

Kyrgyzia

A Through the Lens Tour

A Greentours Trip Report

4th – 19th June 2014

Led by Chris Gardner

N.B. This report has been rewritten from memory after the original was lost following a hard drive crash. I apologise in advance if details have been omitted or plants misnamed here and there and for the delay – it's the best I can do!

Day 1 To Osh

The long but unavoidable journey via Istanbul saw us arriving in Osh in the early hours of the next day and in our hotel by 5.30 for a couple of hours sleep.

Day 2 Taldyk Pass

Partially refreshed we set off along the road south passing roadsides with *Salvia sclarea* and slopes with *Lonicera tartarica* and various yellow roses. The landscape grew wider and wilder with tall very snowy peaks ahead. There was a bit of a hold-up when we had to negotiate a local protest, which meant blockading the road with half a dozen yurts! We walked through and picked up a taxi the other side to continue climbing higher and finding more and more snow. There had clearly been a late and heavy snowfall and this was going to dent our flower finding. However, there were one or two bare patches of turf and on these were a few *Primula algida* and *Smelovskia calycina*, together with one or two *Tulipa dasystemon* and *Pulsatilla campanella*. Snowfinches were hopping about, but the only other birdlife was a large concrete eagle. On the other side of the road were a few small *Chorispora bungeana* too.

We descending some way and searched for *Fritillaria walujewii* and although there were none at the first stop there was an abundance of white *Androsace sericea*. A Lammergeier appeared and cruised along the ridge giving good views. A bit further down and another grassier slope did have some fine *Fritillaria walujewii* as well as more advanced *Pulsatilla campanella* and an unknown *Pedicularis*. Re-crossing the roadblock we were reunited with our minibuses and drove back towards Osh, stopping for a superb population of the very large purple-pink *Allium aflatunense* growing in a damp flush with *Dactylorhiza umbrosa* and *Euphorbia lamprocarpa*, although it looked very much like *palustris*.

Reaching Osh we found a good restaurant with excellent cold beer.

Day 3

To Arslanbob

Leaving Osh we entered tracts of tall grass steppe and stopped in one area rich in species with *Capparis herbacea*, a peculiar mauve fabaceae, two-tone thistles, deep blue *Anchusa azurea*, the delicate blue bells of *Lindelofia macrostyla*, the handsome pink flowered *Phlomis hypoleuca* and delicate white *Consolida rugulosa*. Red-headed Bunting and Roller could be seen on the telephone wires. There was also some large pinkish *Salvia sclarea*, *Phlomooides napulensis* and a bit further on some big golden-rayed *Inula macrophylla*. This dry steppe habitat is also good for Blue-cheeked Bee-eater and we stopped for a couple of these and then more Rollers, and drifts of *Convolvulus subhirsutus* mingled with *Haplophyllum perforatum* before taking lunch among the steppe.

Shortly after we turned off for Arslanbob we stopped for populations of *Eremurus tianshanicus* and its smaller cousin *sogdianus* the latter with obvious orangey anthers. *Perovskia scrophularifolia* was also with these and a bit further up was a superb colony of *Scutellaria adenostegia* tumbling down a stony bank. The landscape became greener and wooded as we approached the town arriving at our guesthouse with Nightingales singing. We had just had time to settle in and enjoy a cold beer in the sunshine that the skies darkened and a belting thunderstorm swept through.

Day 4

Arslanbob

The overnight rain was a worry as we were heading onto dirt tracks into the unique walnut forest of Arslanbob. And it did prove tricky in places for our aged but sturdy Russian 4x4, but nonetheless we more or less made it only having to walk one section. In fact this turned out to be in our favour as we found an area of woodland with many impressive spires of *Eremurus robustus*, some beautifully backlit in the morning sun. It is perhaps a somewhat odd association, magnificent walnut trees and foxtail lilies, but there they were growing and thriving together. There were also a few of yellow *Eremurus fusca*, pink *Dictamnus albus* and the woolly seedpods of *Astragalus sieversianus*. Spotted Flycatcher and Great Spotted Woodpecker was calling as we continued on our way to a large grassy clearing with more *Eremurus* including a few very large *Eremurus fusca*, alongside the fine spurge *Euphorbia lamprocarpa* and a delicate little pink *Allium sp.* We retraced our steps and then took another road into the hills where we stopped for our picnic beside superb stands of *Dictamnus albus*. A fine fennel was encrusted with dozens of fantastic shiny green chafer beetles and there was also cerise *Allium barsczewskii*. However, grey clouds were massing and the picnic was slightly curtailed when the rain began, but fortunately it didn't come to much and the sun was out again not long after. There were fine views of the craggy Tien Shan Mountains and further on a big stand of *Allium aflatunense* and a few bright yellow *Phlomooides speciosa*. Our last stop was for the lovely soft blue *Aquilegia vicaria* that crowded the tufa of a large spring along with *Primula matthioli* and little shrubs of *Spiraea sp.* most of us walked back down to the town from here seeing a few *Pseudosedum longidentatum/lievenii* and many roses on the way. As we neared the town I spotted a peculiar pogon iris with golden falls and brown standards growing in a garden and asked the lady if I could collect some for my garden in Turkey where they are now thriving.

Day 5 To Sary-Chelek

Nightingales were singing as usual from hidden corners as we ate breakfast before departing the green enclave and descending once more to steppe, stopping for *Eremurus sogdianus* on the way. There were also stops for a population of *Achillea filipendulina* growing alongside a river. Rollers were common.

A hot dry gully had some domes of pink *Acanthophyllum pungens*, but this landscape changed dramatically once we'd crested the pass and started to descend again into what was now a very green landscape. The roadsides were becoming increasingly flowery and we stopped for a swathe of the white form of *Salvis sclarea* with *Salvia nemorosa*, *Nepeta sp* and the peculiar *Cnicus benedictus*. A stunning black and yellow ascalaphid appeared a couple of times too.

There followed some shenanigans with the accommodation but eventually we arrived at the right one.

Day 6 Lake Sary-Chelek

The beautiful environs of Lake Sary-Chelek lay a few miles to the north of our homestay and the morning was clear and sunny as we drove up, not stopping until we reached the lake, despite the many flowers we saw. A track led up onto a plateau above the lake and we climbed up past large *Malus sp*, *Spiraea sp* and a multitude of tall fennels also seeing *Phlomooides cordifolia* and a gorgeous Dark-mantled Rosefinch on the way. The flora became more diverse with many alliums, fennels, creamy *Polygonum undulatum* and bright yellow *Arnebia tschimganica* and then our first red and yellow *Tulipa ferganica* and the handsome mauve of *Iris alberti*. There were even more tulips further over, in fact there were hundreds and mingled among them were the soft orange of *Trollius altaicus*. However, the clouds were gathering and we opted to turn around and retrace our steps down, passing a few *Anemone narcissiflora ssp protracta* on the way.

