

The Tulips of the Tien Shan

Spring in Heaven

A Greentours Trip Report

11th – 24th April 2015

Led by Vladimir Kolbintsev & Kurt Vickery

We all made our way to Kazakhstan from various airports, arriving early in the morning. We managed to get just a little rest at the hotel but needed to get our skates on to start the first Tulip foray!

Kapchagai Reservoir

After a fairly swift wash and brush up we were heading back out of Almaty. Before we had left the outskirts we made our first stop to bag our very first Tulip of the trip. With a rather industrial backdrop we spent a quarter of an hour or so amongst perhaps a dozen *Tulipa kolpokowskiana*. Our first birds were familiar Chaffinch and less so Goldfinch, in this case the Grey-necked Goldfinch that some regard as a distinct species. We also noted Eastern Clouded Yellow and Eastern Bath White butterflies before setting off again.

On the journey we had some good bird flypasts such as Black-eared Kite, Marsh Harrier and, as we neared the reservoir, Gull-billed Terns. Our next stop was at a large rocky outcrop that overlooks the great lake. As we got out of the minibus we could see yellow tulips at the bottom of the slope. These were again *Tulipa kolpokowskiana*, but just a bit higher we could see our first *Tulipa albertii* in its stunning yellow and carmine form. Most of the group walked as fast as they could to get a closer view. We were here at the best possible time as they were in splendid condition. The tightly-channelled and undulate glaucous leaves were much admired. Many more plants were found including a couple of *Gagea*, one yellow - *Gagea tenera* and one white - *Gagea ova*. Other plants included *Euphorbia apulum*, *Strigozella turkestanica*, *Anemone petiolulosa* and, as beautiful as anything else, *Valeriana chionophylla*. It was fascinating to see the conspicuous caterpillars of an Apollo species – *Parnassius apollonius* ssp *aphrodite* devouring *Sedum albertii*. Most of us think of these as alpine butterflies, but this one is adapted to cope with extreme summer temperatures. While we were all busy doing this, Alan had been indulging in a bit of birdwatching and had found an impressive list including Turkestan Shrike, Red-footed Falcon, Black Redstart, Siberian Chiffchaff and Pied Wheatear. We then drove around the lake for our next stop on a large peninsular. As Alexander prepared our dinner and assembled an extraordinary 'pop-up' restaurant, we wandered around to admire our next target tulips. This area is home to *Tulipa behmiana* and *taliewii*. The former were here in abundance, but somewhat stunted this season, probably by the lack of rain. The *taliewii* were in a similar state but sadly the *Rhinopetalum karelinii* that we usually see on this trip were already thoroughly frazzled and had failed to produce any seed this season. As we sat and enjoyed our lunch we were treated to a constant flypast of raptors on the move: Sparrowhawks were particularly numerous, and there were plenty of Montagu's Harriers too.

All too soon it was time to leave.

We hadn't gone far back down the road before we saw a gulley with numerous *behmiana* in much fresher condition - and ideal for photography. We had to move fast though as a chap was gathering a large bunch for his sweetheart...The cheerful couple happily posed for our cameras, gold teeth glinting in the sunshine, totally oblivious to the irony! We managed to get some really nice shots before heading back towards a very welcome hot shower in the hotel.

Road to Merke

Alan was up with the lark enjoying some urban birdwatching. Around the hotel were Blackbirds and Indian Mynah along with Great x Bokhara Tits of a bewildering hybrid race from an unfathomable introduction of typical Great Tits some decades ago. We drove through the bustling city for some time before entering the countryside. The central reservation of the dual carriageway became increasingly dotted with the yellow goblets of *Tulipa kolpokowskiana*. Before too long we were in undulating green steppe covered with the tulip. We stopped to photograph them in their classic habitat. Pushing through the shrubs that lined the road we disturbed Yellow-legged Tortoiseshell, and Tree Pipit of a race unfamiliar to most of us. There were countless leaves of *Crocus alatavicus* cryptic in the sward and Marion found a shed skin from a Reinhardt's Viper.

Our next stop was just before the Kordoi Pass. We crossed over a narrow stream to get to a verdant valley of mixed scrub and larger trees. On some tightly grazed turf we found our first Juno of the trip - *Iris kuschakewiczii*, possibly the most spectacular species of the region. On a nearby rocky slope we flushed a few Chukar which as usual had us nearly jumping out of our skins! It was here amongst *Spirea* scrub that we found the delicate *Corydalis shanginii shanginii*. Other flowers included a lingering *Crocus alatavicus* (all the others were in fruit), There was the handsome buttercup *Ranunculus regelianus* and a bank covered in *Anemone petiolulosa*. Alan had wandered off on his own and as we reconvened he reported two Syke's Warblers.

We moved on, and before too long arrived in the Kordoi Pass itself. As we exited the minibus we were instantly among the *Tulipa ostrowskiana* that we had come here for. They were in an almost unbelievable range of colours and made for great photographs. The tulips made it very easy to be distracted from the wealth of other species about us including *Eranthis longistipitata*, *Gagea ova*, *Androsace maxima* and the spectacular tuberous berberid - *Leontice ewersmanii*. Vlad also found a single *Iris tienshanica*, the first time it had been recorded from this site. After a delicious picnic the group split up and explored in different directions. As some of us crossed the road to do a bit of birdwatching, there was a barely audible sound coming from 'somewhere'. With necks bent as far back as they would go, it became apparent that it was the faint cries of great skeins of Demoiselle Cranes passing over us at very high altitude. In an area of tall shrubs we picked up a pair of Turkestan Shrikes and several 'chacking' Black-throated Thrushes. We set off again and after an hour or so couldn't resist stopping at a large brackish scrape that was alive with birds. The list of species here was very long but highlights included Garganey, Shoveler, Gadwall, Little Ringed Plover, Wood Sandpiper, Green Sandpiper, Avocet, Black-tailed Godwit and Yellow Wagtail in various forms. We had resolved not to stop again, but a few miles down the road we crossed the Aksu river and couldn't resist a look at some Pygmy Cormorants, along with a stunning male Citrine Wagtail and a distant Great White Egret. The unscheduled birding stops had

preoccupied us so much that we were running rather late and so we had to make haste for the Merke Sanitorium that was our hotel for the night.

Merke valley and road to Djabagly

Mike, Alan and Kurt were up early for a pre-breakfast walk around the lake by the hotel. As they approached the water they disturbed several roosting Black-eared Kites from trees on the large island in the middle. There was a large raft of some twenty Coots along with a few wildfowl including Gadwall and Teal. In the shallows there were several pairs of Black-winged Stilts and Common Sandpipers that were flushed every so often as the group made their way to the far side. A careful scan of the island revealed some interesting species – four Night Herons were inconspicuous in the reeds, but the real surprise was an Osprey quite low down. Alan with his expert eye pointed out that some of the gulls were in fact Steppe Gulls and the large number of presumed Greater Cormorants were actually Pygmy's. Making their way back there was even more excitement as they put up a juvenile Steppe Eagle at very close 'bins filling' quarters.

After breakfast the group made their way to the Merke valley about half an hour from the hotel. Following the fast flowing Merke river, we eventually pulled up at a very special side valley that is home to our next target the spectacularly beautiful *Tulipa zenaidae* that has a very restricted range in Kazakhstan. Making our way up the valley we had superb views of Golden Eagle and Goshawk. The sun was now warming things up nicely and butterflies became abundant - Queen of Spain Fritillaries particularly so, but there were also plentiful Orange-tips, Holly Blues, Small and Yellow-legged Tortoiseshells, and Brimstones. Moving on we encountered *Tulipa kolpokowskiana* in typical and yellow forms and one of the largest *Astragalus* in the genus – *Astragalus sieversianus*. *Tulipa zenaidae* is possibly unique amongst tulips in its choice of habitat; it has a tendency to grow under dense scrub such as in this valley, dominated by *Spirea hypericifolia*. This habit usually makes it tricky to find and even more difficult to photograph. About three years ago there was quite a large fire in the valley which burnt most of the scrub to nothing in an area of several acres. This has been fortuitous for visitors as all the bulbous and tuberous plants survived the blaze unscathed and there will be a rare opportunity for a few seasons to admire the plants unhindered by herbage. We had timed our trip to perfection as the tulips were in perfect condition and much more numerous than on any of our previous visits. We spent a good hour photographing the *Tulipa* as well as *Corydalis ledebourina* and the very attractive emerging growth of *Gymnospermium albertii*. On the way back to the minibus we stopped to look at a large boulder that has *Tulipa bifloriformis* growing out of it (a most atypical of habitats for this species). We flushed a couple of Woodcock and Alan was delighted to see his first *flavipectus* race of Azure Tit. We drove a little further up the valley to a small village where Christine and Marion enjoyed acquainting themselves with a jolly babushka and her grandson. The rest of the group looked to the skies and enjoyed views of an enormous Himalayan Griffon Vulture circling overhead. All too soon it was time to head back for lunch and prepare for the long journey to Djabagly.

