# Tulip Meadows of Kazakhstan & the Tien Shan Mountains

Naturetrek Tour Report

14 - 29 April 2018





Hulthemia persica (national flower of Kaz)

Tulipa greigii





Allium karataviense

Iris orchioides

Report and images by Neil Anderson



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Tour participants: Neil Anderson (leader) and Vladimir Epiketov (local botanist)

Amina Farakhov (interpreter) with nine Naturetrek clients.

## Day 1

# Saturday 14th April

Six group members met up with Neil at Gatwick airport for a mid-morning flight to Istanbul, where we had a five-hour wait before our connecting flight to Almaty.

# Day 2

# **Sunday 15th April**

## Lake Kapchagai

After our night flight to Almaty, we transferred to the Kazzhol Hotel around 8am and headed into the dining area for a sumptuous breakfast. Here we met the other three group members, Steve, Rami and Katie, who had arrived the previous day.

After getting changed we headed off to Lake Kapchagai, some 60+ kilometres north of Almaty, and the largest reservoir in the country. As we were driving in we could see our first tulips. These were the yellow *Tulipa kolpakowskiana*, a species we saw quite frequently over the next couple of days. We soon encountered another yellow flowered species *Tulipa behmiana*, which we found only here. Also providing some colour was the attractive blue *Iris tenuifolia*, a plant of the sands. The small creamy flowers of the small *Tulipa busheana*, were now well past their best.

One of the largest genera in Kazakhstan is the leguminous *Astragalus*, and it was one we would see plenty of over the coming fortnight. Today we saw at least four species here including the pinkish *A. lasiophyllus* and the yellow *A. farctus*.

There was also plenty of faunal interest here too with a couple of Horsfield's Tortoises found, several Rammula stick insects and some good birds including a male Montagu's Harrier hunting close to us, a flock of 100 Demoiselle Cranes flying over on migration, and six Collared Pratincoles circling above us.

After a splendid picnic lunch nearby, we sought more tulips. Key was the squat and robust yellow form of *Tulipa alberti* with orange stripes on the back of the tepals. Vladimir also pointed out a couple of *Tulipa brachystemon* specimens. We then returned to our hotel for dinner and a much-needed early night.

# Day 3

# **Monday 16th April**

#### Travel Almaty to Merke

Leaving our comfortable hotel, we set off for a couple of days based at Merke. Though it was raining as we set off, by the time we reached our first botanising spot it had just about stopped. Immediately catching our eye was the striking *Berberis* relative, *Leontice eversmanni*, with its large divided glaucous foliage and bright yellow flowers.

At a second stop in the Kordoi Pass we found a couple of flowering *Iris* species. The first had been known as *I. tianschanica* but Vladimir said it was now thought to be an undescribed species. The second species was a Juno

type which Liz found and Neil recognised as *I. kuschakewiczii*. This was the only one we saw and had pale flowers with dark blotches on the falls.

By 7pm we reached the sanatorium at Merke where we registered and headed for our very comfortable rooms with great views.

## Day 4

# **Tuesday 17th April**

#### Merke

Following breakfast, we drove a mile or so from our hotel along the small river to look at the plants. Again we saw a few *Tulipa kolpakowskiana* and then looked at some of the ferns growing on the damp rock, which included Rustyback, Forked Spleenwort and Brittle Bladder Fern. Edwina spotted some attractive pink flowers which belonged on the woody *Astragalus fedtcshenkoanus*. Another fine pink flower was on the crucifer *Parrya subsiliquosa*, spotted by Eva.

By now the sun was getting pretty warm and butterflies were taking to the wing. Most numerous were Yellow-legged Tortoiseshells and Orange Tips. Looking up, a pair of Golden Eagles put on a good display. Soon afterwards we found some good numbers of our main quest at Merke; the exquisite *Tulipa zenaidae* with yellow and red tepals. Merke is the main location in the country for this species but is more widespread across the border.

Following lunch at our base, Neil pointed out a Blue Whistling Thrush pair from the bridge. We then went around the back of our base to where Neil had seen some red tulips from his room. After crossing the fence, they turned out to be our first *Tulipa greigii*, a species we were to see a lot of! The streaked leaves on this species are quite distinctive and it is a character in many modern garden hybrids. Rami spotted the first of many of the small but beautiful yellow Juno, *Iris orchioides*.

As we drove around, Neil had a wonderful reunion with Anna Ivaschenko, a legendary Kazakhstan botanist and a foremost authority on the country's tulips, with whom he had the pleasure of working with on five tours over a decade ago. She was here with a colleague to film tulips. We went on to find a good sward of red *Tulipa kolpakwoskiana*.

# Day 5

# Wednesday 18th April

Merke; Muyumqum Sands; Taraz; Zhabagly

Departing Merke, we set off on the long journey to our base at a guest house at Zhabagly for the next eight nights.

Our first stop at the sands wasn't especially productive for plants as we didn't find *Tulipa binutans*, and Rami spotted the spiny remains of a Long-eared Hedgehog which had been predated. We did though, have good views of a Long-legged Buzzard that appeared to be holding a Jackdaw in its talons, and Katie found a Lesser Whitethroat in some scrub. We also saw some rosettes of *Eremurus anisopterus*. Our next stop in the Kuyuk Pass introduced us to the creamy flowers of *Astragalus lipschitzii*.

Taraz was our stop for lunch in a nightclub-like restaurant with a curious mix of cliental. After a filling lunch we resumed our journey, reaching the guest house before dark.