We drove a short way and prepared the picnic, but the rain started to fall, albeit gently at first. Heavier rain came in bouts and curtailed some of the planend walks although we did manage a few sections of the road finding the attractive creamy *Centaurea turkestanica*, a lovely deep pink *Lathyrus sp*, and then *Asyneuma argutum*, a pale form of *Campanula glomerata*, some impressive spikes of *Dactylorhiza umbrosa* and the sombre bells of *Codonopsis clematidea* with their stunning interior markings. The rain eventually picked up again and we drove back, by which time it had stopped and the sun came out. We still had a little time so we visited the rather run down museum and then had a chat with the friendly curator in his office and managed to buy a couple of flora checklists.

Day 7 To Chitkan

Leaving our homestay on a fine morning we stopped briefly at the gate to note some details and then next for a few blue *Allium caesium* growing on a shingly bund with lots of *Thymus bucharicus* around too. The drive to our next hotel would cross a wide variety of habitats and to begin with we drove across a green landscape with some remarkable rocky formations in places. Yet another pink onion grew here and we were to find several species of *Allium* during the course of the

drive. I apologise in advance for incorrect naming as not only did Geoffrey and I encounter a challenging and often contradicting botanical key, and on top of this I lost the original version of this report (hard disk crash) what identifications we succeeded with have been lost. Anyhow we stopped again in a meadow with *Sophora alopecuroides* including some aberrant forms with fungal (?) infections that caused black distortions to develop on top of the plants as well as the pink form of *Achillea millefolium*. The landscape changed to hotter and drier with a rocky gully holding many golden *Inula macrophylla*, two species of onion small white *Allium oreoprasum* and tall greenish-white *A. oreoscordum* along with another white-flowered duo of *Convolvulus pseudocantabrica* and *Lagochilus platycalyx*. A Red-headed Bunting was calling much of the time and he proved elusive at first before we finally tracked him down. Up and over the pass we entered the long rocky valley that led to Toktogul Lake and huge reservoir, stopping for various steppe plants and views of the rock formations and the spectacular scenery before arriving for a latish lunch.

Moving on we followed around the lake at one point stopping to look at *Otostegia olgae* and then wound up over a pass with some big displays of *Eremurus tianshanicus* in places. Stopping for one such population there were many impressive spires of white flowers. More impressive landscapes followed with the necessary photo stops before the road began to climb and we entered a greener valley with fine *Betula tianshanica* and then *Picea schrenkiana* including those surrounding our riverside hotel. We had a big trout supper at a nearby restaurant.

Day 8 Ala Bel and Otmok Passes

The day began with a stop for some fine *Onosma sp* on some roadside scree and as we progressed upwards the landscape changed markedly to high alpine turf passing through vast populations of emerging *Eremurus fuscus*. The turf was coloured pink in places and these displays grew as we topped the Ala Bel Pass and descended a bit the other side. They were caused by countless thousands of *Primula algida* that grows here in indescribable numbers. Walking out across the turf to one good-looking area we also found the pretty white *Trollius komarovii* and drifts of *Allium fedtschenkoana*. Citrine Wagtails were frequent here and throughout the day. The road dropped to the start of a second pass, the Otmok Pass also with vast drifts of primulas. Horned larks were seen as we drove, having to stop every so often to let the big flocks of sheep past. Huge numbers of animals were being moved up to the higher grasslands for the summer.

We stopped and explored a valley quite a bit lower down, but the season was clearly a bit late and whilst we found many creamy *Pedicularis sp*, plants such as *Phlomis oreophila* and *Scutellaria przewalskii* were scarce this year. Even *Campanula alberti* proved elusive. However as we drove back up we found a good stand of *Phlomis oreophila* with *Thymus cf diminutus* on the rocks and then some lovely rosettes of *Chorispora macropoda*, mauve *Dracocephalum nutans* and the odd *Tulipa dasystemon*. Red Marmots were also quite common and seen well sunbathing outside their burrows and chasing each other across the turf.

There were further stops for a lovely *Erysimum* growing in loose scree and then as we descended and neared the hotel we pulled in to buy some honey and there on the rocks were a few slender *Campanula albertii* to round off the day.

Day 9 To Kochkor

Although today involved a long traverse of the Central Tien Shan, there were many fine things, not least of which was the frequently changing and impressive scenery. We started by climbing back up and over the Ala-Bel pass and crossing the extensive grasslands to where the road began to climb again. Here a quick scan of the hillside – especially in this late season – revealed hundreds of deep pink *Paeonia hybrida* colouring the slopes. However, it took a while to reach, as there were many birds in the *Caragana pleiophyllus* scrub with Isabelline Shrikes, Common Rosefinches and Bluethroat all seen well. As we photographed the peonies a man approached us and invited us to his yurt for kimiz (the traditional kirghiz drink of fermented mare's milk), which we were happy to accept and spent half an hour chatting to him (through Aika our guide) about his time in Germany when he was with the Soviet army.

We turned east now crossing flat plains with Pallid Harriers coursing over and passing through a couple of villages before entering a steep sided valley. I eventually found a population of the pretty endemic *Chesneya ferganica* sprawling across coarse granite sand, although a brief shower rather interrupted things. The landscape was spectacular and we stopped occasionally for this and before we reached our lunch stop in a homestay in Chelek. Not far out of town and we stopped for stands of *Iris halophila* and then there was a series of short stops first for bushy white flowered *Clematis songarica* growing alongside *Scutellaria przewalskii* and then a superb cemetery (with lots of little pink *Allium* sp.) within sight of this we found the peculiar white *Lagochilus seravschanicus*. A wonderful field full of yellow *Thermopsis turkestanica* was worth a stop complete with two horsemen riding across and a thunderous sky in the background.

The road climbed to another pass where there was plentiful *Lidelfia stylosa* along the roadside with *Geranium collinum* and then our final stop was a stony slope with abundant *Acantholinum alatavicum*(?) and the spiny shrublet *Convolvulus tragacanthoides*. From here we completed the drive to Kochkor and the very pleasant very new rooms at our homestay.

Day 10 Song-Kul

Turning off the main road we took a dirt road across a landscape of drier hills and small villages with green areas and marshes fringing the river. Ruddy Shelduck and Citrine Wagtail were seen and then as we began to climb red Marmots scampered across the turf. Things became more flowery as we gained height and we stopped in an area with golden *Trollius dzungaricus* and white *Lagotis integrifolia*, whilst a rockier and drier part had lots of *Androsace sericea* and mauve *Oxytropis chionobia*. A single *Iris loczyi* was also found. As we climbed further there was a Guldenstadt's (or White-winged) Redstart and then we reached a superb area with some lovely plants. Top of the list were the stunning ice-blue goblets of *Trollius lilacinus* and alongside were the curious bells of *Tulipa heterophylla* and it's more regular cousin *T. dasystemon*. The brooding black-red of *Allium atosanguineum* was abundant in the turf with white *Eriotrichium villosum* and a scattering of *Primula algida*. Snowfinches were busy on the slopes with a couple of Alpine Accentors.