Mashat Canyon

Overnight the weather turned dramatically stormy, the rain hammering noisily on the roof of the guesthouse. Kurt and Alan were bonkers enough to go for a birding session before breakfast. After an initial downpour the gusty winds died down enough to make things

bearable and they were able to see a few bits and bobs including Black-throated Thrushes and gangs of chirpy Tree Sparrows. At breakfast we decided to do checklists to give us time to judge the weather. After lists, the sun came out a bit but the skies still looked a bit iffy. Instead of wasting too much time, Kurt and Alan went out again, this time joined by Hilary. They re-visited the stream that borders the village only this time their luck had changed completely - not quite believing their luck they had what will probably be a once in a lifetime experience of getting within twenty feet of a Solitary Snipe. The bird gave what birders would refer to as 'crippling' views. It even went as far as raising its posterior towards us to show unmistakable diagnostic features.

The weather improved considerably and so by mid-morning we set off towards the Mashat canyon. Our first stop was at the Abail railway station. In the Elm plantation that lines the railway, we were just in time to see the last blooms of *Corydalis sewerzowii*. This has to be one of the very best in the genus with its beautiful bluey glaucous foliage and flowers in just the most perfect complementary yellow. About an hour later we arrive at the magnificent Mashat Canyon. This place has a climate all of its own and you can often see plants flowering here two or three weeks before anywhere else. Dramatic as the canyon is, we weren't just here for the scenery but to search for *Tulipa lemmersii* in its type and hitherto only-known locality. Before we climbed to find it, we ambled around on the scree slopes under the looming cliffs. This is an excellent place to see *Allium karataviense* and this year it was blooming in abundance along with startling blue *Ixiolirion tataricum* and the fresh unfurling leaves of *Ferula tenuisecta*. On conglomerate rock faces we found *Astragalus aborlinii* and *Scutellaria immaculata*. Eventually we started up towards the clifftops in search of the tulips. The minibus driver was very brave with his vehicle and drove us a considerable way up before he couldn't get any further. We had our picnic there and while things were being prepared we managed some birdwatching. There were a lot of raptors about including Imperial and Short-toed Eagle, Egyptian Vulture and what Alan would later confirm as Upland Buzzards. After lunch we started to walk towards the tulips. When we got to the plateau the first Tulips we saw were in fact some pristine 'typical red' *Tulipa greigii* interspersed with the odd yellow form with a red stripe. These in turn were growing amongst abundantly flowering *Geranium transversale* in a very beautiful combination. Just a few paces further and we were among the *Tulipa lemmersii*. It was probably the best flowering year so far for a Greentours visit. Only a few blooms were fully open as the temperature had plummeted and the skies had turned very black, not to mention the very unnerving thunder and lightning. Christine's answer to Kurt's "We really ought to go now" was a rather determined "I haven't come all the way up here not to take a photograph"! We got out to admire some fine specimens of *Rindera echinata*. It was another chance to scan for birds that proved to be rather productive. Species included Isabelline, Pied and Northern Weatears, plus White-capped Bunting and Himalayan Rubythroat. We made one last stop on the way home for *Onosma dichroantha* before heading back home for a very welcome restorative cup of tea.

Berkara

A possie of five brave souls with questionable sanity went out at 6.30 for a spot of birding in the bitter Chokpak wind that had arrived overnight. This time we took a slightly different route that included the small dam at the top of the village. Here was a Green Sandpiper and Grey Wagtail, but not a lot else. Arriving back in the relative shelter of the village, and with lovely morning light, our pain was rewarded with great views of Bokhara Tit and Brambling

picked up by its call. On one of the wooden telegraph poles we watched a White-winged Woodpecker going round and round, helping us to see its distinguishing features perfectly. After all this we could seriously feel a cup of tea coming on and returned to the guesthouse to a very comforting French toast breakfast. An hour later we set off towards the Berkara Valley.

Our first stop was at the top of the Kuyuk pass. Vlad instructed our driver to do a bit of 'off-roading' to look for the *Iris subdecolorata* that he had seen a few days before, but all were finished. In the surrounding steppe we found a 'new' yellow *Astragalus – pseudocytisoides* and the enigmatic if not showy *Biebersteinia multifida*. Driving down into the Kuyuk Valley, Susan spotted some yellow 'blobs' on the clifftops that turned out to be *Iris orchioides*. We spent quite a bit of time here taking photographs. A mile or so further down the road we stopped at a gully that is one of our traditional Greentours 'must do's'. This is a deep valley only a few hundred yards long that is home to a plethora of spectacular bulbs. Most obvious of all were the several tens of *Iris wilmottiana* in every conceivable shade of blue. There were some really robust *Korolkowia sewerzowii* and one or two typical *Tulipa greigii*. A real surprise was *Corydalis sewersowii* in nice condition that we hadn't seen here before. *Rhinopetalum stenantha* were finished unfortunately as were *Tulipa orthopoda*, but the latter are always very early flowerers and they had almost ripe capsules. Next stop was for *Eremurus lactiflorus*. It occurs for several unbroken miles in the Kuyuk but the season was obviously a bit late and it took quite a bit of searching for a favourable slope with plants showing the first flowers of the season. On the same slope were *Cousinia karatavica* with its beautiful and very distinctive asymmetrically cut leaves, and *Oxytropis*-like *Astragalus falcigerus*.

As the *Eremurus* weren't in full bloom we resolved to return in a few days and set off towards our next destination, the Karasay Valley. On the road we added Tawny Pipit and a Wood Sandpiper bathing in a puddle to the bird list. Karasay is one of a series of almost parallel valleys cutting into the steppe approaching Berkara. We were here to see another *Corydalis*, this time *shanginii* ssp *ainae*. Although the Berkara valley is cited as the type locality, Karasay has become the place to go for it, mainly for the ease of access and an almost guaranteed chance of seeing it. Unusually for a *Corydalis* it favours streamside boulders for its habitat and must frequently be under water during snow melt. Just before arriving at Berkara we stopped at one of the Bronze Age stone circles and their associated tumuli. It was an opportunity for Vlad to return a favour, for Alan had shown him around a similar site in Scotland during a lecture tour of the UK some years before. Eventually we pulled up at the entrance to the Berkara reserve. We had a delicious picnic before starting the walk through the almost unique riparian Ash forest. Soon we were seeing the speciality of the reserve – the multi-coloured form of *Tulipa greigii*. The range of colours is really quite staggering with every hue of red, orange, yellow, pink and even almost-white, usually with a stripe but sometimes with fiery fringes that defy description. It is possible that *greigii* has morphed like this at the site as a result of an ancient liaison with *Tulipa kaufmanniana* that is also common here. The tulips looked particularly good growing amongst swathes of *Geranium transversale* and delicate green fronds of emerging *Prangos pabularia*. We spent a lot of time taking photographs, finding it impossible to choose the most exquisite specimens from the vast array of contenders. In a muddy patch by the stream were lots of 'puddling' butterflies including Nettle-tree Butterfly, Mallow Skipper and Holly Blue. *Korolkowia* also comes in a range of unusual colour forms here and we found a vast array ranging from almost black through to palest limey-yellow. Making our way back to the minibus we noted some other extraordinary plants including the huge parasol leaves of *Megacarpa orbiculata* and curiously hairy *Onosma irritans*. Nearly back at the entrance we met up with Alan who had

decided to just sit and birdwatch in a thicket. He had enjoyed great views of Greenish and Hume's Leaf Warblers, Redstart and, perhaps most rewarding of all, a resting Scop's Owl. On the way home we made one last stop at the slightly brackish Tas Kol. Here were scattered *Tulipa greigii* all rather stunted in the much harsher saline soils that surround the lake. On the water we saw Great Crested Grebe, Shoveler and Wigeon whilst in the margins we managed to see Redshank and Lapwing.