## Day 6

# **Thursday 19th April**

Kuyuk Pass; Berkera Valley

Today we set off for the Berkera Valley. En route we had a stop in the Kuyuk Pass. As we drove we spotted several red *Tulipa greigii* and investigated the area. We saw the distinctive leaves of the thistle *Cousinia karatavica* which are basally undivided, but divided in the distal half. A pretty flower we were to see several times was the petite *Valeriana chionophila* with pinkish white flowers.

Across the valley was a dramatic scene with rugged snow-capped mountains and, in the valley, over a thousand Demoiselle Cranes feeding up on their migration from India. Above them were a similar number spiralling down, and many more flocks headed towards them. In total there were probably more than 4,000 cranes. Even the non-birders in the group appreciated this avian spectacle!

A couple of the group climbed up some steps overlooking a telecommunications enclosure and found a dense carpet of the same tulips we had been seeing outside the enclosure. Steve found a guard and he kindly allowed the group in to photograph this superb display of red tulips with a few yellowish variants. Tulip heaven!

We had our picnic at the Berkera Valley and soon after, Neil spotted a pair of Black-throated Thrushes landing in the poplars. Our main target here was the large hybrid swarm of *Tulipa greigii* x *T. kaufmanniana*. This year the season was much more advanced than Neil had previously experienced and for the first time, we didn't find many tulips still in flower. Many other flowers to be expected were now in fruit, but as the season was probably three weeks ahead of normal, it meant we saw different plants more advanced. The giant fennels, *Ferula tenuisecta* and *Prangos pabularia* were now getting tall, with some of the former starting to flower and the latter looking feathery.

Our two American friends, Steve and Rami, had particularly expressed a desire to see the native wild apple *Malus sieversii*, the ancestor of many cultivated eating apples. The advanced season facilitated seeing this tree in full blossom so a real treat for them. We also saw the small endemic pear tree *Pyrus regelii*, coming into leaf and bud. Architectural foliage was seen of a variety of herbaceous species including *Cousinia alberti, Inula macrophylla* and *Phlomis regelii*.

The warm conditions resulted in many butterflies being seen, with the highlights being Green-underside Blue and Marbled Skipper. Dragonflies were also encountered, all of which were Four-spotted Chasers. Adding to faunal interest were some obliging Marsh Frogs.

# Day 7 Friday 20th April

Kummtiyn Sands; Akkol Lake

The day started on a high when Katie saw two woodpeckers in the guest house garden. White-winged Woodpecker is the species found here, so it was a new bird for birders in the group.

Once on the road, at a brief stop we found the delightful red poppy Roemeria refracta. Arriving at Kummtiyn Sands, we could see that most of the target species of tulip, Tulipa lehmanniana, were well past their best, but fortunately we were able to photograph a small number still looking presentable. We saw again the pretty blue Ixiolirion tataricum and an attractive sedge Carex physoides. Also in flower was the Salsify relative, Tragopogon ruber. Good numbers of butterflies were seen including a Painted Lady and numerous fast flying Eastern Pale Clouded Yellows.

Continuing our long drive to Akkol Lake, we were to find our desired tulips, the red form of *Tulipa alberti* and *T.bifloriformis*, were already in fruit. One of the highlights was the distinctive leaves of *Rheum tataricum*, which both Hilary and Philip both found independently.

## Day 8

# Saturday 21st April

#### Mashat Canyon

Today was a shorter drive to the warm south-facing Mashat Canyon, which is always popular with groups. Soon after setting off we found a pair of Daurian Shrikes and, higher up, a pair of Pied Wheatears.

Once there it was good to find the attractive but unusual looking labiate *Phlomoides speciosa*, in flower. There was also a delightful patch of red *Adonis microcarpa*. Other plants seen in flower included the borage *Rindera echinata*, the red pea *Lathyrus cicera* and the petite reddish-brown *Allium inconspicuum*.

Following lunch we explored some of the canyon farther down the road. Katie walked about on her own, not being a hardcore botanist, and had an encounter with Haly's Pit-viper, which was identified from a photograph. Fortunately, it warned her of its presence! The rest of us got a thrill from the floral delights. Stars included the yellow Rosa kokanica, a couple of blooms of the national flower (a type of rose) Hulthemia persica, and a mass of large creamy spikes of Eremurus lactiflorus. The latter was one of the most spectacular flowers on the tour. Also stunning were the large drifts of Allium karataviense in full flower amongst the landslip of slate.

This was also a good spot for raptors with excellent views of Egyptian Vulture carrying its dinner, and Booted Eagle and Long-legged Buzzard sparring, as well as ten Alpine Swifts, a Black Stork and a pair of Ravens.

On the way back, by request, we stopped at a market where group members were able to encounter local culture and buy some fruit and wine.

## Day 9

# **Sunday 22nd April**

## Kyzylkol Lake

Today involved a long drive to visit a known site for *Tulipa borszczowii*. This gave us the chance to view the Kazakhstan countryside in detail and pass through several communities.

Before we reached the lake we spotted a glorious display of *Tulipa greigii*, which was too good to resist. As well as the stunning tulips, there were many other botanical delights waiting to be discovered. At the roadside we found

the large leaves and creamy flowers of the kale *Crambe kotschyana*, small yellow *Anemone petiolulosa* and yet more species of *Astragalus*. As we returned to the bus, a bright Lesser Fiery Copper butterfly was spotted.

Upon reaching the lake, we managed to locate two *Tulipa borszczonii* in good condition, and found a number fruiting. A new *Astragalus* species for us was a compact rosette with pale yellow flowers *A. dianthus*. More bizarre than beautiful was the ancient chenopd *Anabasis truncata*, which can live for decades, and in the same family the spiky *Nanophyton erinaceum*.