At the pass there were views down the valley and on the rocks there were pretty tufts of *Oxytropis chionobia*. We descended to a large rock outcrop for lunch where the turf approaching the rocks was peppered with annual *Gentiana karelinii* and on the rocks themselves were many

fine *Dracocephalum paulsenii* and *Androsace sericea*. Below us the land swept away to the immense lake of Song-Kul and there were many yurt camps with grazing herds of yaks and horses wandering about. After lunch we drove around the lake (never actually getting that close to the water) finding drifts of yellow *Chorispora songarica* and pink *C. bungeana* and then the pretty little *Viola tianshanica*. Lammergeier was seen drifting across the hills before we stopped at the top of a steep series of switchbacks. From here we walked for a while quickly finding *Cortusa brotheri*, a flowering *Vaccinium* and a stunning White-tailed Rubythroat which posed very well on a post. Progressing downwards there was yellow *Doronicum turkestanicum*, greenish *Morina parviflora*, white *Anemone narcissiflora* ssp *protracta*, many spiny bushes of pink *Caragana jubata* and the just opening spikes of *Corydalis gortshakovii*.

The cars drove down and picked us up and from here we crossed the grassy hills and then dropped back down to the main road and the final stretch to Naryn.

Day 11 Tash Rabat

Kyrgyzstan was a main thoroughfare for the Silk Road, yet little remains to show this. An exception is the remarkable Tash Rabat caravanserai. The drive there was quite straightforward with the new smooth section of road welcome after the first rough bit. We arrived at an area of tall limestone cliffs seeing Himalayan Griffon and Black Vultures as we got there. Choughs were common too and we kept one eye of the sky as we searched for a very special alpine. It didn't take long to find the charming and refined *Paraquilegia microphylla* growing on the rocks with some decent clumps in (pale lilac) flower. Suddenly a Golden Eagle swept past in a flurry of complaining Choughs and squeaking Red Marmots and then quickly circled up and away. Back to the flowers and there was quite a lot of the pretty *Primula pamirica* in the marshy areas fringing the river.

We drove onto the caravanserai and had a tour inside and then outside where Snowfinches were hopping about tamely. The building still looks suitably ancient set among the windswept and wild landscape, despite all of the locals climbing on top! Sarah had told us of an interesting historical site we could visit on the way back and so after a tasty lunch in a yurt we drove onto Koshoy Korgon. Thanks to Sara for informing us about it as it was a real surprise for although there were only limited remains of sandy walls and ramparts with a few *Zygophyllum* sp scrambling about and clumps of *Iris halophila* the birdwatching was very good. Common Rosefinches were indeed common and obvious as we approached and then inside we had good views of Wheatear and then a Bluethroat. A second Bluethroat was seen as we left with half a tail and a beakful of food so he birds were clearly breeding here.

There was time for one last stop which we squeezed in before the rain came down. A small valley led to a waterfall. On the way up we found *Ligularia narynensis* and then around the falls were fine stands of *Primula* (*Cortusa*) *matthioli* and wonderful tumbling masses of creamy *Clematis alpina* ssp *sibirica*. Following the slope down there was a yellow *Onosma* sp and *Dracocephalum integrifolium* before rumbling thunder and light rain had us making for the vehicles and we arrived just in time to avoid a heavy downpour.

Day 12 To Tamga

Last year I had two feet of snow arrive overnight, but thankfully things were back to normal this year as we drove out of Naryn without a single troublesome flake in sight. We stopped after an hour to explore a little side valley. Marshy stream edges held some superb clumps of *Primula matthiolii* and these continued upstream too. It was a flowery place with tumbling *Clematis alpina* ssp *sibirica*, a few deep wine-red *Aquilegia atrovinosa* and *Codonopsis clematidea*, tall spikes of *Dactylorhiza umbrosa* the delicate dangling stamens of *Thalictrum isopyroides* and then the sticky lilac-pink flowers of *Linum olgae*. There were some good birds too with a lovely Eversmann's Redstart and then incredible close views of two Red-fronted Serins that were at first squabbling in a bush before one sat and preened then posed only five metres away.

From here we climbed the Dolon Pass and then descended to Kochkor and did some necessary shopping, including replacing fast-dwindling chilli pepper supplies. The road crossed steppe and then past cliffs with lots of white *Pyrethrum* sp and spiny cushions of *Acantholimon alatavicum*. Then there were the first views of Lake Issyk-Kul a vast expanse of water that was once a top-secret torpedo testing site and very off-limits. Finding a picnic spot among the poplars the plan had been to explore the lakeshore afterwards hopefully finding Whooper Swans and other birds, but an almighty storm was brewing with strong winds and dust preceding the rain. Plan A was abandoned and we drove on stopping only for a few of the very odd parasitic *Cynomorium coccinea* bursting from the sands.

After some time the storm was left behind and we continued along the lake cutting inland at one point and through stark rocky landscapes. But none of these was as interesting as the Fairytale Canyon, our next stop, and a fascinating area of eroded and colourful rocks. There were many flowers too with yet another white allium as well as the peculiar *Limonium kaschgaricum*, shrubby white-flowered *Lagochilus seravshanicus*, the pretty fimbriate-petalled *Dianthus crinitus* and more *Cynomorium coccineum*.

There was fairly short final leg to our pleasant homestay with its iris-filled garden.

Day 13 Barskoon

Thanks to the huge gold mine nearby, an excellent dirt road leads quickly up towards the height of Barskoon, a former branch of the Silk Road. There was a stop for a good population of *Iris halophila* and then for flowery shrubs of *Rosa albertii* and a *Cotoneaster* sp, as well as a few *Iris ruthenica*. We passed through a belt of spruce and up into rather misty mountains, seeing a Lammergeier perched motionless on a rock before later flying and soaring overhead. Below it we found a few *Iris loczyi* and *Pulsatilla campanella*. Heavy overnight rain has rather dampened some of the flowers but nonetheless the drifts of *Primula nivalis* that lined streams on a rocky slope were a delight and near to these was a thriving population of the lovely lilac-flowered *Desideria flabellata*. Tucked among the rocks Nora and I found a few *Saxifraga oppositifolia* still in flower too.