Akkol

It was the first still morning since we arrived in Djabagly and perhaps the least productive bird-wise except perhaps for the purist. We had a Mountain Chiffchaff (*Phylloscopus sindianus*) that had Alan scratching his head for a few minutes - apparently (with the possible exception of the Solitary Snipe) this was the 'bird of the trip' so far! David and Christine decided they would like a break from driving so they decided to opt for a walk at the nearby valley Taldybulak. The rest of us set off towards Akkol. After an hour we were passing the great Ters Lake. In the distance we could see many hundreds possibly a thousand plus of Demoiselle Cranes congregated in the surrounding fields. This was a great thrill for all of us but particularly for Margaret who had been itching to see them. They gave great views through the scope, and, fidgety as ever, they soon began to take off in small groups with some obligingly flying right over us joined by a few Gull-billed Terns. A little further up the road there was an Osprey sat in the middle of a recently ploughed field. Our next stop was at one of a series of flooded gravel pits on the outskirts of Taraz. Here we found several Gadwall, Wigeon and Shoveler, along with Great Crested Grebe. A Marsh Harrier sailed by and we heard Cetti's Warbler at close quarters which as usual remained unseen despite quite a bit of looking. As we drove on we snatched a glimpse of a Long-eared Owl roosting against a tree trunk. It was only another quarter of an hour before we arrived at Kumburul - a massive ancient stabilized sand dune. We walked up towards the top of the dune. On the way we encountered a pristine Swallowtail. It decided to rest perfectly still on the beautiful pale sand allowing us to take some great pictures. We were really here for another Tulip and before too long we were among the rare and very local *Tulipa lehmanniana* in shades of orange and yellow known only from here and a handful of nearby tennis-court-sized colonies in Kazakhstan. Scattered about were the more modest *Tulipa binutans*. There were countless rosettes of yet-to-flower *Eremurus inderiensis* and many large tussocks of *Iris tenuifolia* that were 'just over'; but the abundant showy bright yellow *Astragalus flexus* (syn *A. farctus*) were by far the most conspicuous plants other than the tulips.

Alan had as usual gone off in a different direction and came back to meet us having found Hume's Lesser Whitethroat and Desert Finch. Our final stop of the day was at another of the region's great salty lakes - Akkol. We drove to the top of the escarpment that overlooks the lake. Our target here was the Karatau form of *Tulipa albertii*. We were delighted to have arrived at their peak as timing the season can be quite tricky with this species. This form is almost always a tomato-red and much less variable than the type with glaucous leaves with extremely undulate leaf margins. Most of the group got busy photographing the plants, while Alan settled down with a scope to scan the lake and its shore. There were many birds to be seen without the help of optics including Asian Short-toed Lark, Tawny Pipit and a rather surprising Yellowhammer seen by Mike. We spent a bit of time botanising the sandy habitat noting a few *Iris orchioides* in flower and hundreds of *Iris subdecolorata* and *Tulipa binutans* in seed. Other plants of note were *Rindera tetrapsis*, *Scorzonera circumflexa*, *Glaucium*

elegans and a relict population of *Rheum tataricum* on a precarious undermined cliff-top patch about fifty feet square. It would seem the rest of the colony had gone over the edge and into the lake over the course of many years. Alan's patience had paid off very well and he invited people to look at the birds he had found through the scope. The list was very long but highlights included Caspian Tern, Pallas' Gull, Red-crested Pochard, White Pelican, Ruff, Great White Egret and, circling overhead, Steppe Buzzard. We eventually had to call it a day and head home but we made one last stop for photographs on the other side of the lake where we found more *Tulipa albertii* growing in gaps among scrub consisting mainly of *Caragana balkashensis*. Last excitement of the day was provided by a flypast of various Yellow Wagtails and views of an Osprey over the lake.

Kshi Kaindy

Today we were going up the pristine Kshi Kaindy Valley which is part of the Aksu-Djabagly nature reserve. It was going to be an extra special trip as this time we were going on horseback. Having been shuttled the seven kilometres or so from the guesthouse, we were met by the reserve rangers who had readied the horses for us. Even though the horses aren't too big, it was comical at times to see the various techniques involved in mounting them. In the end we found a convenient bank that meant people could more or less step onto them rather than suffer flailing legs desperately trying to get over to the far stirrup! Mike showed an instinctive flair for horse control and impressed us all with his mastery over his steed, leaving us to suspect he may have been a top eventer in a former life. We had decided to ride up to the so-called Halfway House (c 2000m) and walk back. On the way up we saw many wonderful plants especially bulbs including a new *Tulipa - turkestanica*, *Tulipa greigii*, *Rhinopetalum stenantha* and *Corydalis ledebouriana* plus *Crocus alatavicus*, the latter opening by melting snow patches.

Although the riding was most enjoyable the sight of the Halfway House was very welcome especially as it promised a hot drink and lunch. After lunch we wandered down to the nearby rocky promontory that looks down into a spectacular waterfall where we got fleeting glimpses of Blue Whistling Thrushes given away by their wonderful loud calls echoing through the ravine. Nest building Ravens were very tolerant of our presence and we got great views of Golden Eagle, Lammergeier and Griffon Vulture overhead. It had become progressively misty making birdwatching a bit tricky however we were very aware of the presence of large numbers of Black-throated Thrushes from their loud 'chacking' calls.

Scanning the slopes above us we were amazed to see the ghostly shapes of tens of Ibex just discernable through the murk. On the way down we spent time admiring and photographing some of the plants we had seen from our horses. People were particularly excited to see the stunning 'Retic' - *Iriodictium kolpokowskiana* - a very fine trio of specimens got particular attention - and we added Blue-capped Redstart and Rock Bunting to the bird list. Within minutes of arriving back big pots of tea were ready for us and Christine was entertaining us with her very accomplished photographs from the day on her iPad.

Alan had stayed behind today with a nasty migraine. Feeling slightly better by lunchtime, he went spent some time by a quiet stream to the west of the village. He picked up some fantastic new birds including Brown and Isabelline Shrikes, Shikra and Wryneck.

Aksu canyon

A small group of us accepted Alan's invitation to re-visit the site that he had been birding yesterday. Before too long we were at the stream and scanning various low Hawthorn thickets. Our first success was with an Isabelline Shrike that allowed us to get within twenty feet. From the same vantage point a female Pied Wheatear sat nicely for us too in the beautiful morning light. A few minutes later we managed to see the 'prize' Brown Shrike skulking in a group of streamside *Salix*. With a bit of patience we got reasonable views from time to time.

Thoroughly satisfied with our early morning's work we headed off back for breakfast. Our destination today was the Aksu Canyon – another of the Aksu Djabagly complex of reserves. We drove along the foot of the mountains for half an hour or so before turning uphill. The climb soon began to test the engine which was revving away furiously in low gear. We stopped about halfway up to admire the amazing panoramic view over the Chokpak Pass, a key migration route between the Kara Tau and Tien Shan for many birds. Around and about were many *Rhinopetalum stenantha*, *Tulipa turkestanica* and *Corydalis ledebouriana*. Having given the engine a chance to cool down we moved on eventually reaching the great plateau stretching out for miles in front of us.

