Mallard	<i>Anas platyrhynchos</i>	Scattered. 3/12
Tufted Duck	<i>Aythya fuligula</i>	Aktaş
Honey Buzzard	<i>Pernis apivorus</i>	1 over the Cam Pass
Black Kite	<i>Milvus migrans</i>	scattered. 3/12
Lammergeier	<i>Gypaetus barbatus</i>	scattered. 3/12
Egyptian Vulture	<i>Neophron percnopterus</i>	1 near Sarıkamış
Griffon Vulture	<i>Gyps fulvus</i>	1 over Bulbulen Pass
Black Vulture	<i>Aegypius monachus</i>	1 between Ardahan and Cildir
Short-toed Eagle	<i>Circaetus gallicus</i>	1 near Sarıkamış
Marsh Harrier	<i>Circus aeruginosus</i>	scattered. 3/12
Montagu's Harrier	<i>Circus pygargus</i>	a male at Aktaş
Sparrowhawk	<i>Accipiter nisus</i>	singles twice in the Cam and Ardahan areas. 2/12
Common Buzzard	<i>Buteo buteo</i>	widespread and common. 12/12
Long-legged Buzzard	<i>Buteo rufinus</i>	Common around Ardahan and in the Çoruh Valley. 8/12
Lesser Spotted Eagle	<i>Aquila pomarina</i>	frequent in forests around Ardahan, Göle and Sarıkamış. 5/12
Imperial Eagle	<i>Aquila heliaca</i>	1 between Ardahan and Göle, 2 near Aktaş. 2/12
Golden Eagle	<i>Aquila chrysaetos</i>	2 Narman Pass, 2 Olgunlar and 1 between Sarıkamış and Ağrı. 3/12
Common Kestrel	<i>Falco tinnunculus</i>	scattered. 10/12

Hobby	<i>Falco subbuteo</i>	noted in the Ardahan area. 3/12
Lanner	<i>Falco biarmicus</i>	1 Aktaş
Quail	<i>Coturnix coturnix</i>	2 Aktaş and 1 near Sarıkamış. 2/12
Coot	<i>Fulica atra</i>	lakes and wetlands Ardahan. 2/12
Lapwing	<i>Vanellus vanellus</i>	1 near Göle
Black-tailed Godwit	<i>Limosa limosa</i>	1 Aktaş
Common Redshank	<i>Tringa totanus</i>	near Ağrı
Yellow-legged Herring Gull	<i>Larus argentatus cachinnans</i>	along the Black Sea Coast
Armenian Gull	<i>Larus argentatus armenicus</i>	common in the Ardahan area. 4/12
Rock Dove	<i>Columba livia</i>	widespread and common – wild birds too. 12/12
Woodpigeon	<i>Columba palumbus</i>	Sarıkamış area. 2/12
Collared Dove	<i>Streptopelia decaocto</i>	scattered. 6/12
Cuckoo	<i>Cuculus canorus</i>	heard almost daily, seen occasionally
Scops Owl	<i>Otus scops</i>	heard from Laşet
Eagle Owl	<i>Bubo bubo</i>	some met one in the woods above Hamamlı
Common Swift	<i>Apus apus</i>	scattered in Ardahan area. 5/12
Alpine Swift	<i>Apus melba</i>	scattered. 3/12
European Bee-eater	<i>Merops apiaster</i>	locally quite common especially near Ardahan. 4/12
Roller	<i>Coracias garrulus</i>	mainly Çoruh Valley. 2/12
Hoopoe	<i>Upupa epops</i>	scattered. 3/12
Great Spotted Woodpecker	<i>Dendrocopos major</i>	mostly around Laşet and the Cam Pass. 3/12
Middle Spotted Woodpecker	<i>Dendrocopos medius</i>	1 Barhal
Bimaculated Lark	<i>Melanocorypha bimaculata</i>	frequent in the eastern highlands. 3/12
Skylark	<i>Alauda arvensis</i>	scattered. 6/12
Shore Lark	<i>Eremophila alpestris</i>	widespread at alpine levels. 6/12
Sand Martin	<i>Riparia riparia</i>	scattered in Ardahan and Göle areas. 2/12
Crag Martin	<i>Ptyonoprogne rupestris</i>	widespread and common. 12/12
Swallow	<i>Hirundo rustica</i>	widespread in low numbers. 12/12
House Martin	<i>Delichon urbica</i>	widespread. 10/12
Tawny Pipit	<i>Anthus campestris</i>	Sarıkamış
Tree Pipit	<i>Anthus trivialis</i>	Scattered. 2/12
Water Pipit	<i>Anthus spinoletta</i>	widespread at alpine levels. 7/12
Black-headed Wagtail	<i>Motacilla (flava) feldegg</i>	noted daily in the Ardahan area. 4/12
Grey Wagtail	<i>Motacilla cinerea</i>	widespread. 12/12
White Wagtail	<i>Motacilla alba</i>	widespread. 12/12
Dipper	<i>Cinclus cinclus</i>	noted along most white waters. 3/12
Wren	<i>Troglodytes troglodytes</i>	scattered. 3/12
Alpine Accentor	<i>Prunella collaris</i>	Ovit Dagi Pass and Anzer. 2/12
Robin	<i>Erithacus rubecula</i>	scattered. 2/12
Nightingale	<i>Luscinia megarhynchos</i>	heard
Black Redstart	<i>Phoenicurus ochruros</i>	frequent. 8/12

