

THREE JOURNEYS IN THE TIEN SHAN, 1928–1929: *A paper read at the Evening Meeting of the Society on 19 May 1930, by*

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THE journeys described in this paper lie wholly in the Tien Shan. The first began with the ascent of the Kash valley from Ili or Kuldja, then crossed the main northern range to the west of the Manass mountains, and ended by reaching the main Manass–Shihho road. This took place in 1928. In 1929 a start was again made from Ili. The Kunges valley, which lies south of and parallel to the Kash, was followed to its source, and the route, continuing due east, led over the Kōnsōn Dawan, along the head of the Little Yulduz, down the Algoi Sai to Toqsun. A little later in the same year the Tien Shan was crossed from north to south by a difficult but locally well-known track over the Tengri Dawan, through both the Little and Great Yulduz, and over the group of passes in the main Southern Tien Shan, skirting the small lake Qara Kōl, and over the Qirghiz At Dawan to Kucha.

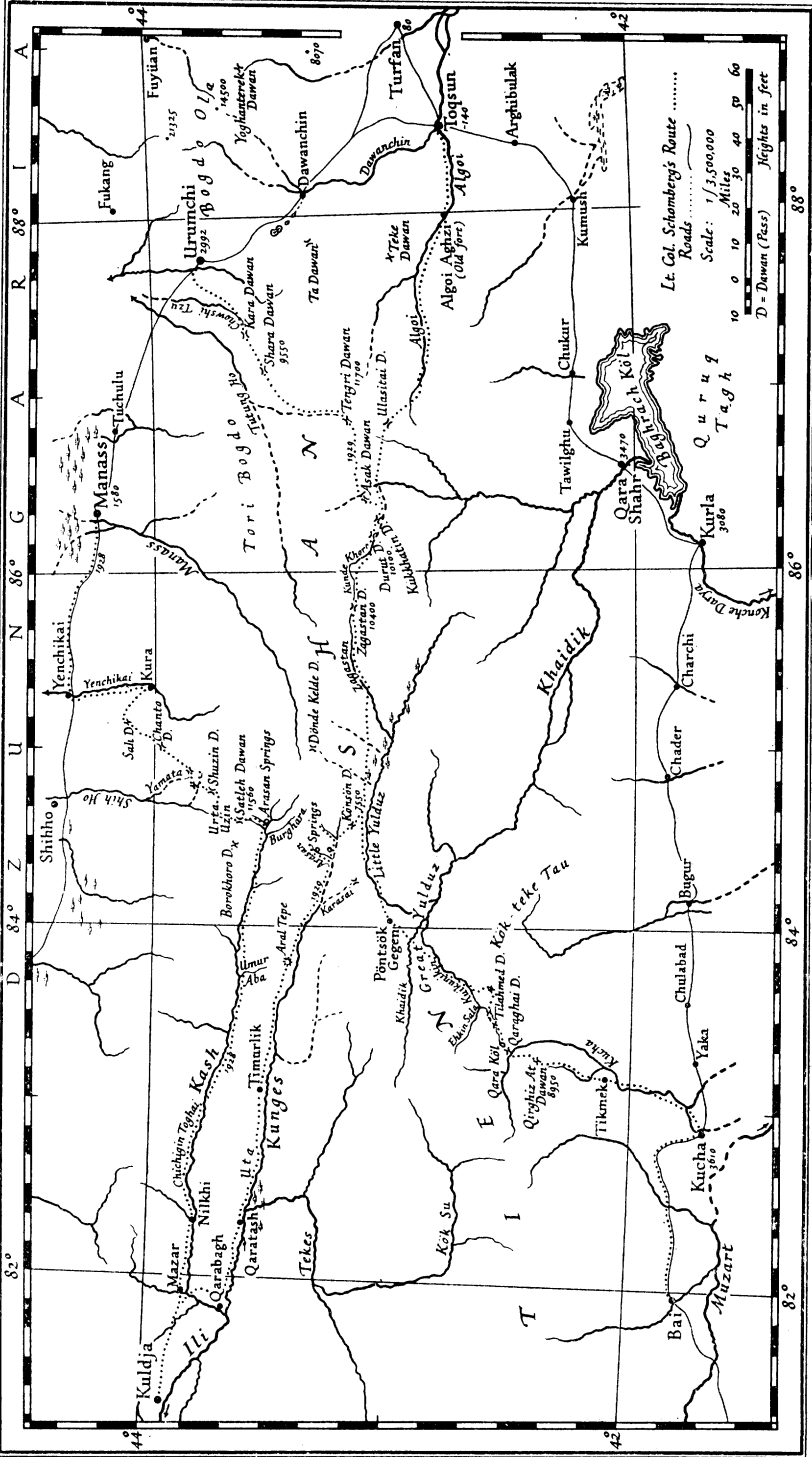
The object of the journeys up both the Kash and Kunges was to find a route that led down directly on to Manass. The local people insisted that there was none, but unfortunately in Central Asia, and perhaps even elsewhere, such assertions are not always strictly true. Our failure to find such a track was not wholly our fault, as will appear.

No one who travels in Asia away from rail or metalled roads should expect comfort, and harrowing descriptions of the inevitable disagreeableness and hardship of travel in Central Asia are out of place and boring. For the benefit of future travellers, however, it is well to point out that the weather in the Tien Shan is so fickle and so impossible to judge, that the climate of the British Isles is monotonously regular in comparison. Professor Merzbacher, in his book on the Central Tien Shan, published by this Society, complains bitterly of the vagaries of the climate—and with reason.