Our next stop was at the wonderful isolated village of Irsu, that gets cut off completely for at least four months in the winter. The village is by a broad, fast flowing stream and it was its banks that we explored for half an hour or so. The landscape is painted yellow at this time of year by myriad *Gagea minutiflora*. We usually stop here for *Scilla puschkinioides* and it wasn't long before we found them. We also had the added bonus of a few *Crocus alatavicus* characteristically flowering by melting snow patches. By the river we had a Green Sandpiper and above us there was a major raptor movement going on, mainly of Steppe Buzzard and Sparrowhawk but we also noted a single Short-toed Eagle. We then moved on to the rangers' offices that overlook the great canyon. Paperwork done, we got our first view of the colossal abyss of Aksu. Looking down into the deep valley forested with *Juniperus sarawachanica* and *semiglobosa*, people were given the choice of botanising the top or making the hot mile long trek down to the river below. Just as we started to make our way down a Short-eared Owl appeared out of the blue doing acrobatics high in the air above the canyon. It was a most unexpected species especially as most of us had only ever seen them in winter flying over bleak moors and estuaries back home in Blighty. The temperature had risen significantly since we had arrived and this brought out a lot of butterflies - Eastern Clouded Yellows and Orange-tips were particularly abundant. For quite a way we found many *Tulipa greigii* in bud. Just as we thought we weren't going to see any flowers we came across a particularly sheltered hot slope with some perfect blooms that thankfully satiated Christine's 'need' to get a 'Tulip with canyon in background' shot. As the season was so late we had passed countless *Eremurus lactiflorus* with spikes just beginning to form but the same sheltered spot helped us to see the very first blooms of the year for the site. About half way down we spent some time enjoying a steep-banked promontory bejeweled with hundreds of *Anemone petiolulosa* and *Tulipa turkestanica* interspersed with a few *Rhinopetalum stenantha*. Moving on, we found a lovely red *Tulipa greigii* x *kaufmanniana* hybrid and a bit further on a yellow one with large red blotches looking very similar to the *albertii* we had seen at Kapchagai. Nearing the bottom we saw some fine stands of *Ferula tenuisecta* and large-leaved *Rheum maximowicii*. *Allium karataviense* were emerging from the base of scree and we managed to see a magnificent early *Megacarpa orbiculata* in flower just to confound the late spring. Just before we got to the river *Iris wilmottiana* lined the path almost as if

someone had planted them as bedding. We rested for a while and made the most of the shade at the bottom. Happily this happens to be a very good spot for *Corydalis nudicaulis* which gave a perfect excuse to delay the ascent back to the top. We gradually made our way back seeking out what shade we could for the odd breather. Nettle-tree Butterfly was seen and Vernal coppers (*Tomares callimachus*) seemed to keep pace just in front of us all the way back. Those waiting for us at the top had had a great afternoon's birding, with Steppe Eagle, Hobby, Himalayan Griffon Vulture, Montagu's Harrier, Black Stork and Sand Martin added to the day's tally. After a refreshing cup of tea back at 'base' we trundled back from whence we came, stopping briefly to admire the *Tulipa kaufmanniana* growing as arable weeds in cultivated land and, in a sheltered gully, tens of *Crocus alatavicus* in fine condition and form.

Needless to say, Alan seized the last opportunity of the day to scan the skies with his binoculars and he managed to find us Upland Buzzards, Bimaculated Lark and singing Skylarks to end a fantastic day.

Koksay

We made a prompt start today as we had a lot to fit into a short last day in Djabagly. We made a short but sweet re-visit to the Kuyuk Pass picking up one of the first Rollers of spring on the way. The reason for the stop was to see if any of the *Eremurus lactiflorus* were further into flower. We were in luck as we found a group that were just about 'there' bathed in nice light and with less wind than before, making photography just that bit easier. Passing Ters Lake, the Demoiselle Cranes were there again, fewer in number but considerably closer and joined by a few Commons. There were several Syke's Wagtails passing through too. This time we stopped on the causeway that cuts off a large corner of the lake. The lake was alive with birds and scopes and tripods were brought out for a bit of leisurely birding in the warm sunlight. We found several duck species with splendid male Garganey a particular treat, and there were waders such as Ruff, Greenshank and Common Sandpiper. A seemingly colossal Steppe Eagle on the far bank dwarfed the shrub it was roosting in. Collared Pratincoles looking like giant swallows chased each other around at great speed.

We then headed off to the Koksay Gorge. In the steppe that approaches the gorge we stopped for an amazing colony of *Iris subdecolorata* - in a multitude of colour forms. If there was ever an inappropriate epithet for a plant this must be right up there with the worst. Among the 'typical' forms we found almost entirely white specimens and a number of 'blues' that looked very similar in colour to their close relative *Iris kuschekewiczii*. Vlad managed to find and catch various snakes and lizards to everybody's amazement. Among them were Dione Snake, Reinhardt's Viper and Desert Skink. A little further on we stopped for our picnic. The site was chosen as we could see several *Iriodictium kolpokowskiana* in flower. We all took photographs as lunch was prepared. After lunch we headed for the Koksay Canyon just a kilometer or so further along. Much of the canyon is fenced off at the moment due to tensions with neighboring Kyrgyzstan (The canyon creates a natural border). We found some access to the amazing water-eroded 'Cappadocia-esque' rock features and in the surrounding area were plentiful *Rhinopetalum stenantha* and an exquisite dwarf form of *Tulipa turkestanica*.

Our last stop of the day was on the way back via Ters Lake again. Mike had seen conspicuous *Iris orchioides* in the steppe. The group piled out to take photographs whilst Alan took advantage of our mobile hide to pick up a couple of Little Bustards. We were preoccupied with taking photographs but eventually realised that we needed to make haste for our 9 o'clock train back to Almaty.

Kaskelen

The overnight train rocked most of us to sleep with the exception of poor Alan who spent most of the night standing up by the corridor window. Needless to say he took advantage of every hour of daylight to birdwatch. A number of Shikra and plentiful Black-winged Stilts were most rewarding as well as the spectacle of ever increasing numbers of Rollers seemingly between every other telegraph pole. Arriving in the bustle of Almaty we were whisked off promptly to the hotel for breakfast and a very welcome shower. Refreshed, we set off to the Kaskelen Valley. We hadn't been there long before spotting a large patch of fiery orange *Tulipa ostrowskiana*. The hillsides here are covered in huge swathes of *Iris albertii*. Unfortunately it was a bit early for them but we did find one or two of the first blooms of the season. Kurt took a few of the group to look at the emerging rosettes of *Eremurus robustus*. It is quite surprising to the uninitiated that this species grows amongst quite tall and dense shrubs and small trees – the very tall spikes emerge from the canopy in May and June. Whilst peering amongst the foliage for the *Eremurus* we found plentiful *Corydalis glaucescens*. Returning to the minibus we picked up a few butterflies including Queen of Spain Fritillary, Mazarine Blue and the local form of Green Hairstreak. Alan had been off on his own again and found Penduline Tit, Greenish Warbler and Lesser Whitethroat. We then drove higher up the valley through beautiful forest dominated by Aspen and the graceful Birch *Betula elegans*. Eventually the valley opened up and we could see the first of the Tianshan Spruce – *Picea schrenkiana* in the highest snow-covered peaks. Our picnic stop was made in a really spectacular spot. We were surrounded by a scene recalling Switzerland in so many ways. Our choice of stop was by no means random for here were yet another Tulip for the trip - *Tulipa dasystemon*. Its bright yellow flowers open wide and star-like in the glorious sunshine. *Pedicularis albertii* were fine 'companion' plants for the tulips. Yet more exciting plants were emerging - *Paeonia hybrida* with its wonderful bronzy-red finely-dissected leaves was well on the way. *Rheum witrockii* and especially *Ligularia macrophylla* would clearly dominate the area as the season progressed. For the last stop of the day we climbed to 1960m and the very lowest of the *Picea* - and a trio of *Juniperus*, namely *sabina*, *pseudosabina* and *sibirica*. We spent a pleasant half an hour or so exploring the area and photographing a particularly large patch of *Crocus alatavicus* before it was time to get back to the hotel.

Charyn canyon and the Sugaty plain

Today we made the long journey towards the Ketmen Mountains and the Chinese border. After miles and miles of steppe we entered the Ketmen range and followed the road through the spectacular rocky valleys so characteristic of the area. After a while we became aware of thousands and thousands of *Eremurus altaicus* lining the rock ledges above us. Unfortunately we were just too early for the flowers to be open, clearly they would need another week... A bit further into the valley we stopped for a colony of perhaps two hundred blooming *Tulipa tetraphylla* at the bottom of a scree slope. In the shade of surrounding *Spirea hypericifolia* we found plentiful *Corydalis glaucescens* too. We crossed to the other side of the road as another scree was blue with abundant *Ixiolirion tataricum*. David W found a Dice Snake perhaps a metre long which Vlad of course caught and presented for a very keen group of photographers to snap.

