

Georgia

Greater & Lesser Caucasus

A Greentours Trip Report

9th to 22nd May 2016

Led by Kurt Vickery

David Gareja

The day dawned very hot and humid due to the overnight rains. The first part of our journey took us through the leafy part of Tbilisi. The slow progress due to rush hour traffic at least gave us the chance to admire the many ornate early Christian churches perched on many a high part of the city.

Having made our way through the outskirts we passed several small seasonal pools where we had brief glimpses of graceful Black-winged Stilts. As we walked in the surrounding hills the landscape became dominated by *Paliurus* on the slopes. As we reached the plateau above Rustavi the land became much more grassy. Amongst many pretty meadow plants we recorded *Astragalus bungeanus*, *Achillea micrantha* and Sweetsultan – *Amberboa moschatus*. Bulbs were represented here by *Muscari szovitsianum* and pale lilac flowered little ‘drumstick’ onion - *Allium gramineum*. We pressed on, passing through rolling grassy countryside. On a flooded plain we saw Demoiselle crane and Ruddy shelduck before stopping at one of our usual spots for lunch. We usually come here to watch birds by a lake as we have our picnic, only this year the lake had become a more like a puddle. Paul was in his element here as he loves botanical minutiae. There were many ‘weeds’ for him to investigate including *Lepidium perfoliatum* and where the water had receded *Lagopus orientalis*. Our next brief stop was a flowery slope with abundant *Astragalus bungeanus* and scattered *Stachys balansae*, *Onobrychis radiata*, *Linum austriaca* and *Potentilla recta*. The song of Skylarks filled the air and restless Rose-coloured starlings flitted here and there in the background. We hadn’t travelled much further before we couldn’t resist another meadow this time with another quite different plant community consisting of *Scutellaria orientalis*, *Polygala amoenissima*, *Veronica multifida*, *Astragalus microcephalus* and *Psephellus carthalinicus* amongst many others. *Leopoldia tenuifolia* were found growing in the protection of spiny shrubs.

Possibly the most exciting find was a large group of *Diphelypaea coccinea* unusually right out in the open, their vivid red flowers almost eye-burning in the bright sunlight. Half an hour or so later we approached the extraordinary and unexpected rocky wind-eroded landscape at David Gareja. The beautiful monastery here nestles in a natural amphitheatre. As we got out of the minibus the group admired clumps of *Dictamnus caucasicus* right by the road with many more on the slopes above. Only Kurt, Paul and Utta felt energetic enough to walk the slopes above the monastery. It was well worth it as many fine plants grow here including *Colutea orientalis*, *Stachys atherocalyx*, *Jasminium fruticans* and not least the spectacular very narrow endemic *Salvia garedjii*. Several Fritillary butterflies were busy chasing each other about of which Cardinals and Queen of Spain were particularly abundant.

On the way up we also found the leaves and seed capsules of *Iris caucasica* and lots of *Iris pumila*. At the top of the ridge we were able to take in the amazing panorama. Most of what we could see was Azerbaijan, tantalisingly close at the bottom of the slope. Several Griffon Vultures hovered overhead giving us fantastic close views. It had been a wonderful day so far but got even better on the slow drive back as we managed to see some new birds, adding Roller and Montagu's harriers to our growing list.

Road to Gudauri

After a comfortable night's sleep and fine breakfast It was time to make our way towards Gudauri. This time we took a different route through the city. Right on the outskirts of the city we entered a leafy well-to-do suburb before turning up a hill that took us to the somewhat kitsch amusement park centred on Kustba which translates roughly as 'Turtle lake', probably so named after the resident Terrapin population. We made our way around the back of the lake and entered a strip of woodland before making our way onto a steep area of scrub and herb rich grassland. To the uninitiated this site is a great surprise as it is a fragment of near pristine habitat overlooking the vast sprawl of the capital. Very soon we encountered fine clumps of *Dictamnus caucasicus* and *Echium russicum* and in the shorter sward plentiful orchids – Burnt-tip and Green-winged (*Orchis ustulata* and *Orchis morio*) in perfect condition were joined here and there by *Ophrys transhyrcana*, *Fritillaria caucasica* and *Muscari szovitsianum*. The latter two were plentiful but sadly all in fruit at this time of year. It was a bit early in the day for butterflies but a few Glanville Fritillaries flitted about as we disturbed them from the herbage. We could happily have stayed here all day but as we hadn't even left Tbilisi yet and we had to get on our way again.

Our next stop was at the wonderful Jvari church only a few miles down the road. Like so many of these early Christian churches in Georgia they are positioned on top of hills that can be seen from great distances. As is usual we parked up in our traditional Greentours picnic spot a few hundred yards from the church. By chance as we pulled up a large flock of Rose-coloured starlings dropped in at the same time affording us wonderful close views of them looking magnificent in the soft morning light. While lunch was being prepared the group made the short walk to admire the church. The surrounding grassland is always good for flowers and this year was particularly good for striking purple flowered *Verbascum phoeniceum*. On the surrounding walls we noted *Zygophyllum fabago* and *Hyoscyamus niger*. Isabelline wheatear made a brief appearance, no doubt on its way to more suitable habitat and as usual Black-eared wheatear had set up territory on a nearby boulder. We had lunch in the shelter of the nearby woodland edge before continuing our journey a few more miles and stopping at the Ananuri reservoir and yet another stunning church. This is a favourite spot as there is a very convenient car and coach parking area, and just across the road is a marvellous Hornbeam and Hazel woodland. We made our way to the track leading into the woods and were soon rewarded with some superb plants. Some really fine *Orchis simia* and *Stevaniella satyrioides* were growing in the margins, and in stony areas we found amongst other things rosettes of *Astragalus brachycarpus*, *Ajuga genevensis* and Hippocrepis-like *Coronilla coronata*. With time pressing and the weather looking 'iffy' we made a non-stop final leg towards Gudauri through spectacular wooded valleys and up to a very warm welcome at Gela's wonderful guesthouse

Cross Pass and Khada valley

Today we set off over the Cross pass towards the Truso gorge. Our first stop was a few miles above the guesthouse to see one of the 'priority' species for this trip – *Galanthus platyphyllus*. Seasonal timing is essential for this species so we were delighted to find them at their peak of perfection. Our luck was short lived however as quite literally on arrival there was a dusting of snow that turned into a much more intense snowfall within minutes. The other gem at this site is *Fritillaria latifolia* but they were only just unfurling their flowers. With the weather rapidly deteriorating we decided to abandon plans for the Truso gorge and head back down to lower altitude. We had decided to visit the Khada valley a stunning high sided valley covered in Hornbeam and Hazel forest, In places huge exposed rock faces of folded strata known as 'columnar jointing' add to the drama. The weather was much brighter as we made our way up the rough track. We investigated a side valley and found lots of new species for the trip. A couple of *Dentaria – quinquefolia* and *bulbifera*, the latter having, unusual-for-a-dicot, bulbils in its axils. *Anemones ranunculoides* and *caucasica*, *Paris incompleta*, *Galium odoratum* and *Myosotis sylvatica* to name just a few. Ferns were well represented too with large colonies of very fresh 'Shuttlecocks' on the slopes with Rustybacks and delicate Oak ferns on shady damp rocks.

The loud and characteristic sound of Green warblers so typical of these euxine forests could be heard everywhere. On the way back down the valley we found *Viola collina* and a few *Aquilegia caucasica* a few days away from flowering. Our next stop was on the banks of the Aragvi river. The site was yet another impressive very wide forested valley dissected by a boulder-strewn roaring river. The woods had a high concentration of Alder near the bottom of the slopes. In the woodland edges we found pretty *Polygala alpicola* plus a few scattered *Rhododendron luteum*. Further up the valley we stopped at a sheer cliff at the bottom of which was a fast flowing stream. Clinging onto the rock face were some impressive cushions of *Draba bryoides* and *Saxifraga juniperifolia*. Further downstream were great colonies of colossal-leaved *Petasites albus*. Our last stop of the day was at Gudaure lake. It was a stiff walk up to the site but worth it as surrounding the water were thickets of *Rhododendron luteum* that sheltered plentiful *Scilla armena*. In the turf thousands of dwarf *Ornithogalum* probably *schmalhauseni* were joined by almost as plentiful *Sibbaldia parviflora* and *Potentilla krantzii*. We found highly scented *Daphne glomerata* growing among the fringes of the *Rhododendron* as we approached the lake. We sat overlooking the lake for a while listening to a cacophony of countless Marsh Frogs. We had some fantastic views of Egyptian vultures circling around and just before we left confiding Red-backed and Lesser grey shrikes were a last treat for the day

Cross Pass and Truso Gorge

The weather wasn't great but at least it was better than yesterday, so we decided to traverse the Cross pass as quickly as possible. It took a lot of self-discipline to drive past the *Galanthus* but we knew we would come past again in the coming days. Once we had gone over the top and well on our way to our main destination, we came to the famous travertine seep that colours a large swathe of the valley in shades of ochre and gold. There was a 'window' in the weather so we decided to take advantage and explore the site. To the right of the site is a complex of small waterfalls that we usually get to see *Primula auriculata*. There were thousands of rosettes but only a few of the very first flowers were beginning to show. Shamil pointed out the endemic dwarf

Willow – *Salix kazbekensis*. When we reached the bottom of the pass we turned into the immense and awe inspiring Truso valley. The weather had perked up considerably. A mile or so in we stopped to photograph a most photogenic semi-abandoned village before making our traditional stop at the junction of one of the many side valleys that are pretty spectacular in their own right. We walked along some roadside cliffs to search for *Fritillaria collina* as we had found them here during previous visits. Here we found our first *Primula ruprechtii* on the lower parts of the slopes but we couldn't see the *Fritillaria* that grow on the more precarious ledges. Kurt went up to reece and discovered that they were still in tight bud due to the late season. A bit further along we encountered a dense patch of *Primula algida* or was it as Shamil suggested the recently described *Primula darielica*. The differences are hair-splitting and we left them with the jury still open. As we made our way back to the minibus for lunch we had the most extraordinary privilege of watching a pair of Wallcreepers displaying from no more than twenty feet away. These normally elusive birds seemed oblivious to our presence and for some of us one of the best natural history moments of our lives. After lunch we ventured up the side valley where we picked up new birds for the trip including Firecrest and Ring ouzel. On the boulder strewn slopes dotted here and there with characteristic *Juniperus communis* we found plants like *Antennaria caucasica* and *Ajuga orientalis* but struggled to find our main target here – *Dryas caucasica*. The late season again worked against us but eventually we did find the very first flowers in some very sheltered spots. We then left the valley and headed for the tiny village of Kobi at the foot of the pass. We traditionally stop here for the meadows but again were thwarted by the season. Shamil then suggested that we should try the next village along called Vardisubani as it has some steep south facing slopes that might just help us. It turned out to be an inspired decision. Firstly on our way up the slopes we found plentiful *Viola somchetica* with its tell-tale round 'faces' and a bit higher up on the warmest aspects our first *Pulsatilla violacea*. Of course the best specimens were on the most difficult places to get to but did afford some wonderful mountain 'backdrops' for photographs. Paul had a search around the village church and found what he thought were *Primula cordifolia* and Snowdrops which we suspected must have been planted because of their situation. We then went back over the Cross pass and took advantage of the much improved weather to revisit the *Galanthus* site. Even in the short that had passed since we came here the *Fritillaries* had advanced considerably and we were able to appreciate their magnificent tessellated plum-purple bells as well as a few *Trollius patulus*, *Anemone caucasica* and the fresh emerging bronze leaves of *Rumex alpestris*. Above us were tens of Red-billed and Alpine choughs, their distinctive calls just adding to the atmosphere. It was then time for the last few miles back to the guesthouse to a welcoming log fire and another delicious evening meal