Common Redstart	<i>Phoenicurus phoenicurus</i>	race 'samamisticus' in Şavşat and Laşet area. 3/12
Whinchat	<i>Saxicola rubetra</i>	scattered. 2/12
Stonechat	<i>Saxicola torquata</i>	scattered. 3/12
Isabelline Wheatear	<i>Oenanthe isabellina</i>	mainly Sarıkamış area. 3/12
Northern Wheatear	<i>Oenanthe oenanthe</i>	locally common. 8/12
Black-eared Wheatear	<i>Oenanthe hispanica</i>	Tortum
Rock Thrush	<i>Monticola saxatilis</i>	scattered. 2/12
Blue Rock Thrush	<i>Monticola solitarius</i>	mainly Çoruh Valley. 2/12
Ring Ouzel	<i>Turdus torquatus</i>	1 on the Zigana Pass
Blackbird	<i>Turdus merula</i>	widespread and common. 10/12
Mistle Thrush	<i>Turdus viscivorus</i>	scattered. 3/12
Cetti's Warbler	<i>Cettia cetti</i>	mostly heard
Marsh Warbler	<i>Acrocephalus palustris</i>	1 Çoruh Valley
Great Reed Warbler	<i>Acrocephalus arundinaceus</i>	heard in the Çoruh Valley
Orphean Warbler	<i>Sylvia hortensis</i>	heard Kafkasör
Lesser Whitethroat	<i>Sylvia curruca</i>	locally common. 6/12
Common Whitethroat	<i>Sylvia communis</i>	mainly Laşet and Ardahan area. 3/12
Garden Warbler	<i>Sylvia borin</i>	heard Sumela
Blackcap	<i>Sylvia atricapilla</i>	Sumela
Green (ish) Warbler	<i>Phylloscopus trochiloides nitidus</i>	heard frequently in the Trabzon area, also Cam Pass
Mountain Chiffchaff	<i>Phylloscopus sindianus</i>	singles on the Cam Pass and Sarıkamış. 2/12
Spotted Flycatcher	<i>Muscicapa striata</i>	1 on the Ovit Pass
Semi-collared Flycatcher	<i>Ficedula semitorquata</i>	a male on the Ovit Pass
Coal Tit	<i>Parus ater</i>	scattered. 2/12
Blue Tit	<i>Parus caeruleus</i>	Hamsiköy
Great Tit	<i>Parus major</i>	widely scattered. 5/12
Nuthatch	<i>Sitta europaea</i>	Sarıkamış
Golden Oriole	<i>Oriolus oriolus</i>	seen in the Çoruh Valley, heard elsewhere
Red-backed Shrike	<i>Lanius collurio</i>	widespread. 7/12
Jay	<i>Garrulus glandarius</i>	widespread 10/12
Magpie	<i>Pica pica</i>	widespread. 10/12
Alpine Chough	<i>Pyrrhocorax graculus</i>	only above Olgunlar
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Ovit Pass and Anzer. 2/12
Jackdaw	<i>Corvus monedula</i>	widespread. 10/12
Hooded Crow	<i>Corvus (corone) cornix</i>	widespread and common. 12/12
Raven	<i>Corvus corax</i>	widespread. 11/12
Starling	<i>Sturnus vulgaris</i>	Common around Ardahan & Sarıkamış – absent elsewhere. 5/12
Rose-coloured Starling	<i>Sturnus roseus</i>	Ardahan and Aktaş. 2/12
House Sparrow	<i>Passer domesticus</i>	widespread near habitation. 9/12
Spanish Sparrow	<i>Passer hispaniolensis</i>	between Horasan and Ağrı
Tree Sparrow	<i>Passer montanus</i>	scattered. 4/12