Pushing on we eventually entered the vast expanse of the Sugaty Plain. In places the land was stained yellow with *Chorispora* and then white with a tiny *Arabis*. A bit further and the landscape became yellow with another super abundant plant. This time it was totally

unexpected *Tulipa kolpakowskiana* by the million! We had never seen them here before. We had a similar experience in 2010 with *Tulipa buhseana* but there were just a very few seed capsules of the latter to betray their presence this season. After many more miles the *Tulipa* fizzled out and were replaced by countless *Rheum tataricum* with its huge adpressed leaves looking most impressive. Moving on, we reached the right altitude for *Iris kuschekewiczii*. We were lucky this year as the flowers were at their peak of perfection. Just a bit further on we came to the spectacular Charyn Canyon. We were pressed for time and weren't able to give this amazing place the attention it deserved. We did have time to admire the *Fraxinus potamophila* that we had last seen in the Berkara Valley some 1000km away, giving us a real feel of just how disjunct it is at that station.

Next stop was in the Kegen Pass, this time to look at the gorgeous candy-striped *Tulipa iliensis*. By the roadside we found clumps of the unusual coloured plum and purple *Iris scariosa* and, hidden in crannies, *Rosularia turkestanica*. At the top of the pass we took our last stop of the day. We explored the rocky peak, one face of which is home to a large colony of Lesser Kestrels. In the grassy slope above the kestrel colony we found pristine *Iris tienshanica* (sometimes referred to as *loczyi* in this part of the world but apparently both being lumped into something else again before too long) and the very local rarity *Adonis tienshanica*. It had already been a rather long day but we still had quite a distance to our next hotel the Koktal-Arasan Sanatorium and so made our way as quick as the rather poor roads would let us.

Back to Almaty via the Altyn-Emel pass

Alan's pre-breakfast walk around the sanatorium produced a couple of really good birds - a typical form Azure Tit and Sulphur-bellied Warbler. Alexander had also been out and about and caused quite a stir by showing a picture of a Tulip on his phone that looked superficially at least like *Tulipa tetyraphylla*. This would have been 'new' to the Dzhungarian mountains but when we investigated it turned out to be the recently rediscovered *Tulipa cornystemon*. After breakfast we set off for the Altyn-emel along the eastern edge of the Aktau Mountains. Our first stop was at an area of wind and water sculpted gypsum hills. We soon encountered some of the plants able to cope with the very harsh conditions. We expected to see such plants as *Cistanche salsa*, *Cynomorium songaricum* and leaves of *Iris songarica*, but the beautiful pink *Hedysarum ferganensis* in a very fresh state didn't seem to belong here. Kurt and Alan went off in search of birds and were rewarded with a couple of specialist species - Desert Warbler and Desert Wheatear. They could hear the plaintive cries of Barbary Falcon but it just wouldn't show itself. Moving on, we stopped in a valley to look at a slope with scattered *Tulipa cornystemon*. As we looked closer we realised that there was a sizable population of *Iris glaucescens* too. They were extremely variable and we particularly admired a very unusual brown form that was much more attractive than it sounds! Further searching turned up another tulip species in fruit, probably *Tulipa buhseana* and deepest red-flowered *Nonea caspica*. Our next stint was a rather long drive over miles of seemingly identical semi-desert. As we approached the Altyn-emel the habitat got greener and greener as we gained altitude. It soon became apparent that we were too early for our target of the day - *Tulipa brachystemon*. This was our first miss of the trip. During our stop at the locus classicus we found endless yellow carpets of *Gagea* comprising of probably three species. Amongst these were the occasional clump of *Corydalis glaucescens* out in the open and not as is usual cowering in the protection of shrubs. We searched the other side of the road on the off chance of an early *Primula kaufmanniana* but again we were thwarted. There were however

plentiful *Crocus alata* to keep us amused. We had yet another long trek to make and so reluctantly set off again. We stopped for lunch in a café that was unexpectedly frilly with outrageous kitsch chandeliers and plastic flowers adorning every possible cranny. After lunch it was the 'last leg' towards Almaty. We were joined almost all the way back by countless *Tulipa kolpokowskiana* that could be seen as far as the eye could see in all directions at times. Our circular route took us past the Kapchagai Reservoir again and we could see that in the time we had been in Kazakhstan the *Tulipa behmiana* were well and truly finished for the year. Another hour or so saw us back in Almaty for our last night before our flights back home.

<p>Flowers of Tien Shan, April 2015</p> <p>F = flowering Plants B = flowers in bud V = vegetation only S = in fruit</p>		Apr.12	Apr.13	Apr.14	Apr.15	Apr.16	Apr.17	Apr.18	Apr.19	Apr.20	Apr.21	Apr.22	Apr.23
		Kapchagay	Korday Pass	Merke valley	Mashat Canyon	Kuyuk, Karasay, Berkara, Taskol	Kumburul, Akkol Lake	Kshi Kaindy valley	Aksu Canyon	Kuyuk, Ters, Koksay	Kaskelen valley	Kokpek, Alasa and Kegen pass	Altyn Emel pass
Day:		1	2	3	4	5	6	7	8	9	10	11	12
<u>EQUISETACEAE</u>													
Equisetum	arvense					V		V					
<u>POLYPODIACEAE</u>													
Ceterach	officinatum			V									
Asplenium	ruta-muraria								V				
Asplenium	septentrionale			V									
Cystopteris	fragilis			V		V		V					
<u>CUPRESSACEAE</u>													
Juniperus	sabina									V	V	V	V
Juniperus	pseudosabina										V		
Juniperus	semiglobosa			V				V		V			
Juniperus	seravschanica								V				
Juniperus	sibirica										V		
Juniperus	turkestanica							V					
<u>PINACEAE</u>													
Picea	schrenkiana										V	V	
<u>EPHEDRACEAE</u>													
Ephedra	equisetina	V		V		V	V	V	V	V	V	V	V
Ephedra	intermedia	V	V							V		V	V
Ephedra	regeliana									V			

<u>ARACEAE</u>													
Arum	korolkovii					V		V					
<u>ASPARAGACEA</u>													
<u>E</u>													
Asparagus	breslerianus												B
Asparagus	persicus				V								
<u>LILIACEAE</u>													
Eremurus	altaica										V	V	V
Eremurus	cristatus	B	B	B									
Eremurus	inderiensis	V					V						
Eremurus	lactiflorus					B	B		B	F			
Eremurus	regeli				V			V	B				
Gagea	bulbifera	F	F							F			
Gagea	divaricata	F					F						F
Gagea	emarginata							F	F				F
Gagea	filiformis							F	F	F	F		F
Gagea	gageoudes								F		F		
Day:		1	2	3	4	5	6	7	8	9	10	11	12
Gagea	minutiflora							F	F				
Gagea	ova	F	F				F			F			
Korolkovia	severzovii					F		F	F				
Rhinopetalum	karelinii	F					S						
Rhinopetalum	stenantherum				S	F		F	F	F			
Scilla	puschkinioides								F				
Tulipa	alberti var. alberti	F											
Tulipa	alberti var.												
Tulipa	karatavica						F						
Tulipa	behmiana	F											F
Tulipa	aff. (biflores)						S						
Tulipa	bifloriformis				F	F	F		F	F	F		
Tulipa	binutans						F						
Tulipa	brachistemon												B
Tulipa	buhseana	F	F									F	
Tulipa	corynestemon												F
Tulipa	greigii		F	F	F	F	F	F	F	F			
Tulipa	greigii x												
Tulipa	kaufmanniana					F			F				
Tulipa	iliensis											F	
Tulipa	kaufmanniana				F	F		F	F	F			
Tulipa	kolpakowskianum	F	F	F							F	F	F
Tulipa	lehmanniana						F						

Tulipa	lemmersii				F									
Tulipa	orthopoda				S				S					
Tulipa	ostrowskiana		F	F							F			
Tulipa	tetraphylla											F		
Tulipa	turkestanica							F	F	F				
Tulipa	turkestanica aff.												F	
Tulipa	zenaidae			F										
<u>ALLIACEAE</u>														
Allium	decipiens	V												
Allium	drobovii				V		V	V						
Allium	fetisowii						V					V		
Allium	galantum											V	V	
Allium	inconspicuum							V						
Allium	karataviense			V	F			B	F					
Allium	pratensum						V							
Allium	sewerzowii					V								
Allium	suworowii			V										
Allium	turkestanicum						V							
<u>CONVALLARIACEAE</u>														
Polygonatum	sewerzowii								B					
<u>AMARYLLIDACEAE</u>														
Ixiolirion	tataricum	F			F				F	F	F	F		
Ungernia	severtzovi							V	V	V				
<u>IRIDACEAE</u>														
Crocus	alatavicus (Xiphium)		F	S				F	F	F	F			
Iridodictyum	kolpakovskianum		F					F		F				
Iris	albertii											F		
Iris	brevituba												V	
Iris	glaucescens											F	F	
Iris	loczyi											F		
Iris	pallasii (iliensis)											V	V	
Iris	regelii (= loczyi)		F							F			F	
Iris	sogdiana				V		V	V	V	V			V	
Iris	songorica					B	B			V			V	
		Day:	1	2	3	4	5	6	7	8	9	10	11	12
Iris	tenuifolia		F					F						
Juno	kuschakewiczii			F									F	