Dariel Gorge

Kurt went down to the dining room early for a bit of luxury birdwatching. A panoramic view of the surrounding meadows and woodland, a cup of coffee and a warm radiator what could be better? The usual selection of local birds put in an appearance including Redstart, Common rosefinch and Red-backed shrikes. Then just as the group came down for breakfast an influx of a dozen or so Golden orioles dropped into some nearby Aspen giving wonderful views. After breakfast it was time to bid a sad farewell to Gela and make our way to Stepantsminda which was to be our base for the next few days. We retraced our steps of yesterday through the Cross Pass before the short drive along the base of the mountains to Stepandsminda and bit further to explore the Dariel Gorge. Scenery doesn't get much more dramatic than the towering cliffs and peaks in

us a perfect opportunity to compare *Betula litwinovii* and the much scarcer *Betula raddeana* growing side by side. The Primulas growing here had Paul's undivided attention for although the *Primula amoena* were straight forward enough the '*ruprechtii*' looked a bit different. Thanks to Paul's determination and diligence we were retrospectively able to identify them as the much more local *Primula cordifolia*. Next stop was at another of our usual spots, this time yet another side valley but with a vast shingle flood plain. The site offered several different habitats and a number of interesting plants. In gravelly areas the interesting if not beautiful *Sobolewskia caucasica* abounded and on riverside cliffs *Saxifraga cartilaginia* and a yellow *Draba*, some of which Shamil told us were the endemic *Draba osetica* though they were out of reach and difficult to tell apart. At the base of the cliffs we found *Thalictrum foetidum*, *Carum meifolium* and *Erysimum ibericum*. We then pushed on a few miles further on to a roadside stream and fountain where we usually see *Puschkinia scilloides* and *Primula auriculata* but sadly they weren't even beginning to start this year. Paul and Utta were keen to walk the last few miles to Juta and so we left them while the rest of us drove up. Juta itself is a fascinating and beautiful village, an idyllic place seemingly lost in time. The traditional wooden houses are very pretty but basic to say the least with a labyrinth of paths running between them. All the gardens have great piles of dung blocks for winter heating and livestock run free range everywhere. Garden birds included Chaffinch, White wagtail, and Ring ouzels. The Ring ouzels seemed to behave just like Blackbirds back home and it was most interesting to see them away from the more wild places that we usually encounter them. After about an hour Paul and Utta reached the village. Paul reported that he had seen a Rock bunting on the way. We had lunch and then had a hurried walk to the plateau above the village mainly to get a good view of the dramatic jagged peak of Chauki (3842m). We managed just in time because the weather deteriorated rapidly and forced our hand into turning back. On the way back down we stopped in Sno to admire and photograph the ancient fortified tower and the pretty little church nearby. On our return to Stepantsminda Paul and Utta still had lots of energy and wanted to walk up to the Tsminda Sameba church perched high above the town. It was probably more of a hike than they imagined but they met us back for dinner and had clearly really enjoyed the experience

Road to Bakuriani

We set off in good time towards Bakuriani. The weather wasn't very good and The Cross pass very bleak and wet though we did manage to see a Dipper near the top taking the downpour in its stride. Below Gudauri the Rhododendron had flowered since we first passed through a week ago. When we reached the outskirts of Tbilisi we dropped Shamil off who was needed at the university and swapped him for Tolkha who was to be our co-leader for the next few days. After saying goodbye we went a little further before getting onto the new motorway that would help us make the next leg of our journey in good time. After leaving the motorway we stopped for lunch at a fantastic bit of habitat just outside of the town of Igoeti. We always stop here to look for *Paeonia tenuifolia* that abounds in small clearings in the dense woodland. It was absolutely pouring when we arrived but we braved the conditions to at least try for our target. The rain made it rather unpleasant and we consoled ourselves with the fact that although we did see the Peony quite easily we had missed the flowers already anyway. We had our lunch in a handy nearby bus shelter avoiding drips as we ate which was a lot more fun than it may sound. The weather cleared (a bit) just as we were to leave giving the opportunity to photograph a particularly large and floriferous *Ajuga chamaepitys* before the final leg. At Borjomi we took forested road up to Bakuriani. Making a very brief look at one of our traditional stops for Orchids and *Paeonia* on the

way. We could see that the site was as good as ever but because the rain was as relentless as ever and we knew we would be coming back the lure of comfortable warm hotel was irresistible.

Javakheti Plateau and Tabatskouri

We awoke to much improved weather and set off up towards the Javakheti plateau. Our first stop was just a few miles above the village. We were here for *Paeonia steveniana* which we found but sadly they were still in tight bud and probably a week away from flowering. It was disappointing not to see the flowers, but the magnificent large lobed bronze leaves bejeweled with sparkling water droplets were much admired by all anyway. The lush surrounding foliage was still soaking wet but well worth getting trouser bottoms soaked to admire luxuriant *Pulmonaria dacica*, *Polygonatum multiflora* and *Arum orientale* amongst other woodlanders. Moving on up the mountain road we made another stop to admire a hillside covered in the rosettes of *Dactylorhiza caucasica* though only a few had started to flower. Just above them thousands of *Anemone fasciculata* were just opening with millions to follow. Just as we were about to move on we heard our very first rasping Corncrakes of the trip which just went to further confirm how late the season was. A mile or so further on we passed slopes covered in *Primula pseudeliator* before spending a bit of time looking at the first smatterings of *Scilla rosenii* mixed with *Anemone caucasica*. The weak morning sun was just strong enough to stir four or five Camberwell beauties from their winter slumber. A couple attempted some rather unconvincing test flights while the others competed for the oozing sap of a Birch damaged by the winter's snow. Our next stop was at one of our usual places, a rocky promontory, with an amazing view. If groups are particularly 'birdy' we tend to come here ridiculously early to scan for Caucasian Blackcock on the opposite side of the valley. As it happens this was a 'planty' group and we were here at a much more sensible time. We were soon rewarded with such gems as flowering *Muscari sosnowskyi*, *Pulsatilla georgica* and *Veronica gentianoides*, Swallowtail also put in a surprise appearance. Finally, near the top we passed through dense stands of yet to flower *Rhododendron caucasicum* only recently released from snow. As the road flattened out onto the plateau we stopped at the security post to show our passports before getting to see what we had come for – myriad *Scilla rosenii*. We were surprised but delighted that despite the late season they were right 'on time'. In places *Gagea lutea* in perfect complimentary yellow abounded as well. This was a bit of a paradox as *Gagea lutea* is an early species and usually in fruit when we visit at this time. The other species of which several occur at this site were conspicuous in their absence. There were a number of Horned larks moving about and we had a brief flypast of a plaintive Saker falcon. It took some persuading to drag people away from *Scilla* but we needed to press on. En route we passed several vast colonies of *Colchicum speciosum*, of course only showing their splendid glossy leaves at this time of year. Given the number of developing seed capsules the previous autumn's flowering must have been spectacular. A couple of miles further on we approached the lake and eponymous village of Tabatskouri.

Just as it came into view we could also see the impressive two and a half thousand meter extinct volcano 'Tavkvetili' in the distance. Dropping down to the lake we passed people working the land in a kind of strip system. Very, very little has changed in this isolated community for hundreds of years. Next we parked up by the lake. There weren't as many birds as we usually see on the lake as some noisy shepherds had spooked them. However we did get to see Armenian Gull, Great Crested and Black-necked Grebe. We were also able to see of the special bird of the

lake - Velvet Scoter in this most unlikely of places for them. Lunch was taken by the shore next to a large area of Tussock sedge and *Equisetum fluviatile*. As usual we were able to watch Marsh Harriers quartering this ideal habitat. On the way back over the plateau we stopped to photograph tiny inconspicuous *Bellevia paradoxa* and the more obvious and showy *Doronicum oblongifolium*. When we got back to Bakuriani the weather was so much better that we decided to try and make up for lost time and head back to woods near Borjomi and try and find *Paeonia caucasica* in flower. It would also be a chance for Joan to spend some time amongst the Orchids as she had been rather starved of them for a few days. After a lot of searching Kurt found a single Peony flower tantalizingly close to flowering. Knowing that Paul was desperate to see an open bloom we resolved to return at the first opportunity.

Borjomi-Kharagauli National park Day 1 Kvastikevi valley

It had rained 'cats and dogs' again during the night so it was a very pleasant surprise to wake to a fine sunny morning. We had to pass the Peony site again to get to Kharagauli and so it was our first stop. Frustratingly the bloom was still tiniest soupcon away from opening so we decided we would try again on the way back. In the meantime we had seen *Helleborus caucasicus* in flower and added Orange tip, Wood white and Glanville fritillary to the butterfly list. A little further down the mountain our attention was drawn to flashes of bright orange that turned out to be a colony of *Papaver fugax* and while looking around the slopes we found the stunning blue *Asperula arvensis*. We then stopped briefly at the National Park HQ in Borjomi to pick up our nature reserve permits. Arriving at the Kvastikevi valley we parked at the ranger's cottage. Things were already looking promising butterfly-wise as straight away several Scarce swallowtails, Wood whites and Pearl bordered fritillaries were seen. As we entered the reserve proper, new things started to appear. On wet mossy boulders *Saxifraga repanda* and nearby a trio of *Polygonatum – glaberrimum, multiflorum* and *verticillatum*. Our fortune with the weather was short lived and soon it started to rain again. We moved further up ably assisted by Tolkha who would stay ahead of us deftly making temporary fords out of boulders to help crisscross the small river. We made a few new finds including *Dactylorhiza urvilliana* and *Galanthus alpinus* in fruit. But then the rain got progressively worse. Paul laughs in the face of bad weather so he decided to carry on while the rest of us made our way slowly back. Whilst waiting for Paul's return we prepared lunch in one of the excellent shelters provided for the purpose and Utta took the opportunity to visit the 6th century basilica secreted in the rocks nearby. The effort was clearly very worthwhile and she showed us her photographs with great enthusiasm. Paul eventually returned reporting yet more new things including the very beautiful *Veronica liwanensis*. On the way back to Bakuriani we couldn't resist checking on 'our' Peony. Despite the rain it had opened to the point that you could just see the inner parts so we left hoping that our last chance to see it next morning would be just enough to get Paul his photograph!

Borjomi –Kharagauli National park day 2 Tsagveri

Today we pretty much retraced yesterday's route though this time we stopped briefly on the way to Borjomi to investigate some crumbling hillside habitat to look at the rare *Coluteocarpus vesicaria* with its characteristic inflated seed heads. The site happens to be excellent for other flowering plants too and we enjoyed half an hour enjoying such delights as *Scutellaria sosnowskyi*, *Astragalus kozlowskyi* and *Euphorbia pontica*. This time everybody got to see *Veronica liwanensis* that only Paul

had seen yesterday in the rain. We couldn't stay any longer as we needed to get to the Peony site to give Paul one last chance of seeing it open. We arrived and headed straight for the plant, more in hope than expectation but our patience had paid off. Despite the cool weather the single bloom had opened and revealed its inner beauty. Whilst the group was engrossed with taking its photograph, Kurt had a wander around and found some *Orchis coriophora* to add to our growing Orchid list. It was a lovely reddish colour form for this sometimes rather drab species. A few miles past Borjomi we noticed *Centranthus longiflorus* flowering on some cliffs. We had only seen it in bud thus far so it seemed essential to stop even though the road was rather busy. It took a little while to find somewhere safe to park up and look for it but the effort was worthwhile as we also found *Campanula hohenackeri*, *Gypsophila elegans* and most un-*Verbascum*-like *Verbascum orientale* with its finely divided pinnatifid leaves. At the turning for the nature reserve we stopped to photograph the castle ruins of Atskuri. Usually we drive on from here to the entrance but the heavy rains had made the road impassable for the minibus so we walked the mile or so to get there. It had brightened up a little and encouraged a few butterflies to venture out and we found Mazarine blue, Glanville Fritillary and Wall brown on the way and in hedgebanks *Vicia balansae* was frequent. In the reserve itself some nice flowering shrubs were found including *Philadelphus caucasicus* and a particularly floriferous *Viburnum opulus*. Because we had to walk time was limited and the weather not that encouraging anyway, so we pushed on towards our hotel. We made a quick stop to look at an unlikely but beautiful combination of 'weeds' - *Consolida orientalis*, *Hyoscyamus major* and *Adonis flammea*. Nature has a way of doing things that we would never think of and in this case probably very hard to replicate.

Eventually we arrived at our slightly quirky but beautifully situated accommodation at the Abastumani observatory. After we had settled in we strolled around the grounds. One of the first plants we found – *Psoralea acaule* aroused Paul's interest as a dermatologist as he explained that compounds are extracted from it for the treatment of various skin conditions. On a herb rich grassy mound we found some enormous spikes of *Orchis pinetorum* along with scattered *Muscari sosnowskyi* and in a damper glade, perhaps a hundred *Dactylorhiza flavescens* in both purple and yellow forms. Further searching revealed a few robust spikes of *Platanthera chlorantha* on the verge of flowering, before we needed to get back to the hotel for dinner.