Rock Sparrow	<i>Petronia petronia</i>	between Horasan and Ağrı
Snow Finch	<i>Montifringilla nivalis</i>	Seen on the Ovit Dagi Pass and quite common on the Bulbulen Pass. 2/12
Chaffinch	<i>Fringilla coelebs</i>	locally common. 6/12
Red-fronted Serin	<i>Serinus pusillus</i>	Zigana Pass and Ovit Pass. 2/12
Serin	<i>Serinus serinus</i>	scattered. 3/12
Goldfinch	<i>Carduelis carduelis</i>	scattered. 6/12
Siskin	<i>Carduelis spinus</i>	1 Laşet
Linnet	<i>Carduelis cannabina</i>	mostly in Ardahan area. 5/12
Twite	<i>Carduelis flavirostris</i>	scattered in alpine areas. 3/12
Common Crossbill	<i>Loxia curvirostra</i>	frequent in Laşet and Sarıkamış areas. 4/12
Common Rosefinch	<i>Carpodacus erythrinus</i>	locally common. 9/12
Rock Bunting	<i>Emberiza cia</i>	scattered throughout. 5/12
Ortolan Bunting	<i>Emberiza hortulana</i>	between Horasan and Ağrı
Black-headed Bunting	<i>Emberiza melanocephala</i>	only noted in the Çoruh Valley
Corn Bunting	<i>Miliaria calandra</i>	locally common. 7/12

Systematic List Number 3 Mammals

Persian Squirrel	<i>Sciurus anomalus</i>	scattered
Red Squirrel	<i>Sciurus vulgaris</i>	Sarıkamış
Fox	<i>Vulpes vulpes</i>	scattered
Brown Bear	<i>Ursos arctos</i>	At least 18 seen! A mother and two cubs above olgunlar was very good. Also around fifteen at the dump near Sarıkamış!
Harbour Porpoise	<i>Phocoena phocoena</i>	Several offshore of Yanbolu

Systematic List Number 4 Butterflies

The taxonomic nomenclature and the systematic order have been taken from Tolman and Lewington's Butterflies of Britain and Europe published by HarperCollins (1997) with additional species information from Hasselbarth's 'Die Tagfalter der Turkiye. 79 species was a remarkably good total for this time of year!

Papilionidae

Swallowtail	<i>Papilio machaon</i>	Hamsiköy and Barhal
Scarce Swallowtail	<i>Iphiclides podalirius</i>	Barhal
Caucasian Festoon	<i>Zerynthia caucasica</i>	Barhal
Clouded Apollo	<i>Parnassius mnemosyne</i>	only seen in the meadows at Kafkasör

Pieridae

Large White	<i>Pieris brassicae</i>	scattered
Black-veined White	<i>Aporia crataegi</i>	Barhal
Small White	<i>Artogeia rapae</i>	Barhal & Tortum
Mountain Small White	<i>Artogeia ergane</i>	Anzer
Green-veined White	<i>Artogeia napi</i>	Sumela
Eastern Bath White	<i>Pontia edusa</i>	Barhal
Eastern Greenish Black-tip	<i>Elphinstonia penia</i>	2 Barhal
Orange-tip	<i>Anthocharis cardamines</i>	scattered throughout
Eastern Orange-Tip	<i>Anthocharis damone</i>	Barhal
Sooty Orange-tip	<i>Zegris eupheme</i>	Tortum
Clouded Yellow	<i>Colias crocea</i>	widespread
Greek Clouded Yellow	<i>Colias aurorina</i>	above Hamamlı
Berger's Clouded Yellow	<i>Colias alfaciensis</i>	above Hamamlı
Brimstone	<i>Gonepteryx rhamni</i>	locally frequent
Powdered Brimstone	<i>Conepteryx farinosa</i>	Barhal