Juno	orchioides			V		F	F			F			
Juno	subdecolorata					S	S			F			
Juno	willmottiana (coerulea)					F		F	F	S			
<u>SALICACEAE</u>													
Populus	diversifolia												V
Populus	italicus	F	F	F	F	F	F	F	F	F	F	F	F
Populus	nigra	F	F	F	F	F	F	F	F	F	F	F	F
Populus	talassica								V			V	
Populus	tremola											V	
<u>BETULACEAE</u>													
Betula	pendula											V	
Betula	turkestanica							V					
<u>ULMACEAE</u>													
Celtis	caucasica			V	V	V			V				
Ulmus	campestris	S	S	S	S	S	S	S	S	S	S	S	S
<u>ANACARDIACEAE</u>													
Pistacea	vera			V									
<u>URTICACEAE</u>													
Parientaria	judaica			V									
Urtica	dioica		V								V		
Urtica	cannabina											V	
<u>POLYGONACEAE</u>													
Atraphaxis	muschketowii											F	
Atraphaxis	pyrifolia			V	V				V				
Atraphaxis	virgata				V				V				
Calligonum	junceum					V							V
Rheum	cordatum					B				B			
Rheum	maximowiczii	B											
Rheum	tataricum						B					B	
Rheum	wittrockii										V		
<u>CHENOPODIACEAE</u>													
Anabasis	salsa												V
Haloxylon	ammodendron												V
Nanophyton	erinaceum						V						
Nanophyton	iliense												V

Rhaphidophyton	regelii					V				V				
Salsola	arbusculiformis	V					V					V	V	
<u>CARYOPHYLACEAE</u>														
Cerastium	inflatum		F		F	F				F				
Holosteum	polygamum	F	F									F		
Holosteum	umbellatum				F	F	F			F				
<u>RANUNCULACEAE</u>														
Adonis	tianschanica												F	
Anemone	petiolulosa	F	F			F	F	F	F	F				
Ceratocephala	testiculata	F	F	F	F	F	F		F	F	F	F	F	
Clematis	orientalis			V							V			
Clematis	songarica												V	
Delphinium	longipedunculatum						V							
		Day:	1	2	3	4	5	6	7	8	9	10	11	12
Paeonia	hybrida											V		V
Ranunculus	regelianus		F		F	F	F		F	F	F	F	F	F
Shibateranthis	longistipitata		S	F	S	S	S	F	F	F				
Thalictrum	isopyroides	V			V					V				
<u>BERBERIDACEAE</u>														
Gymnospermium	alberti			F	S			F	F					
Leontice	incerta						S							
Leontice	ewersmanii		F	F										
Berberis	iliensis													V
Berberis	integerrima (= oblonga)								V	V				
Berberis	sphaerocarpa											V		
<u>PAPAVERACEAE</u>														
Glaucium	elegans						F				F		F	
Glaucium	squamigerum													F
Hypecoum	parviflorum						F							F
Papaver	pavoninum	F					F						F	
Roemeria	hybrida						F							F
<u>FUMARIACEAE</u>														
Corydalis	glaucescens											F	F	F
Corydalis	ledebouriana		F	F		F		F	F	F	F			
Corydalis	nudicaulis							F	F					
Corydalis	schanginii		F										F	F

Corydalis	schanginii ainii					F								
Corydalis	sewerzowii					F								
<u>BRASSICACEAE</u>														
Achoriphragma	australe					F								
Achoriphragma	beketovii												F	
Achoriphragma	popovii												F	
Achoriphragma	stenocarpum													F
Achoriphragma	subsiliquosum			F										
Alliaria	petiolata					F								
Allisum	turkestanicum	F	F		F	F	F		F	F	F	F	F	F
Arabis	fruticulosa												F	
Barbarea	arcuata					F					F			
Chorispora	sibirica												F	F
Conringia	clavata						F							
Cryptospora	falcata												F	
Megacarpaea	orbiculata					F			F					
Microthlaspi	perfoliatum						F		F					
Strigosella	turkestanica	F	F		F	F	F						F	
Srubendorffia	sp.		V											
<u>CRASSULACEAE</u>														
Hylotelephium	ewersii													V
Macrosepalum	tetramerum				V									
Orostachis	thyrsiflora													V
Pseudosedum	longidentatum	B												
Pseudosedum	karatavicum							V	V					
Rosularia	platiphylla												V	V
Rosularia	turkestanica			V				V	V					
Sedum	alberti	V						V	V	V				
<u>SAXIFRAGACEAE</u>														
Saxifraga	sibirica			V										
Day: 1 2 3 4 5 6 7 8 9 10 11 12														
<u>ROSACEAE</u>														
Amygdalus	communis							B						
Amygdalus	petunnikowii					F			F					
Amygdalus	spinosissima				F									
Armeniaca	vulgaris											F		F
Cerasus (Padellus)	mahaleb				F	F		V	F					

Cerasus	tianschanica		F		F	F			F		F	F	F
Prunus	sogdiana			F	F	F	F	F	F	F	F	F	
Cotoneaster	karatavica					V							
Crataegus	pontica				B	B			B				
Crataegus	songarica				B	B							
Crataegus	turkestanica			B	B	B	B	B	B				
Hulthemia	persica				V	V	V						
Malus	niedzwetzkiiana						F						
Malus	sieversii		B				F		B	B		F	
Potentilla	orientalis	V	V	V	V	V	V				V	V	V
Potentilla	soongarica	F					F						
Pyrus	regelii						F						
Sorbus	persica								V				
Sorbus	tianschanica											V	
Spiraea	hypericifolia	F	F	F	F	F	F	F	F	F	F	F	F
<u>FABACEAE</u>													
Astragalus	abolinii					V							
Astragalus	angustissimus												F
Astragalus	atrovinosus						F				F		
Astragalus	balchaschensis	F											
Astragalus	fractus							F					
Astragalus	kurdaicus		F										
Astragalus	lasiophyllus	F											F
Astragalus	macrotropis										F		
Astragalus	pachyrhizus						F			B	F		
Astragalus	pseudocytisoides		B										
Astragalus	scabrisetum												F
Astragalus	scorniakowii					F				F			
Astragalus	sieversianus			V	F	F			V				
Astragalus	sp.										F		
Caragana	arborescens					F							
Caragana	balkhashensis						F	F				F	F
Caragana	pleiophylla											F	
Halodendron	halimodendron						B					B	B
Hedysarum	ferganense												F
Vicia	subvillosa	F	F	F	F	F	F		F	F	F	F	F
<u>GERANIACEAE</u>													
Erodium	cicutarium	F				F	F	F		F	F		
Erodium	hoeftianum	F											F
Erodium	oxyrhynchum												F
Geranium	rotundifolium		F	F	F	F			F	F			

DAY:		1	2	3	4	5	6	7	8	9	10	11	12
Birds, Animals, Amphibians and Reptiles of Tien Shan, April 2015		Kapchagay	Korday Pass	Merke valley	Mashat canyon	Kuyuk, Karasay, Berkara, Taskol	Kum-Burul, Akkol Lake	Kshi-Kaindy valley	Aksu Canyon	Kuyuk, Ters Lake, Koksay	Kaskelen valley	Kokpek, Alasa, Kegen Pass	Altyn Emel Pass
		Apr 12	Apr 13	Apr 14	Apr 15	Apr 16	Apr 17	Apr 18	Apr 19	Apr 20	Apr 21	Apr 22	Apr 23
Little Grebe	<i>Podiceps ruficollis</i>	1											
Great Crested Grebe	<i>Podiceps cristatus</i>		+	+		10	8			4			
White Pelican	<i>Pelicanus onocrotalus</i>						1						
Dalmatian Pelican	<i>Pelicanus crispus</i>						1						
Great Cormorant	<i>Phalacrocorax carbo</i>	1					6			20			
Pygmy Cormorant	<i>Phalacrocorax pygmaeus</i>		2	35			1			30			
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>			4									
Great Egret	<i>Egretta alba</i>		1				5					2	
Grey Heron	<i>Ardea cinerea</i>		3	5		1	6			4			
Black Stork	<i>Ciconia nigra</i>								6				
Ruddy Shelduck	<i>Tadorna ferruginea</i>		1	2		2	2			2		2	
Mallard	<i>Anas</i>	2	1	6			2			4			