Zekaris Pass

Whilst waiting for breakfast we watched Crossbills in the top of an old Pine across from the hotel. Joan had disappeared early to take a closer look at the *Orchis pinetorum* just to convince herself that is what they actually were. We had arranged for a couple of 4x4's to get us up the Zekaris pass and decided to get going as quickly as possible because of much talk of rain. As we entered the Zekaris nature reserve the road deteriorated rapidly and it soon became obvious why we had decided to take the 4x4's. After driving uphill for some time we stopped by a crumbly bank for a colony of *Corydalis angustifolia*. It proved almost impossible to get very far without stopping and we had barely moved when we found a large colony of *Dactylorhiza flavescens* and yet more really big spikes of *Orchis pinetorum*. Our next stop was for a few hundred perfect blooming plants of *Primula amoena*, very impressive but modest by Georgian standards! When we reached the tree line and drove up onto large grassy slopes we realised that the *Fritillaria latifolia* that we had hoped to see were even later than on the Cross pass and only just beginning to flower. We arrived at a plateau and spent some time photographing them growing amongst the first flowering *Scilla*

sibirica caucasica of the season. We also noted a single *Scrophularia chrysantha* that is usually much more numerous at this site. On previous trips we had always had lunch at this point but as the weather was still rather 'iffy' we headed straight up to the top of the pass. At the very top we had an almost 360 degree view. Now we could see the *Picea*-shrouded and snowy mountains of Turkey and most of the Greater Caucasus. Here the road cuts right through a dense forest of *Rhododendron*. While we were botanising the drivers wasted no time in collecting some of the leaves to make a tea. None of us had ever heard of such a thing before. We clambered up amongst the rocky and grassy areas nearby and were delighted to see soft yellow *Pulsatilla albana* which because of the late season were in the best condition we had seen in several recent trips. Lunch was taken amongst a group of shepherd's shacks, where we had the most extraordinary panoramic view. As is traditional while the picnic was being prepared we walked down a nearby ridge towards a small disjunct group of *Rhododendron* nestling amongst stunted *Betula litwinovii* and *Sorbus aucuparia*. The slope down is very sheltered and on the way we passed some well advanced *Fritillaria latifolia* and *Scilla sibirica caucasica*, a few of which were albinos as well as *Anemone caucasica*, *Trollius patulus*, *Gentiana angulosa* plus *Primulas ruprechtii* and *algida*. The *Rhododendrons* here are probably the lowest plants in the valley and a few were just beginning to flower. Sweet scented *Daphne mezereum* was another notable find before returning to the shacks. Back at the shacks a pair of Black redstarts, no doubt with a nest nearby were keeping an eye on us and several small flocks of Red-fronted serins dashed about never settling for long. Going back down the mountain we frequently asked the drivers to stop for individual plants such as *Tragopogon reticulatus* or a particularly large specimen of *Dactylorhiza flavesens*. They got progressively more grumpy the more stops we made but then all was forgiven when we stopped for *Pedicularis wilhelmsiana*. Their mood completely changed from sulky downward stares and deep noisy inhalation of cigarettes to smiles and laughter as they had discovered abundant emerging shoots of *Ekala (Smilax excelsior)* a local delicacy, which they avidly gathered to the point that the tables were turned and we got a bit fed up of waiting for them to finish!

Nichbisi and home

We set off on the long haul towards Tbilisi. We had only got as far as Arkaltsikhe when the group wanted to stop and photograph the imposing castle that gives the town its name. By chance the safest place to stop on the busy road was a by a stunning steep meadow dominated with various Poppies, Flax and Fleabanes. Even more fortuitously the crumbly roadside habitat by the minibus had superb rosettes of the local endemic *Onobrychis meschetica* that we had only caught a glimpse of at speed on the way. We then travelled for some time before entering the Mtkvari gorge system. Towards the end of the gorge we had necks bent looking out for a cliff hugging colony of *Eremurus spectabilis*. In most years a stretch of the cliffs less than a mile long is lined with their tall spikes. Unfortunately this year we had only just started flowering and it took quite a bit of work to find just two or three. Next we went through Georgia's 'Lake district' passing several lakes including the largest - Paravani. In one of the small towns there were several occupied White stork nests on the telegraph poles that lined the main thoroughfare. A few minutes were taken to get photographs before pushing on to yet another bus shelter that has become one of our traditional picnic stops. It is in the middle of absolutely nowhere and at an altitude of circa two thousand meters. Very convenient for us but makes you wonder who would want to be picked up or dropped off here! The site gives great views of the other side of Tavkvetili- the volcano we had seen from Tabatskauri and Paravani below. This is a great spot for botanising but because of time

issues and the weather we didn't hang around for long. For the last leg of our journey we headed for the fabulous limestone area of Nichblisi just outside of Tbilisi. The site is a huge ridge of crumbly limestone with a labyrinthine habitat of stunted *Carpinus*, *Corylus* and *Juniperus oblonga*. On arrival there were some really fresh looking shrubs of one of the best Honeysuckles that doesn't seem to be in general cultivation – *Lonicera iberica*. The plant community was as ever very diverse and we found amongst many other things, *Peganum harmala*, *Eremostachys iberica*, *Genista orientale*, *Lappula squarrosa*, *Euphorbia helioscopia* and *Hedysarum sericeum*. Just before getting on the minibus and back to the hotel we added one last butterfly to the list – The Caucasian vernal copper before very reluctantly heading back to the hotel and home.

PLEASE NOTE THAT THE FOLLOWING SYSTEMATIC LISTS ARE FROM THE 2013 AS WE HAVE NOT YET RECEIVED THE LISTS FOR THE 2016 TOUR

Systematic List Number 1 Flora

Aceraceae

<i>Acer campestre</i>	widespread
<i>Acer laetum</i>	scattered
<i>Acer platanoides</i>	riverine forests
<i>Acer trautvetteri</i>	treeline forests in all regions
<i>Acer velutinum</i>	locally abundant at mid-levels, especially Lesser Caucasus

Adoxaceae

<i>Adoxa moschatellina</i>	Truso/Terek Valley Junction!
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Alismataceae

<i>Alisma plantago-aquatica</i>	in leaf in the Davit Gareja
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Amaryllidaceae

<i>Galanthus alpinus</i>	Above Bakuriani, Kharagauli, Azagri valley]
<i>Galanthus platyphyllus</i>	a few fine flowers emerging from the snow above Gudauri

Anacardiaceae

<i>Cotinus coggygria</i>	locally common in shibliak
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Apiaceae

<i>[Anthriscus cerefolium]</i>	near Signakhi
<i>[Anthriscus sylvestris]</i>	scattered
<i>[Astrodaucus orientalis]</i>	approaches to the Greater Caucasus
<i>Bilacunaria microcarpa</i>	finely dissect leaves noted in Davit Gareja
<i>Carum</i> sp	reddish-flowered sp Snostkali Valley
<i>Chamaescidium acaule</i>	dwarf stemless species in the Gweletti Valley, Kazbegi, Juta etc
<i>Falcaria falcata</i>	scattered in leaf
<i>Heracleum antasiaticum</i>	Borjomi, Abastumani
<i>Heracleum sosnowskyi</i>	Widespread
<i>Laser trilobum</i>	large trifoliate leaves. Achalciche and Nichbisi
<i>Malabaila dasyantha</i>	Jvari, Nichbisi
<i>[Physospermus cornubiense]</i>	scattered
<i>Sanicula europaea</i>	Common in forests
<i>Trinia leiogona</i>	scattered in lower areas – delicate white flowered umbel
<i>[Turgenia latifolia]</i>	leaves in the Gareja steppe
<i>Zosima orientalis</i>	Gareja steppe and Jvari

Apocynaceae

<i>Vinca herbacea</i>	shibliak areas
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Asclepiadaceae

<i>Vincetoxicum funebre</i>	dark flowered species. Achalciche and Nichbisi
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Araceae

Arum orientale Scattered

Araliaceae

Hedera colchica Borjomi
Hedera helix Georgian Military Highway
[*Hedera pastuchovii* scattered in Bakurianai and Lagodekhi]

Asteraceae

[*Achillea millefolium* scattered]
Achillea yellow species common in steppe zones
Anthemis zyghia common at Davit Gareja
Artemesia fragrans Davit Gareja
Artemesia splendens Nichbisi
Bellis perennis scattered
Carduus adpressus Achalciche
Carduus crispus Jvari and Georgian Military Highway
Carduus nutans Nichbisi
Centaurea bagadensis pretty mat-forming knapweed with pink flowers. Achalciche
Centaurea bella Jvari
Cicerbita macrophylla large blue sow-thistle in bud at Nichbisi
[*Cichorium intybus* Nichbisi]
Cirsium arvense Nichbisi
Cirsium echinus Nichbisi
[*Cnicus benedictus* Borjomi area]
Dolichorhiza renifolia Senecio-like. In bud in the Darial Gorge
Doronicum oblongifolium Bakuriani area
Doronicum orientale Jvari
[*Inula helenium* just one plant in flower en route to waterfall in Lagodekhi]
Jurinea blanda Gareja steppe and Nichbisi. Also Jvari
Jurinea carthalinica Achalciche and Nichbisi
Leucanthemopsis vulgare Borjomi area
Petasites albus widespread in Lesser Caucasus
Petasites georgicus screes in the White Arigwi Valley – doubtfully distinct
Petasites hybridus the common butterbur in the Greater Caucasus
Psephellus carthalinicus knapweed-like. Common at Davit Gareja
Psephellus meskheticus Borjomi Gorge
Senecio massagetovii Achalciche
Senecio vernalis scattered
Stemmacantha pulchra Achalciche
[*Taraxacum confusum* near Bakuriani]
Taraxacum officinale widespread
[*Tephrosia cladobotrys* scattered in Lagodekhi in mid-level forests, just coming out]
Tragopogon grandiflorus Jvari
Tragopogon tuberosum Borjomi Gorge
Tripleurospermum caucasicum Common on drier spots in the Lesser Caucasus
Tussilago farfara widespread

Berberidaceae

Berberis iberica scattered in Kazbegi area, also Achalciche

Berberis vulgaris common in shibliak habitats

Betulaceae

Alnus barbata widespread
Alnus incana shrubby alder. Nichbisi
Betula litwinowii locally abundant in mountains. White bark
[*Betula pendula* lower slopes of the Greater Caucasus]
Betula raddeana Great Caucasus. More often on scree. Dark bark

Boraginaceae

Anchusa italica lowlands
Asperugo procumbens near Borjomi and Achalciche
Buglossoides arvensis scattered in steppic areas
Cerinthe glabra Achalciche
Cerinthe minor limestone shibliak near Nichbisi
Cynoglossum officinale scattered
Echium vulgare scattered
Echium (russicum) rubrum beautiful dark red flowered species in limestone shibliak near Nichbisi. Also Davit Gareja, Jvari and Achalciche
Lappula barbata Nichbisi. Also Jvari and Achalciche
[*Lappula consanguinea* Gareja steppe]
Lappula squarrosa Borjomi Gorge and Achalciche
Lithospermum purpureocaeruleum locally common in shibliak and lower forests
Lycopsis orientalis mistaken for *Anchusa*. Signakhi. Also Gareja steppe
Myosotis sylvaticum scattered in woods
Macrotomia (Arnebia) pulchra scattered in alpine grasslands
Moltkia caerulea lovely blue and pink alkanet, rather gone over when we saw it. Extreme rarity in Georgia. We saw it on the Gareja steppe
Nonea lutea locally common in steppe
Onosma armeniaca the white-flowered species at Achalciche. The white species in the Gareja steppe may have been a different one?
[*Onosma caucasica* scattered]
Onosma rupestris yellow. Achalciche
Onosma sericea the more bristly yellow flowered species at Davit Gareja
Pulmonaria dacica gorgeous lungwort. Georgian Military Highway and common in woods above Bakuriani
Symphytum asperum blue flowers. Widespread
Symphytum caucasicum Georgian Military Highway
Symphytum grandiflorum white. Paratatsemi

Brassicaceae

Aethionema arabicum dry areas in the Lesser Caucasus
Alliaria petiolata widespread
[*Arabis hirsuta* scattered]
Arabis sachokiana glabrous species in grasslands above Bakuriani
[*Aridopsis thaliana* scattered]
Barbarea vulgaris Juta Valley
Bunias orientalis large white-flowered crucifer. Achalciche
Capsella bursa-pastoris scattered

