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*The Great Central Asian Trade Route from Peking to Kashgaria.**

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Map, p. 128.

FROM Peking, Kashgaria is reached (1) by the Great Central Asian trade route, a cart road, passing through the province of Shansi to the Wei valley at Si-ngan-fu, and thence through Shensi, Kansu, and the New or Sin-Kiang provinces of Kashgaria; and (2) by the Ala-shan route, i. e. that usually taken by camel caravans via Kwei-hwa-cheng to Barkul. By the former it is reckoned to be 75 days to Hami, 95 days to Urumtsai, now the Chinese Hung Miotsa, and 113 days to Ili (Kuldja). By the latter it is reckoned to be 12 days to Kwei-hwa-cheng, 67 days to Barkul, and 104 to Ili. Lieut. Younghusband, King's Dragoon Guards, was the first Englishman to traverse the latter, and I the first to travel along the former route in its entirety. This we did in 1887, separating at Peking, and expecting to meet at Hami.

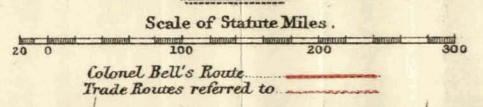
The actual lengths of the journey were, by the great trade route (68 days, 7 halts), 61 travelling days to Hami, and 73 days to Urumtsai. Other routes, skirting the Yellow river or striking across the Ordos country, leading to the north-western part of Kansu, exist and are taken by travellers; the Belgian Catholic missionaries often traverse them, and they have recently been brought into prominent notice by Prejevalski. Kwei-hwa-cheng is the terminus for the Mongolian (Uliassutai, &c.), and Tian Shan camel trade routes, and Si-ngan-fu the Chinese centre for the cart and pack animal routes leading to Kashgaria, Koko-nor, and Tibet; these are the points of contact of China with Central Asia, and hence they derive their political and commercial importance, as I hope to explain presently.

Since the days when the conquests of Chenghiz Khan and his successors levelled all political barriers from the frontiers of Poland to the Yellow Sea, and opened Asia to the inspection of Christendom, few

* Abridged from the author's original MS.; we have been unable also from want of space to reproduce more than a few of the illustrations accompanying the paper.—[Ed.



MAP
to illustrate paper by
COLONEL MARK S. BELL, R.E., V.C.
on
**THE GREAT CENTRAL ASIAN TRADE ROUTE
FROM PEKING TO KASHGARIA.**



Europeans have traversed this main trade route leading from the Irtish and Semirechensk province to the Wei valley, the commercial and strategic centre of Mid-China. In 1874-75 the Russian Colonel Sosnoffsky explored it to the vicinity of the Wei basin, and on to Han-kau, and reported that this diagonal, leading from the valley of the Irtish to the north-west provinces of China, united all the conditions (length, time, cost, &c.), for becoming the most important artery for the trade between Russia and China, and that even as it existed as a river-route, camel-track, or cart-road, its advantages were such that it was capable of competing with the sea route to Russia. He gives figures to prove this. From the Wei valley the route from Si-ngan-fu, through the loess plains, hills, and valleys of Shansi, and over the alluvial plain of Chili, has ever been of commercial importance. Let us now proceed to its description.

The length of the journey I here describe is so great, viz. 3500 miles to Kashgar, that I can enter into little detail, and where I do so more at length, it will be in the lesser known parts of Shensi, Kansu, and Kashgaria, now the Chinese Sin-Kiang or New province.

From Peking the route, passing through Paw-ting-fu, the capital of Chili, runs over the great alluvial plain of Chili for seven days (218 miles) to Khavailu; and thence for five days, over the hills separating Chili from Shansi (157 miles), and rising 4500 feet and over before descending to Tai-yuen-fu, the capital city of Shansi. The Chili plain is a flat expanse rising to an elevation of 600 feet, a thickly populated and moderately well cultivated country. Cotton is largely grown; the soil is loam, loess, sand, and fertile alluvium. The road is generally broad and in good order, but rutty in places; it is unmetalled and suited for a double line of cart traffic; the carts run in ruts without difficulty at the rate of $2\frac{1}{2}$ to $3\frac{1}{2}$ miles an hour. It crosses the various streams rising in the hills, separating Chili and Shansi, and which drain the alluvial plain lying in the direction of Tien-tsin, and give access to it by river junks. When not in flood these streams are crossed by rough bridges of piles and fascines, and by ferries at other times.

The front range of Silurian rocks, bordering it to the northward, rises to a height of 2000 feet and more above the plain; coal and iron are found in them, but in insignificant quantities compared with the deposits of Shansi.