We left Kuldja on 31 July 1928 and went up the right side of the broad cultivated Ili valley. Just below Mazar, a village with a large and frequented shrine built in the Tungan style, the Kash river flows through a gorge into the Kunges, and the united stream is called the Ili river. Continuing up the right bank of the Kash river, the country became down-like in appearance, though deep and unsuspected gorges made travel away from the river quite impossible. These narrow gorges, really deep canyons with foaming impassable streams, are a feature of both the southern but particularly the northern, slopes of the Tien Shan, and more pronounced perhaps in the northern than in the southern range.

It is unfortunate that there is no means of distinguishing the two arms of the Tien Shan, except by a vague and unsatisfactory periphrasis. The mountain people, though nomads, are too local in their outlook to invent a name or even to realize the need of one.

The debris brought down by the streams has formed subsidiary hills between the river and the mountains on the north, which makes the right of the Kash valley very broken and tedious to travel through. This fact and the difficulty of crossing the swollen streams flowing from the north, compelled the route to cross the Kash by a ferry-boat very like a coffin. The *modus operandi* was simple.



Colonel Schomberg's routes in the Tien Shan

The boat or box, loaded to its utmost and with two horses attached, was thrust into the boiling, tearing flood, and tore down the river at a prodigious rate, until it was near the opposite bank, when the horses were lashed, the craft reached the bank, and the frightened passengers scrambled out.

Just below the ferry, and above Nilkhi, the last village, was the summer encampment of the Zungur lamas, at Chichigin Toghai (willow plain), a striking collection of sixty-four large white felt tents on a grassy plain by the willow-fringed river. The sacred tabernacle with a blue and yellow covering, and distinguished further by a small gold spire, was an impressive feature in the centre of the circle. The lamas were extremely courteous, and appeared prosperous. Their winter quarters, with monastic buildings, temple, and a large chorten, were 8 miles above Nilkhi.

The country on the left of the Kash was even more down-like than that opposite, and it rolled away, fold upon fold, until it culminated in the grassy watershed between the Kunges and the Kash. The track now rose high above the river, and to the north the serrated peaks of the Tien Shan, a stark wall of fretted stone, stood out naked against the blue sky, for there was little snow left on the rocky summits. At the end of the valley the snows and glaciers of the Manass group gleamed.

The Kash valley became more alpine in character, and the right side of the valley was particularly broken by deep fissures; and its difficult nature was evident from the fewness of the auls, in spite of the abundant grass. On the left side of the valley, however, these comfortable beehive tents were standing everywhere. Dense spruce forests covered the hillsides, and park-like prairies stretched along the river. The views up the dark forest-clad side glens were tantalizing, inviting exploration which leisure did not permit.

The Kalmuk area was now left. A little farther up on reaching Umur Aba we found several small camps of Chinese who were collecting the annual taxes from the Kasai Qazaqs who swarmed everywhere. The taxes are paid in kind, and are levied at the rate of 2 per cent. of all animals. We overtook many dejected but loyal owners, driving back beasts which the Chinese, very wisely, had refused to take. No one but a Qazaq would have expected it to be otherwise.

The chief of the Kasai was here, a stalwart, active man of fifty-three, who but for his clothes might have been a British farmer. A curious pest of flying stinging ants had been a nuisance near Umur Aba, and pursued us for miles over the plain.

The weather now became very bad, with drenching rain and driving wind, and hailstones as large as cherries, which made the dogs howl mournfully and flee into the long grass for shelter. Above Umur Aba the scenery became delightful, the forests were thicker and deeper, the valley sides more regular, and the smaller nalas more frequent. The auls, too, were very numerous, often pitched high up close to the snow-line, on some bleak exposed slope, where the fine pasture was ample compensation for distance and discomfort. The river gradually became less formidable, and we re-crossed to the right bank quite easily just below the junction with the Burghara, a valley and stream almost equal to the Kash, coming in from the south-east. The forest here ended, the scenery grew rugged and wild, and the last nomads were left behind. We should have felt happier with a guide or a map, but there was neither. The

Qazaqs all swore that we had reached a cul-de-sac, and advised us to go back and retrace our steps down the valley. All forms of persuasion were used by us to glean some information about the route, but we could discover nothing except that we should have to turn back and retrace our steps.

Continuing up the valley we came in 6 miles to the warm springs of Arasan. The neighbouring Kunges has a similarly named valley also provided with a hot spring. Not knowing what to do, we turned left up the Arasan Ridge, but were disappointed to find that the two heads of the valley were blocked by immense glaciers, splendid to look at, but not adapted to our purpose.

After we had camped on a wretched bit of grass as far up the valley as we could go, we saw two Qazaq marmot hunters scrambling down the valley side on their ponies. Waving our largest teapot we persuaded them to come near us, and entertained them with tea and talk. They said, pointing vaguely towards a heap of boulders, that there was said to be a pass in that direction, so the next day I went over with one of my men. The pass proved to be excellent, as passes go in the Tien Shan. The ascent from the Kash side was steep and stony, but on the northern side the descent was over soft shale at a slope of 45° , very awkward for the first 100 yards immediately below the pass, but otherwise not difficult. The track wound down under huge gendarmes to an open valley. This pass is the Satleh Dawan, and seems to be a little to the east of the Borokhoro, which means "grey hollow" in Mongol. I am however prepared to admit that the Satleh may be identical with the Borokhoro, in which case the latter seems to be marked too much to the west in existing maps. On the other hand, Merzbacher, in his map, seems to put the Borokhoro more to the east, in a network of difficult peaks and glaciers. The real explanation is that the maps of the whole area of the Tien Shan are quite inaccurate, and the only remedy is a completely new survey. At present every traveller, and I am no exception, bases his maps and sketches on the work of the original cartographer, so the original error increases. The height of the pass was 11,560 feet. Crossing it on 15 August 1928 we found ourselves in the Urta Uzin, a valley with two long arms running respectively east and west, and surrounded by glaciers. The grass and vegetation were abundant, but the valley was entirely deserted, and the only sign of man was a deserted shikari's hut. Descending the valley, we passed through a dense growth of willow and extensive groves of well-grown poplar. We were now growing a little anxious, as we had not very much food and did not know where we were. A short march of 10 miles down the valley ended in a magnificent canyon, with lofty precipitous walls of stone soaring up from a rushing unfordable stream. Turning east, we ascended the Shuzin stream and camped by the Aqsai torrent, quite impassable at midday, as the stream flowed from a fine cirque of peaks to the south, and the melting snow came down in flood by that time.