<i>Cardamine flexuosa</i>	is not present in Georgia – but it certainly looked like it. In leaf. Bakuriani area!
[<i>Cardamine impatiens</i>	widespread in forests]!
<i>Cardamine uliginosa</i>	along streams in both mountain areas
<i>Cardaria draba</i>	widespread in lowlands
<i>Coluteocarpus vesicaria</i>	in inflated seed in dry steppe in forest between Bakuriani and Borjomi
<i>Dentaria bulbifera</i>	scattered in higher forests in both mountain areas
<i>Dentaria quinquefolia</i>	widespread in forests at higher levels
[<i>Draba brunifolia</i>	higher parts of the pass above Bakuriani]
<i>Draba bryoides</i>	beautiful species widespread on rocks in Great Caucasus
<i>Draba hispida</i>	Zekaris Pass
<i>Draba nemorosa</i>	small yellow <i>Draba</i> common in grasslands
<i>Draba polytrichum</i>	fine yellow cushion-forming species. Javakheti Plateau
<i>Draba scabra</i>	scattered in Greater Caucasus
<i>Draba siliquosa</i>	widespread white species
<i>Draba supranivalis</i>	rocky areas in alpine grasslands in both ranges
<i>Erophila praecox</i>	Darial Gorge
[<i>Erophila verna</i>	Gareja steppe]
<i>Erysimum leptophyllum</i>	Gareja Steppe
<i>Erysinum szowitsianum</i>	dry areas near Bakuriani
<i>Hesperis matronalis</i>	Dame's Violet. Roadsides near Tbilisi
<i>Hesperis voronowii</i>	pretty pink dame's violet in the Darial Gorge
[<i>Isatis iberica</i>	cliffs on approach to Greater Caucasus]
<i>Murbeckiella huettii</i>	Darial Gorge
<i>Pachyphragma macrophylla</i>	widespread in Lagodekhi, also noted in Bakuriani area. Quite large plant with white flowers and large heads of flattened seeds. Only seen in seed in 2010
<i>Sisymbrium officinale</i>	scattered
<i>Sobolewskia caucasica</i>	endemic white flowered crucifer a little like a small squat crambe on screes in Juta Valley, Great Caucasus – only in leaf this year
<i>Sobolewskia clavata</i>	very smelly species (!) in the gorges near Borjomi
<i>Sterigmostemon tomentosum</i>	weird contorted fruits. Achalciche
<i>Thlaspi arvense</i>	scattered
<i>Thlaspi orbiculatum?</i>	Javakheti Plateau
<i>Thlaspi perfoliatum</i>	widespread
<i>Turritis glabra</i>	Igoeti area. Also Nichbisi

Campanulaceae

<i>Campanula hohenackeri</i>	rangy bellflower. Gareja Steppe and Jvari
<i>Campanula stevenii</i>	elegant small single-flowered sp. Achalciche

Caprifoliaceae

<i>Sambucus ebulus</i>	widespread in leaf
[<i>Sambucus nigra</i>	scattered]
[<i>Sambucus triganii</i>	Lagodekhi]
<i>Viburnum opulus</i>	scattered in the Lesser Caucasus
<i>Viburnum lantana</i>	scattered in the Lesser Caucasus
<i>Lonicera caprifolia</i>	widespread

<i>Lonicera caucasica</i>	Nichbisi – nice shrubby species
<i>Lonicera iberica</i>	Jvari, Nichbisi etc
<i>Caryophyllaceae</i>	
<i>Arenaria serpyllifolia</i>	Juta Valley, Greater Caucasus
<i>Cerastium argenteum</i>	silvery-grey leaved species on steppe slope between Borjomi and Bakuriani
<i>Cerastium arvense</i>	scattered
<i>Cerastium cerastioides</i>	Juta Valley
<i>Cerastium fontanum</i>	scattered in ruderal habitats
<i>Cerastium glomeratum</i>	scattered
<i>Cerastium hemischinicum</i>	Darial Gorge, Greater Caucasus
<i>Cerastium polymorphum</i>	Gweletti Valley, Greater Caucasus. Large flowers!
<i>Cerastium pseudokasbek</i>	Gweletti Valley, Greater Caucasus
<i>Cerastium purpurascens</i>	large-flowered species of alpine areas above Gudauri
<i>Cerastium semidecandrum</i>	Achalciche
<i>Cerastium sosnowskyi</i>	steppe slope between Borjomi and Bakuriani
<i>Cucubalus baccifer</i>	scattered throughout
<i>Gypsophila elegans</i>	Borjomi Gorge
<i>Minuartia aizoides</i>	Gweletti Valley, Greater Caucasus
<i>Minuartia circassica</i>	Gweletti Valley, Greater Caucasus
<i>Minuartia imamoena</i>	Gweletti Valley, Greater Caucasus
[<i>Minuartia imbricata</i>	Darial Gorge and Gweletti Valley, Greater Caucasus]
<i>Minuartia oreina</i>	Darial Gorge, Greater Caucasus
<i>Moehringia trinervia</i>	scattered
<i>Saponaria procumbens</i>	pretty little pink species on dry bluffs in the Borjomi area
<i>Scleranthus annuus</i>	Borjomi Gorge
<i>Silene armena</i>	Davit Gareja and Georgian Military Highway. Like <i>italica</i> but with dark-centred flower
[<i>Silene boissieri</i>	foothills of the Greater Caucasus]
<i>Silene conoidea</i>	Davit Gareja and Achalciche
<i>Silene italica</i>	Achalciche and Nichbisi
<i>Silene latifolia</i>	Davit Gareja and Jvari
<i>Silene otites</i>	Nichbisi
<i>Silene ruprechtii</i>	Borjomi Gorge. <i>italica</i> -like species
<i>Silene spergulifolia</i>	Achalciche
[<i>Stellaria media</i>	Scattered throughout]
<i>Stellaria holostea</i>	Forests in mountain areas – in flower near Borjomi
[<i>Stellaria persica</i>	Lagodekhi]
[<i>Tunica stricta</i>	Borjomi area]
<i>Celastraceae</i>	
<i>Euonymus europaeus</i>	Borjomi area
<i>Euonymus latifolia</i>	scattered in woodlands in the Lesser Caucasus
<i>Euonymus leiophloea</i>	Nichbisi
<i>Euonymus verrucosum</i>	Borjomi area
<i>Cistaceae</i>	
[<i>Fumana arabica</i>	foothills of the Greater Caucasus & Nichbisi]
<i>Helianthemum nummularium</i>	' <i>grandiflorum</i> ' form in steppe areas

<i>Helianthemum orientale</i>	Achalciche and Nichbisi
<i>Helianthemum salicifolium</i>	scattered
Convolvulaceae	
<i>Convolvulus arvensis</i>	Achalciche
<i>Convolvulus lineatus</i>	Achalciche and Nichbisi
Cornaceae	
<i>Cornus mas</i>	scattered in shibliak habitats
<i>Swida orientalis</i>	Achalciche and Nichbisi
Corylaceae	
<i>Carpinus caucasica</i>	widespread. Probably same as <i>Carpinus betulus</i> .
<i>Carpinus orientalis</i>	foothills of the Greater Caucasus
<i>Corylus avellana</i>	foothills everywhere
[<i>Corylus colchica/kachetica</i>]	one of these two (or both?) at Lagodekhi]
Crassulaceae	
<i>Sedum caucasicum</i>	leaves noted at several localities
<i>Sedum hispanicum</i>	Achalciche
<i>Sedum pilosum</i>	Achalciche
[<i>Sedum spurium</i>]	in leaf in Khada Gorge, Greater Caucasus]
[<i>Sedum stoloniferum</i>]	abundant in leaf in Greater Caucasus]
<i>Sempervivum caucasicum</i>	leaves in the Greater Caucasus
[<i>Sempervivum transcaucasicum</i>]	foothills of the Greater Caucasus]
Cupressaceae	
[<i>Juniperus depressa</i>]	alpine areas of Lagodekhi]
<i>Juniperus oblonga</i>	alpine areas of Lagodekhi. Also Gweletti Valley
<i>Juniperus oxycedrus</i>	Nichbisi limestone shibliak and Davit Gareja
[<i>Juniperus excelsa</i>]	Nichbisi limestone shibliak]
<i>Juniperus sabina</i>	Gweletti Valley in Great Caucasus
Cyperaceae	
<i>Carex carophyllacea</i>	Khada Gorge
<i>Carex digitata</i>	woodlands along the Georgian Military Highway
<i>Carex divisa</i>	woodlands along the Georgian Military Highway
Dioscoreaceae	
<i>Tamus communis</i>	scattered
Dipsacaceae	
<i>Cephalaria gigantea</i>	in last year's seed in Borjomi area, leaves in Greater Caucasus
Elaeagnaceae	
<i>Elaeagnus angustifolius</i>	scattered along roadsides etc
<i>Hippophae rhamnoides</i>	common in valley bottoms throughout

Ephedraceae

Ephedra procera scattered, e.g. Davit Gareja steppe, Borjomi Gorge

Empetraceae

Empetrum caucasicum in leaf in areas around Kazbegi, Greater Caucasus

Ericaceae

Rhododendron caucasicum in flower in the Gweletti Valley, Greater Caucasus

Rhododendron luteum in flower along the Georgian Military Highway

Vaccinium arctostaphylos Bakuriani and Zekaris Pass

Vaccinium myrtilus in flower in the Darial Gorge

Vaccinium vitis-idaea in flower in the Gweletti Valley, Greater Caucasus

Equisetaceae

Equisetum arvense Scattered along mountains streams etc

Equisetum fluviatile wet areas in Greater Caucasus

Equisetum hyemale wet banks and streamsides in Bakuriani area

Equisetum palustre marshy spots along the Georgian Military Highway

Equisetum ramosissimum Bakuriani area

Equisetum telmateia Riversides in the Great Caucasus

Equisetum variegatum Snostkali Valley

Euphorbiaceae

[*Euphorbia boissieriana* foothills of the Greater Caucasus]

Euphorbia glareosa Davit Gareja

Euphorbia macroceras hairy tall species of wet areas in forests throughout with brown-maroon 'flowers'

Euphorbia pontica 'rigida' group. Fleshy glaucous leaves and reddish towards top of plant. Dry steppe slopes in forest above Borjomi etc.

Euphorbia seguieriana Davit Gaerja

Euphorbia villosa foothills of the Greater Caucasus, woodlands around Bakuriani

Fabaceae

Argyrolobium biebersteinii Widespread on cliffs and rocky slopes in all mountain areas – named as *Caragana grandiflora* originally. Sub-shrub with orange and yellow flowers

Astragalus brachycarpus Scattered at low and mid levels. Purple flowers, slightly shrubby – rather like *cancellatus*?