Late in March the day temperature here rises to 60° , and at night 7° to 10° of frost may be registered; a high wind prevails in the spring, which fills the atmosphere with dust, and obstructs all distant view. To Ching-ting-fu (197 miles) the route followed is the Great Southern highway; here the Great Central Asian highway leaves it. A railway to Canton would probably follow approximately the line of the Great South road, keeping to the eastward of the Shansi hills, and striking the Yang-tsze about Han-kau, whence an easy line can be

taken to Canton. Such a line is to be preferred to that taking the general direction of the Grand Canal, which keeps too much to the low ground. The country to the eastward of the 112th meridian is not hilly, as shown in our maps, and a wheelbarrow road runs from Fau-cheng on the Han to Honan. A branch line along the valley of the Yellow river, through a difficult loess country, will connect the Wei valley with this north and south trunk line, and be eventually extended through Kansu. Such a line combines both commercial and strategic advantages, and all Chinese lines of rail must be projected to meet the requirements both of commerce and defence, in order that the former may pay for the latter; they must be designed also to meet the wants of the internal trade of the country, to develop its resources and to give employment to the greatest numbers, and to increase her exports. They alone can enable China to make her empire secure, both internally and externally; for they alone can render political and military reforms possible by bringing the distant provinces under the control of Peking, the nervous centre of the empire. Without them provincial governors have in the past, and may again in the future, defy the central Government.

From Khavailu (Huo-lu-hien), an important commercial centre supplying Shansi, for 130 miles to Sze-tien, the road traverses the loess hills, which extend from the Peking-Kalgan road in a south-west direction to the Yellow river, and which are passable throughout this length only by the Great Central Asian trade route to Tai-yuen-fu and by the Tung-kwan, Honan, i. e. the Yellow river route. This loess, which extends for about 1400 miles along the Great Central Asian route, is, according to Baron Richthofen, a sub-aerial formation formed in a region without outward drainage, and the collective residue of uncountable generations of herbaceous plants, assisted by the large amount of material which was spread over the prairie by wind and water, and kept there by the vegetation. He thus describes it:—"The loess is a solid but friable earth of brownish-yellow colour, and when triturated with water not unlike loam, but differing from it by its highly porous and tubular structure: these tubes are often lined with a film of lime, and ramify like the roots of plants. Amongst the constituents, very fine sand and carbonate of lime predominate next to the argillaceous basis. It spreads alike both over high and low ground, smoothing off the irregularities of the surface, and its thickness exceeds often considerably 1000 feet. It is not stratified, and has a tendency to vertical cleavage. The loess is full of fossil land-shells, and contains bones of land quadrupeds, but no remains either of marine or of fresh-water shells. It is very fertile, and requires little manure."

The road is often rocky, and difficult for carts, but is a good pack-animal road. After rain some of the inlines become next to impassable.

The first section of low hills is more densely peopled than the western

section beyond the Shi-tien-men, and the road over it, where not rocky, is easy, the worst gullies and inclines being met with in the latter; for miles at a stretch it is nothing but a deep, winding, narrow gully (8 to 10 feet wide, 10 to 50 feet deep), bordered by perpendicular sides; numerous are the blocks and difficulties one gets into by meeting carts — fortunately for the traveller not very many, otherwise there must be a complete block: pack animals chiefly use the road. The loess hills are so cut up by numberless ravines as to be impassable, except by a few tracks. It will now be seen how the province of Shansi is cut off from the rest of China to the eastwards. To its westward lies a mass of more rocky hills, passable only by carts to the north-east, i. e. towards Khwei-wa-cheng, in Mongolia, and in no other direction are they to be passed except by mule tracks. To the eastward of the Yellow river lies a mass of hills. Those to the north of the city are of loess similar to those to the eastward, and rise to heights of 5000 feet and over; the outer range is rocky. This (Shansi) province is very rich in coal and iron, but does not grow enough grain for its own consumption. To develop its resources, the Nankow pass should be made passable to carts, and roads opened across the hills from the Chili plain to Lu-ngan-fu and Ping-yang-fu.

Tai-yuen-fu, the terminus of the first cart stage, is a walled city of 50,000 inhabitants, but of no commercial importance, the trade-centres of the basin being Ping-yau and T'ai-ku. The succession of loess basins or broad, fertile valleys or plains stretching from Ta-Tung-fu in the north to Tung-kwan, on the Yellow river, i. e. the basins of Tai-chau, Hin-chau, Tai-yuen-fu, Ping-yang-fu, Ho-chau, and Kiai-chau, are important on account of both their mineral and vegetable productions. They are supposed to mark the sites of ancient lakes, through which one of the channels of the Yellow river flowed to the sea.

Under an enterprising government, the neighbourhood of Ta-tung-fu, which possesses a large amount of fuel, is destined to become an important manufacturing centre, for Mongolia is a large producer of raw material, such as camels' hair, wool and hides; and the region Ta-tung, Hsuen-wa, Kalgan, Khwei-hwa-cheng is traversable by carts, and were the Nankow pass passable to carts, Peking could be reached by it by cart road from Northern Shansi.

In the Tai-yuen-fu basin the thermometer in winter sinks to 4° F., and in summer rises to 96°. Little snow falls; a heavy fall is considered a blessing. In January the minimum temperature is about 4° F., and the maximum 36°. In February it averages between 2° and 45°; the rise of temperature in March is considerable; early in April the midday temperature is 55°, and the night minimum 20°. The heaviest rain falls in the months of June, July, and August; the valley roads then become practically closed, and the Fuen-ho floods the country to a considerable distance on either side.

The port of Tai-yuen-fu is Tien-tsin which is reached by river from Pau-ting-fu; a cart road leads to Khwei-hwa-cheng and Mongolia; communication with the Yang-tsze is by Kaifong; the more direct roads to Han-kau lead through the hills, and are rendered at times difficult by snow; a mule road leads direct by Ningsha to Lan-chau-fu, which is reached in twenty-one days, for three of which a desert is crossed.