We had that day passed a number of deserted sheep-folds and much fine pasture, and the desolation of the valley called for explanation. We subsequently discovered that the water in the Urta Uzin stream had risen so much of late years that the valley had been abandoned. Near the Aqsai torrent we found two Qazaq youths who gave us some directions, and after a day's halt to enable the baggage to get halfway up the pass, we crossed the right of the Shuzin valley, and then over a pass as steep as the side of a house. At the top we skirted

the head of a small valley over bad shale close beneath a glacier, and descended easily into another valley with a very large glacier and moraine. As we had little idea where we were we should have halted, and indeed wanted to do so, but there was no grass, and no dung for fuel, not even enough to boil a kettle. Here we went wrong, as we crossed the valley, toiled up an interminable shale ascent, passed the head of two valleys which lay far below, and in pouring rain reached the cul-de-sac of Kara Mören. The sight of sheep cheered us up as we hoped it meant a comfortable aul, but to our disgust the hardy herdsmen had no better shelter than an overhanging rock, and this disappointment made our tempers viler than ever. We spent two miserable days here in the snow, retraced our steps to the previous valley, and camped at the foot of the Jingsikuzhan Dawan, where we lost time by having to reconnoitre the pass, which proved to be a long stiff climb to 12,435 feet.

Crossing on August 24 we were rewarded with fine views, thanks to a break in the weather, and descended to the well-known yailaq or pasture ground of Yamata, an extensive grassy valley much frequented earlier in the season, but now nearly deserted, as the grass was all eaten away and the short summer of the Tien Shan was over. Crossing the Yamata Bash Dawan—an easy pass—we then struggled up to the Narin Köl Dawan. The first 400 yards of the ascent was very steep, over hard earth sprinkled with stones. In fact it was stony, with layers of shale, in parts all the way to the top of the pass. The cold was intense, with a bitter wind blowing, and there was little view as the clouds hid the peaks. On the north side the path crossed a glacier for 900 yards, then went over a moraine and down to a clump of willows. Here the valley again became impossible, and it was remarkable how consistently all these Tien Shan valleys narrowed into a canyon-like gorge.

Journeys in the Tien Shan are thus always sideways, down a valley as far as possible, then over its side into another one, which is followed in the same fashion till it too becomes closed. It is a tedious business—difficult for man and beast, but this crab-like form of progress is the only possible.

The track out of the Narin Köl was very steep and greatly tried the worn-out ponies, and the top of the pass, the Chanto Dawan, was reached in $2\frac{1}{2}$ miles. The view back was fine, but rather marred by the weather, and the autumn tints were well advanced, showing how near winter was. Leaving the pass the track led down the Chantoleh valley for 5 miles, then crossed the Sah Dawan, with a view of the river Shih Ho, and the plains, and followed down the Sah valley, which was very narrow and gorge-like, with dense forest and undergrowth and striking cliff scenery. Then suddenly the valley ceased, and, as if by the touch of a magic wand, the trees, stream, grass—the verdure and freshness of the mountains—all vanished, and the hot plains of Dzungaria lay before us. The ponies required a rest, and we all needed food, so we camped for several days near the Yenchikai river, and straightway the servants took the opportunity to go sick. Manass was reached on September 9, and the distance from Kuldja proved to be 350 miles.

Having already visited the Kash valley I was anxious to see the parallel valley, the Kunges, and hoped that we might be more fortunate in finding a way over into the Manass district than we had been. We started from Kuldja on 23 April 1929, St. George's Day. The weather during the previous journey

had been consistently bad, and as July, August, and September seemed wet months, it was hoped that April, May and June would be dry. The hope was a vain one, for the weather proved villainous. For the first few miles we followed our track of the previous year, but before Mazar we crossed the Kash river by a bridge just below the red sandstone gorge which almost blocks the valley mouth. The river, even so early as this, was a turbulent unfordable stream. We continued up the valley with the Kunges near us on the right, and left the last cultivation at Qarabagh, and we were sorry to do so, as, though the Turki is a tiresome creature in many ways, he can usually provide good victuals. His tastes, too, were our tastes, and the future was of doubtful alimentary promise.

The difference between the lower Kash and the lower Kunges was very marked. The Kunges was a wide level valley, with abundant pasture, watered by a winding sluggish river, and bounded by rather low and commonplace hills. There were often many poplars (*Populus alba*) and some brushwood near the river, but elsewhere the valley and hillsides were treeless, and the fuel difficulty in consequence was a nuisance in places. But the touch of spring coloured everything. A small blue iris, a yellow poppy, and berberis were abundant, the primulas were coming out, and the banks of the river flashed emerald under the bursting shoots of the new reeds.