Our main stop for the day was a spectacular alpine plateau that was studded with half-frozen lakes. Ruddy Shelduck were happily braving these cool heights as we set off for a walk across the tundra-like turf. The creamy-white heads of *Smelovskia calycina* were common as were the golden flowers of *Ranunculus albertii*. Near recent snowmelt were drifts of the lovely *Trollius lilacinus* and

more primulas. Walking across to one of the larger lakes there were some fine *Allium semenowii* and at this point the sun came out and the climate became decidedly more pleasant. It was a perfect spot for lunch with the mountains reflected in the near-calm lake.

Post-lunch we continued our exploration climbing a little higher to where there were hundreds of *Callianthemum alatavicum* streaming down the scree as well as little buttercup *Ranunculus rufisepalus*. Walking back to vehicles across the tundra we found the peculiar little *Chrysosplenium nudicaule*.

Day 14 Chonashu

Our final foray into the high mountains began with an area of diverse tall meadows on a fine sunny morning. There was a superb mixture with tall *Aconitum leucostomum*, *Aquilegia atrovinosa*, *Campanula glomerata*, *Veratrum lobelianum*, various *Geranium spp*, frothy masses of a *Thalictrum sp*, what seemed to be *Dactylorhiza hatagirea* in the marshy fringes and the lovely *Lathyrus gmelinii* whose creamy flowers aged to gold, stunning with a blue sky behind. On the other side of the road was yet another pink allium and some fine *Codonopsis clematidea*. Driving on we stopped in a rocky spot for *Papaver nudicaule* (=croceum) and a pink *Hedysarum sp*. The valley flattened and a lazy braided river flowed through, perfect habitat for one of the world's loveliest birds. A persistent whistle drew our attention to a gravelly flat where a male Ibisbill was courting sitting female, walking around and around her whilst calling. We had good scope views. A fine clump of reddish-orange *Rhodiola linearifolium* followed.

Making the most of the good weather we climbed up through a spectacular valley to the high pass at 3800m with an equally impressive view on the other side. Some necessary on the spot car repairs meant we wandered back along the track with no other vehicles or people in sight but some Alpine Choughs for company. Gravelly areas and slopes had abundant domes of *Chorispora bungeana* strewn like washed up jellyfish across the ground. Lunch was near drifts of *Primula nivalis* and a few of the pretty *Taraxacum lilacinum* and afterwards we wandered down the old track finding *Gastrolychnis apetala*, *Saxifraga hirculus*, *Draba oreades*, *Androsace lehmanniana*, *Cerastium lithospermifolium* and then many *Erysimum humilimum* and the odd *Dracocephalum imperbe*. Our drivers somehow missed us and there followed a few minutes of them driving up and down the mountains until they found us!

We drove back to the hotel stopping occasionally to let my tooth/earache ease!

Day 15 Cholpon-Ata & Burana Tower

Our final day involved the long transfer to Bishkek, passing through a series of lakeside towns interspersed with colourful fields and tree-line stretches with views of the southern Tien Shan to our left. There was time to stop at and look at the petroglyphs at Cholpon-Ata that depicted various ibex and sun motifs as well as other figures (depending on your level of imagination). There were also three Turkic balbals. Isabelline Wheatears were very common.

Continuing on we had lunch in a roadside restaurant and then descended to a lower elevation through some fine scenery and then on to one of the few old structures in a land of nomads. The

Burana Tower sits among a sprawling site with many balbals collected from around the country and a little museum. I must confess the narrow, steep stairway to the top of the tower was not for the faint-hearted. We arrived in Bishkek in good time and then went for dinner in a large yurt complex where we also met a local botanist and managed to buy his useful little flora book.

Then it was to bed for a few hours sleep before our flight.

Day 16 Flights home

An early start had us checked in and through to the delights and many facilities of Manas airport! Arrival at Istanbul was prompt and onward flights took us to the UK, the Netherlands and for me Trabzon where I had an appointment with some lilies.

Systematic List # 1 Flora of Kyrgyzia

Includes flowers seen during the six day reccy before this year's tour.

Cupressaceae

- Juniperus communis* Alpine slopes
Juniperus seravshanica Upright tree mid altitudes
Juniperus turkestanica Upright tree, higher altitudes

Pinaceae

- Larix sp* Kyrgyz-Ata
Picea schrenkiana A main component of forests, typical slender spruce

Ephedraceae

- Ephedra intermedia* Issy-Kul, some smothered in orange-red berries, blue stems

Apiaceae

- Angelica archangelica* Jeti Oghuz
Angelica brevicaulis Alpine species, compact but typical broad green umbels, Chon Ashu
Eryngium bungei Steppe below Sary-Chelek, Toktogul reservoir
Eryngium campestre Roadsides, steppe
Ferula foetida Abundant below Tor Ashu 2012, but monocarpic so none 2013 – expect many 2014!
Ferula sp Several species seen but not identified
Ferula tenuisecta Locally dominant fennel, common at Sary-Chelek, also steppe west of Otmok, etc. Beware irritating sap!
Heracleum sp Kyrgyz-Ata, Karakol
Pleurospermum sp? Dwarf species in scree at Chon Ashu

Asteraceae

- Achillea filipendulina* Tall yellow species common in grassy steppe and roadsides, greyish ,flat pinnate leaves
Achillea sp Smaller species, yellow flowers, narrower leaves
Aster alpinus Alpine turf, Barskoon, Song-Kul, excellent at Chon Ashu
Aster spp Steppe species seen
Centaurea turkestanica Handsome pale yellow cornflower at Sary-Chelek
Cousinia fetisowii West of Okmok on rocky steppe, broad capitula, pink, stem not winged
Doronicum turkestanicum Song-Kul, (Ala Archa 2012)
Erigeron acer Ala Bel
Hieracium aurantiacum Bright orange red, abundant in shorter meadows at Chonashu
Inula macrophylla Large leaved tall species with much branched infl., steppe around Toktogul res.
Leontopodium fedtschenkoanum Taller with no black in subsidiary clusters, lanceolate leaves along stems, south of Naryn
Leontopodium ochroleucum Short with obvious black tips to subsidiary clusters in capitula, alpine turf, very common at Song-Kul, but widespread