Some of the group walked down to the lake and admired the flowering tamarisk. On the water was a flock of ten Slender-billed Gulls and three Black-necked Grebes, while three Citrine Wagtails fed on the shoreline and some Gull-billed Terns flew over. On our return to the bus we found several of the colourful parasitic *Cistanche salsa*, which is related to the broomrapes.

## **Day 10**

# **Monday 23rd April**

Lake Ters; Koksai Gorge

Everyone was relieved that today was going to be a much shorter journey than yesterday! Our first brief stop was at Lake Ters to have a look at the birds. Waders included breeding plumaged Black-tailed Godwits and, further away, Black-winged Stilts.

As we drove along the track to Koksai Gorge we put up a female Little Bustard, which we stopped to see. Calandra Larks were singing everywhere, Rollers were on the wires and we saw another Golden Eagle.

A botanical highlight was our first sighting of the variable but elegant *Tulipa kaufmanniana*, in a dip. More subtle was the diminutive lousewort *Pedicularis karatavica* with white flowers with raspberry blotches. As ever, there were some fine flowering legumes including the pink *Oxytropis pilosissima* and *Astragalus atrovinosa*, whose yellow flowers turn wine red after pollination.

Following lunch, several of the group descended into the canyon and walked along the rapidly flowing small river. The grasslands here held large numbers of Dalmatian Ringlets. As we drove back our driver, Elmer, spotted a snake. Getting out, we had close views of a Steppe Viper. Returning to the guest house, people enjoyed the market at Burnoye.

# **Day 11**

# Tuesday 24th April

#### Aksu Canyon

This was our first day botanising in the Aksu Zhabagly Nature Reserve, where it is required to have a permit and be accompanied by a park ranger.

At our first stop we saw the shrubby *Lonicera tianschanica* in flower. Closer to the ground were delights such as *Potentilla soongarica*, *Ranunculus alberti* and *Hedysarum sewersowii*. Philip spotted a male Blue Rock Thrush posing on a rock with a Northern Wheatear.

Reaching the canyon, a huge Cinereous (Black) Vulture flew over and, a bit later, also a couple of Griffon Vultures. Along the winding descent we had many floral delights including a superb display of *Eremurus lactiflorus* mixed with some *Tulipa greigii*. We saw several attractive borages including the widespread *Solenanthus circinnatus*, *Korolkowia sewersowii* and *Rindera echinata*.

Most reached the bottom of the canyon to witness the fast flowing Aksu River. The cool conditions made the ascent easier than it can be on a hot, sunny day!

# **Day 12**

# Wednesday 25th April

#### Kishi-Kaindy

On our second day in the park we encountered almost every kind of weather: sunshine, cloud, mist and fog, and some hefty hail and rain showers. Typical mountain weather!

As soon as we got out of our bus, Neil spotted a Lammergeier (Bearded Vulture) flying low over us - an impressive bird!

We were more fortunate today with a good number of *Tulipa kaufmanniana* and our first flowering *Tulipa turkestanica*. Impressive tree junipers *J. semiglobosa* and *J. seravschanica* punctuated the slopes. Other flowers enjoyed were the delicate *Corydalis ruksansii*, *Anemone gortschakowii* and the ubiquitous *Geranium transversale*.

This was a brilliant day for mammals with Roe Deer, four Wild Boars and at least 25 Siberian Ibex grazing on the upper slopes seen by members of the group. In addition we also saw fresh scats of the Isabelline race of Brown Bear, and Grey Wolf.

Lunch was taken at the Halfway House where we took shelter from the showers. The ranger lit the fire and made some tea. Ben and Hilary had decided to shelter lower down the mountain and we found them nestled down at the base of a large juniper on our way back down.

Despite the capricious conditions, all had a great day and we returned to our base to dry out our clothes.

# **Day 13**

# **Thursday 26th April**

#### Redhill; Kuyuk Pass

Vladimir made a road stop by the edge of some woodland, where we found the leaves of the aroid *Eminium korolkowii*, and we saw a striking spathe and spadix of the related *Arum regelii*. We then had a stop by a level crossing where several of the group wanted to take photographs.

Redhill is a popular attraction where we encountered a family and a school party; the latter used a couple of the ladies for a group photograph! The tulips were slightly past their best but still a fine display. We also saw a fine display of pink *Tragopogon marginifolius*, and the group were now getting familiar with some of the more widespread plants.

We headed back to the Kuyuk Pass for our picnic. New plants encountered were the truly minute *Sedum* tetramerum, a delicate *Astragalus nematodes* and a pink labiate *Pseuderemostachys sewersowii*. Just before departing we photographed a stunning yellow poppy *Glaucium fimbrilligerum*, related to our coastal Yellow Horned Poppy.

It was then time to return to pack and have an early dinner, in readiness for our overnight train journey.

# Day 14

# Friday 27th April

## Kaskalen Valley

We were pleasantly surprised by the comfort of the sleeper train. The morning gave us a chance to look at the steppes, and at least 80 Rollers were seen on wires. We arrived in Almaty just after 9am and headed back to the Kazzhol, Hotel for breakfast.

Soon after, we set off for the Kaskelen Valley in the Ili-Alatau National Park. As soon as we stopped we could see the violet flowers of *Iris alberti*, not dissimilar to the familiar garden irises. Equally photogenic were our first *Tulipa ostrowskiana*, a beautiful orange tulip, and we found some good colonies of them. We also came across a couple of *Euphorbia* species. *E. lamprocarpa* had lime green flowers, and then we encountered the Red Data book *E. yaroslavii*.