At Qaratash the Tekes river, a fine stream, comes in on the left from the south-west. It was remarkable that the Tekes was lined with trees, usually willow and poplar, whereas the Kunges above the junction was devoid of any. The explanation probably is that the Tekes is the faster, remains in its bed, and thus allows the reeds and plants to grow. The Kunges is sluggish, often changing its channel, and giving vegetation no opportunity to reach maturity.

The Kasai Qazaqs were the owners of most of the Kunges valley, and their flocks and herds and tents covered the plains. The Kasai is less attractive than he believes himself to be. To begin with, he is a thief, preferably a horse thief, but ready to steal anything from a cooking-pot to a cigarette. He is a born bully and a bluffer, and not particularly hospitable. But we knew our men, and got on admirably with them, and never allowed ourselves to be bullied by them. We always, however, kept a sharp eye on our property, and passed through the Qazaq country without losing anything.

In the lower valley lay the great plain of Uta, covered when we crossed it with tents and animals, as the grass was plentiful, though even in April water was already scarce. North of Uta the scenery improved as the main range of the Southern Tien Shan, previously separated from the valley by the hills between the Tekes and the Kunges, came in on the left with its forest-clad slopes. The north or right side of the valley remained bare, and it was only some miles above Timurlik (where there are old iron workings) that a little brushwood and spruce were met. The Kunges was here 50 yards wide, a deep, muddy, unfordable stream, with brakes of reed and high grass and treacherous sides.

One difference between the Kunges and Kash valleys lay in the absence of lateral affluents in the former, whereas in the Kash these were very frequent; indeed, in the lower Kunges the only tributary was the Tekes river. The low isolated mound of Aral Tepe in the centre of the valley was a continuous landmark for two or three days before reaching it; and it was noteworthy as being the point where the Kunges valley definitely assumed a mountainous character.

We spent a couple of days pleasantly enough near the village of Aral Tepe, a rather dreary collection of ramshackle huts, for the nomad in a house makes a poor job of it. The scenery however was delightful. The river ran through forests of wild apple-trees in blossom, and dense thickets all burgeoning with the first touch of spring. On the southern hills the fresh tracks of the first travellers of the year over the Chang Ma and Narat passes were visible in the crisp snow, and all around us were spruce forests hanging from the steep mountain sides. The chiefs of the Kunges Kasai Qazaqs, Urus Bai and Turus Bai, father and son, fat, prosperous, jolly souls, entertained us. They ran the most successful horse-stealing association in Western Sinkiang, were arrant liars, bluffers, and thieves, and were hospitable, helpful, delightful humbugs, the typical Central Asian mass of contradictions.

We noticed here many abandoned farms, and were told that they belonged to Sarts who had come up here, and finally abandoned the trying life of the farmer for the free life of the veld. Indeed, a number of settlers had turned nomad, and so long as Central Asia remains what it is there is little likelihood for the Qazaqs or Torguts taking to husbandry, for what inducement can they have?

On leaving Aral Tepe we passed, 9 miles up, another long low isolated hill, Baiying Yurek, and we camped at Uliasutai, where the valley bifurcated, by a river lined with poplar, birch and apple-trees, berberis, briar and juniper, the light greens of their partly opened buds contrasting with the background of sombre conifers. The names now became Mongol—Uliasutai means "poplar"—and a few miles on the Kalmuk grazing-grounds were entered. It is worth remarking that the distribution of the pastures is incomprehensible to a traveller. The Chinese may have some subtle scheme, they may even be assuring compensation to dispossessed herdsmen, but the plan of dividing the same valleys amongst hostile tribes leads to endless friction and bitter feeling. One valley for one tribe should be the rule.

On leaving Uliasutai the river flowed picturesquely through a very narrow thickly wooded valley, where we saw many wild pig. The track was awkward, rising high over spurs, and then dropping steeply to river-level again. A little farther up the valley forked, and the fine Karasai streams came into the Kunges, which above this junction was now known as the Arasan—the same name as the upper waters of the Kash. The scenery continued fine, but the track was tiresome, being often in the river over boulders. This narrow gorge of the main valley was about 25 miles in length, when the character of the country changed unexpectedly. At the end of the defile we emerged on to an open rolling country, with high mountains on the south and grassy uplands on the north, while beyond the latter the country became very wild and rugged. Here we met the Kalmuks or Torgut Mongols, and we were not very pleased to see them; with all their virtues their ways were hardly ours.

At this point it was impossible to determine which was the main stream, but it seems reasonable to suppose it was the Yeldi Usun, which continued in an easterly direction to the foot of the pass. The stream that flowed from the north, however, was called the Arasan. Going up this lovely valley, passing first of all the grassy downs and clumps of conifers in the sheltered spots, we reached the hot springs, 15 miles farther, where had been built rough baths with painted figures of Buddha above them. The water was very hot, and just

bearable to the hand. Unfortunately the journey up had proved too much for the thermometer, and the temperature was not read. The altitude of these hot springs, of which there were certainly twelve with a copious flow, was 7965 feet. The springs were surrounded with a regular midden of mutton bones, the remains of the patients' meals, and bits of felt. The water was clear and almost tasteless, with only a trace of sulphur. There were plenty of tadpoles, and also (it was said) snakes, so that it was dangerous to graze animals here. Pushing up the valley, much impeded by the dense growth of juniper, we came to a moraine of recent date (the trees were still standing amongst the stones), from a small glacier dominated by a magnificent pinnacle of rock. After passing a few stunted conifers the valley turned south-east and ended $2\frac{1}{2}$ miles farther on in a smooth saddle of snow, that compared poorly with the magnificent rock peaks on either side.