<i>Ligularia heterophylla</i>	Tor Ashu, Ala Bel, greyish leaves, stout infl.
<i>Ligularia macrophylla</i>	Starting to flower on west side of Kyzart Pass, also Naryn, huge glaucous leaves, Jeti Oghuz, Ala Archa
<i>Ligularia spp</i>	Several other species seen in both dry and wet habitats
<i>Ligularia thomsonii</i>	Tall green leaved, cordate leaf bases, corymbose, wooded areas at Dashman, Sary-Chelek
<i>Pyrethrum/Tripleurospermum sp</i>	White daisy en route to Issyk-Kul.
<i>Saussurea elegans</i>	Pretty lilac species at Fairy Canyon
<i>Saussurea gnaphalodes</i>	Tidy mats at Barskoon, wooly centred
<i>Tragopogon dubius</i>	Pink washed yellow form west of Otmok, typical yellow form and many big seedheads widespread
<i>Taraxacum lilacinum</i>	Pretty pink daisy, stony roadsides in alpine zone Chon Ashu
<i>Waldheimia transaltaica</i>	White flowered species at Song-Kul. Not 2013.
<i>Xeranthemum annuum</i>	Common roadside flower near Bishkek, Burana
Balsamaceae	
<i>Impatiens parviflora</i>	Small white flowered species abundant at Dashman, Sary-Chelek
Berberidaceae	
<i>Berberis sphaerocarpa</i>	Barskoon valley, Jeti Oghuz, Ala Archa, Sary-Chelek
Betulaceae	
<i>Betula tianshanica</i>	Along rivers and in mixed forest
Boraginaceae	
<i>Anchusa azurea</i>	Steppe west of Osh, Sary-Chelek
<i>Arnebia guttata</i>	Dry slopes in lower areas
<i>Arnebia tschimganica</i>	Yellow flowers in dense heads Sary-Chelek
<i>Cynoglossum amabile</i>	Blue flowers Sary-Chelek
<i>Echium vulgare</i>	Roadsides
<i>Eritrichium sp</i>	Song-Kul, white or blue dwarf species in stony ground
<i>Eritrichium villosum</i>	White flowered, hairy leaves and stems, leafy stems, upright tufts below Song-Kul, also Barskoon. Can be blue
<i>Heliotropum rotundifolium</i>	Steppe
<i>Lappula barbata</i>	Steppe near Bishkek
<i>Lindelofia macrostyla</i>	Handsome species with cymes of pretty blue bells, banks, roadsides in steppe Toktogul, east of Osh
<i>Lindelofia stylosa</i>	Dark reddish-purple borage, slender flowers, roadsides
<i>Myosotis asiatica?</i>	Locally abundant in alpine turf, grasslands
<i>Onosma sp</i>	Grassy banks south of Naryn, pale yellow
<i>Onosma sp 2</i>	Spiny species, similar to <i>irritans</i> , above Chichkan.
Brassicaceae	
<i>Chorispora bungeana</i>	Pretty stemless pink species, gravelly places and on rocks, Song-Kul, Tash Rabat, Barskoon, sensational at Chonashu Pass
<i>Chorispora macropoda</i>	Yellow flowered species below Song-Kul, dense heads of yellow flowers

<i>Chorispora songarica</i>	Another yellow flowered species but with looser heads and larger flowers, gravelly roadsides, Song-Kul
<i>Chorispora sp</i>	Large pink flowers, entire leaves stony slopes and among <i>Allium semenowii</i> on Chon Ashu
<i>Desideria flabellata</i>	Impressive brassica with dense heads of lilac flowers in moraine at Barskoon. In bud 2013.
<i>Draba oreades</i>	Tight cushions with yellow flowers, Chon Ashu
<i>Erysimum humillimum</i>	Gravelly areas in alpine zone, narrow leaves, Chonashu Pass, Taldyk Pass
<i>Isatis glauca</i>	Probably this species along roadsides, steppe
<i>Parrya sp</i>	Taldyk Pass
<i>Smelovskia calycina</i>	Spherical white heads, common at Barskoon, Taldyk Pass, Song-Kul

Campanulaceae

<i>Asyneuma argutum</i>	Slender spikes of starry bluish flowers, grassy banks at Sary-Chelek
<i>Campanula alberti</i>	Rocks west of Okmok and gorge below Tor Ashuu, slender stems, narrow petals, lilac
<i>Campanula glomerata</i>	Jeti Oghuz, Chonashu, Ala Archa, Sary-Chelek; dense heads of dark blue-purple
<i>Codonopsis clematidea</i>	Jeti Oguz, near Naryn, Kyrgyz-Ata, handsome pale blue bells with stunning insides

Caprifoliaceae

<i>Lonicera semenovii</i>	Song-Kul, pale yellow flowers on rocks, also Barskoon
<i>Lonicera sp</i>	Large shrub with yellow flowers at Ala Archa 2012
<i>Lonicera tartarica</i>	White and pink flowered large shrub, south of Osh, Kyrgyz-Ata
<i>Viburnum lantana</i>	Kyrgyz-Ata

Capparaceae

<i>Capparis herbacea</i>	Common on steppe between Osh and highlands.
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Caryophyllaceae

<i>Acanthophyllum pungens</i>	Fine shrubby species, dense cymes of small lilac flowers south of Sary-Chelek
<i>Cerastium lithospermifolium</i>	Dwarf scree species, Chon Ashu
<i>Cerastium spp</i>	Various species seen
<i>Dianthus crinitus</i>	Pretty species with finely divided fimbriate petals, near Sussamyr, Fairy Tale Canyon
<i>Silene alba</i>	Roadsides
<i>Gastrolychnis apetala</i>	Dwarf alpine species at Chon Ashu, dark veined calyces, reduced cream flowers
<i>Silene sp 2</i>	Slender species, white flowers, west of Otmok

Cistaceae

<i>Helianthemum sp</i>	East of Chaek on dry banks, steppe
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Convolvulaceae

Convolvulus arvensis

Roadsides

Convolvulus lineatus

Small rosette forming species, silvery entire lanceolate leaves, pinkish flowers, stony roadsides, steppe

Convolvulus

pseudocantabricus

White flowers. Certainly akin to *cantabrica*, so probably this on the rocks en route to Bishkek, steppe below Sary-Chelek, Toktogul res.

Convolvulus tragacanthoides

Stony slopes east of Kyzart Pass, shrubby, silvery leaves, white flowers with pink reverse

Convolvulus subhirsutus

Pink, wiry stems, bushy, steppe east of Osh, gorge below Tor Ashu 2013

Crassulaceae

Orostachys thyrsiflora

Peculiar little succulent rosettes in semi-desert near Issyk-Kul.

Pseudosedum

Scattered in mountains, like a lanky sedum, pink flowers

longidentatum/lievenii

Rhodiola linearifolia

Handsome species with flat heads of red-orange flowers. Alpine zone at Chonashu

Rhodiola litwinowii

Yellowish to orangey heads, below Song-Kul

Rhodiola sp 2

Small species with few flowered heads of yellowish flowers, rocks at Tash Rabat

Rosularia sp 1

White

Cuscutaceae

Cuscuta sp

Widespread parasite

Cynomoriaceae

Cynomorium coccinea

Weird brown, columnar parasite growing from saline ground and sandy places around Isyk-Kul

Elaeagnaceae

Elaeagnus angustifolia

Planted along roadsides, sweet scent, native south of Osh, Issyk-Kul

Ericaceae

Orthilia secunda

Jeti Oguz

Pyrola rotundifolia

Jeti Oguz

Euphorbiaceae

Euphorbia lamprocarpa

Fine tall species at Dashman/Arslanbob

Euphorbia talastavica

Maybe this at Sary-Chelek

Fabaceae

Astragalus alopecias

Many unidentified species were seen mainly *Astragalus* and *Hedysarum*.