We then descended through the jungle of *Spiraea hypericifolia* and headed back to the bus, to move on to an appropriate picnic stop by the Kaskalen River. As we were packing up our picnic, Neil spotted a Wallcreeper flying over us, which Philip and Edwina managed to see. The other keen birders were already back on the vehicle.

After lunch we headed to see Vladimir's garden and nursery at Kyrgauldy, 1500 metres above the city. It was a wonderful location and everybody loved the collection and his passion for his beloved plants.

# **Day 15**

# Saturday 28th April

## Bear Valley; Almaty

On our final full day in Kazakhstan, Ben and Hilary decided to spend the day looking at the cultural riches of Almaty, while the rest of the group headed back into the mountains around the city.

It was a glorious morning with warm sunshine and freshness in the air. Appropriately for Bear Valley, we got out by the statues of a family of three bears. We were delighted to find good numbers of petite yellow *Tulipa dasystemon* in the short grass. Last year we missed this species due to snow cover. Many photographs were taken of these beauties. For the first time on this trip, we found a colony of flowering *Crocus alatavicus*; elsewhere it had long gone over. We also scored well with *Primulas*, with good numbers of carmine flowers and attractive scalloped leaves on *P. kaufmanniana* and a couple of tiny pink flowered *P. algida*. Eva was delighted to see the serried rows of the local spruce *Picea schrenkiana*, which she had been interested in seeing and noted the natural variation within the species.

After our final excellent picnic, we headed back to Almaty and said farewell to Vladimir. Our interpreter, Amina, took some of us to the Green Market and then on to the Zenkov Cathedral in Panfilov Park. Philip, Edwina and Eva loved the heavenly choir inside.

The group wished to eat out for our final meal at a nearby local restaurant, and we had an interesting time ordering our excellent meal. After the meal we said goodbye to Steve and Rami, as they had an earlier flight than the rest of us in the morning.

#### **Day 16**

# Sunday 29th April

#### Fly Almaty to Gatwick via Istanbul

We had an early start as we were being picked up by our driver and Amina at 4am. Arriving at the airport, we said our farewell to Amina, who had added so much fun to the trip and worked so hard in translating for us. We sailed through customs and relaxed before our flight.

At Istanbul airport we went through some more rigorous security during a five-hour wait for our next flight. The plane departed an hour late, so we arrived back at a cool, grey Gatwick at 5pm and exchanged farewells and good wishes.

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Eremurus lactiflorus

# **Species Lists**

## Plants

## **Key to Site Name Codes:**

Code	Site Name
AC	Aksu Gorge
AL	Akkol Lake
AM	Almaty mountains
BV	Berkera Valley
KG	Koksai Gorge
KK	Kshi-Kaindy
KL	Kyzolkol Lake
KM	Karatau Mountains
KP	Kordoi Pass
KU	Kuyuk Pass
LK	Lake Kapchagai
LT	Lake Ters
Ma	Mashat
Me	Merke
MS	Moyumqum Sands

Scientific Name	Common Name	Location
Alliaceae		
Allium caeruleum		KP
A.decipiens		LK
A.drobovii		Ma, KK
A. eriocoleum		AC, KK
A. inconspicuum		BV, MA
A. karataviense		Me, KU. Ma, AC
A. kuyukense		KU
A. inderiense		KL
A. pallasii		AM
A. pratensum		KL
A. sewersowii		KP, KK
A. trachyscordum		KU
A. turkestanicum		Al, KL
Amaryllidaceae		
Ungernia sewersowii		KK, KG, AC
Araceae		
Arum korolkowii		Ma, Me, AC
Eminium korolkowii		Stop
Asphodelaceae		
Eremurus anisopterus		K, MS
E. cristatus		KP, ME, KG
E. fuscus		AM
E. inderiensis		LK, KL
E. lactiflorus		KU, Ma, AC

Scientific Name	Common Name	Location
E. regelii		Me, Ma, KG, KK
E. robustus		AM
E. tianshanicus		KV
Convallariaceae		
Polygonatum sewersowii		KK, AC
Iridaceae		
Crocus alatavicus		AM
Iridodyctium kolpokowskianum		AC
Iris albertii		AM
I. kuschakewiczii		KP
I.orchiodes		Me, KU, KG, KK
I. sogdiana		KK, KU
I. songorica		KG
I. subdecolorata		KL
I. tenuifolia		LK, KL
I. tianschanicus		KG
I. willmottiana		KU, AC
Ixioliriaceae		
Ixiolirion tataricum		LK, BV, Ma, AI, AM
Liliaceae		
Korolkowia sewersowii		BV, AC, KK
Rhinopetalum karelinii		LK, AL
R. stenantherum		KU, MA, KG, AC
Gagea bulbifera		KLK, KU
G. chomotovae		MS
G. filiformis		KP, AC
G. liotardii		AM
G. minutiflora		KK
G' ova		KU, KP
Tulipa alberti		LK, AL
T. behmiana		LK
T. Bifloriformis		Me, KK
T. borszczowii		KL
T. brachystemon		LK
T. busheana		LK, KP
T. dasystemon		AM .
T. greigii		common in west
T. kaufmanniana		KK, KG, AC
T. kolpakowskiana		LK, KP, Me
T. lehmanniana		K
T. lemmersii		Ma
T. orthopoda		BV, KU
T' ostrowskiana		AM
T. turkestanica		Ma, KK
T. zenaidae		Me