From Tai-yuen-fu to Ping-yang-fu is a journey of 185 miles, down the valley of the Fuen-ho. The roads over the loess basin are narrow



THE FUEN-HO.

gullies, similar to those over the hills, with steep inclines. The Hansing-ling pass between the two basins is elevated 4000 feet, the elevation of Tai-yuen-fu being 2260 feet, and that of Ping-yang-fu 1800 feet. Ping-yang-fu is a city of about 20,000 inhabitants displaying no commercial activity, Huo-chau carrying on the more active trade. Traffic chiefly avoids the cart road just described, and merchants prefer to send their goods across the hills on pack animals to gain the water-way, the Wei-ho and Grand canal, to Tien-tsin. Within the hills to the eastward are several thriving towns; hsien cities are also numerous along the left bank of the Yellow river to the westward.

The Chinese have to suit proper names to the limited number of sounds expressed by their pictorial characters. I rejoiced in the name of "Bey-law," a word having an excellent meaning, which is everything in China. At Ping-yang-fu I took to Chinese dress of blue cotton leggings, blouse, travelling cap and spectacles, and so disguised saved myself many a mobbing. Hair, eyes, and tight clothing, such as breeches, must be hidden from view, as they most astonish the provincial Chinese.

From Ping-yang-fu to the important centre of Si-ngan-fu (elevation 1700 feet), the capital city of Shensi, and once the capital of the Empire, is 253 miles—still over the loess; the Yellow river is crossed at Tung-kwan, 93 miles from Si-ngan-fu, or at Tai-chin-kwan, a few miles below Puchau-fu. Tung-kwan (elevation 1560 feet), on the Honan and Shensi frontier, is one of the principal gates of China, and has been the scene of

numerous dynastic battles, and is on the main line of traffic between east and west, and south-west and north-east China. Situated amidst loess narrows, it occupies an important commercial and military position. North of the Tung-kwan bend no important commercial road crosses the Yellow river; an unimportant traffic passes at Pau-te-chau and Potoo, leading to the Ordos country. This so-called fortress forms most effectually the Eastern gate of Shensi and Kansu, and is the key to them, as well as that of the north-east provinces of China, to an enemy occupying the Wei basin. The road to Honan-fu passes through an intricate loess region, and is a difficult cart road on this account.

The most natural port for the outlet of the trade passing through the Tung-kwan gate is Lao-ho-kau on the Han river; most of it hitherto has taken one or other of the roads to Tien-tsin i. e. via Tai-yuen-fu and Khavailu-hien, or by Tau-kau-chin and Ho-nan-fu.

This proud position of Tung-kwan, Baron Richthofen has pointed out, is likely to be wrested from it in the distant future by the rise in importance of the area Ju-chau, Ho-nan-fu, and Hwai-king-fu so soon as railways are introduced; it will then become the gate of Central Asia, for the Ho-nan-fu passage is the only railway inlet to the north-west; there is no one possible further south, nor any to the north, excepting one perhaps through Hsuen-hwa-fu, and southern Mongolia, a thinly inhabited and poor producing region. There being no water communication in north-west and north China, including the rich province of Honan, and freight by land being twenty to forty times more expensive than it is by water, we may conceive how the advent of railways will increase the produce of Honan, Shensi, and Kansu; these provinces abound in coal and probably in iron ore. The cost of land transport at present keeps trade down to its lowest possible limits. Coal, which costs next to nothing at the pit's mouth, rises to seven taels per ton at a distance of 60 miles, and generally 30 miles of land carriage equals the cost of 600 to 800 miles of water carriage.

After leaving Tung-kwan, a granite range borders the road to the south at a variable distance from it to Si-ngan-fu.

The province of Shensi now traversed, produces abundance of grain, and for days around Si-ngan-fu the traveller passes through one vast wheat-field. Shansi exports coal, iron, and salt, and imports cotton, cotton goods, wheat, tobacco, and opium; Shensi exchanges with her these latter for the former; to Kansu cotton and wheat are sent in exchange for cotton, rhubarb, furs, skins, felts, mules, cattle, and sheep. Si-ngan-fu imports silk from Che-kiang and Sze-chuen, tea from Hupé and Honan, sugar from Sze-chuen, and sends these and other merchandise on to Kansu, Kashgaria, Ili and Russia, in fact, it does a large collecting and distributing trade. On the line taken, the chief traffic was going eastwards, and consisted of cotton, straw hats, tobacco, sheepekins, mules, &c.

Si-ngan-fu was founded in the 12th century B.C., and since then has suffered many reverses of fortune, but its position between the central and western provinces of China and Central Asia has always assured for it importance. It was the capital of China for 2000 years (1122 B.C. to 1127 A.D.). A sprinkling of Mongols, Tibetans, and Tartars is found amongst its population. It is a fine city, with a circuit of eight to ten miles, lofty walls, massive gateways, and walled suburbs. In it are many fine shops. It seems unrivalled for open drains, and there are manufactories of dry-earth manure within its walls to add to its many other odours; otherwise it is a clean city with narrow streets, many of which are paved. Carts pass with difficulty, but delays are thought nothing of in China.