Astragalus

Fine species in steppe north of xxx

macronyx/chlorodontus

Possibly this acaulescent species west of Otmok Pass, below Ala Bel in steppe; yellow flowers

<i>Astragalus nuciferus</i>	Fine large sprawling species, long leafy stems with white flowers, west of Otmok Pass
<i>Astragalus sieversianus</i>	Prominent oval cotton-wool ball seed heads, Arslanbob
<i>Astragalus spp</i>	Many species seen, all unknown
<i>Caragana bongardiana</i>	More upright bush with larger yellow flowers, south of Naryn, semi-desert near Issyk-Kul
<i>Caragana jubata</i>	Probably this species at around 2800m at Song Kul, Tash Rabat, pale pink flowers, densely spiny shrub with fastigiated stems
<i>Caragana pleiophylla</i>	Locally dominant shrub between Suusaymr and Ala-bel Pass, flattened spreading habit, yellow flowers densely arranged on stems
<i>Chesneya ferganica</i>	Handsome prostrate spreader with reddish-pink flowers, between Suusamy and Kochor
<i>Chesneya sp</i>	Growing with <i>C. ferganica</i>
<i>Glycerrhiza sp</i>	Fairy tale canyon
<i>Hedysarum chaitocarpum</i>	Showy species with large pink flowers, below Sary-Chelek
<i>Hedysarum neglectum</i>	Tall slender pink species in meadows e.g. Ala Archa
<i>Hedysarum sp</i>	Widespread steppe species, also widely grown fodder crop species
<i>Hedysarum sp</i>	Lovely showy species on slopes west of Otmok
<i>Lathyrus gmelinii</i>	Handsome species with white flowers that turn orange-brown with age, broad pinnate leaves, wooded area at Jeti Oguz
<i>Lathyrus sp</i>	Sary-Chelek
<i>Onobrychis sp</i>	Pretty prostrate species with palest lilac flowers, Taldyk Pass
<i>Oxytropis chionobia</i>	Pretty lilac flowers in mats on rocks at Song-Kul
<i>Oxytropis sp</i>	Gravel roadside, Otmok
<i>Sophora alopecuroides</i> (?)	East of Suusamy
<i>Thermopsis turkestanica</i>	Abundant along roadsides, damp pasture

Gentianaceae

<i>Comastoma falcatum</i>	Pale blue, high turf, Chon Ashu
<i>Gentiana olivieri</i>	Kyrgyz-Ata
<i>Gentiana karelinii</i>	Small annual blue species, scattered on passes throughout

Geraniaceae

<i>Erodium cicutarium</i>	Roadsides, steppe
<i>Geranium collinum</i>	The common mauve species, alpine turf especially, also damp pasture. Variable with palest pink form abundant at Chon Ashu
<i>Geranium ferganensis</i>	Sary-Chelek
<i>Geranium tuberosum</i>	South of Naryn

Hippuridaceae

<i>Hippuris sp</i>	Stream in valley south of Dolon Pass
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Hypericaceae

<i>Hypericum perforatum</i>	Arslanbob
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<i>Hypericum scabrum</i>	Steppe en route to Sary-Chelek
Juglanaceae	
<i>Juglans regia</i>	Magnificent walnut forest at Dashman, also Sary-Chelek
Lamiaceae	
<i>Dracocephalum imperbe</i>	Long-tubed mauve flowers, crenulated leaves, often on rocks at altitude, Chonashu, Ala Archa
<i>Dracocephalum integrifolium</i>	Lilac flowered shrublet, south of Naryn near waterfall
<i>Dracocephalum nutans</i>	Compact alpine form with dense heads of mauve flowers, Otmok Pass, taller forms lower down.
<i>Dracocephalum paulsenii</i>	Lovely alpine with dense heads and crenate leaves, crevices, roadsides at Song-Kul
<i>Phlomoides fetisowii</i>	Handsome species, yellow and orange flowers in distant verticillasters, west of Otmok Pass
<i>Phlomoides napaulensis</i>	White and yellow flowers, one plant in steppe near Osh
<i>Phlomoides cordifolia</i>	White-flowered species as we climbed to plateau at Sary-Chelek.
<i>Phlomoides (Eremostachys) speciosa</i>	Common and widespread, impressive golden yellow species, steppe, alpine turf, roadsides
<i>Lagochilus platycalyx</i>	Pronounced calyx, smallish white flowers, steppe near Sary-Chelek.
<i>Lagochilus seravshanicus</i>	Characteristic spiny calyx, flowers white with reddish stripes internally. Dissect leaves. Steppe near Chalek and Fairytale Canyon.
<i>Marrubium anisodon</i>	Steppe south of Sary-Chelek
<i>Otostegia olgae</i>	Unusual bushy species, pronounced white calyx, white flowers, dense verticillasters, steppe banks
<i>Perovskia abrotanoides</i>	More loosely branched than xxx with purple flowers, steppe west of Osh
<i>Perovskia scrophulariifolia</i>	Common shrub on dry areas east of Osh
<i>Phlomis oreophilus</i>	The common purplish species in alpine turf, meadows
<i>Phlomis hypoleuca</i>	Handsome species with lanceolate leaves, pink flowers, steppe between Osh and Jalalabad.
<i>Prunella vulgaris</i>	Arslanbob
<i>Salvia nemorosa</i>	Common around Issyk-Kul, roadsides, tall with deep blue-purple spikes. Syn: <i>deserta</i>
<i>Salvia sclarea</i>	Very common in steppe, roadsides in the south both pink and white forms
<i>Scutellaria adenostegia</i>	A small subshrub in rocky steppe near Suusamyr
<i>Scutellaria przewalskii</i>	Prostrate with incised leaves, in steppe e.g. near Naryn, superb mats west of Otmok
<i>Thymus bucharicus</i>	Common in steppe below Sary-Chelek, Toktogul res.
<i>Thymus cf diminutus</i>	West of Otmok pass, pink, creeping
<i>Thymus sp 3</i>	Bluish flowers in round heads, low bushy plants, locally common in dry steppe en route to Jeti Oguz.
Linaceae	
<i>Linum altaicum</i>	Largish flowers blue flax, scattered, Song Kul, Ala Archa