Scientific Name	Common Name	Location
Poaceae Festuca ovina Hordeum bulbosum Phragmites australis		KP Ma, AC, KK lakes
Dicots		
Aceraceae Acer negundo A. semenovii  Anarcadiaceae Pistacio vera	Box Elder	Ma, Me Me, AC Ma
Apiaceae Aegopodium tadshikorum Angelica decurrens Conium maculatum Ferula karatavica F. foetida F. leucographa F.ovina F. penninervis F. samarkandica F. tenuisecta Prangos pabularia P. uloptera Scandix pectin-veneris S. stellata Screnkiana golickeana		BV, AC, KK, AM AM KU KL, AC KL stop Ma LK KG, AC, KK AC widespread KU, BV, AC Ma, KK Ma KU, AC Common
Asteraceae Achillea biebersteinia Achillea filipendulina A. millefolium Artemisia absinthium A. dracunculus A. rutifolia Centaurea squarrosa Cichorium intybus Cousinia affinis Cousinia alberti C. karatavica C.microcarpa C. umbrosa Echinops talassicus E. tschanganicus Handelia trichophylla Inula macrophylla Ligularia heterophylla L. naryniensis Onopordum acanthium	Wormwood Tarragon	KU widespread Common Me, Ma, KK, KV widespread Me, AC Widespread Common LK Ma, BV KP, BV, Ma, KL KL, AL Me, KK AC, KK KG, AC KP, KG widespread AM KG, AC, KK widespread

Scientific Name	Common Name	Location
Scorzonera circumflexa S. inconspicuum Tanacetum turlanicum T. officinale agg. Tragopogon marginifolius T. ruber T. krasheninnikovii Tussilago farfara Xanthium strumarium	Dandelion  Coltsfoot Cocklebur	AL KU AC Common widespread LK, K, KL Ma, BV KK Lk, K, KL
Berberidaceae Berberis oblonga B. sphaerocarpa Gymnospermum alberti Leontice eversmanii L. inserta		AC, KK Me, AM Me, AC, KK, AM KP, Me KL
Betulaceae Betula pendula B. tianschanica Betula turkestanica	Silver Birch	AIM AM Me, KK
Boraginaceae Asperugo procumbens Echium italicum Lappula microcarpa L. spinocarpos Lithospermum arvense L. tenuiflorum Myosotis asiatica Myosotis micrantha Nonea caspica Onosma dicroanthum Rindera echinata R. oblongifolia R. tetraspis Solenanthus circinnatus Trichodesma incana Trachelanthus korolkowii		KU Ma LK KG KP, Ac, KK KP, MS, Ma, AC KK AC LK, MS KP, Ma Ma, AC BV, KG KP, Me, AM widespread Ma AC
Brassicaceae Alliara petiolata Alyssum turkestanicum A. dasycarpum Barbaraea vulgaris Cammelina microcarpa	Garlic Mustard	BV LK, BV AL Ma Me, Ma, KK, AC
Capsella bursa-pastoris Conringia clavata Crambe kotschyana C. orientalis Descourania sophia Erysimum schezniarii	Shepherd's Purse Flixweed	common AL KL, AM roadsides KP, AL, KI KL, AM

Scientific Name	Common Name	Location
Lepidium draba	Hoary Cress	Ma, Me
Malcolmia africana		KP, KI
Megacarpea orbiculata		Me, Ac, KK
Menioicus linifolius		LK
Parrya subsiliqosa		Me
P. vedenskiana		AC
Steptoramphus crassicaulis		AL
Strigosella turkestanica		AL
Thlaspi perfoliatum		AC, Me
Campanulaceae		
Sergia sewersowii		Ma, AC
Caprifoliaceae		
Abelia corymbosa		Me
Lonicera microphylla		Me
L. nummularifolia		BV, AC
L. tianschanica		KK, AC
Caryophyllaceae		
Acanthophyllum pungens		AL
Cerastium inflatum		Ma, KU
Holosteum glutinosum		LK, K, AC
Queria hispanica	0 01:1	Ma
Stellaria media	Common Chickweed	ruderal
Celastraceae		
E. semonovii		Me, AIM
Chenopodiaceae		
Anabasis truncata		AL, KL
Ceratoides papposa		LK
Nanophyton erinaceum		KL
Rhaphidophyton regelii		Ма
Convolvulaceae		
Convolvulus arvensis	Field Bindweed	Ma
C. lineatus		AC
Crassulaceae		
Pseudosedum longidentatum		BV, Ma, KK
Rhodiola semonovii		AM
Rosularia glabra		KP, KG, AC, KK
Sedum alberti		KP, KG, AC, KK
S. hybridum		AIM
S. tetramerum		KU
Dipsacaceae		
Dipsacus azureum		KP, KG, KK

Scientific Name	Common Name	Location
Eleagnaceae		
Hippophae rhamnoides	Sea Buckthorn	
Euphorbiaceae		
Euphorbia helioscopa	Sun Spurge	Ма
E. lamprocarpum		AM
E. rapulum		LK, KP
E. yaroslawii		AM
Fabaceae		
Astragalus anisomerus		KK
A. atrovinosus		KU, KG
A. balchaschensis		LK
A. chlorodonta		AM
A. dianthus		KL
A. fedtschenkoanus		Me, KP
A. farctus		MS, K
A. lipschitzii		KU
A. macrotropis		common
A. megalomerus		Ma, KU
A. nematodes		KU
A. mucrurus		KP, MS, Ma
A. neolypskianus		Ma, KG
A. pachyrhizus		Ku, AC
A. scabrisetus		LK
A. sewersowii		KG
A. sieversianus		common
A. skorniakovii		KL
A. turczaninowii		LK
A. xipholobus		KU
Calophaca tianschanica		Ма
Caragana camilli-schneiderii		AM
C. balchashensis		Ka, AL
Goebelia pachycarpa		MS
Halimodendron halodendron		KP, KU
Hedysarum sewersowii		AC
H. songoricum		
Lathyrus cicera		Ма
Medicago minima		Ма
Onobrychis chorassanica		Me, KG
Onobrychis grandis		Ma, AC
Oxytropis ochroleuca		AM
O. ornata		Ма
O. pilosissima		KG
Vicia subvillosa		LK, AL
V. sativa		
Fumariaceae		
Corydalis glaucescens		AM
C. ledebouriana		KP, AC, KK
C. ruksansii		Me, KK