The country from Ping-yang-fu to Si-ngan-fu is an agricultural one. All animals are stall-fed, there being no grazing. Live-stock does not appear to be numerous, and oxen, donkeys, and mules are chiefly used to plough. All China's cart and pack animals come from Mongolia, Kansu, and Western Shensi. Cut off from this supply—and these districts now approximately border on Russia—she would be much crippled. Mules do all the transport of North China whether cart or pack; as the north-west provinces are approached ponies are seen gradually taking the place of mules, and in Kashgaria horses and ponies altogether replace them. In the district now under consideration, with water within 15 feet of the surface, but little irrigation is attempted; here and there windlasses worked by two or four men were seen. Villages with inns are met with every 3 or 4 miles along the main road, and haïen towns every 10 or 11 miles. The masonry and architecture of the district are in good taste; the basins and valleys are crossed by numerous sunken roads, and the loess hills on its border by good mule tracks. The Yellow river freezes in winter but does not bear traffic, nor do boats use it; it is here valueless as a communication; coal is rafted down.

The difference of temperature between Shansi and Shensi is very marked. About Tai-yuen-fu and Ping-yang-fu the temperature rose to 75° daily (April), and west of the Yellow river to 95°; as we progressed northwards the temperature rapidly sank again, and at Lan-chau-fu, a fortnight later, it was 15° cooler.

Notwithstanding its important position, as a centre of communications, Si-ngan-fu is rather inaccessible by good roads. Westward of Honan extends a belt of hills, crossed only by mule roads, and to get to Han-kau, on the Yangtze, the best way from Si-ngan-fu is to return eastward to Tung-kwan, and by cart road, viâ Honan to Fan-cheng and thence by boat. This is the only cart road to Han-kau. The best mule road keeps up the Wei valley to Pan-ki-haïen (available for carts so far), and thence across the hills to Han-chung (the great Szechuen road), whence Han-kau is reached by river. The foot post, which reaches

Han-kau in twenty days, takes the cart road to Fancheng (550 miles), whence it is seven days on by river. A mule road also goes to King-tse-kwan or Ting-tse-kwan (330 miles), and thence by boat to Han-kau (seven days). Traders prefer this route on account of its shortness and cheap freights. The boat journey up from Han-kau to Han-chung takes five months in summer, and under the most favourable circumstances it takes two and a half months.

The down journey takes twenty days under favourable circumstances, and may occupy as much as two months. The river is at times too swift, at others too low, or the boats top-heavy, or the wind unfavourable. It is a hot summer journey, and the land journey is more certain. The cart road via Honan, Nan-yang-fu, &c., is greatly to be preferred to any other route. During the summer months only small steamers could reach Fan-cheng, or Lao-ho-kau, 60 miles above it.

The hills between the valleys of the Wei and the Yang-tze-kiang are granitic and rocky throughout. Those towards Lan-chau-fu are chiefly loess. This town can be reached either by Pin-chau, the road taken, or by Tsin-chau, further west, whence an indifferent cart road (travelled by Sosnofsky) and a more direct mule road lead there. The road to Tsin-chau is fit for carts only to a few miles west of Fang-tsiang-hsien, from whence it is a mule road.

The great barrier of communication with the south has ever been the Tsing-ling-shan range, which, stretching westward, joins on with the mountainous region of Koko-nor. Sixteen hundred years ago an artificial road was opened across it to Han-chung-fu, which is still the only practicable route between the north of China and the province of Sze-chuen. To the south-east, however, a natural road opens into the Tan-ho valley, which falls into the Han at Lao-ho-kau. It establishes an easy communication with the whole of south-east China, and will enable railway communication to be opened between the Wei and Han valleys, and to the Yang-tze-kiang. This natural highway will, as pointed out by Baron Richthofen, prove of great future importance.

From Si-ngan-fu, Lan-chau-fu, the capital of Kansu, was reached in twelve days, travelling over a difficult hilly country, the road crossing heights of 8000 and 10,000 feet, and during the greater part of the time being at an elevation of 6000 to 7000 feet. The distance is 449 miles. The road is at times a fine highway, 100 feet wide; at others for miles and miles 8 to 10 feet wide, and running in deep gullies in the loess. It is practically suited for one line of cart traffic only. Many of the inclines are very steep. Cart roads lead from Lan-chau, to Hami; to Si-ning (nine days' journey), whence the trade route goes to Lhasa; to Tsin-chau in the Wei valley, and round, westward of the Yellow river, by the desert and Mongolian route on to Peking (1300 miles). Mule roads exist in plenty. The Mohammadan rebellion lasted for seventeen years, and as its result the whole country traversed from Si-ngan-fu is

depopulated and its villages destroyed. A few of the walled towns alone escaped. Out of fifteen millions of inhabitants before it took place only one to two millions probably now remain. No confidence has yet returned to the people, for it is fourteen years since the rebellion ceased, and the greater part of the land is still untilled. The Mohammadans are still feared; they are braver than the "Heathen Chinese" who is demoralised more or less by opium-smoking. The rebellion was not put down, as is generally supposed, by the prowess of the Chinese soldiery, but by bribery, starving the garrisons out, and the distribution of buttons of rank to the Mohammadan Akhuns or leaders. The missionaries state that the accounts of the rebellion given to them by the Chinese who were partakers in it read like extracts from the book of Joshua; 500 heathen would fly at the sight of one Mohammadan; terror seized them, and they were slaughtered, man, woman, and child. Consequently the only cart line of communication from the Wei valley to Lan-chau, the intermediate base of operations towards Kashgaria, for 450 miles passes through a depopulated and for several hundred miles an untilled country, over hills up to 10,000 feet high, having soil of loess, slippery in wet weather, with rivers running in deep gullies, and with a Mohammadan population on either flank holding their heathen brothers in no estimation.