After being snowed up for two days we again reached the junction of the Yeldi Usun and Arasan. Crossing the high downs between the two, we passed a number of small tarns. One of the prettiest was the Noghan Nor, which the Kalmuks said was very unhealthy, as any one staying by it got covered with a nasty rash, or pains in the limbs. It sounded like malaria. This lake consisted actually of two small lakes, and mallard, sheldrake, teal and geese floated in them, while pigeons fluttered in the trees. The local people regarded the Arasan as the main stream, but the wider one was the Yeldi Usun, or Tsarno Usun, though there was less water in it than in the former. On the other hand, later in the year it would carry a larger stream, as it drained a greater area.

After being delayed by bad weather at Ulan Kura (the red lamasery), we ascended the Yeldi Usun valley to the Könsön Dawan on our right; we continued up the valley, now called the Tsagan Usun (White Water), but found it less attractive than the Arasan, as it proved to be much more rocky, and consequently held little grass or forest. The track, too, was difficult, and the climb was considerable. Fifteen miles from its junction with the Yeldi Usun, a large moraine at 9340 feet above the level almost blocked the valley, and it was observed that a small lake was beginning to form here in the red sandstone detritus. Beyond was yet another moraine, and the valley ended in a wide circle of rocky peaks, with much shale and moraine in the valley bed. There was said to be a difficult track at the head of the valley, but no trace of it could be found. It was, however, probably too early in the year, as it was not open till July. The weather was severe for mid-May, and we were again snowed up, as the snow fell for twenty-four hours with a bitter wind.

Descending, we returned down the Tsagan Usun, and camped at the foot of the Könsön Dawan at Koyur Bulak (Two Springs), height 6380 feet. From here we crossed the easy Könsön Dawan, 7550 feet, which was one of several ways over the low ridge separating the Kunges from the Little Yulduz. The contrast between the two sides of the pass was great. On the side of the Kunges was a richly wooded valley with fine forests of spruce, whereas the Yulduz was a vista of low paltry hills, with much stone and not a vestige of a tree or bush. This insignificant pass is on the watershed between the Kunges and the Yulduz drainage system, and is an important geographical feature in Central Sinkiang, separating as it does the two principal catchment areas excepting the Pamirs.

Leaving the Little Yulduz and crossing pass after pass we finally arrived at



Looking up the Arasan, tributary of the Kash



Satleh Dawan from north side



Hot springs of Arasan, Kunges: looking up the valley

Toqsun, in the Turfan oasis. The weather was not propitious. Day by day for fourteen days it snowed. There was no grass and no fuel, except wet horse-dung; and as we had no maps we proceeded rather by the light of nature than by any other means. We became heartily sick of the Yulduz, and still more of the filthy Kalmuks, but we had not yet plumbed our hatred for either.

On the way to Toqsun, whilst crossing the 28 miles of sai (desert of stone or gravel) between the Algoi valley and the oasis, we were overtaken by the worst storm for a century. It destroyed almost every camel and most of the sheep within a large radius, filled up the Kariz (underground water-course) at the most critical time of the irrigating season, blasted the young corn, blew down walls, killed old women and children, and devastated the countryside. We passed the night huddled together in the desert, and lost all our light articles as well as five horses. I resolved never again to pooh-pooh the Central Asian buran.

These journeys up the Kash and Kunges had shown that there is no means of reaching the Manass by any satisfactory route through the mountains. The route over the numerous passes from the Kash is possible but difficult, and circuitous; from the Kunges there is practically none; and in no case is there a practical track that leads directly to Manass.

A little east of the head of Bagha or Little Yulduz it was possible to identify the Dönde Kelde Dawan, which figures so prominently in many maps. It is the centre of three adjacent valleys coming in from the north: the Hörte Kelde, the Dönde Kelde, the Ömnö Kelde, taken from west to east, and meaning the Hind Foot, the Middle Foot, and the Front Foot. These are all very difficult passes, and seldom used, as they are only open for a few weeks in the year, during the brief period between the end of the summer, when the snows have melted, and the beginning of winter. The season prevented us from trying them, and they can be dismissed as being of no real value as a route.

The third journey in the Tien Shan was from Urumchi over the Tengri Dawan through the Great Yulduz to Kucha. The route is regularly used, but little known except locally, and an account may be interesting. Whatever virtues Urumchi, the capital of Sinkiang, may possess, they are hidden from sight, and we were not sorry to leave on 4 July 1929. Dreary and squalid though the town may be, the environs are delightful, for it is only a day's march to the wooded valleys of the mountains. Travelling in the Tien Shan is always peculiar because of the truly prodigious number of passes that have to be crossed, and the reason is always the same, namely, the narrow deep canyons which are so persistent a feature of this range. Travellers who complain of the narrow valleys of the Himalaya would be greatly harassed by the gorges of the Tien Shan. The difficulty of travel in them is seen by the immense detours laden animals take sooner than face the difficulties of these mountain tracks.

Deluges of rain had fallen at Urumchi, and we left during a break in them, hoping foolishly for fine weather. The Dzungarian plain merged gently, almost imperceptibly, into the foothills, and for the first two days led through farms surrounded by fine crops largely grown without irrigation, as the rains are copious here. The valleys of the Tien Shan are so deep and fissure-like that the water is useless for irrigation until it reaches the plains.