Scientific Name	Common Name	Location
<b>Gentianaceae</b> Gentiana olivieri		Ma, AC, AM
Geraniaceae		
Biebersteinia multifida		KP, Ma, AL, AC
Erodium cicutarium	Common Storksbill	KP, Ma
E. hoefftianum		LK, MS, K
Geranium pratense		AM
G. rotundifolium	Round-leaved Cranesbill	BV, Ma, AC
G. transversale		common
Hypericaceae		
Hypericum elongatum		KK, KG
H. perforatum	Perforate St. John's-wort	Me
H. scabrum		Ma, KU, KK, AC
Lamiaceae		
Betonica betoniciflora		KK
Lagochilus platycalyx		Ma, KK, AM
Lamium album		AM
L. amplexicaule		common
Leonurus turkestanica		KP
Mentha asiaticus		Ма
Origanum tyttanthum		Me, Ma, AC, KK
Phlomis regelii		BV, Ma
Phlomoides brachystegia		AC
P. speciosa		common
Pseuderemostachys sewersowii		KU
Salvia aethiopis		roadside
S. deserta		Ma, Ac, KK
S. sclarea		Ma, Ac
Scutellaria immaculata		Ma, AC
S. transiliensis		AM
Ziziphora bungeana		widespread
Malvaceae		
Alcea nudiflora		common
Oleaceae		
Fraxinus potamophila		BV
Orobranchaceae		
Cistanche salsa		KL
Papaveraceae		
Glaucium sqamigerum		KU
G. fimbrilligerum		KU
Hypecoum parviflorum		sandy areas
Papaver pavoninum		Redhill
Roemeria refracta		Ma, stop

Scientific Name	Common Name	Location
<b>Peganaceae</b> Peganum harmala		K
r eganum namaia		K
Plantaginaceae	D.".	1.1
Plantago lanceolata	Ribwort	roadsides
Plumbaginaceae		
Acantholimon aulieaatense		KG
Limonium otolepis		
Polygonaceae		
Atraphaxis pyrifolia		LK, MA, AC, AM
Calligonum macrocarpa Rheum cordatum		MS BV
R. maximowiczii		Me, KL, AC, KK
R. tataricum		AL
R. wittrockii		AM
Rumex crispus		Almaty
R. tianschanicus		Me, AM
Primulaceae		
Androsace maxima		LK
Primula algida		AM
P. kaufmanniana		AM
Ranunculaceae		
Aconitum leucostomum		AM
Adonis parviflora		MA, KU, Redhill
Anemone petiolulosa		widespread
A. gortschakovii		KP, Me, AC
Aquilegia atrovinosa Ceratocephalus orthocera		AM
Clematis orientalis		widespread Ma
Delphinium confusum		KK
Eranthis longistipitata		common
Ranunculus arvensis	Corn Buttercup	Redhill
R. regelianus		common
R. scleratus	Celery-leaved Buttercup	Ма
Thalictrum isopyroides		common
T. simplex		KK
Rosaceae		
Alchemilla sp		AM
Amygdalus petunnikovii		Ma, AC
A. spinosissimus		Ma
Armeniaca vulgaris Crataegus korolkovii		common BV KK
Crataegus korolkovii Crataegus pontica		BV, KK Ma
C. turkestanica		Me
Geum urbanum	Wood Avens	BV
Hulthemia persica		common
Malus sieversii		BV, AC, KK

Scientific Name	Common Name	Location
Padus mahaleb Potentilla soongaricaa P.fedtschenkoana P. orientalis Poterium polyganum Prunus tianschanicus Pyrus regelii Rosa alberti	Salad Burnet	Ma, AC common AC widespread common LK, Me, AC, KK BV AM
R. fedtschenkoana R. kokanica R. platyacantha Rubus idaeus Spiraea hypericifolia	Raspberry	KG, KK Ma,AC, KK AM BV common
S. pilosa		AC
Rubiaceae Asperula setosa Galium aparine G. verum	Goosegrass Lady's Bedstraw	Ma Common Ma
Rutaceae Haplophyllum latifolium H. perforatum		Ma, AC K, Ma, KG
Salicaceae		
Populus nigra P. talassica P. tremula	Black Poplar Aspen	Me AC AM
Saxifragaceae Saxifraga sibirica		Me
-		
Scrophulariaceae Bungea vesiculifera Dodartia orientalis Linaria transiliensis Pedicularis alberti Pedicularis karatavica P. olgae P. pubiflora Verbascum songoricum		BV, Ma MA LK, MS, AM Me, AM KG KK, AC KG common
Tamaricaceae		
Tamarix laxa		KL
Ulmaceae Celtis caucasica Ulmus pumila	Siberian Elm	Me, Ma common
Urticaceae Urtica diocia	Stinging Nettle	common