The ease with which the loess soil is tilled, and the readiness with which it gives good crops without manure, other than a top dressing of its own dust, has enabled a considerable portion of the Wei basin to be recultivated. Although no villages were seen, many square miles of fine wheat covered the soil for many miles after leaving Si-ngan-fu.

A railroad is necessary to bring Lan-chau-fu into communication with Si-ngan-fu; it will be a difficult and somewhat costly undertaking for about 200 miles of the distance. The Wei valley itself is 800 miles from Peking. The mandarins on the borders of the empire do much as they like, and the city bears a bad name for all sorts of iniquity—lying, thieving, opium-smoking, and sodomy; female children are sold as slaves, and bring, if good-looking, 50 taels each; they eventually become the concubines of the family. Opium-smoking seems to dull family affection, and causes women and female children to be looked upon as so much property only. During the rebellion cannibalism was practised pretty universally. The above-named vices are destroying the vitality of the better classes, and indeed of all. Government in China is very decentralised by reason of want of intercommunication, and though the advancement of a province much depends on the honesty and capability of local governors, yet the life led by a mandarin in the remote parts must lead to sensuality and laziness. They have no interest except that of making money during their three years of office, no sports, no modern literature, &c. They know little about their districts, for to observe too minutely would be wanting in dignity.

These considerations will give some idea of China's position in Kansu, and yet its capital is 1300 miles from Urumtsi, the administrative and strategic centre of the Sin-kiang province, or Kashgaria. The Great Wall at Kia-yu-kwan lies still 500 miles to its northward, over a still depopulated and devastated country, with its richest oasis alone yet brought under recultivation. Therefore I have concluded that, unless China improve her communications by running strategic railways, the country bordering Russia up to the Yellow river and the Great Wall, must fall to her whenever she wants it.

Travelling over clay hills, a depopulated, untilled, treeless country, with poor inns, the dust ankle deep, at times whirled in clouds overhead, obstructing all view, is scarcely pleasant; but it is lucky for the traveller if it be dust only that he has to contend against, and not the mud and swollen streams that result from a moderate rain. The water throughout the district is brackish, but I think wholesome.

Let us enter into a few more details.

After crossing the Wei river at Hsien-Yang-Hsien, where it is 150 yards wide, flowing in a flat sandy bed 500 yards wide, by a rough wooden pile bridge, the loess districts traversed, often undulating and richly cultivated (wheat, poppy, abundantly grown), in 70 miles gains an elevation of 4700 feet, and becomes worn into a mass of huge, terraced, and cultivated hills. Passing through Pin-chau (elevation 2620 feet) and Pin-liang-hsien (elevation 4450 feet), shortly before reaching Hwa-ting-shien (230 miles, elevation 6000 feet), beyond which lies the water-parting of Kansu, the character of the country changes, and rock becomes prevalent. Caves are numerous in the steep loess cliffs along the whole route, but the majority are unoccupied; they are often very deep, and constructed in tiers, the upper tiers being reached by ladders or steep steps cut in the nearly perpendicular rock. Such cave dwellings are lasting, and impervious to changes of temperature. Sheep-grazing is generally plentiful, and flocks of sheep and herds of cattle are now for the first time seen in any numbers. The country so far presents few difficulties to the construction of a railway; its difficulties now increase.

The cart road bifurcates at Hwa-ting-hsien, one branch leading to Lan-chau-fu, the other via Ku-yuen to Ning-sha-fu. The gradients on the latter are easy, no high range being crossed by it, and it may give the best line for a railway to Lan-chau-fu. From Ning-sha a cart track leads to Peking, keeping west of Alashan and the Yellow river.

Beyond Hwa-ting-hsien, on the Lan-chau-fu road, the watershed of the Yellow and Wei river is crossed at an elevation of 8700 feet; from it nothing but barren hills are seen to run east and west, and to the front lie a series of ridges rising the one above the other. Between these ridges, hidden from view, occur the cultivated valleys. Hence to Lan-chau-fu the general character of the country is hilly. The ascent is gradual to Hwa-ting-hsien if the valleys be followed. Beyond Lung-to-

hsien, 243 miles, the hills traversed become more intricate and out of cultivation; they offer, however, no great difficulty to the construction of a line of railway. A tunnel three miles long, chiefly through loess, would be required to connect the valleys of the King-ho and that in which Lung-to-hsien lies. About Kho-ja-pu, 288 miles, the hill terraces ceased to be



HILLS OF KANSU.

cultivated for want of cultivators only. Thence the country to Hui-ning-hsien is hilly, with narrow and shallow valleys and streams running in deep gullies; also depopulated and generally uncultivated; about Shi-gun-i, 347 miles, it is composed of a number of treeless flat valleys, from half a mile to a mile broad, bordered by treeless loess hills, with slopes more or less steep (up to 45°), rising 1000 to 1500 feet over their valleys and communicating with each other by similar or narrower valleys, or ravines. The streams, of no size (except when in flood, when they are dangerous to cross), flow in deep-cut beds with perpendicular sides into which open similar ravines, cutting up the valleys and making movements, except under the border hills, difficult. Some of the hill-sides are terraced, others not.