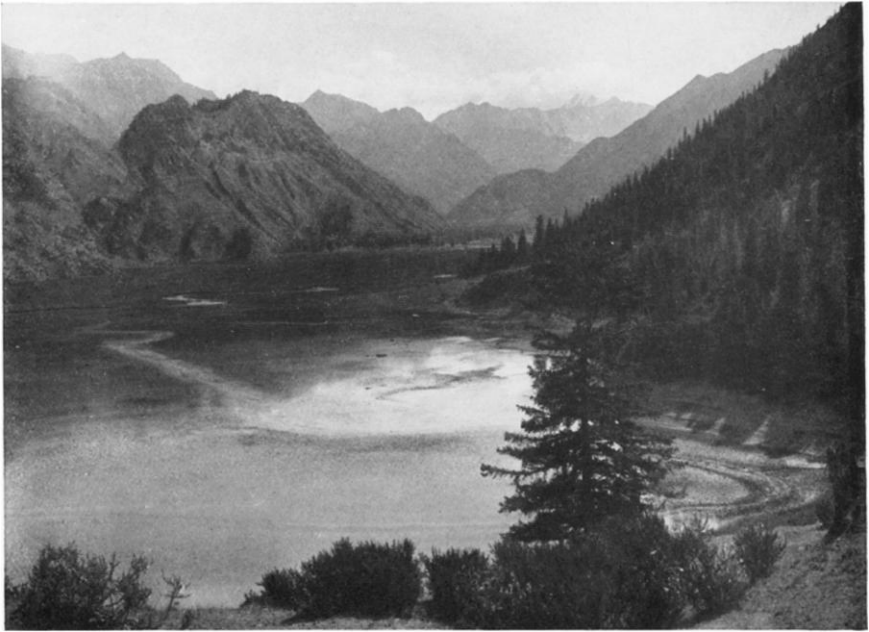
Undulating over low green but rather uninteresting spurs, the track descended, with that trick of sudden contrasts peculiar to Central Asia, into

the lovely Chowshih Tzu (Damp Stone Watercourse), with a fine growth of poplars, willows, and spruce. Climbing out of this, we reached the grassy yailaq (grazing-ground) high above the valley, with a perfect view over the Bogdo Ola, 35 miles away. The road then crossed the Kara Dawan (9700 feet) and wound down a very narrow valley into the Yapsar Salasai, where it poured for two days. In the Northern Tien Shan there are certain compensations to an enforced halt: mushrooms, wild spinach, rhubarb, and a kind of "greens" beloved of the Kashmiri, are abundant.

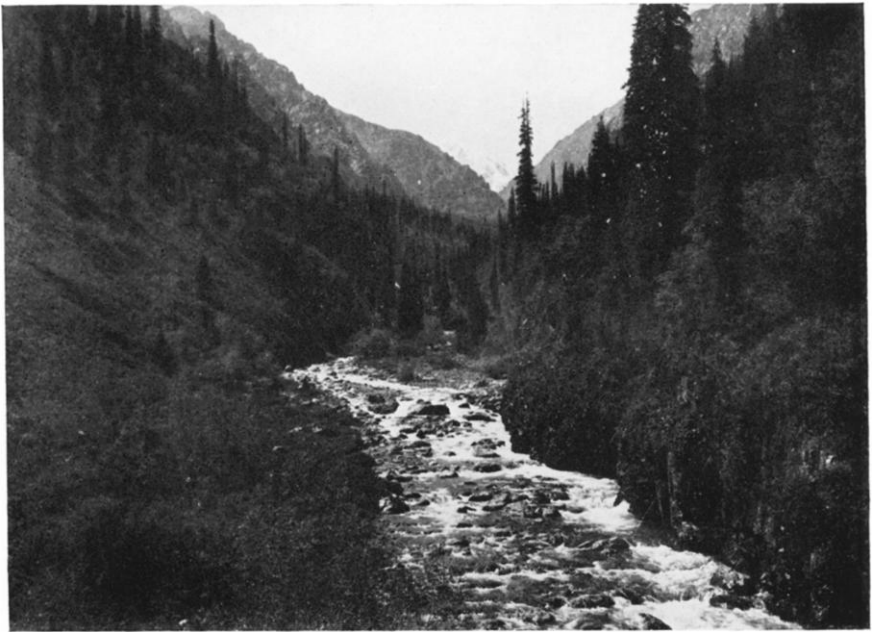
The route then ascended the Tutung Ho (First Series river), which was narrow and difficult for pack-animals, with high red cliffs above, frowning on the exuberant growth of willow and spruce. We passed by a wide stretch of bright green lawn between the tumbling river and the deep forest, and here we saw a dozen auls of the Kasai Qazaqs. A herd of yak, unknown in the Tien Shan, were grazing here. They belonged to a Tungan who had brought them from Kobdo beyond the Altai, as the owner had fled when the red flag of liberty was unfurled in Outer Mongolia. Leaving these nomads, we traversed broad and rich pastures to an easy grassy saddle, the Shara Dawan (Yellow Pass), height 9550 feet, with a splendid view.

It is one of the annoying customs of the nomads to give the same name to two different streams which unite farther down. The Tutung Ho was thousands of feet behind us, a high pass had been crossed, yet the stream and valley on the other side bore the same name. This topographical nomenclature leads to inextricable confusion, which is complicated by the poverty of the available place-names—common everywhere throughout Central Asia, and nearly meaningless in cases like this. It is due to the people, whether nomad or settler, never leaving their homes. As a Taranchi of the district said with pride, "We never travel. It is not our custom." Their stay-at-home habit is disastrous geographically, and results in hundreds of names almost useless for identification.