Scientific Name	Common Name	Location
Valerianaceae		
Valeriana chionophila		KP, KU, KG, AC
V. ficarifolia		Me, BV, AC, KK
Violaceae		
Viola acutifolia		AM
Viola collina		Me
Viola hirta		
V. suavis		KK, AM
Zygophyllaceae		
Zygophyllum pinnatum		KL
GYMNOSPE	ERMS	
Cupressaceae		
J. pseudosabina		AM
Juniperus semiglobosa		KK, KG
J. seravscanica		KK,AC
J. sibirica		AM
J. turkestanica		KK
Ephadraceae		
Ephedra equisetina		widespread
E. intermedia		LK, KP
Pinaceae		
Picea screnkiana		AM
Aspleniaceae		
Aspenium ceterach	Rustyback Fern	Me
Asplenium septentrionale	Forked Spleenwort	Me
Dryopteridaceae		
Dryopteris filix-mas	Male Fern	AM
Woodsiaceae		
Cystopteris fragilis	Brittle Bladder Fern	Me, AC, KK

## Birds

	Common name	Scientific name	Notes
1	Ruddy Shelduck	Tadorna ferruginea	Seen most wetlands in ones/two
2	Gadwall	Anas strepera	wetlands, 100+ road stop
3	Mallard	Anas platyrhynchos	Small numbers
4	Northern Shoveler	Spatula clypeata	several wetlands, max of 15 LT
5	Garganey	Spatula querquadula	small numbers wetlands, max 30 LK
6	Eurasian Teal	Anas crecca	10TL
7	Eurasian Wigeon	Anas penelope	8 LT
8	Common Pochard	Aythya ferina	3 female 27th Junction Lake
9	Chukar Partridge	Alectoris chukar	common, heard more than seen

	Common name	Scientific name	Notes
10	Common Pheasant	Phasianus colchicus	heard
11	Great-crested Grebe	Podiceps cristatus	LT + 27th Junction Lake
12	Black-necked Grebe	Podiceps nigricollis	3 KL
13	Black Stork	Ciconia nigra	1 Mashat
14	Grey Heron	Ardea cinerea	20+
15	Bearded Vulture	Gypaetus barbatus	1 KK
16	Egyptian Vulture	Neophron percnopterus	1pr Ma
17	Griffon Vulture	Gyps fulvus	1
18	Cinereous Vulture	Aegypius monachus	AC, KK
19	Booted Eagle	Hieraaetus pennatus	several
20	Golden Eagle	Aquila chrysaetos	4 Me, 1 AM
21	Eurasian Sparrowhawk	Accipiter nisus	common
22	Western Marsh Harrier	Circus aeruginosus	c 10 around lakes
23	Montagu's Harrier	Circus pygargus	1m LK
24	Black Kite	Milvus migrans	c40
25	Long-legged Buzzard	Buteo rufinus	Common mountain areas
26	Common (Steppe) Buzzard	Buteo buteo vulpinus	Small numbers, more in valleys
27	Little Bustard	Tetrax tetrax	1 KG
28	Eurasian Coot	Fulica atra	10 27th Junction Lake
29	Common Crane	Grus grus	1 from train
30	Demoiselle Crane	Grus virgo	5,000 over several days Kuyuk Pass
31	Black-winged Stilt	Himantopus himantopus	stop + Lake Ters
32	Northern Lapwing	Vanellus vanellus	from bus + 4 LT
33	Green Sandpiper	Tringa ochropus	several
34	Common Redshank	Tringa totanus	4 LT, 4 road stop
35	Common Sandpiper	Actitis hypoleucos	several
36	Black-tailed Godwit	Limosa limosa	8 Lake Ters
37	Gull-billed Tern	Gelochelidon nilotica	1 AL, 5 KL
38	Black-headed Gull	Chroicocephalus ridibundus	various sites
39	Slender-billed Gull	Chroicephalus genei	10 Kyzylkol Lake
40	Caspian Gull	Larus cachinnans	several LT, LK
41	Heuglin's Gull	Larus heuglini	1 LT
42	Rock (feral) Dove	Columba livia feral	common
43	Common Wood Pigeon	Columba palumbus	small numbers
44	Eurasian Collared Dove	Streptopelia decaocto	common in villages
45	Laughing Dove	Spilopelia senegalensis	garden Zhabagly guesthouse
46	Common Cuckoo	Cuculus canorus	1 heard
47	Eurasian Scops Owl	Otus scops	Me
48	Little Owl	Athene noctua	1 from bus
49	Tawny Owl	Strix aluco	1 heard Guest House garden
50	Common Swift	Apus apus	several
51	Alpine Swift	Tachymarptis melba	12 Mashat
52 52	Eurasian Hoopoe	Upupa epops Coracias garrulus	Several
53	European Roller	-	Large numbers on wires. Over 80 from train + probably c100 along roads.
54	White-winged Woodpecker	Dendrocopus leucopterus	Pair in Zhabagly garden
55	Eurasian Hobby	Falco subbuteo	2
56	Common Kestrel	Falso tinunculus	Common in open areas
57	Eurasian Magpie	Pica pica	common
58	Western Jackdaw	Coloeus monedula	small numbers most days
59	Rook	Corvus frugilegus	abundant in agricultural areas
60	Carrion Crow	Corvus corone	common
61	Northern Raven	Corvus corax	small numbers in mountains