An-ting-hsien, 370 miles, the junction of three valleys, is one * of the granaries of Lan-chau-fu; more life was seen in this valley than in the others traversed, and many of its ruined villages were re-occupied in part. It contained fewer walled and defensive enclosures than had been hitherto met with, showing the greater amount of security that is felt there. Valleys one mile broad, like that in which An-ting-hsien lies, are rare, and are reached by crossing hills separated by narrow and intersected ravines. From the ridges one sees nothing but waves of hills, rising one over the other, beyond the immediate valleys

* Its other granaries are the Ho and the Si-ning valleys.

below. The most difficult section of the road lies between Kho-ja-pu and Kan-san-dien, a distance of 100 miles. Coal is plentiful along the whole line and costs from 300 cash to 1000 cash (1500 cash = 1 tael) the picul (133½ lbs.), according to the distance it has to be carried. No iron was heard of, and that in use came from the vicinity of Han-kau. With a dry air and not too rigorous temperature, the district traversed must be a very healthy one.

Snow lies in the Lan-chau valley till April, and sheep-skins are in wear till the beginning of May, and at this season the thermometer in the deserts northward of Lan-chau will read as low as 5° F. The winter nights about Lan-chau are very cold, water freezing in a room warmed by a fire, but the sun is always warm, and in a sunny room no fire is required at midday. The summer heat is not excessive, maximum of 95° in the shade in August, and the nights are always cool. Thunderstorms occur in June and July, and are followed by two months of rain, August and September. Little rain falls at other seasons, and although the agriculturist generally gets enough for his crops, famines are of periodical occurrence in Kansu.

Lan-chau-fu (elevation 5500 feet) is comparatively a fine city of, it is said, 40,000 houses. It has some fine shops. The Roman Catholics in the city number 80; in the neighbourhood 200, and in Kansu 2400. Tobacco is largely grown and exported. The Yellow river is here 250 feet wide, with a rapid current, and spanned by a bridge of twenty-two boats. Ice covers it from November to February, during which season carts cross it.

Direct Russian trade reaches this point; it flourishes at Urga, Kobdo, and Uliassutai, where merchants are established and have opened shops. When I was in Lan-chau, twenty cart-loads of Russian goods, with six merchants, one of whom had his wife with him, had just arrived from Tomsk, coming by Biisk, Kobdo, to Su-chau-fu, on camels, and thence on carts. Russians here work by their own, and not Chinese agency. Mr. Spingear, a Belgian and a Chinese mandarin, is stationed at Su-chau-fu to conduct all dealings with Russian traders, and prevents indirect taxation being levied. This is the only way of preventing the mandarins from "squeezing" the traders. They will, unless we take the necessary measures, probably drive British goods from Kansu and Shensi; for, although a foreign customs order should pass these free of "lekin" to Han-kau, yet imposts are imposed by delays, stamping invoices, opening bales to count goods, &c., so vexatious as to force the boatmen to pay the unjust demands.

I will now give a short description of Kansu and its borders. The province itself comprises the best parts of the ancient kingdom of Tangut, which was destroyed by Chenghiz. Its hilly western districts submitted to China about 1700. The Tangutans resemble gipsies, and are zealous Buddhists.

From the Kansu-Tibetan border, about Si-ning, Kumbum, Labrong, to the westward, there are no villages, and the country is there occupied by nomad Tibetans, who supply many mules to this part of China. The Chinese Inland Mission propose to open stations on the Tibetan border. The country from thence to Llassa is described as a gradual but undulating slope up to the water-parting, and thence a gradual undulating descent to Llassa; the main route passes through Si-ning, and cannot be very difficult, for an old Tibetan woman, who described it as above, went there and back by it in five months, walking all the way. Huc has given an excellent account of it. Prejevalski has, I think, too hastily thrown discredit on the works of this talented Jesuit, to the pertinency of whose remarks, and to the accuracy of whose observations, whenever and wherever I have been able to test them, I desire to pay tribute. The mandarins use the Chentu-Bathang, the official route, described by Huc as a very difficult and arduous one. Tsaidam and the country to the east of Su-chau are inhabited by Buddhists, Mongols, and Kalmucks. At Koko-nor are found Chinese, Mongols, Tibetans, &c., a mixture of races; indeed the population of Tibet seems to be centred about the frontier of Kansu and the Sampu valley.

To the westward of the line Liang-chau to Su-chau Mongols are found of the Shara Ugárah and Hára Ugárah. The inhabitants of Kansu itself are not purely Chinese, and northward of Lan-chau the change in the facial features of the people becomes marked; the nose becomes larger and more prominent, the eyes more open, and the general expression more pleasing to the European eye. Several of the border tribes have their special rulers and their special laws.