Leaving this second Tutung Ho, we descended to its junction with the Cholunger Sala (Stone House Valley), and followed them to its source. Where the Cholunger joined the Tutung Ho there was a long precipitous canyon through which the stream hurled itself with a roar. As we continued up the valley, crossing and recrossing the boulder-filled stream with some difficulty, we were struck by the lovely scenery, which surpassed any we had seen before. It was a steady ascent until near the head of the valley, when grassy stretches appeared. Camping at the foot of the Tengri Dawan, we crossed that pass on July 11. This pass (height 11,700 feet) has a very evil reputation, and long detours are made to avoid it. There was still snow on it, and it took several hours to reach the top, but on the northern side the gradient is nowhere really severe. On the southern side, descending into the long grassy Lopdong Ghol, the feeling was that of going down the side of a house, and in the reverse direction pack-animals could only do it by relays. The views from the top were fine and extensive. Although these passes had been crossed we had not passed over the watershed of the Manass river, and were thus still north of the Tien Shan. Leaving the pass we descended precipitously for 1200 yards, and after several steep patches we camped at Babaghai Sala (Wife's Valley). There was not a soul in sight, but our four best horses were stolen that night, and although we pursued



Qara Köl, Eastern Tien Shan



Cholunger valley leading south to Tengri Dawan



Looking south up valley to Shara Dawan



Head of Cholunger valley, north side of Tengri Dawan

the thieves, who were Torgut Mongols, we never managed to recover them. We noticed many abandoned gold workings at Babaghai Sala, and it was difficult to say why they had been abandoned.

The loss of four horses was very serious. In the days of the old Governor a horse thief was promptly executed, and very rightly. However, we managed to push on, but the riding-ponies had to carry packs. Turning nearly due south we crossed the Asak or Burukstai Dawan, height 11,850 feet, and in pouring rain we descended to the foot of the valley. From here, after retracing our steps over the Kukkhatin (worm or insect) Dawan, a grassy col, then into Durut or Durbut Dawan, 10,100 feet, then the Ulan Moron (red horse) Dawan, down the Kunde Khoro valley, over the important Zagastan (fish) Dawan, 10,400 feet, the Sagasutai of Stieler, we arrived at the head of the Great Yulduz (the word, strictly speaking, is Zuldúz, or plain), and camped at Pöntsök Gegen, the Regent's headquarters. He was very civil and attentive, and replaced the four stolen horses, as is the custom of the country. I am afraid we hardly benefited by the exchange.

The headquarters of the Regent was a pretentious house built in the Russian style, but the auls of the lamas and chief Mongols and the tents holding the sacred images were more interesting. The camp was in a plain at the mouth of a side valley running out of the plain of the Great Yulduz itself. The latter is truly objectionable in summer, as flies of all kinds, but especially the large green-eyed horse flies and the mosquitoes, make life intolerable. The summer however is a short one, and the Regent only stays three months, as snow falls in September.

The Yulduz is nothing more than a magnificent grazing-ground. The low insignificant rounded hills, the wide grassy plain watered by a sluggish river, the complete absence of tree, shrub, or bush, and the treacherous climate with its detestable wind, the insect pests, and the rawness of the whole aspect make the Yulduz universally disliked by all except the nomads. Far better the real desert than these bleak uplands, deceitful with their fat pastures and devastating with their attendant evils.

Leaving the chief's headquarters, the route crossed the Khaidik river, which drains the whole Yulduz and falls into the Baghrash Kól, or Tengris Nor. The ground was swampy, but the river itself was easily fordable. A long stretch had to be traversed before the mountains were reached, and we were escorted by clouds of green-eyed horseflies which swarmed round man and beast alike, stinging and buzzing. The weary pack-animals bustled along as they had never done before, but it was only when we reached the top of the Tilahmad Pass that we managed to shake these insects off, which are always a serious menace to horses, and often cause death from loss of blood; indeed, it was owing to them that about 300 or 400 square miles of fine pasture were derelict.

The rest of the journey is soon told. The track entered the grassy but desolate Kuikunikin valley—the name means “the maiden's breast”—and a mile above the junction of the Ehkin Sala with the main valley, turned to the left up the Dawan Usun and crossed the Kuikunikin or Arche Dawan (11,200 feet). It is possible to continue up the main valley and avoid this pass, but the track is so rough that the pass is preferable. It is this pass which apparently figures on the maps as the Kuikul Pass, and which could not be identified anywhere else.

Descending the Shara Sala ("Yellow Valley") from the pass, the track led up a rough forbidding side valley and climbed rather steeply to the Dönde or Mulakchi Dawan (height 10,500 feet). The track then dipped into a valley, crossed the Arakwaste Pass, which at that height is only a col, and rose slightly to the Tilahmed or Noryn Dawan (height 10,800 feet). These three passes were close together and in a line—all visible from each other. It has been claimed that the Kuikul Pass is really the Tilahmed, but it can only be repeated that we failed to identify either name or pass, and certainly did not do so with either the Kuikunikin or the Tilahmed passes. The descent from the Tilahmed was very severe. It is a most difficult and dangerous pass at certain seasons, and Captain George Sheriff, H.B.M.'s Vice-Consul at Kashgar, lost his caravan and nearly all his party when caught in a snowstorm there in October 1928.

Passing the glades and park-like country near the lake Qara Köl—not to be confused with the other better-known Qara Köl in Russian territory—we crossed the Qaraghai Dawan (8400 feet) and skirting and then fording the Kucha river, where the scenery at Qurghan was fascinating, we crossed the Qirghiz At Dawan (Qirghiz Horse, after a huge peak so named), height 8950 feet, and in due course reached Bai, a little too early for the melons, but in time for plenty of apricots, peaches, and nectarines—very welcome and much appreciated after a diet of meat and stringy rhubarb.

In conclusion, the following observations may be made. The climate of the Tien Shan is most uncertain. At no season of the year can any fine weather be depended on, as is the case in the Himalayas. Now this is a most serious matter for the traveller, who is thus obliged to be always anxious about supplies. The changes in weather, too, are unusually rapid and capricious, and no reliance whatever can be put on conditions which would indicate in other countries' mountain systems some days of settled weather.