<i>Linum corymbulosum</i>	Small yellow flowers, steppe south of Sary Chelek
<i>Linum olgae</i>	Jeti Oghuz, Ala Archa, meadows - sticky glandular inflorescence, pink-lilac
<i>Linum sp</i>	Tiny yellow flowered species, steppe below Sary-Chelek
Malvaceae	
<i>Alcea nudiflora</i>	Large white hollyhock; steppe, widespread
Morinaceae	
<i>Morina parviflora</i>	Below Song-Kul
Onagraceae	
<i>Chamerion angustifolium</i>	Roadsides in uplands, damp valleys
Orobanchaceae	
<i>Orobanche amoena</i>	
<i>Pedicularis amoena</i>	Common pink species
<i>Pedicularis dolichorrhiza</i>	Tall creamy-white species, widespread in turf
<i>Pedicularis oederi</i>	Mountain turf, creamy-yellow with reddish tip
<i>Pedicularis olgae</i>	Sary-Chelek (in seed).
<i>Pedicularis pubiflora</i>	Pale yellow flowers, held upright, with hairs on calyx, leaves linear, once pinnate in dense whorls, turf below Song-Kul
<i>Pedicularis rhinanthoides</i>	Jeti Oghuz, south of Tor Ashu short with wide pale pink flowers, wet areas
<i>Pedicularis spp</i>	Various other unknowns seen
Paeoniaceae	
<i>Paeonia hybrida</i>	Below Tor Ashu, deep pink
Papaveraceae	
<i>Corydalis fedtschenkoana</i>	Finely pinnatisect leaves, white flowers, coarse scree on Barskoon, Chon Ashu
<i>Corydalis gortschakovii</i>	Tall yellow species on descent from Song-Kul, ferny leaves, deeply dissect bracts.
<i>Fumaria parviflora</i>	Scattered
<i>Glaucium squamigerum</i>	Widespread in gravelly areas, long rough seedpods
<i>Papaver croceum = nudicaule</i>	Widespread in gravelly areas, yellow to orange
<i>Papaver pavoninum</i>	Lovely species with deep purple ring inside red flower, Sary-Chelek
<i>Roemeria refracta</i>	En route to Sary-Chelek, bright red, yellow anthers.
Plantaginaceae	
<i>Dodartia orientalis</i>	Deep purple wide lipped flowers, leafless stems, roadsides e.g Chaek
<i>Linaria bungei</i>	Attractive species with purplish or golden-brown flowers with darker veins, west of Otmok and growing around cabins at Suusamy
<i>Linaria vulgaris</i>	Roadsides
<i>Plantago lanceolata</i>	

<i>Plantago media</i>	Showy (for the genus) white inflorescence, broad ribbed leaves
Plumbaginaceae	
<i>Acantholimon alatavicum</i>	Large population on stony slopes east of Kyzart Pass, spiny domes with pink flowers
<i>Limonium kaschgaricum</i>	Fairy Tale Canyon, delicate pink calyces in cymes with small white flowers
<i>Limonium sp</i>	Small white calyced species, east of Kyzart Pass
Polemoniaceae	
<i>Polemonium caucasicum</i>	Pretty blue herb, good stands at Jeti Ortuz and Chonashu
Polygalaceae	
<i>Polygala hybrida</i>	Damp areas
Polygonaceae	
<i>Atraphaxis seravshanicus</i>	Small shrub with cream flowers, south of Osh
<i>Polygonum bistorta</i>	Familiar short to tall white species, meadows
<i>Polygonum undulatum</i>	Very common below Tor Ashu and Ala-Bel
<i>Rheum sp</i>	A small rhubarb at Tash Rabat
<i>Rheum turkestanica</i>	Maybe this
Primulaceae	
<i>Androsace lehmanniana</i>	Pretty mat forming species, white flowers, leaves with long-ciliate margin, Song-Kul rocks
<i>Androsace septrionalis</i>	Small rosettes of lanceolate leaves, long stemmed small white flowers, rocks, gravels, Song-Kul
<i>Androsace sericea</i>	Gravelly areas, Song-Kul, Dolon Pass
<i>Androsace spp</i>	Various other unknowns seen especially at Song-Kul, cushion forming cream species at Chonashu
<i>Primula algida</i>	Abundant in mountain turf
<i>Primula minkwitzsiae</i>	Pretty pink chasmophyte, a few among boulders at Ala Archa
<i>Primula nivalis ssp farinosa</i>	A few below Tor Ashu on north side, superb at Barskoon
<i>Primula nutans</i>	Damp pastures at Issyk-Kul
<i>Primula pamirica</i>	Tallish, slender pale pink primula, pronounced bracteoles, marshy places, below Ala-Bel, near Naryn.
Ranunculaceae	
<i>Aconitum leucostomum</i>	Abundant at Jeti Oghuz
<i>Anemone narcissiflora ssp protracta</i>	Quite common in mountains, typical white anemone
<i>Aquilegia atrovinosa</i>	Handsome wide-red species, Jeti-Otuz, Chonashu, etc
<i>Aquilegia vicaria</i>	Lovely pale blue species, tufa springs near Arslanbob
<i>Callianthemum alatavicum</i>	Locally abundant at Barskoon, Chonashu, white
<i>Clematis alpina ssp sibirica</i>	Large creamy sepals, near Naryn, Kyrgyz-Ata, Suusamyr
<i>Clematis songarica</i>	Abundant roadside steppic species with masses of small white flowers
<i>Consolida rugulosum</i>	Delicate white species in dry steppe south of Sary-Chelek

<i>Delphinium semibarbatum</i>	Lovely pale yellow species, locally common in steppe east around Toktogul
<i>Oxygraphis glacialis</i>	Abundant at Barskoon, also Song-Kul
<i>Paeonia anomala</i>	Hundreds below Tor Ashu –slightly over but still impressive
<i>Paraquilegia microphylla</i>	On limestone cliffs at Tash Rabat, Ala Archa
<i>Pulsatilla campanella</i>	Common in turf at Tash Rabat, Barskoon, Taldyk Pass, Song-Kul
<i>Ranunculus albertii</i>	Abundant in bare places on tundra at Barskoon, coarse palmate leaves. Also Chonashu, Taldyk Pass, Song-Kul
<i>Ranunculus rufisepalus</i>	Common in scree at Barskoon, delicate deeply dissect leaves
<i>Ranunculus polyanthemos?</i>	Tall leafy stemmed species, deeply dissect leaves; abundant at Dashman, Sary-Chelek
<i>Thalictrum alpinus</i>	
<i>Thalictrum isopyroides</i>	Near Naryn
<i>Thalictrum sp</i>	Large green flowered species below Chonashu
<i>Trollius altaicus</i>	Orange species, locally abundant below Tor Ashu and Ala-Bel passes, Ala Archa, Sary-Chelek
<i>Trollius dzungaricus</i>	Locally abundant in mountains, golden yellow, Tor Ashu, Dolon, Song-Kul, etc
<i>Trollies komarovii</i>	Short, white flowered species, Ala Bel.
<i>Trollius lilacinus</i>	Gorgeous ice-blue species by snowmelt at Song-Kul (and Tash Rabat), big drifts at Barskoon