We thus see how the Chinese have driven a wedge into Central Asia, between alien peoples and colonised it, so, as it were, to form a road for conquest and commerce to reach it. It is the natural line of inter-communication between the extreme east and west, only readily accessible by the natural inlets given by Kulja, the Black Irtish valley and the passages between its neighbouring mountains. To strengthen the position the Great Wall was carried to Kia-yu-kwan beyond Su-chau-fu, at a distance of 500 miles from Lan-chau-fu, and every exertion has been made by China in all ages (for 2000 years, Han dynasty) to retain possession of it, for she understands its military value.

In 1737, the Peh-lu and Nan-lu, the great arteries to the north and south of the Tian Shan, were added to it. The late Mohammadan rebellion robbed China not only of the Kashgarian roads, but also of the greater portions of the province of Kansu and that of Shensi to Ning-hia and Sí-ngan-fu. This wedge, from a political and strategical point of view, is of extreme importance to China, yet with what a loose hold does she hold it! it may slip from her grasp any day! To strengthen her position here, China must run a railway through it as already pointed out, but which cannot be too often repeated.

To the north and north-east of the line Hua-ting, Ping-liang, Kin, lies an undulating plateau, easy to traverse, now depopulated, but in former years fairly covered with towns and villages. To the westward of Ning-sha the roads are passable by pack-animals only to Ting-uen, the seat of a Mongol king. From Ting-uen to the west and north of the Great Wall is an easy country to Lan-chau and Po-toe, traversable by carts; in part, desert. To the south and westward of the great Central Asian trade route described lies a hilly country, traversed by mule-tracks, and which extends to the cart road passing from Tsin-chau by Fu-chiang, Ning-uen, Kung-chang, Titao to Lan-chau-fu. There are Muslim centres about Ho-chu, Si-ning, Salar, and Tsin-chau.

To the westward of the line Tsin-chau to Lan-chau are the rocky hills separating China from Tibet. Mule-roads are plentiful in them to the vicinity of Chau-i, the residence of a Tibetan prince (Yang); to Labrang Llamasery; to Suin-hwa, in which neighbourhood live Salor Turks; to Bayar Sing, Kunbum Lamasery, &c., all Tibetan localities. The roads to Lhasa viâ Si-ning from Lan-chau, Ping-fang-hsien, and Liang-chau are of importance, as Lhasa is the Mecca of the Buddhist religion, the resort of strangers from the steppes of Central Asia, and where collect Kalmuks, Mongols, Tatars and traders from Ladakh, Kashmir, and Nepal—a centre of communications, the seat of Government, and of the Dalai Lama.



HIGH ROAD IN KANSU.

From Lan-chau-fu, Su-chau-fu, distant 482 miles, was reached in sixteen days' travelling in May. The road passes twice over heights of 8000 to 9000 feet by such gradual ascents and descents as to be unnoticed. It traverses a narrow wedge of cultivation between the inhabited Nan-shan Mountains on its one side and the desert on the other for a

part of this distance; for the rest it runs over a barren salt plain or amongst low hills. There are no great difficulties of topography met with likely to trouble much the railway engineer; soil of sand, gravel, clay, and loess are met with.

Let us now give a few details of the route. From Lan-chau the road, taking one line of cart traffic, after crossing the river on the bridge of boats, shortly leaves the valley, and traversing a series of cultivated valleys separated by low necks and bordered by cliffs of clay, gains the fertile and extensive Ping-fang valley. From Ping-fang a cart-road leads to Si-ning, a populous and fertile district on the road to Lhassa, and whence (from Kunbum Lamasery) caravans leave yearly for Tibet. Continuing up the valley, at Chen-chiang (elevation 9100 feet), 81 miles, the Ping-fang river is crossed and the Wu-so-ling pass (elevation 9900 feet) over the Nan-shan range, the watershed of the country, traversed by long gradients of 1 in 12 to 1 in 15. Winding thence through clay hills, by grassy valleys and narrow ravines pent in by steep and lofty snow-clad hills, rising 13,000 feet and over, with their lower slopes crowned by the Great Wall to the north, the extensive plain of the Lian Gobi or Little Gobi, called by Prejevalski the Ala-shan plain, is reached, at the southern extremity of which, and at the junction of two important gorges, lies the town of Ku-lang-hsien (elevation 6900 feet, distance 138 miles). Its position is one of commercial and strategic importance. The hills of Kansu are now practically left behind. The plain is in places very fertile, in others barren; over the former the road often runs through loess, or over a rich sandy clay soil, and in the latter over stony gravel or sand or a spongy salt soil. Its cultivated and culturable portions (leaving the Gobi desert out of consideration) exceed in extent the barren stretches. It is a plain well watered, and of great extent and possibilities. Its oases are most fertile. In July the heat renders travelling by day very trying. The Great Wall is here of mud, six to eight feet high and but a few feet thick; it is often wanting.

A cart road leads to Ning-sha, twelve days distant. All the villages are in ruins, and ruined farmsteads with attached low mud towers are closely dotted over the fertile plain, much of which lies untilled.