	<i>platyrhynchos</i>												
Gadwall	<i>Anas strepera</i>		2	1			12			+			
Green-winged Teal	<i>Anas crecca</i>			1			5			1			
Eurasian Wigeon	<i>Anas penelope</i>		4				4	2					
Garganey	<i>Anas querquedula</i>		4					4		+			
Northern Shoveller	<i>Anas clypeata</i>		10				2	2		+			
Red-crested Pochard	<i>Netta rufina</i>							2					
Osprey	<i>Pandion haliaetus</i>			1				2		1			
	DAY:	1	2	3	4	5	6	7	8	9	10	11	12
Honey Buzzard	<i>Pernis apivorus</i>	1						1					
Black-eared Kite	<i>Milvus lineatus</i>	50	20	70	2	1			2		1	2	2
Montagu's Harrier	<i>Circus pygargus</i>	1	1					3		2			
Marsh Harrier	<i>Circus aeruginosus</i>	1	1	1		1	3			1			
Northern Goshawk	<i>Accipiter gentilis</i>			1					1				
Northern Sparrowhawk	<i>Accipiter nisus</i>	6		1			1	3	40	2	1	2	
Shikra Sparrowhawk	<i>Accipiter badius</i>							1			2		
Upland Buzzard	<i>Buteo hemilasius</i>								3				
Long-legged Buzzard	<i>Buteo rufinus</i>		4	4	1	1	3		6	2		4	2
Short-toed Eagle	<i>Circaetus gallicus</i>				1				1				
Booted Eagle	<i>Hieraaetus pennatus</i>	1					1						
Steppe Eagle	<i>Aquila rapax</i>			1					4	1			1
Imperial	<i>Aquila</i>				1				1				

Eagle	<i>heliaca</i>												
Golden Eagle	<i>Aquila chrysaetus</i>			3				1	1				
Lammergerier	<i>Gypaetus barbatus</i>			1				2	4				
Egyptian Vulture	<i>Neophron percnopterus</i>				2				1				
Black Vulture	<i>Aegyptius monachus</i>			1				2					1
Himalayan Vulture	<i>Gyps himalayensis</i>			6				2	2				
Northern Hobby	<i>Falco subbuteo</i>								4				
Lesser Kestrel	<i>Falco naumanni</i>	1	8					3				10	4
Common Kestrel	<i>Falco tinnunculus</i>	1	20	10	2	5	15	3	20	4	2	6	6
Himalayan Snowcock	<i>Tetraogallus himalayensis</i>			(1)									
Chuckar Partridge	<i>Alectoris chukar</i>		8	5		3			2	2		2	
Common Pheasant	<i>Phasianus colchicus</i>	2	2	2	2			1			2	4	
Common Crane	<i>Grus grus</i>									3			
Demoiselle Crane	<i>Anthropoides vigro</i>	++ +	30 0	80 0		55	15 00			20 00			
Water Rail	<i>Rallus aquaticus</i>			1									
Moorhen	<i>Gallinula chloropus</i>			3		3							
Coot	<i>Fulica atra</i>	5		30		+	+			+			
Little Bustard	<i>Tetrax tetrax</i>									3			
Little Ringed Plover	<i>C.dubius</i>		10					1					1
Northern Lapwing	<i>Vanellus vanellus</i>		10	1		4	6			+		2	
Black-winged Stilt	<i>Himantopus himantopus</i>			3								6	

Pied Avocet	<i>Recurvirostra avosetta</i>		5										
Green Sandpiper	<i>Tringa ochropus</i>		3	2		1			1	1			
Wood Sandpiper	<i>T. glareola</i>					1							
DAY:		1	2	3	4	5	6	7	8	9	10	11	12
Common Greenshank	<i>T. nebularia</i>									2			
Common Redshank	<i>T. totanus</i>		1			1				2			
Marsh Sandpiper	<i>T. stagnatilis</i>										1		
Common Sandpiper	<i>Actitis hypoleucos</i>			1		1			1	5			
Ruff	<i>Philomachus pugnax</i>						4			2			
Solitary Snipe	<i>Gallinago solitaria</i>				1								
Eurasian Woodcock	<i>Scolopax rusticola</i>			2									
Black-tailed Godwit	<i>Limosa limosa</i>		1										
Great Black-headed Gull	<i>Larus ichthyaetus</i>						4						
Black-headed Gull	<i>Larus ridibundus</i>	10	25	20		2	60			+			
Slender-billed Gull	<i>Larus genei</i>					2	12						
Caspian Gull	<i>L. cachinnans</i>	2	10	20			6	27		+			
Heuglin's Gull	<i>Larus heuglini barabensis</i>			2			3			1			
Gull-billed Tern	<i>Gelochelidon nilotica</i>	2					4			6			
Caspian Tern	<i>Hydroprogne caspia</i>						4						
Common Tern	<i>Sterna hirundo</i>					1	3						
Woodpige	<i>Columba</i>	3	10	10	20	30	10	4	4	2		2	2

on	<i>palumbus</i>												
Rock Dove	<i>Columba livia</i>	+	+	+	+	+	+	+	+	+	+	+	+
Collared Dove	<i>Streptopelia decaocto</i>	1	3		12	+	+	4	4				1
Laughing Dove	<i>Streptopelia senegalensis</i>	1		1	5	+	+	4	4				1
Eurasian Cuckoo	<i>Cuculus canorus</i>								1				1
Long-eared Owl	<i>Asio otus</i>						1				1		
Short-eared Owl	<i>Asio flammeus</i>								1				
Eurasian Scops Owl	<i>Otus scops</i>		1	2	1	3			1				
Eurasian Swift	<i>Apus apus</i>				10	15	2						1
Alpine Swift	<i>Apus melba</i>				10								
European Roller	<i>Coracias garrulus</i>									1	3		
Hoopoe	<i>Upupa epops</i>			1	1	2	2	1	1	1	1	4	2
Wryneck	<i>Jynx torquilla</i>							1					
White-winged Woodpecker	<i>Dendrocopus leucopertus</i>			4		1		4		4			
Sand Martin	<i>Riparia riparia</i>	10	1							+	2		
Crag Martin	<i>Ptyonoprogne rupestris</i>												
Barn Swallow	<i>Hirundo rustica</i>	1		6	10	8	15	1	40	0	+	+	+
Red-rumped Swallow	<i>Hirundo daurica</i>	3		2									
House Martin	<i>Delichon urbica</i>	15			2								
Crested Lark	<i>Galerida cristata</i>						1						
	DAY:	1	2	3	4	5	6	7	8	9	10	11	12
Short-toed Lark	<i>Calandrella cinerea</i>						5					1	

Calandra Lark	<i>Melanocorypha calandra</i>		3			2	20						
Bimaculated Lark	<i>Melanocorypha bimaculata</i>								3				
Shore Lark	<i>Eremophila alpestris</i>								2				
Skylark	<i>Alauda arvensis</i>		1						8	2			
Tawny Pipit	<i>Antus campestris</i>					3	3			2			
Tree Pipit	<i>Antus trivialis</i>		5		3		3		2				
Water Pipit	<i>Antus spinoletta</i>								3				
Yellow-headed Wagtail	<i>Motacilla lutea</i>		2										
Sykes's Wagtail	<i>Motacilla flava beema</i>		4				++			+			
Black-headed Wagtail	<i>M. feldegg</i>				1								
Citrine Wagtail	<i>M. citreola</i>		2						1				
Grey Wagtail	<i>M. cinerea</i>	2		1			2	3	5		2		
White Wagtail	<i>M. alba</i>				1								
Masked Wagtail	<i>Motacilla personata</i>	2	10	+	6	3	+	+	+	2	4	+	8
Brown Shrike	<i>Lanius cristatus</i>								1	1			
Turkestan Shrike	<i>Lanius phoenicuroides</i>	3	3		1								1
Isabelline Shrike	<i>Lanius isabellinus</i>								1	1			
Long-tailed Shrike	<i>Lanius schach</i>			1									
Lesser Gray Shrike	<i>L. minor</i>								1				
European Starling	<i>Sturnus vulgaris</i>				2	2	6	25	7		+	+	