Rosaceae

<i>Alchemilla tianshanica</i>	Damp mountain turf
<i>Crataegus monogyna</i>	Kyrgyz-Ata, Sary-Chelek
<i>Exochorda tianshanica</i>	
<i>Geum rivale</i>	Suusaymr
<i>Geum urbanum</i>	
<i>Malus sieversii</i>	Sary-Chelek
<i>Potentilla asiatica</i>	Widespread <i>recta</i> type
<i>Potentilla bifurca</i>	Stony steppe
<i>Potentilla nervosa</i>	Possibly this grey leaved species at Ala Bel, also Taldyk.
<i>Potentilla spp</i>	Various seen
<i>Rosa albertii</i>	Common white rose
<i>Rosa canina</i>	Arslanbob, Sary-Chelek
<i>Rosa kokanica (?)</i>	Yellow rose, scattered, common at Ala Archa
<i>Rosa sp</i>	Smaller yellow flowered species, small pinnate leaves, south of Osh, Kyrgyz-Ata
<i>Sibbaldia tetrandra</i>	Tight cushions, tiny yellowish flowers at Barskoon, Chon Ashu
<i>Sorbus tianshanica</i>	Fine large rowan with large cymes of white flowers, scattered and widespread in uplands
<i>Sorbus tomentosa</i>	Kyrgyz-Ata
<i>Spiraea sp</i>	Sary-Chelek.

Rutaceae

<i>Dictamnus albus</i>	Good stands at Jeti-Otuz, Arslanbob, Sary-Chelek; aromatic pinkish-white flowers in tall spikes, large pinnate leaves
<i>Haplophyllum perforatum</i>	Steppe west of Osh

Salicaceae

Populus nigra

Very widespread

Populus alba

Very widespread

Salix spp

Riversides

Saxifragaceae

Chrysoplenium nudicaule

Peculiar little plant in moss at Barskoon and Chonashu.

Saxifraga macrocalyx

Yellow species with glandular hairs on sempervivum-like leaf rosettes and red runners. Song-Kul, Barskoon

Saxifraga hirculus

Chon Ashu, rosettes or tight clumps, yellow with prominent orange dots inside

Saxifraga sibirica

Scattered, white

Saxifraga oppositifolia

Tight mats with purple flowers, Barskoon

Scrophulariaceae

Lagotis integrifolia

Large, white flowers, turf below Song-Kul

Lagotis sp

Lilac flowers, procumbent and stoloniferous, Barskoon

Verbascum songaricum

Widespread in steppe habitats, branched infl. greyish leaves

Solanaceae

Hyoscyamus niger

Widespread

Tamaricaceae

Tamarix sp

Thymeleaceae

Stellera chamaejasme

Tash Rabat, south of Naryn, in grassy or scrubby steppe

Valerianaceae

Valeriana dioscoridis

Song-Kul, south of Naryn

Verbenaceae

Xxx

Shrubby species east of Osh, lilac-purple flowers, leaves ovate with scalloped margin

Violaceae

Viola altaica

Tor Ashu Pass, Chon Ashu

Viola biflora

Yellow species at Barskoon, Ala Archa

Viola suavis

Sary-Chelek

Viola tianshanica

Delicate little violet with strongly lined lip and distinctive ovate-lanceolate leaves, Tor Ashu, Song-Kul, Chon Ashu, bare ground among turf at 3000m

Zygophyllaceae

Peganum harmala

Common and widespread in steppe

Zygophyllum atriplicoides

Shrub with large winged fruits, steppe near Osh, Jalalabad

Zygophyllum sp

Fleshy leaves, greyish bell flowers with prominent orange stamens, road side bank near Chaek

Amaryllidaceae

Ixiolirion tartaricum Steppe, e.g. near Naryn

Colchicaceae

Colchicum kesselringianum Taldyk Pass

Convallariaceae

Polygonatum roseum Jeti Oguz, pink flowers

Iridaceae

Iris alberti Fine mauve 'pogon' species with prominent brown and white barring on upper falls, in meadows above Sary-Chelek

Iris halophila Syn: *spuria ssp sogdiana* Widespread, roadsides, wet places

Iris loczyi Barskoon, Song-Kul

Iris ruthenica Deep-blue and white good population above Sary-Chelek, Barskoon

Liliaceae

Allium aflatunense Large species in big groups at Arslanbob and south of Osh.

Allium ambylophyllum Common in meadows, pink

Allium atosanguineum Locally abundant in mountain turf, dark purple sheaths

Allium barsczewskii Deep pink species at Arslanbob (picnic site)

Allium caeruleum Jeti Oghuz not 2014

Allium caesium Pretty blue species, near Sary-Chelek

Allium fedtschenkoanum Yellow to reddish, tall onion, Ala Bel Pass.

Allium oreoprasum Small white with green vein, steppe

Allium oreoscordum Steppe near sary-Chelek, tall, white

Allium platyspathum Dwarf forms at Barskoon and Chon Ashu, leaves horizontally flat, smallish pink heads

Allium semenowii Dwarf yellow species at Barskoon

Allium severtzovoides/suworowii Possibly this species at Sary-Chelek, medium sized pink heads

Allium spp Several species seen

Allium trachyscordum Pink. Kara-Bulak Gorge below Too Ashu pass

Fritillaria walujewii Attractive reddish-pink bells, below Taldyk Pass. Substantial population in seed south of Naryn.

Lloydia serotina Barskoon, Chon Ashu

Tulipa dasystemon A small yellow tulip Barskoon, Taldyk Pass, Song-Kul

Tulipa heterophylla Curious nodding bell-like flowers Song-Kul in alpine turf

Tulipa ferganica Bicoloured yellow and red, many this year at Sary-Chelek

Melanthiaceae

Veratrum lobelianum Best en route to Chonashu, tall branched spikes with greenish flowers

Orchidaceae

Coeloglossum viride Turf on Tor Ashu

Dactylorhiza sp. On the way to Chon Ashu, smaller than *umbrosa* purplish leaves.

Dactylorhiza hatagirea Chonashu
Dactylorhiza umbrosa Marshy places
Epipactis palustris In bud at Sary-Chelek.

Xanthorrhoeaceae

Eremurus fuscus Abundant and widespread in mid altitudes, yellowish-green to orangey flowers
Eremurus robustus Colossal species, to over two metres tall with long dense spikes with white to pinkish flat flowers. Arslanbob, Dashman, south of Osh.
Eremurus sogdianus Delicate species, white flowers with prominent orange stamens, huge numbers en route to Arslanbob, in seed elsewhere
Eremurus tianshanicus Widespread in various steppe habitats, huge populations near Arslanbob, Sary-Chelek and elsewhere, tall slender spires crowded with flat-faced white flowers