Astragalus cf. *fabaceus* low green-flowered species. Davit Gareja

Astragalus fragrans pale yellow flowers. Khada Gorge and Borjomi area. Also Abastumani and Zekaris Pass

Astragalus kazbeki endemic to Kazbegi area. Pretty white and pink low growing species

Astragalus kemulariae scattered in Lesser Caucasus

Astragalus kozlowskyi Javakheti Plateau

Astragalus mollis Jvari Church, Achalciche and Nichbisi

Astragalus troizkii Jvari Church and Davit Gareja

Astragalus xiphidium pink flowers. Davit Gareja

Cercis siliquastrum Judas Tree. Scattered throughout at mid-levels

<i>Colutea lutea</i>	Lovely orange flowered broom scattered in steppe and shibliak areas
<i>Coronilla balansae</i>	Borjomi and Achalciche, also Nichbisi
<i>Coronilla orientalis</i>	woodlands along the Georgian Military Highway
<i>Genista flagellaris</i>	dwarf species on limestone shibliak near Nichbisi
<i>Hedysarum elegans</i>	stunning species with large heads of red flowers. Between Achalciche and Abastumani
<i>Hedysarum sericeum</i>	beautiful red flowered species with large flowers in the limestone shibliak near Nichbisi
<i>Lathyrus aphaca</i>	Achalciche
<i>Lathyrus cicera</i>	Davit Gareja
<i>Lathyrus laxiflorus</i>	scattered in woodlands
<i>Lathyrus miniatus</i>	Sometimes treated as a subspecies of <i>rotundifolius</i> . Jvari Church
<i>Lathyrus pratensis</i>	in leaf, Georgian Military Highway
<i>Lathyrus roseus</i>	scattered in woodlands
[<i>Lathyrus sphaerica</i>	scattered]
<i>Lathyrus vernus</i>	woodlands around Bakuriani – in flower lower down
<i>Medicago dzhawakhetica</i>	mat-forming. Roadside gravels on the Javakheti Pass
<i>Medicago lupulina</i>	scattered in ruderal habitats
<i>Onobrychis angustifolium</i>	scattered. Pale pink forms at Davit Gareja and Jvari Church
[<i>Onobrychis kachetica</i>	near the airport hotel! Fine species]
<i>Onobrychis meschetica</i>	pretty orange/cream flowers. Between Achalciche and Abastumani
<i>Onobrychis petraea</i>	Igoeti area
[<i>Onobrychis radiata</i>	large pale flowered species with orange-lined petals – only noted from vehicle as we drove near Gori]
<i>Oxytropis dasypoda</i>	beautiful purple-blue species in Darial Gorge, Greater Caucasus. In 2010 had finished there but was seen flowering Truso/Terek junction and also in the Juta Valley
<i>Oxytropis owerinii</i>	pale yellow flowered. Gweletti Valley, Greater Caucasus
<i>Robinia pseudacacia</i>	scattered in lowlands – planted
<i>Sophora alopecuroides</i>	In leaf, Achalciche
<i>Spartium junceum</i>	common along roadsides around Tbilisi
[<i>Trifolium ambiguum</i>	Igoeti area]
<i>Trifolium caucasicum</i>	large-flowered species, Abastumani
<i>Trifolium pratense</i>	scattered
<i>Trifolium repens</i>	scattered. Several other <i>Trifoliums</i> noted
<i>Trigonella coerulescens</i>	Davit Gareja and Achalciche. Blue fenugreek
<i>Vicia alpestris/purpurea</i>	fine purple alpine in the Juta Valley
<i>Vicia (Orobus) aureus</i>	woodlands along the Georgian Highway, first flowers
<i>Vicia balansae</i>	in bud in the Darial Gorge
<i>Vicia faba</i>	near Signakhi. Davit Gareja and Jvari Church
[<i>Vicia grandiflora</i>	Davit Gareja]
[<i>Vicia hirsuta</i>	Borjomi area]
<i>Vicia lutea</i>	Davit Gareja
<i>Vicia pannonica</i>	Achalciche and Nichbisi, also Borjomi Gorge. Creamy-white flowers
<i>Vicia peregrina</i>	single purple flowers. Looked like this species but apparently not recorded in Georgia – synonym? Achalciche
<i>Vicia sativa</i>	foothills, roadsides etc
<i>Vicia truncatula</i>	woodlands at lower levels in Greater Caucasus. Also Nichbisi

Vicia villosa? roadsides, Nichbisi etc

Fagaceae

Fagus orientalis widespread and locally dominant
Quercus hartwissiana Achalciche and Borjomi Gorge
Quercus (petraea) iberica widespread – low to mid levels
Quercus longipes scattered in Lagodekhi at lower levels. Also Nichbisi
Quercus macranthera locally dominant at higher levels in both mountain areas

Fumariaceae

Corydalis alexeenkoana
Corydalis angustifolia Pale yellow or almost white with few flowers – Zekaris Pass
Corydalis caucasica Zekaris Pass
Fumaria asepala Jvari Church area
Fumaria densiflora Paratatsemi

Gentianaceae

Gentiana angulosus widespread and locally abundant in alpine grasslands
Gentiana aquatica scattered in alpine turf throughout. Tiny flowers
Gentiana cruciata leaves only. Foothills in both areas
Gentiana pyrenaica Snostkali Valley and Javakheti Plateau

Geraniaceae

Erodium armenum pretty species in the Gareja Steppe
Erodium cicutarium scattered
[*Erodium moschatum* Lagodekhi]
Geranium columbinum Igoeti. Jvari Church
Geranium lucidum Lagodekhi village. Scattered at lower levels
[*Geranium molle* scattered throughout]
Geranium pyrenaicum Igoeti. Lesser Caucasus
[*Geranium purpureum* high forests in Great Caucasus]
Geranium pusillum Davit Gareja
Geranium renardii leaves on the Zekaris Pass and in Greater Caucasus
Geranium robertianum forests in all areas
Geranium rotundifolium Davit Gareja

Globulariaceae

Globularia trichosantha Khada Valley and limestone shibliak near Nichbisi

Grossulariaceae

Ribes alpinum Javakheti Plateau
Ribes biebersteiniana Gudauri
[*Ribes orientale* widespread in shrubby and wooded areas]

Hydrangeaceae

[*Philadelphus caucasicus* in leaf at Lagodekhi]

Iridaceae

<i>Iris furcata</i>	a beautiful purple dwarf form in flower in the Dariel Gorge And Juta valley
<i>Iris pumila</i>	Davit Gareja
<i>Iris sibirica</i>	leaves noted in Dariel Gorge

Juglandaceae

<i>Juglans regia</i>	Scattered – in all mountain areas. Jvari
<i>[Pterocarya fraxinifolia</i>	in lower forests at Lagodekhi]

Labiatae

<i>Acinos arvensis</i>	Davit Gareja, Nichbisi etc
<i>Ajuga chamaepitys</i>	occasional in steppe areas
<i>Ajuga genevensis</i>	common in foothills throughout
<i>Ajuga orientalis</i>	widespread
<i>[Ajuga reptans</i>	scattered]
<i>Eremostachys iberica</i>	scattered in steppe and shibliak zones
<i>Glechoma hederacea</i>	scattered throughout
<i>Lamium applexicaule</i>	Davit Gareja
<i>Lamium album</i>	widespread
<i>Lamium purpureum</i>	mostly villages
<i>Marrubium vulgare</i>	Achalchiche
<i>Nepeta musinii</i>	scattered, steppes – small blue species
<i>Phlomis pungens</i>	leaves on the Davit Gareja
<i>Salvia aethiopsis</i>	leaves on the Davit Gareja
<i>Salvia gareji</i>	beautiful large pink flowered species named after and endemic to Davit Gareja. Not in flower in 2010
<i>[Salvia limbata</i>	white and yellow flowered. Nichbisi]
<i>Salvia nemorosa</i>	Achalchiche
<i>Salvia virgata</i>	in bud on the Gareja steppe
<i>Salvia viridis</i>	Davit Gareja and Achalchiche
<i>Scutellaria orientalis</i>	widespread in low and mid levels. Subspecies <i>sosnowskyi</i> in Nichbisi limestone shibliak and Achalchiche
<i>Sideritis montana</i>	Davit Gareja
<i>Stachys atherocalyx</i>	Nichbisi and Borjomi
<i>Teucrium polium</i>	Nichbisi
<i>Thymus collinus</i>	steppe areas. Another <i>Thymus</i> species in Borjomi Valley
<i>[Thymus tiflisiensis</i>	Davit Gareja]

Liliaceae

<i>Asparagus officinalis</i>	scattered at lower levels
<i>Asparagus verticillatus</i>	Davit Gareja
<i>Aspodeline lutea</i>	Borjomi Gorge
<i>Bellevalia paradoxa</i>	alpine slopes above Bakuriani and Tikmatagi pass
<i>Leopoldia caucasica</i>	Davit Gareja
<i>[Colchicum speciosus</i>	leaves abundant in Zekaris pass and Javakheti Plateau
<i>Colchicum szovitsii</i>	Javakheti Plateau ,Tabatskouri
<i>Convallaria majus</i>	Zekaris pass
<i>Fritillaria collina</i>	widespread and sometimes abundant in the High Caucasus
<i>Fritillaria latifolia</i>	abundant fine flowers on the Zekaris Pass and Cross Pass

<i>Fritillaria orientalis</i>	Several in flower between Kazbegi and Russian border
<i>Gagea anisanthos</i>	single hollow basal leaf. Scattered in high areas of Greater Caucasus. 2010 seen above Bakuriani
[<i>Gagea caroli-kochii</i>	solitary narrow (only 1mm) basal leaf longer than inflorescence, cauline leaves 2-3, verticillate, to 3mm broad, glabrous, umbel of 1-3 flowers, pedicels shorter than flowers, tepals small (to 9mm), narrow, yellow with hyaline margin, pale green on underside, acuminate, villous at tip. On rocks in Lagodekhi]
[<i>Gagea chanae</i>	Single flat basal leaf to 4mm wide longer than 2-4 flowered umbellate inflorescence. Cauline leaves 3, verticillate, all villose at margin. Quite common in high areas around Bakuriani and Zekaris]
<i>Gagea charadze</i>	tall flat basal leaf. scattered in the Darial Gorge, Gweletti Valley and Kuru Mountain in the Greater Caucasus. In 2010 only on the Javakheti Plateau
<i>Gagea commutata</i>	squat rather coarse <i>Gagea</i> with two basal leaves flattened but narrow to 2mm, cauline leaves 3-5, verticillate and tepals very long acuminate. In seed at Jvari Church and Gareja steppe
<i>Gagea germainae</i>	flat basal leaf, tallish species with pale flowers. Gweletti Valley and Darial Gorge, Greater Caucasus. In 2010 on the Javakheti Plateau
<i>Gagea glacialis</i>	I now believe in this species again! Locally quite common near Snow especially in Lagodekhi. In 2010 Javakheti
[<i>Gagea lutea</i>	tall wide flat basal leaf much exceeding inflorescence, often glaucous. 3-10 flowered umbel, tepals large, yellow with white margins, outer wider than inner]
[<i>Gagea stipitata</i>	single linear (to 1.5mm wide) basal leaf, , cauline leaves alternate, roughly equal to inflorescence, cymose inflorescence, 3-10+ flowers, tepals to 10mm, narrow, yellow (pale), green on underside. Davit Gareja]
<i>Gagea sulfurea</i>	hollow basal leaves, tepals large, obtuse and bright golden yellow. Widespread and common throughout the mountains
<i>Gagea taurica</i>	five-angled leaves, acuminate tepals. Scattered on dry bluffs on the Javakheti Plateau and the Zekaris Pass
<i>Lilium georgicum</i>	aka <i>Lilium ponticum</i> . In bud in the Darial Gorge between Kazbegi and Russian border,
<i>Lilium szovitsianum</i>	Common in bud above Bakuriani, Zekaris pass and Kharagauli
<i>Lloydia serotina</i>	nice colony in the Darial Gorge and Truso/Terek Junction
<i>Muscari pallens</i>	curious white flowered species scattered in the Darial Gorge in the Greater Caucasus, also in the Snostkali Valley
<i>Muscari sosnowskyi</i>	scattered on slopes between Bakhuriani and the Javakheti Plateau, also Zekaris Pass
<i>Muscari szovitsianum</i>	in scrub around the Jvari Church and Kus Tba – in fruit
<i>Ornithogalum balansae</i>	scattered in the Greater Caucasus. Probably this species on the Javakheti Pass and possibly also Zekaris Pass and Gudauri
[<i>Ornithogalum magnum</i>	Zedazeni
<i>Ornithogalum schmalhauseni</i>	Gweletti Valley
	however the species limits on this group are poorly known, poorly differentiated, or both!]
<i>Paris incompleta</i>	in abundant flower in forests below Bakuriani, and Aragvi gorge

<i>Polygonatum glaberrimum</i>	widespread
<i>Polygonatum multiflorum</i>	widespread
<i>Puschkinia scilloides</i>	Juta Valley
<i>Scilla rosenii</i>	widespread in huge patches in meadows and forests above Bakuriani.
<i>Scilla sibirica</i>	subspecies ' <i>caucasica</i> '. to 10cm tall, several brilliant blue open flowers. Abundant on the Zekaris Pass – truly stunning!
<i>Veratrum lobelianum</i>	young leaves in many areas in the mountains

Linaceae

<i>Linum austriacum</i>	blue flowers. Steppe areas
<i>Linum bienne</i>	smaller blue flowers. Nichbisi
<i>Linum mucronatum</i>	bright yellow flowers. Nichbisi

Lycopodiaceae

<i>Huperzia selago</i>	Shining Clubmoss. Gweletti Valley
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Malvaceae

<i>Alcea rugosa</i>	leaves at Jvari
<i>Althaea hirsuta</i>	Marsh-Mallow. Gareja steppe
[<i>Malva sylvestris</i>	roadsides]
[<i>Malva negelctus</i>	Lagodekhi Village]
<i>Malva parviflorus</i>	Davit Gareja

Oleaceae

<i>Fraxinus excelsior</i>	Locally abundant in Lagodekhi. Scattered along main river valleys
<i>Jasmiium fruticans</i>	scattered
<i>Ligustricum vulgare</i>	Borjomi Gorge