Lycaenidae

Ilex Hairstreak	<i>Satyrium ilicis</i>	Barhal
Gerhard's Black Hairstreak	<i>Satyrium abdominalis</i>	Tortum
Orange-banded Hairstreak	<i>Satyrium ledereri</i>	Barhal
Green Hairstreak	<i>Callophrys rubi</i>	scattered
Sooty Copper	<i>Lycaena tityrus</i>	mainly Sarıkamış area
Purple-shot Copper	<i>Lycaena alciphron</i>	Barhal
Large Copper	<i>Lycaena dispar</i>	male and female noted near Barhal – an uncommon species in Turkey
Turkish Fiery Copper	<i>Lycaena ochimus</i>	Çoruh Valley
Anatolian Fiery Copper	<i>Lycaena asabinus</i>	Barhal
Lesser Fiery Copper	<i>Lycaena thersamon</i>	Barhal
Balkan Copper	<i>Lycaena candens</i>	Barhal
Little Tiger Blue	<i>Tarucus balkanicus</i>	Barhal
Short-tailed Blue	<i>Everes argiades</i>	Çoruh Valley

Eastern Short-tailed Blue	<i>Everes decoloratus</i>	near Ispir
Little Blue	<i>Cupido minimus</i>	Tortum
Osiris Blue	<i>Cupido osiris</i>	Tortum
Holly Blue	<i>Celastrina argiolus</i>	Çoruh Valley
Green Underside Blue	<i>Glaucopsyche alexis</i>	widely scattered
	<i>Pseudophilotes vicrama</i>	Tortum
Silver-studded Blue	<i>Plebejus argus</i>	below Şavşat
Loew's Blue	<i>Plebejus loewii</i>	Barhal
Blue Argus	<i>Plebejus anteros</i>	rather faded individual at Kafkasör
Geranium Argus	<i>Plebejus eumedon</i>	on a Geranium on the Cam Pass!
Brown Argus	<i>Aricia agestis</i>	Çoruh Valley & Tortum
Mazarine Blue	<i>Cyaniris semiargus</i>	Barhal
Pontic Blue	<i>Neolysandra coelestina</i>	scattered
Chapman's Blue	<i>Poyommatus thersites</i>	Çoruh Valley
Common Blue	<i>Polyommatus icarus</i>	scattered

Libytheidae

Nettle-Tree Butterfly	<i>Libythea celtis</i>	Tortum and Barhal
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Nymphalidae

Ionian Emperor	<i>Thaleropsis ionia</i>	1 Tortum and 2 Barhal
Southern White Admiral	<i>Limentis reducta</i>	1 Tortum Golu
Hungarian Glider	<i>Neptis rivularis</i>	2 Barhal
Large Tortoiseshell	<i>Nymphalis polychloros</i>	either this species or <i>Nymphalis xanthomelas</i> , the Yellow-legged Tortoiseshell, Sumela
Camberwell Beauty	<i>Nymphalis antiopa</i>	at least ten flying up off the track between Barhal and Yaylarlar
Red Admiral	<i>Vanessa atalanta</i>	Sumela
Painted Lady	<i>Cynthia cardui</i>	widespread
Small Tortoiseshell	<i>Aglais urticae</i>	frequent at higher altitudes
Southern Comma	<i>Polygonia egea</i>	Barhal
Niobe Fritillary	<i>Argynnis niobe</i>	1 Barhal
Twin-spot Fritillary	<i>Brenthis hecate</i>	Anzer
Glanville Fritillary	<i>Melitaea cinxia</i>	scattered
Knapweed Fritillary	<i>Melitaea phoebe</i>	Çoruh Valley below Artvin

Satyridae

Balkan Marbled White	<i>Melanargia larissa</i>	Tortum
	<i>Erebia melancholica</i>	Olgunlar
Dalmatian Ringlet	<i>Proterebia afra</i>	Cam Pass
Meadow Brown	<i>Maniola jurtina</i>	Barhal
Russian Heath	<i>Coenonympha leander</i>	1 near Ispir
Speckled Wood	<i>Pararge aegeria</i>	scattered
Wall Brown	<i>Lasiommata megera</i>	scattered

Northern Wall Brown

Lasiommata peropolitana

Bulbulen Pass

Hesperiidae

Tessellated Skipper

Muschampia tessellum

Barhal

Yellow-banded Skipper

Pyrgus sidae

Çoruh Valley

Oberthür's Grizzled Skipper

Pyrgus armoricanus

dry steppe near Tortum

Orbed Red-Underwing Skipper

Spialia orbifer

Barhal

Persian Skipper

Spialia phlomidis

Barhal

Mallow Skipper

Carcharodus alceae

Barhal

Marbled Skipper

Carcharodus lavatherae

Barhal

Dingy Skipper

Erynnis tages

Barhal

Small Skipper

Thymelicus sylvestris

Barhal

Large Skipper

Ochlodes venatus

Barhal