	Common name	Scientific name	Notes			
62	Great Tit	Parus major	Common Almaty			
63	Eurasian Skylark	Alauda arvensis	several KL			
64	Crested Lark	Galerida cristata	Several KL			
65	Calandra Lark	Melanocorypha calandra	commonest lark- most arid plains			
66	Short-toed Lark	Calendrella brachydactyla	a few in field margins			
67	Sand Martin	Riparia riparia	several			
68	Barn Swallow	Hirundo rustica	Small numbers several days			
69	Common House Martin	Delichon urbicum	several			
70	Daurian Shrike	Lanius isabellina	Pr Mashat			
71	Common Chiffchaff	Phylloscopus collybita	2 Almaty area			
72	Greenish Warbler	Phylloscopus trochiloides	2			
73	Hume's Warbler	Phylloscopus humei	1 Merke			
74	Lesser Whitethroat	Sylvia curruca	1 in scrub Muyumkum Sands			
75	Wallcreeper	Tichodroma muraria	I flying low from mountain Kaskelen Valley			
76	Common Myna	Acridotheres tristis	abundant			
77	Common Starling	Sturnus vulgaris	small number			
78	Common Blackbird	Turdus merula	small numbers			
79	Black-throated Thrush	Turdus atrogularis				
80	Mistle Thrush	Turdus viscivorus	several in mountains			
81	Blue Whistling Thrush	Myophonus caeruleus	along running water, 8+ seen			
82	Common Rock Thrush	Monticola saxatilis	KG			
83	Blue Rock Thrush	Monticola solitarius	male near Aksu Canyon			
84	Siberian Stonechat	Saxicola maurus	several			
85	Northern Wheatear	Oenanthe oenanthe	few pairs scattered			
86	Pied Wheatear	Oenanthe pleschanka	several LK, + several other sites			
87	Isabelline Wheatear	Oenanthe isabellinus	pr LK + pr KL			
88	House Sparrow	Passer domesticus	Almaty			
89	Eurasian Tree Sparrow	Passer montanus	6+ Zhabagly Village			
90	White-throated Dipper	Cinclus cinclus				
91	Masked Wagtail	Motacilla alba personata	small numbers, most at Me			
92	Grey Wagtail	Motacilla cinerea	most streams			
93	Eastern Yellow Wagtail	Motacilla tschutschensis	6+ KL on migration			
94	Citrine Wagtail	Motacilla citreola				
95	Tawny Pipit	Anthus campestris	4 KL			
96	European Goldfinch	Carduelis carduelis subulata	several Me (grey capped race)			
97	Common Linnet	Linaria cannabina	7 KG			
98	Corn Bunting	Emberiza calandra	2 wires			
99	Rock Bunting	Emberiza cia	1 KK			
Mammals						
1	Roe Deer	Capreolus capreolus	1 female Kishi- Kaindy			
2	Siberian Ibex	Capra sibirica	c25 Kishi- Kaindy			
3	Wild Boar	Sus scrofa	4 KK			
4	Red Fox	Vulpes vulpes	1 near village			
5	Brown Bear	Ursus arctos isabellinus	Fresh scats KK			
6	Eurasian Wolf	Canis lupus	Fresh scats KK			
7	Souslik	Spermophilus citellus	1 KL + 2 KP			
8	Red Squirrel	Sciurus vulgaris	3			
9	Long-eared Hedgehog	Hemiechinus auritus	2 predated			

Reptiles & Amphibians

	Common name	Scientific name	Notes				
1	Haly's Pit-viper	Gloydius halys	1 photographed by Katie at Merke				
2	Renardi's Viper	Vipera renardi	1 KG				
3	Stepperunner	Eremias arguta	seen at MS + also KG				
4	Horsfield's Tortoise	Agrionemys horsfieldii	LK + MS				
5	Marsh Frog	Pelophylax ridibundus	3 seen at BV + heard elsewhere				
6	Central Asian Green Toad	Bufo pewzowii	spawn strings Bear Valley				
Butterflies & Moths							
1	Swallowtail	Papilio machaon	3 seen				
2	Eastern Bath White	Pontia edusa	several in arid areas				
3	Small White sp.	Pieris rapae	few, most in urban area				
4	Large White	Pieris brassicae	iew, most in diban area				
5	Green-veined White	Pieris napi	1 mountain near Almaty				
6	Wood White	Leptidea sinapis	1BV				
7	Brimstone	Gonepteryx rhamni	common in mountain areas				
8	Orange Tip	Anthocharis cardamines	Common humid areas				
9	Eastern Clouded Yellow	Colias croceus	widespread, most at Ma				
10	Peacock	Aglais io	small numbers near water				
11	Painted Lady	Vanessa cardui	3 or 4 seen				
12	Yellow-legged Tortoiseshell	Nymphalis xanthomelas	Fairly common near wooded streams. Common at Merke				
13	Small Tortoiseshell	Aglais urticae	common near Almaty				
14	Small Heath	Ceonympha pamphilus	several				
15	Dalmatian Ringlet	Proterebia afra	100+ KG, several elsewhere				
16	Nettle Tree Butterfly	Libythea celtis	4 AC				
17	Holly Blue	Celastrina argiolus	common				
18	Green-underside Blue	Glaucopsyche alexis	BV +AL				
19	Mazarine Blue	Cyaniris semiargus	1				
20	Brown Argus	Aricia agestis	several				
21	Lesser Fiery Copper	Lycaena thersamon	2 +1 KU				
22	Small Copper	Lycaena phlaeas	couple seen				
23	Green Hairstreak	Callophrys rubi	1 KU				
24	Marbled Skipper	Carcharodus sp	several				
25	Humming-bird Hawk-moth	Macroglossum stellatarum	2 at Mashat				
Other sightings of note							
1	Carpenter Bee	Xylocopa sp	common				
2	7-spot Ladybird	Coccinella 7-punctata	common				
3	hairy flower eating beetle	Epicometis hirtella	common in flowers				
4	Oil Beetle sp.	Meloe sp.	common, especially AC				
5	Hairy Shieldbug	Dolycoris baccarum	common in flowers				
6	Dock Bug	Coreus marginatus	Merke				
7	Southern Field Cricket	Gryllus bimaculatus					
8	Four-spotted Chaser	Libellula quadrimaculata	6 BV				
9	Stick Insect	Rammulus sp	5				