Orchidaceae

<i>Cephalanthera caucasica</i>	Above Borjomi.
[<i>Cephalanthera kotschyana</i>	Above Borjomi
<i>Cephalanthera longifolia</i>	scattered throughout
<i>Dactylorhiza caucasica</i>	Widespread in suitable habitat
<i>Dactylorhiza euxina</i>	Especially common around White Agavri valley area
<i>Dactylorhiza flavescens</i>	yellow and pink forms in good flower on the Zekaris Pass. and Abastumani
<i>Dactylorhiza urvilliana</i>	Kharagauli
<i>Neottia nidus-avis</i>	Kharagauli
<i>Orchis caucasica</i>	In fruit at Nichbisi
<i>Orchis pallens</i>	on way to Javakheti Pass.
<i>Orchis pinetorum (mascula)</i>	Dariel Gorge, Zekaris Pass
<i>Orchis simia</i>	Scatterd locally common
<i>Orchis stevenii</i>	Superb specimens above Borjomi
<i>Platanthera chlorantha</i>	Above Borjomi

Orobanchaceae

<i>Orobanche alba</i>	Jvari Church and Nichbisi
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<i>Orobanche caryophyllacea</i>	Jvari Church and Nichbisi
<i>Orobanche gracilis</i>	Khada Gorge, Greater Caucasus
<i>Orobanche lutea?</i>	Jvari Church
<i>Orobanche minor?</i>	Jvari Church
<i>Orobanche purpurea</i>	Jvari Church and Nichbisi
<i>Orobanche ramosa</i>	noted by Jvari Church and on the Gareja steppe
<i>Phelypaea coccinea</i>	in bud at Davit Gareja and in flower in the limestone shibliak near Nichbisi

Oxalidaceae

<i>Oxalis acetosella</i>	in the foothills of the Greater Caucasus
[<i>Oxalis corniculata</i>]	Lagodekhi village]

Paeoniaceae

<i>Paeonia caucasica</i>	2 sites above Borjomi. In seed only in 2013
<i>Paeonia steveniana</i>	2 sites around Bakuriani magnificent display of huge flowers
<i>Paeonia tenuifolia</i>	Igoeti. – in fruit!

Papaveraceae

<i>Chelidonium majus</i>	widespread
<i>Glaucium corniculatum</i>	Jvari Church. Gareja steppe and Achalciche
<i>Papaver arenarium</i>	scattered. Bright red with large black cross inside flower. Georgian Military Highway and Nichbisi
<i>Papaver argemone</i>	Gareja steppe
<i>Papaver commutatum</i>	scattered throughout
<i>Papaver dubium</i>	en route to Lagodekhi. Jvari Church
<i>Papaver fugax</i>	large orange flowers, many on a head, one opening at a time. Dry hillside between Kharagauli and Borjomi
[<i>Papaver hybridum</i>]	Jvari Church]
<i>Papaver rhoeas</i>	roadsides along the Mtkvari River

Pinaceae

<i>Abies nordmanniana</i>	Widespread in Lesser Caucasus, less frequent than <i>Picea</i> though
<i>Picea orientalis</i>	Widespread in Lesser Caucasus. Also a population near Gudauri
<i>Pinus kochiana</i>	Scattered in forests of Lesser Caucasus. Occasional patches right on treeline, also some in Greater Caucasus
<i>Pinus nigra</i>	Scattered (often planted)

Plantaginaceae

<i>Plantago lanceolata</i>	scattered
<i>Plantago major</i>	ruderal habitats
[<i>Plantago media</i>]	in the foothills of the Greater Caucasus]
<i>Plantago ovata</i>	Jvari Church

Polygalaceae

<i>Polygala alpicola</i>	scattered in the Greater Caucasus, also noted on the Zekaris Pass. Dwarf blue species
<i>Polygala amoenissima</i>	near Pasanauri in the Greater Caucasus. Also Bakuriani area

Polygala anatolica or *papilionacea*? In fact I'm not at all sure of the differences between *anatolica*, *papilionacea*, *amoenissima* and *transcaucasicus*!
Polygala hohenackeriana small pale species with odd-shaped flowers. Gareja steppe
Polygala transcaucasicus Davit Gareja, also Jvari Church and Achalciche

Polygonaceae

Atraphaxis caucasica Jvari Church
Rumex obtusifolius scattered in ruderal habitats
 [Rumex pulcher Signakhi]

Primulaceae

Androsace chamaejasme some nice plants in the Khada Valley, Greater Caucasus, also noted at the junction of the Truso/Terek Valleys
Androsace intermedia small pink flowered umbels. Rocky bluffs on the Javakheti Pass
Androsace raddeana slightly more robust pink flowered umbels. Dry turf on the Zekaris Pass
Androsace septentrionalis Darial Gorge
Androsace villosa scattered in dry alpine slopes throughout
 The taxonomy of the following *Primulas* is debatable. Certainly there are three that could be subsumed into *algida*, at least four possible subspecies/variants of the Oxlips *Primula elatior*, and two possible subspecies/variants of *Primula vulgaris*, for the moment we've maintained the taxa listed in the Georgian Flora.

Primula algida high grasslands and wet areas throughout the Greater and Lesser Caucasus
Primula amoena a pink-purple or white 'oxslip' common in alpine grasslands and open birchwoods in Great Caucasus. We saw in flower in the Darial Gorge, Gweletti Valley and many parts of the Snostkali and Juta Valleys this year
Primula auriculata umbel of pink flowers. Common along streams on the Zekaris Pass
Primula cordifolia like a large leaved (leaves are distinctively cordate at the base) pale flowered lax form of *ruprechtii*. In flower in the Darial Gorge. Not sure what the similar plants above Bakuriani are?
Primula darialica *algida*-like species endemic to Truso Valley region. Differs little and may be just a variety of the previous species
Primula farinifolia? the *auriculata* types noted in the White Arigwi Valley and Juta Valley were very squat and may have been this species?
Primula macrocalyx beautiful bright yellow 'cowslip'. Widespread in montane woods and meadows throughout
Primula meyeri stunning deep purple flowers in an umbel on a grey hairy stem. Just a few (including apparent hybrids with *Primula pseudelatior*) above Bakuriani
Primula pallasii elegant 'oxslip', tall and with many creamy flowers. Locally common in woods near Bakuriani
Primula pseudelatior common pale yellow oxslip of alpine areas around Bakuriani and Zekaris Pass – not one hundred per cent sure of the distinction between this and *Primula ruprechtii*?
Primula ruprechtii beautiful pale yellow flowered 'oxslip' common in alpine grasslands throughout

Primula sibthorpii pretty deep pink 'primrose' abundant in woods below Bakuriani
 – just the last flowers seen this year
[Primula woronowii mauve 'primrose' scattered in Lagodekhi where a few still in
 flower in the higher woods]

Pteridophyta

Adiantum capillus-veneris cliffs in Tbilisi!
Asplenium adiantum-nigrum common in Lagodekhi. Woods along the Georgian Military Highway
[Asplenium hausknechtii cliffs in the Arigwy Valley in the Greater Caucasus]
Asplenium septentrionale scattered throughout
Asplenium trichomanes widespread
Asplenium viride scattered in the Greater Caucasus
Asplenium woronowii Khada Gorge, Greater Caucasus
Athyrium distentifolium Lagodekhi. Probably this species on the Zekaris Pass
Athyrium felix-femina Lady Fern. Gweletti Valley, Greater Caucasus
Cystopteris fragilis widespread
Cryptogramma crispa tufts in screes in Gweletti Valley and the Darial Gorge in the Great Caucasus
[Dryopteris affinis scattered in mountains]
[Dryopteris alexeenkoana aka *Dryopteris dilitata*. scattered in mountains]
Dryopteris caucasica scattered in the Greater Caucasus
Dryopteris felix-mas Male Fern. Gweletti Valley, Greater Caucasus
Dryopteris oreades scattered in high mountains
Gymnocarpium robertianum Borjomi area. Khada Gorge, Greater Caucasus
Matteucia struthiopteris foothills of Great and Lesser Caucasus where locally abundant
Oreopteris limbosperma woodlands along the Georgian Military Highway
Phyllitis scolopendrium Common in wetter forests
Phegopteris connectilis Borjomi area. Also Khada Gorge and Darial Gorge, Greater Caucasus
Polystichum aculeatum widely scattered, though not common
Polystichum braumii common in forests in all mountain areas
Polystichum lonchitis Truso Valley, Greater Caucasus. In 2010 only on the Zekaris Pass
[Polystichum setiferum foothills of Great Caucasus and Lagodekhi]
Polystichum woronowii Paratatssemi
Polypodium australe scattered throughout
Polypodium vulgare widespread
Pteridium aquilinum mostly Lesser Caucasus
Woodsia alpina rocks at the Truso/Terek Valley junction
Woodsia ilvensis rocks at the Truso/Terek Valley junction, also above Bakuriani

Ranunculaceae

Adonis aestivalis Davit Gareja
Adonis flammea Achalciche and Nichbisi
Adonis parviflora? Jvari Church
Anemone caucasica small blue alpine species. Same as Turkish *Anemone blanda?*
 Widespread in damper areas near snow melt – some fine mixed
 white and blue populations on the Zekaris Pass
Anemone fasciculata conspecific with Turkish *Anemone narcissiflorus?* Scattered on

	dryish slopes in both mountain areas. Mostly white flowered, some with pink flowers seen (can be red!). This year reddest ones were above Bakuriani
<i>Anemone speciosa</i>	Yellow-flowered. Very similar to <i>ranunculoides</i> . Flowering in the Darial and Khada Gorges by late snow patches. Greater Caucasus
<i>Caltha palustris</i>	widespread in mountains
<i>Consolida orientalis</i>	Achalchiche
[<i>Ficaria calthifolia</i>	local form of the Celandine! Lagodekhi]
<i>Helleborus caucasicus</i>	presumably the same as <i>orientalis</i> of NE Turkey. Widespread
<i>Pulsatilla albana</i>	Zekaris Pass. This and <i>Pulsatilla georgica</i> may be conspecific
<i>Pulsatilla georgica</i>	dry slopes above Bakuriani
<i>Pulsatilla violacea</i>	similar habitats in the Great Caucasus. A richer-coloured and larger flowered species – some stunning displays in the Snostkali Valley in 2010
<i>Ranunculus arvensis</i>	Jvari Church
<i>Ranunculus buhsei</i>	damp forests below Bakuriani, also along Georgian Military Highway
<i>Ranunculus caucasicus</i>	leaves with petiolate central segment. Greater and Lesser Caucasus
[<i>Ranunculus chius</i>	small, leaves trisect, glabrous to hairy, flower stalks thickening in fruit. Flowers only 3-6mm. Wet ground around Lagodekhi Village]
<i>Ranunculus illyricus</i>	Leaves trisect with very long undivided lobes. Covered in silvery hairs. Signakhi area. Also Gareja steppe and Jvari
<i>Ranunculus grandiflorus</i>	Signakhi area and probably elsewhere in steppe. Achalchiche
<i>Ranunculus illyricus</i>	large pale yellow flowers and silver leaves appearing undivided or with three long thin segments. Common in lower areas
<i>Ranunculus ledebouri</i>	squat alpine celandine. A few on the Cross Pass, Greater Caucasus
[<i>Ranunculus marginatus</i>	round heart shaped leaves, broadly winged at base, central leaflet stalked, hairy, deep golden yellow flowers to 11mm. Wet ground around Lagodekhi Village]
[<i>Ranunculus muricatus</i>	glabrous with kidney-shaped leaves 3-7 lobed. Petals as long as semi-reflexed sepals. Wet areas. Woodlands in the Alazani Valley]
<i>Ranunculus polyanthemus</i>	meadows and woodland edge in all areas. Meadow Buttercup like species
<i>Ranunculus oreophilus</i>	alpine species noted in Arigvi, Gweletti and Juta Valleys in the Greater Caucasus
<i>Ranunculus oxyspermus</i>	frequent in steppe areas
<i>Ranunculus repens</i>	scattered throughout
<i>Ranunculus sarduus</i>	3-lobed basal leaves, hairy, often shiny, mid lobe larger than others and toothed. Flowers pale yellow, large, sepals reflexed. Appeared to be this species in lower meadows in Bakuriani area
[<i>Ranunculus sceleratus</i>	Celery-leaved Butercup. Almost hairless, robust, leaves three-lobed, many flowers in branched clusters. Marshy areas. Woodlands in the Alazani Valley]
<i>Ranunculus tripartitus</i>	white-flowered aquatic species – Gareja steppe
<i>Trollius patulus</i>	In flower in the Darial Gorge in the Greater Caucasus and scattered in the Bakuriani area. Presumably the same as <i>ranunculoides</i> of NE Turkey