The bleakness and inhospitable nature of the Yulduz is not easily explained. The chief's yamen was only 7550 feet above sea-level, yet no trees would grow, even though carefully tended, and the few vegetables were most troublesome to cultivate. It is well known that Rupshu, the Pamirs, the Altai, or parts of the same Tien Shan south or north of the Yulduz, and other inhabited altitudes, carry trees, brushwood, and certain crops; but all the attempts to grow anything in the Yulduz have failed. It is due, however, to no defect in the soil. The only suggestion, and it is not a very convincing one, is that the wind is harmful to vegetation.

Reference must be made again to the canyons of the Tien Shan. On both sides of the main northern range, and also in the southern, these deep fissures were the feature of the mountain structure. Their effect is considerable, because it is owing to them that Dzungaria is cut off from the south, and that pack-animals have to cross the Muzart Pass, with a difficult and shifting glacier, as the sole alternative to going round by Urumchi.

Haze is very bad in the Tien Shan, and parts of the Yulduz plains looked as if some London fog had swept up the valley. This is a further complication to the traveller, who may be pardoned if he sometimes becomes exasperated by the churlishness of the climate.

A final remark with regard to the nomenclature of this region is desirable. The whole district is inhabited by a variety of races, and each gives its own

name to the local features. The consequence of this is that there are several names to one place, and these names are often used indifferently ; for example a Qazaq will use the Mongol name, and, though less frequently, a Mongol will use the Qazaq or Sart name. There is, though, a tendency in the case of important features for one name to be the most general and others gradually to drop out. This, however, does not do away with, but merely mitigates the confusion ; and it is this variety of synonyms, coupled with the poverty of place names, that makes the identification of points so difficult. The extremely bad transliteration of the Russian maps has also to be considered (Chinese names in particular suffer most in the process of Russification) and the clumsy German spelling makes the muddle still worse. In the homogeneous Turki districts of the Tarim basin, Achiq Bulaq, Aqsu, Jigda Bulaq, and the like are met with at every turn, but when the same few names are turned into Mongol, Chinese, Qazaq, and the rest, the result is devastating.

DISCUSSION

Before the paper the PRESIDENT (Colonel Sir CHARLES CLOSE) said: Since we last met we have all learned, with the deepest regret, of the death of two of our most distinguished Honorary Corresponding members. I allude to the death of Dr. Nansen, that world-famous explorer and man of science, who twice received a Gold Medal from this Society, whose name is world-wide and whose ability was only equalled by the amiability of his character ; and also to the death of Mr. Hotz, so well known as a student of the history and geography of the Near East, who was a benefactor to this Society, having left us a large number of very valuable and interesting books as an important addition to the Library. The Council has, in the name of the Society, sent messages of sympathy to Madame Nansen and to Madame Hotz.

Turning to the subject of the lecture, I may remind you that though this year we have had a varied fare, we have heard more of Asia than of any other continent. We have had accounts of the Karakoram, of the Himalaya, of Northern Burma, of North-West Manchuria: in fact, about nine lectures dealing with Asia, chiefly with Central Asia and the great backbone of the continent.

Colonel Schomberg, who is our lecturer this evening, has given us two papers already, one published in the *Journal* for December last on the Tarim basin, and another, read at a recent Afternoon Meeting of the Society, in which he gave pretty conclusive reasons why we should give up the notion that that part of Asia is gradually being subjected to desiccation.

He will lecture to-night on the Tien Shan, which, as you know, is to the north of the Tarim basin. He has been there three times and will give us a condensed account of his three journeys. The Society thinks highly of his work in Central Asia, and recently awarded him the Gill Memorial, the presentation of which is reserved for June 23. By that time Colonel Schomberg will be once more on his way to Central Asia, and perhaps the only means of presenting the award to him personally will be to call on the services of Miss Amy Johnson. However, we wish him all possible success in his new journey. Meanwhile, we shall be glad to hear what he has to say about his three journeys in the Tien Shan.

Colonel Schomberg then read the paper printed above.

The PRESIDENT, having without response called upon two travellers present to open the discussion, said: If there is no one else who has been in the Tien Shan

I should like to ask the lecturer two questions: first, is the word "Tien Shan" known locally over the whole of that region, including the two branches?

Colonel SCHOMBERG: Not by the nomads, but by the Chinese.

The PRESIDENT: If you say "Tien Shan" they know what you are referring to?

Colonel SCHOMBERG: Yes.

The PRESIDENT: What is the height of the mountains in the Tien Shan?

Colonel SCHOMBERG: Manass peak is about 24,000 feet.

The PRESIDENT: And the hills you showed?

Colonel SCHOMBERG: About 21,000 feet.

The PRESIDENT: We have listened to a lecture on a part of the world which very few of us know anything about. Colonel Schomberg is gradually exploring that region which, I take it, is about 150,000 square miles in area. It is an area which deserves exploration because the existing maps, which are largely based on Russian material, are to a great extent worthless. I understand it is not by any means easy to do the mapping which is necessary, but we shall hope, bit by bit and as the result of Colonel Schomberg's journeys and perhaps those of others, soon to know a little more about the region. It is possible to make some kind of map if one has only a few points to go on. That is the great difficulty. If you take photographs and know where you are pointing and have one or two points in the photography you know something of, you can construct something of a map. But we have not much of a framework at present. Meanwhile, we are getting as much information as possible from Colonel Schomberg. We do not know where he is going to next time, but we hope he will carry on his explorations in that relatively little-known part of the world. I am sure we all wish him good luck in his next expedition, and we thank him heartily for his lecture.