Common Myna	<i>Acridotheres tristis</i>	+	++	++	++	+	+	+	+	+	+	+	+
Magpie	<i>Pica pica</i>	+	+	+	+	+	+	+	+	+	+	+	+
Alpine Chough	<i>P. glauculus</i>								3				
Jackdaw	<i>Corvus monedula</i>	+	+	+	+	+	+	4	4	+		+	+
Rook	<i>C. frugilegus</i>	++	+	+	+	++	++		6	++	+	++	++
Carrion Crow	<i>C. corone</i>	10	5	2	1	40	20			4		+	+
Common Raven	<i>C. corax</i>			2	3	2		8	10				
White-throated Dipper	<i>Cinclus cinclus</i>					1							
Brown Dipper	<i>C. pallasii</i>								1				
Northern Wren	<i>Troglodytes troglodytes</i>					1		1					
Cetti's Warbler	<i>Cettia cetti</i>						2						
Sykes Warbler	<i>Hippolais rama</i>		2										
Whitethroat	<i>Silvia communis</i>						2					1	
Desert Warbler	<i>S. nana</i>												1
Chiffchaff	<i>Phylloscopus collybita</i>	1		1		1	3	10	1				
	DAY:	1	2	3	4	5	6	7	8	9	10	11	12
Greenish Warbler	<i>P. trochiloides</i>					3							
Hume's Warbler	<i>P. inornatus humei</i>					2	1		1				
Sulphurbellied Warbler	<i>P. griceolus</i>												1
Siberian Stonechat	<i>Saxicola torquata</i>			1			1			1	1		
Northern Wheatear	<i>Oenanthe oenanthe</i>				2	6			8				
Pied Wheatear	<i>Oenanthe pleschankaa</i>	8	6		6	10	10		1			2	2

Desert Wheatear	<i>O. deserti</i>												1
Isabelline Wheatear	<i>Oenanthe isabellina</i>				2		3		2	2		+	+
Rock Thrush	<i>Monticola saxatilis</i>									1			
Himalayan Rubythroat	<i>Luscinia pectoralis</i>				1								
Common Redstart	<i>Phoenicurus phoenicurus</i>					1		1	2	1			
Blue-headed Redstart	<i>Phoenicurus caerulecephalus</i>							2					
Black Redstart	<i>Phoenicurus ochruros</i>	1											
Black-throated Thrush	<i>Turdus atrogularis</i>	1	20		3	3	4	17					
Blackbird	<i>Turdus merula</i>	2	2	3	6	4	2	2	4	2			
Mistle Thrush	<i>Turdus viscivorus</i>							1					
Blue Whistling Thrush	<i>Myiophonus caeruleus</i>			2	2			5					
White-crowned Penduline Tit	<i>Remiz coronatus</i>										2		
Yellow-breasted Azure Tit	<i>Parus flavipectus</i>			1		2							
Azure Tit	<i>Parus cyanus</i>												1
Great Tit	<i>Parus major</i>	4	20	+								4	2
Turkestan Tit	<i>Parus bokharensis</i>					4		2	2	2			
Eastern Rock Nuthatch	<i>Sitta tephronota</i>				2				1				
House Sparrow	<i>Passer domesticus</i>	4	4									4	2

Tree Sparrow	<i>Passer montanus</i>		30		30	+	+	+	+	+				1
Chaffinch	<i>Fringilla coelebs</i>	50								4				
Brambling	<i>Fringilla montifringilla</i>					2								
Greenfinch	<i>Chloris chloris</i>												1	
Grey-headed Goldfinch	<i>Carduelis caniceps</i>	2								1				6
Desert Finch	<i>Rhodospiza obsolata</i>						1							
Corn Bunting	<i>Emberiza calandra</i>		3											
White-capped Bunting	<i>E. stewarti</i>				1				1					
Rock Bunting	<i>Emberiza cia</i>								4					2
Yellowhammer	<i>Emberiza citrinella</i>						1							
Grey-necked Bunting	<i>E. buchmanani</i>		1											
DAY:		1	2	3	4	5	6	7	8	9	10	11	12	
Long-eared Hedgehog	<i>Erinaceus auritus</i>												de ad	
Pipistrelle	<i>Pipistrellus pipistrellus</i>	1										3		
Large-toothed Suslik	<i>Spermophilus fulvus</i>		2	1					10					
Severtzov's Jerboa	<i>Allactaga severtzovi</i>									hol e				
Small Five-toed Jerboa	<i>Allactaga elater</i>												1	
Muskrat	<i>Ondatra zibethicus</i>			5										
Great Gerbil	<i>Rhombomys opimus</i>												1	4

Wood Mouse	<i>Apodemus sylvaticus</i>			1									
Wild Boar	<i>Sus scrofa</i>							1					
Ibex	<i>Capra sibirica</i>							73					
Central Asian Toad	<i>Bufo pewzovii</i>							1				2	
Marsh Frog	<i>Rana ridibunda</i>		(+)	(+)			1				(+)		
Central Asian Tortoise	<i>Agrionem is horsfieldi</i>	2											
Glass Lizard	<i>Pseudopus apodus</i>				2	1							
Stepperunner	<i>Eremias arguta</i>									8			
Rapid Racerunner	<i>Eremias velox</i>	1						1					
Desert Lidless Skink	<i>Ablepharus deserti</i>									1			
Alpain Lidless Skink	<i>Asymblepharus alaicus</i>										1		
Dione Snake	<i>Elaphe dione</i>									1			
Dice Snake	<i>Natrix tessellata</i>											1	
Renard's Viper	<i>Vipera renardii</i>		2							3			

TIEN-SHAN BUTTERFLIES, APRIL 2015		Kapchagay	Korday Pass	Merke valley	Mashat Canyon	Kuyuk, Karasai, Berkara, Taskol	Kumburul Dune, Akkol Lake	Kshi-Kaindy valley	Aksu Canyon	Kuyuk, Ters Lake, Koksay Canyon	Kaskelen	Kokpek, Alasa and Kegen Pass	Altyn Emel Pass
		DAY: 1	2	3	4	5	6	7	8	9	10	11	12
SPECIES	DATES	Ap	Ap	Ap	Ap	Ap	Ap	Ap	Ap	Ap	Ap	Ap	Ap
		r 12	r 13	r 14	r 15	r 16	r 17	r 18	r 19	r 20	r 21	r 22	r 23
Papilionidae													
Swallowtail	<i>Papilio machaon</i>						+		+				
Pieridae													
Orange-Tip	<i>Anthrocharis cardamines</i>		+	+		+	+	+	+	+	+		
Brimstone	<i>Gonepteryx rhami</i>			+		+	+		+		+	+	
Bath White	<i>Pontia daplidice</i>	+	+	+		+	+				+	+	+
Large White	<i>Pieris brassicae</i>	+	+	+		+	+		+	+	+	+	+
Small White	<i>Pieris rapae</i>	+	+	+			+		+				
Eastern Pale Clouded Yellow	<i>Colias erate</i>	+	+	+	+	+	+		+		+	+	+
Lycaenidae													
Caucasian Vernal Copper	<i>Tomares callimachus</i>								+				
Holly Blue	<i>Celastrina argiolus</i>			+		+			+		+		
Mazarine Blue	<i>Cyaniris semiargus</i>				+						+		
Green Hairstreak	<i>Callophrys sp.</i>										+		
Nymphalidae													
Queen of Spain Fritillary	<i>Issoria lathonia</i>		+	+		+					+	+	+
Yellow-legged	<i>Nymphalis</i>		+	+		+	+				+		+

Tortoiseshell	<i>xanthomelas</i>												
Small Tortoiseshell	<i>Aglais urticae</i>	+	+	+			+	+			+		+
Peacock	<i>Inachis io</i>		+	+				+				+	
Painted Lady	<i>Cynthia cardui</i>	+											
Libytheidae													
Nettle-Tree Butterfly	<i>Libythea celtis</i>						+				+		
Satyridae													
Dalmatian Ringlet	<i>Erebia sp.</i>	+											
Hesperiidae													
Mallow Skipper	<i>Carcharodus alceae</i>						+				+		