Resedaceae

Reseda lutea scattered in lower areas
Reseda luteola noted on roadsides

Rhamnaceae

Paliurus spina-christi locally dominant in shibliak
Rhamnus cathartica Jvari Church
Rhamnus cordata Darial Gorge, Greater Caucasus
Rhamnus depressa extraordinary alpine 'tree' just a few inches high and growing in steep screes below the Cross Pass
Rhamnus pallasii steppe areas

Rosaceae

Alchemilla sp. Several species noted
Amelanchier rotundifolia scattered throughout
[*Cerasus divaricata*] Lagodekhi
Cerasus incana Davit Gareja and Jvari Church
[*Cerasus silvestris*] Lagodekhi
Cotoneaster integerrimus Snostkali Valley
Cotoneaster meyeri rather tree-like! Jvari Church and Nichbisi
Cotoneaster nummularifolia scattered throughout
Crataegus microphylla Igoeti
Crataegus orientalis Achalciche and Nichbisi
Crataegus pentagyna Igoeti
Cydonia oblonga Achalciche and Nichbisi
Dryas caucasica in leaf in various high places in the Great Caucasus
Duchesnia indica wild strawberry-like. Various lowlands sites
Fragaria vesca scattered
Geum rivale damp woodlands throughout
Geum urbanum scattered throughout
Malus orientalis scattered in all forested areas
Mespilus germanica scattered throughout at low-mid levels
Potentilla caucasica rather common in alpine grasslands in the Greater Caucasus, e.g. Gweletti Valley
[*Potentilla gelida*] Truso Valley, Greater Caucasus]
Potentilla micrantha white-flowered strawberry-like species. Scattered in the Greater Caucasus
Potentilla recta roadsides
[*Potentilla ruprechtii*] Aragvi Valley, Greater Caucasus]
Poterium lasiocarpa scattered
Prunus avium mid-level forests
Prunus padus Khada Gorge
Prunus spinosus Blackthorn. Khada Gorge
Pyracantha coccinea woodlands along the Georgian Military Highway
Pyrus demetrii/georgica Davit Gareja steppe
Pyrus caucasica forming sizeable trees in the Bakuriani area
Pyrus salicifolius most steppe and shibliak areas
Rosa canina Nichbisi
Rosa pimpinellifolia Scattered at low-mid levels

<i>[Sanguisorba major</i>	Igoeti]
<i>Sibbaldia parviflora</i>	Scattered in high areas in the Greater Caucasus
<i>Sibbaldia semiglabra</i>	glabrous species. Kuru Mountain and Juta Valley
<i>Sorbus aucuparia</i>	Lagodekhi and frequent in the Lesser Caucasus
<i>Sorbus graeca</i>	Nichbisi
<i>Sorbus hajastanii</i>	Nichbisi
<i>Sorbus torminalis</i>	Nichbisi
<i>Spirea hypericifolia</i>	scattered in shibliak communities

Rubiaceae

<i>Asperula arvensis</i>	blue-flowered. Scattered throughout at mid-low levels
<i>Asperula caucasica</i>	Jvari Church
<i>Asperula glomerata</i>	Achalciche and Nichbisi
<i>Galium aparine</i>	scattered
<i>Galium odoratum</i>	widespread in woods
<i>Galium verum</i>	Nichbisi and Gareja stppe – in leaf
<i>Cruciata laevipes</i>	foothills throughout

Rutaceae

<i>Dictamnus caucasicus</i>	spectacular Burning Bush scattered throughout in shibliak
<i>Haplophyllum armenum</i>	Nichbisi

Salicaceae

<i>Populus canescens</i>	Georgian Military Highway
<i>Populus nigra</i>	river valleys
<i>Populus tremula</i>	Scattered – locally common in high mountains
<i>[Populus X euphratica</i>	commonly planted in and near villages]
<i>Salix caprea</i>	scattered
<i>[Salix elburzensis</i>	Darial Gorge]

Santalaceae

<i>Thesium brachyphyllum?</i>	probably this species at Achalciche and Nichbisi
<i>Thesium procumbens</i>	Davit Gareja? Jvari Church

Saxifragaceae

<i>Chrysosplenium alternifolium</i>	widespread
<i>Saxifraga cartilaginea</i>	scattered on rocks on both mountain areas. In leaf only
<i>Saxifraga cymbalaria</i>	Lagodekhi. Borjomi woodlands in wet areas
<i>Saxifraga desoulavyi</i>	' <i>juniperifolia</i> ' type. In Khada Gorge and Aragvi Valley in Great Caucasus growing on sharp shale cliffs
<i>Saxifraga exarata</i>	Truso/Terek junction – in leaf
<i>Saxifraga kolenatiana</i>	' <i>cartilaginea</i> ' type with red flowers. Rosettes in the Darial Valley, on serpentinite, and in flower in upper Snostkali Valley, both Great Caucasus
<i>Saxifraga moschata</i>	Truso/Terek junction – in leaf
<i>Saxifraga repanda</i>	tall forest species of 'meadow saxifrage' group. Borjomi area
<i>Saxifraga pseudolaevis</i>	another of the ' <i>juniperifolia</i> ' saxifrages. Frequent in the Kazbegi and Truso areas
<i>Saxifraga scleropoda</i>	Truso/Terek junction – in leaf
<i>Saxifraga sibirica</i>	Lagodekhi. Juta Valley

Scrophulariaceae

<i>Celsia orientalis</i>	scattered in shibliak communities
<i>Lathraea squamaria</i>	common in Lagodekhi and scattered in the Greater Caucasus
<i>Linaria genistifolia</i>	in leaf on the Davit Gareja
<i>Linaria simplex</i>	steppe areas. Tiny single yellow flowers
[<i>Melampyrum arvense</i>	Lower parts of Great Caucasus]
[<i>Parentucella latifolia</i>	Lagodekhi]
<i>Pedicularis acmodonta</i>	in flower in the Darial Gorge
<i>Pedicularis armena</i>	small pale species. Javakheti Plateau and Zekaris Pass
<i>Pedicularis eriantha</i>	probably the same as <i>Pedicularis comosa</i> . Usual looking yellow form along the Georgian Military Highway and a yellow form with brown on in the Lesser Caucasus
<i>Pedicularis wilhelmsiana</i>	Javakheti where the usual dingy yellow/red form and Zekaris Pass where a rather nice red/purple form
<i>Scrophularia chrysantha</i>	scattered in alpine meadows of the Lesser Caucasus
<i>Scrophularia diffusa</i>	Darial Gorge
<i>Scrophularia grossheimii</i>	Darial Gorge
<i>Scrophularia ilwensis</i>	Achalchiche
<i>Scrophularia rutifolia</i>	Achalchiche and Nichbisi
[<i>Verbascum formosum</i>	beautiful large flowered species. Davit Gareja]
<i>Verbascum laxum</i>	scattered in the Lesser Caucasus
<i>Verbascum phoeniceum</i>	scattered at low-mid levels
[<i>Veronica beccabunga</i>	Lagodekhi]
<i>Veronica chamaedrys</i>	scattered
<i>Veronica filiformis</i>	locally common in high areas
<i>Veronica gentianoides</i>	scattered throughout in mid-altitude damp meadows
<i>Veronica liwanensis</i>	beautiful species on dry steppe between Borjomi and Bakuriani and in the Borjomi Gorge
<i>Veronica multifida</i>	scattered at low-mid levels throughout
[<i>Veronica officinale</i>	Borjomi]
<i>Veronica petraea</i>	pretty dwarf alpine in Truso Valley with brilliant blue pink-eyed flowers
<i>Veronica peduncularis</i>	like <i>chamaedrys</i> but rangier and different colour flowers. Scattered throughout
[<i>Veronica serpyllifolia</i>	Lagodekhi and Greater Caucasus]
[<i>Veronica tournefortii</i>	Igoeti]

Solanaceae

<i>Atropa belladonna</i>	scattered - in leaf
<i>Hyoscyamus niger</i>	widespread
<i>Physochliana orientalis</i>	strange purple-belled species on cliffs in the Darial Gorge, Greater Caucasus

Thymelaeaceae

<i>Daphne glomerata</i>	scattered on dry slopes in Great Caucasus
<i>Daphne mezereum</i>	very occasional throughout except on the Zekaris Pass where common!
[<i>Daphne pontica</i>	Bakuriani area]
<i>Daphne transcaucasica</i>	bushy white-flowered highly fragrant species. Nichbisi

Tiliaceae

Tilia caucasica Lagodekhi. Scattered

Typhaceae

Typha laxmannii river margins in the Greater Caucasus foothills. Also Davit Gareja

Ulmaceae

[*Celtis caucasica* Davit Gareja steppe & Jvari Church]
Ulmus elliptica Davit Gareja steppe
Ulmus minor Nichbisi

Urticaceae

Urtica dioica widespread

Valerianaceae

Valeriana alliarifolia in bud around Bakuriani
Valeriana alpestris in bud in the Juta Valley
Valeriana officinalis scattered
Centranthus longifolius on cliffs in the Borjomi area

Violaceae

Viola alba Javakheti Plateau and Zekaris Pass. Not white!
Viola arvensis scattered
[*Viola canina* Borjomi area]
Viola caucasica aka *Viola biflora* subspecies *caucasica*. Yellow 'rock' violet. Gweletti Valley, Darial Gorge and Juta Valley in Great Caucasus
Viola ignobilis? Marbled spur, same colour as flower, flowers small, leaves heart shaped, crenate. Khada Gorge and Truso/Terek junction, both Greater Caucasus
Viola kitabeliana steppe areas
Viola kupfferi fine purple and yellow pansy (sometimes considered a form of *Viola tricolor*) in forests around Bakuriani and Abastumani
Viola mirabilis? forests below Bakuriani
Viola montana? Species with a long clavate spur, stipules long ciliate, petals long, strongly bearded, dark ring round pale centre of flower, leaves heart shaped. Khada Gorge, Greater Caucasus. May be a synonym of *Viola canina*?
Viola odorata locally abundant especially in Lagodekhi. A dark purple variant throughout
[*Viola occulta* tiny flowers. Nichbisi]
Viola oreades syn. *Viola altaica*. Scattered on the Javakheti Plateau and Zekaris Pass. Mostly cream or yellow, some blue. Large flowers.
[*Viola reichenbachiana* scattered throughout]
[*Viola riviniana* noted only in the higher parts of the Greater Caucasus]
Viola sieheana Khada Gorge, Gudauri and common in the Bakuriani and Abastumani areas
Viola somchetica Common in Great Caucasus. Very pretty species with short lower petal making the face look round
Viola suavis Achalchiche. Blue flowers with a white centre

Zygophyllaceae

Zygophyllum fabago

in leaf at Jvari Church

Systematic List Number 2 Birds

Black-necked Grebe	<i>Podiceps nigricollis</i>	Tabatskuri
Great Crested Grebe	<i>Podiceps cristatus</i>	Tabatskuri,Paravani
Little Grebe	<i>Tachybaptus ruficollis</i>	Tabatskuri
Cattle Egret	<i>Bubulcus ibis</i>	Scattered around Tbilisi
Great white Egret	<i>Egretta alba</i>	Tabatskuri
Night Heron	<i>Nycticorax nycticorax</i>	Rustavi
Grey Heron	<i>Ardea cinerea</i>	Tabatskuri
White Stork	<i>Ciconia ciconia</i>	Paravani area
Pochard	<i>Aythya ferina</i>	Paravani
Tufted Duck	<i>Aythya fuligula</i>	Paravani
Velvet Scoter	<i>Melanitta fusca</i>	Tabatskuri
Black Kite	<i>Milous migrans</i>	Tabatskuri
Egyptian Vulture	<i>Neophron percnopterus</i>	Azagri valley
Griffon Vulture	<i>Gyps fulvus</i>	widespread in low numbers.
Marsh Harrier	<i>Circus aeruginosus</i>	Gareja Steppe, Tabatskuri
Sparrowhawk	<i>Accipiter nisus</i>	Scattered
Common Buzzard	<i>Buteo buteo</i>	widespread.
Long-legged Buzzard	<i>Buteo rufinus</i>	Scattered
Golden Eagle	<i>Aquila chrysaetos</i>	Juta valley
Booted Eagle	<i>Hieraetus pennatus</i>	Scattered
Short-toed Eagle		
Common Kestrel	<i>Falco tinnunculus</i>	Scattered.
Peregrine	<i>Falco peregrinus</i>	Truso/Terek junction area
Caucasian Blackcock	<i>Tetrao mlokosiewiczii</i>	Bakuriani. Stepantsminda
Corncrake	<i>Crex crex</i>	Gudauro,Dariel gorge
Baillons Crake	<i>Porzana pusilla</i> Gudauro	Lake (Deborah only)
Coot	<i>Fulica atra</i>	Tabatskuri,Paravani
Little ringed Plover	<i>Charadrius dubius</i>	Juta Valley
Ruff	<i>Philomachus pugnax</i>	Lake Nr Davit Gareja
Common Sandpiper	<i>Actitis hypoleucos</i>	Truso/Terek junction area, Juta valley
Black-headed Gull	<i>Larus ridibundus</i>	Paravani
Yellow-legged Herring Gull	<i>Larus a.cachinnans</i> V	ardzia
Armenian Gull	<i>Larus (argentatus) armeniacus</i>	Tabatskuri Javakheti Plateau
Common Tern	<i>Sterna hirundo</i>	Paravani
Woodpigeon	<i>Columba palumbus</i>	Nr Borjomi
Collared Dove	<i>Streptopelia decaocto</i>	Nr Vardzia
Cuckoo	<i>Cuculus canorus</i>	widespread
Little Owl	<i>Athene noctua</i>	Gareja Steppe
Common Swift	<i>Apus apus</i>	widespread.
European Bee-eater	<i>Merops apiaster</i>	widespread
Roller	<i>Coracias garrulus</i>	widespread
Hoopoe	<i>Upupa epops</i>	scattered.
Green Woodpecker	<i>Picus viridis</i>	scattered
Black Woodpecker	<i>Dryocopus martius</i>	Above Bakuriani
Great Spotted Woodpecker	<i>Dendrocopus major</i>	locally common in forests
Middle Spotted Woodpecker	<i>Dendrocopus medius</i>	Zekaris pass.
Calandra Lark	<i>Melanocorypha calandra</i>	Gareja Steppe
Crested Lark	<i>Galerida cristata</i>	Gareja Steppe

Skylark	<i>Alauda arvensis</i>	scattered.
Shore Lark	<i>Eremophila alpestris</i>	Javakheti Plateau
Sand Martin	<i>Riparia riparia</i>	Davit Gareja
Crag Martin	<i>Ptyonoprogne rupestris</i>	widespread.
Swallow	<i>Hirundo rustica</i>	widespread.
House Martin	<i>Delichon urbica</i>	widespread.
Tree Pipit	<i>Anthus trivialis</i>	scattered
Water Pipit	<i>Anthus spinoletta</i>	widespread in mountains.
Black-headed Wagtail	<i>Motacilla flava feldegg</i>	Tabatskuri
Grey-headed Wagtail	<i>Motacilla flava superciliaris</i>	Aragvi
Grey Wagtail	<i>Motacilla cinerea</i>	scattered along most hill streams.
White Wagtail	<i>Motacilla alba</i>	widespread.
Dipper	<i>Cinclus cinclus</i>	scattered.
Wren	<i>Troglodytes troglodytes</i>	widespread
Dunnock	<i>Prunella modularis</i>	uncommon.
Robin	<i>Erithacus rubecula</i>	Karagauli NP
Nightingale	<i>Luscinia megarhynchos</i>	heard only
Black Redstart	<i>Phoenicurus ochruros</i>	Quite frequent in high mountain areas.
Common Redstart	<i>Phoenicurus phoenicurus</i>	Widespread and locally common.
Whinchat	<i>Saxicola rubetra</i>	widely scattered.
Stonechat	<i>Saxicola torquata</i>	scattered.
Black-eared Wheatear	<i>Oenanthe hispanica</i>	Jvari Church
Isabelline Wheatear	<i>Oenanthe isabellina</i>	Davit Gareja
Northern Wheatear	<i>Oenanthe oenanthe</i>	Scattered
Rock Thrush	<i>Monticola saxatilis</i>	Scattered in mountains.
Blue Rock Thrush	<i>Monticola solitarius</i>	Vardzia and day 2
Ring Ouzel	<i>Turdus torquatus</i>	Scattered in mountains.
Blackbird	<i>Turdus merula</i>	widespread.
Song Thrush	<i>Turdus philomelos</i>	scattered uncommon
Mistle Thrush	<i>Turdus viscivorus</i>	Scattered
Cetti's Warbler	<i>Cettia cetti</i>	between Archaliche and Abastumani
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	Lake near Davit Gareja
Lesser Whitethroat	<i>Sylvia curruca</i>	Bakuriani
Common Whitethroat	<i>Sylvia communis</i>	scattered throughout.
Blackcap	<i>Sylvia atricapilla</i>	widespread
Green Warbler	<i>Phylloscopus nitidus</i>	widespread
Caucasian Chiffchaff	<i>Phyllscopus lorenzii</i>	Cross pass
Spotted Flycatcher	<i>Muscicapa striata</i>	scattered.
Coal Tit	<i>Parus ater</i>	scattered
Blue Tit	<i>Parus caeruleus</i>	scattered
Great Tit	<i>Parus major</i>	widespread.
Nuthatch	<i>Sitta europaea</i>	Zedazeni
Kruper's Nuthatch	<i>Sitta krueperi</i>	Bakuriani
Common Treecreeper	<i>Certhia familiaris</i>	Bakuriani and Zekaris pass
Golden Oriole	<i>Oriolus oriolus</i>	Gudauro
Red-backed Shrike	<i>Lanius collurio</i>	widespread.
Lesser Grey Shrike	<i>Lanius minor</i>	scattered. Locally common
Woodchat Shrike	<i>Lanius senator</i>	Davit Gareja
Jay	<i>Garrulus glandarius</i>	widespread.
Magpie	<i>Pica pica</i>	scattered.
Alpine Chough	<i>Pyrrhocorax gracilis</i>	common in higher areas.

Red-billed Chough	<i>Pyrrhocorax pyrrhocorax</i>	common in high areas esp Juta valley
Jackdaw	<i>Corvus monedula</i>	noted in the Gareja Steppe
Rook	<i>Corvus frugilegus</i>	near Tbilisi
Hooded Crow	<i>Corvus (corone) cornix</i>	widespread.
Raven	<i>Corvus corax</i>	widespread.
Starling	<i>Sturnus vulgaris</i>	scattered
House Sparrow	<i>Passer domesticus</i>	around habitation.
Tree Sparrow	<i>Passer montanus</i> V	ardzia
Rock Sparrow	<i>Petronia petronia</i>	Davit Gareja
Snow Finch	<i>Montifringilla nivalis</i>	1 only Cross Pass
Chaffinch	<i>Fringilla coelebs</i>	widespread.
Red-fronted Serin	<i>Serinus pusillus</i>	Dariel gorge area, Zekaris Pass
Serin	<i>Serinus serinus</i>	1 at Bakuriani
Greenfinch	<i>Carduelis chloris</i>	widely scattered.
Goldfinch	<i>Carduelis carduelis</i>	widespread.
Siskin	<i>Carduelis spinosa</i>	Zekaris pass
Linnet	<i>Carduelis cannabina</i>	scattered.
Twite	<i>Carduelis flavirostris</i>	Gudauri
Common Crossbill	<i>Loxia curvirostra</i>	Abastumani.
Common Rosefinch	<i>Carpodacus erythrinus</i>	widespread.
Bullfinch	<i>Pyrrhula pyrrhula</i>	scattered,few only
Rock Bunting	<i>Emberiza cia</i>	Zakaris pass
Ortolan Bunting	<i>Emberiza hortulana</i>	Gareja Steppe
Black-headed Bunting	<i>Emberiza melanocephala</i>	scattered
Corn Bunting	<i>Miliaria calandra</i>	scattered.

Systematic List Number 3 Reptiles and Amphibians

A very incomplete list with many lizards either escaping identification or their photographs still to be checked – Georgia has quite a range of lizard species!

<i>Bufo viridis</i>	Green Toad	Juta valley
<i>Ophisaurus apodus</i>	Glass Snake	Around Jvari Church.Davit Gareja

Systematic List Number 4 Butterflies

An indication of frequency of sightings is given by the number of days out of 12 (so including the 'pre-tour' to Lagodekhi) a species was seen on – thus 4/12 means a species was noted on four days during the holiday. The departure day from Tbilis is not included.

Papilionidae

Clouded Apollo	<i>Parnassius mnemosyne</i>	Zekaris valley
Swallowtail	<i>Papilio machaon</i>	Scattered uncommon
Scarce Swallowtail	<i>Iphiclides podalirius</i>	Scattered locally common

Pieridae

Green-veined White	<i>Pieris napi</i>	widespread.
Large White	<i>Pieris brassicae</i>	scattered.
Small White	<i>Pieris rapae</i>	scattered
Orange-tip	<i>Anthocharis cardamines</i>	scattered
Gruner's Orange-tip	<i>Anthocharis gruneri</i>	Aragvi valley
Clouded Yellow	<i>Colias crocea</i>	scattered
Berger's Clouded Yellow	<i>Colias alfacariensis</i>	scattered
Brimstone	<i>Gonepteryx rhamni</i>	scattered
Wood White	<i>Leptidea sinapsis</i>	Aragvi valley

Lycaenidae

Small Copper	<i>Lycaena phlaeas</i>	scattered
Sooty Copper	<i>Lycaena tityrus</i>	Kharagauli
Little Blue	<i>Cupido minimus</i>	Jvari Church meadow
Brown Argus	<i>Plebeius agestis</i>	scattered
Silver-studded Blue	<i>Plebeius argus</i>	scattered
Chapman's Blue	<i>Polyommatus thersites</i>	Kus Tba
Common Blue	<i>Polyommatus icarus</i>	scattered

Nymphalidae

Peacock	<i>Inachis io</i>	widespread
Red Admiral	<i>Vanessa atalanta</i>	scattered.
Camberwell Beauty	<i>Nymphalis antiopa</i>	Zakaris valley
Large Tortoiseshell	<i>Nymphalis polychloros</i>	scattered
Small Tortoiseshell	<i>Aglais urticae</i>	scattered.
Comma	<i>Polygonia c-album</i>	Zakaris valley
Southern Comma	<i>Polygonia egea</i>	Kharagauli
Southern White Admiral	<i>Limenitis reducta</i>	Kharagauli
Glanville Fritillary	<i>Melitaea cinxia</i>	scattered.common at Kharagauli
Spotted Fritillary	<i>Melitaea didyma</i>	Jvari Church meadow
Marsh Fritillary	<i>Euphydryas aurina</i>	Dariel Gorge
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Kharagauli abundant
Hungarian Glider	<i>Neptis rivularis</i>	Kharagauli

Satyridae

Dalmatian Ringlet	<i>Protoerebia afra</i>	Scattered
Woodland Ringlet	<i>Erebia medusa</i>	Kharagauli
Meadow Brown	<i>Maniola jurtina</i>	Common
Wall Brown	<i>Lasiommata megera</i>	Scattered
Large Wall Brown	<i>Lasiommata maera</i>	Igoeti
Northern Wall Brown	<i>Lasiommata petropolitana</i>	Juta Valley
Speckled Wood	<i>Pararge aegeria</i>	scattered
Small Heath	<i>Coenonympha pamphilus</i>	scattered
Pearly Heath	<i>Coenonympha arcania</i>	Nichbisi

Hesperidae

Dingy Skipper	<i>Erynnis tages</i>	Zekaris pass
Inky Skipper	<i>Erynnis marloyi</i>	Azagi valley
Grizzled Skipper	<i>Pyrgus malvae</i>	Scattered
Orbed red-underwing Skipper	<i>Pyrgus orbifer</i>	Kharagauli
Yellow-banded Skipper	<i>Pyrgus sidae</i>	Jvari Church meadow
Tufted Marbled Skipper	<i>Carcharodus flocciferus</i>	Kharagauli
Chequered Skipper	<i>Carteracephalus palaemon</i>	Kharagauli

SPHINGIDAE

Olive Bee Hawkmoth	<i>Hemaris croatica</i>	Nichbisi
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