Liang-chau, 180 miles (elevation 5050 feet), is an important walled town of 20,000 to 30,000 inhabitants; the direct roads from Shansi and Chili reach Kansu here. The direct road to Tai-yuen-fu takes 26 days, and passes through Kwang-wu and Yulin; stages or villages are met with along it at distances of 25 miles. The usual road taken to Peking goes by Ta-tsing, Kwang-wu, the Roman Catholic station and bishopric north of lat. 40°, across Ordos to Pau-to, and so on to Kwei-hwa-cheng, and Hsuenhwa. It is a cart road, but tents must be taken for desert use. There is a direct road also to Ning-sha, suited to carts. It skirts the hills, leaving them to the left. A caravan camel route also runs via

Ning-sha, Pau-to to Kwei-wa-cheng, i. e. Huc's route approximately. This route is also said to run 60 miles or two days north of Ning-sha through Fu-ma-fu (?Din-yuan-ing of Prejevalski). By it Peking is reached in 50 to 55 days. Tents are required. Grass is always found in sufficient quantity except for two days when crossing sandhills. Wells are met with at intervals; generally speaking an immense prairie is crossed; provisions of grain must be carried; the Mongols along the route are shy of Europeans. They pasture large numbers of sheep, cattle, and horses. The spring of the year is well suited for the journey, but the cold of winter, although severe, is preferable to the heat of summer.

After leaving Lanchau little traffic was met with, and the pigs in the ruined villages were as numerous as the men to be found in the few huts reoccupied by them. A few Chinamen alone occupy the cultivated wedge; coal is abundant and cheap, 200 cash the picul in the Ping-fang



PASS NEAR KULANG-HSIEN; THE GREAT WALL ALONG THE CRESTS OF THE HILLS.

and Kulang-hsien basins. Millets form the main harvests of the country, and are sown in May. Beans are largely grown, and bean cake exported. Grapes grow plentifully and produce excellent wine (not made, except by the priests). During the winter the thermometer sinks to 3° F., and during the summer rises to 95° F. Very little rain or snow falls, and the climate of Kansu is very dry, especially from October to May; the country is very healthy, and there are few illnesses except

the preventible ones of small-pox, &c. A Lazarite bishopric has been established here for eight years, and their converts around the city number some 600 souls. They have stations at Kan-chau, Ili, Kashgar, and along the Yellow river, besides numerous others along the route taken. I found the Chinese Inland Mission firmly established along the route taken, and doing an heroic work as far as Lan-chau-fu. They work for "Love," and are deserving of the support of all; they should join hands with the American Missionaries of Armenia and Azarbeijan, who are excellent Turki scholars, and establish joint stations in Kashgaria, where both languages are needed by them. The people here are described as excessively poor, and without heart; there are no markets for the produce of the country. They are generally inoffensive, and given to no special evil practices; the police are considered to be the greatest thieves. Few sheep or cattle were seen.

The country northward of Liang-chau is practically a plain, across which it would be easy to run good roads or railroads. The width of the cultivated portions is variable, and the general characteristics of the fertile portions are clay soil, with detached walled farmsteads and small villages, often in ruins, dotted here and there; irrigation by streams from the snows of the mountains to the south is general and extensive; grains, poppy, beans, &c., are grown. Rhubarb grows in the hills; coal abounds also in them: that in use in the towns and villages is coal dust, which, mixed with clay, is an economical and good fuel. The desert tracks are gravelly or sandy, and heavy for carts. The deserted lands around some of the ruined villages are full of pheasants of magnificent plumage. The country along the south-east border of the Mongolian plateau—Alashan, Ordos, &c.—is described by Huc and Prejevalsky. The Lazarite missionaries who have traversed it give a better account of its climate than Prejevalsky.

Kan-chau, our eleventh stage from Lan-chau, and distant from it 313 miles, is elevated 5300 feet, and contains from 15,000 to 20,000 inhabitants. Morasses within the walls render it unhealthy, and croup is very prevalent. It is the headquarters of a military district, with a fair trade. There are 350 Christians here. Its opium is of noted quality, and costs 190 cash the tael weight. Coal-mines are five days' journey distant; coal dust costs 100 cash the picul, and lump coal 800 cash.

As a rule, the climate is dry, and but little snow falls. In May, however, we experienced much wet for four or five days. In summer, a temperature of 93° is not unusual. The cold of winter is severe, and all then wear sheepskins. The climate is variable in the spring—one day hot, the next cold. Cotton is said to grow well in the district. Goitre is prevalent.

Beyond Kan-chau the route runs within view of the snowy range, and after passing through several well-watered oases growing wheat, beans, peas, &c., of a sandy, clayey soil, a partially cultivated prairie is

crossed, partly of a saline, spongy nature. Salt is found in the neighbourhood, of excellent quality. Su-chau lies in an extensive oasis, a good deal of it fallow, and much of it under grass. The streams crossed are liable to be flooded; given a hot sun and a little rain in the hills, and a flood ensues; this must be so, for the hills rise like a wall from the plain, and there is no large river system to carry off the water resulting from the melting of the snows. The day temperature of Su-chau in May averages 60°. It is elevated 4800 feet and has about 10,000 inhabitants, including the suburbs, and 200 shops. Opium is largely grown and consumed by men, women, and children.

Within the Nan-shan, 30 miles off, are pasture lands occupied by nomad Tibetans, called by the Chinese "Shi-Fanza," i. e. the Tangutans, described by Prejevalsky, and Mongols. To the east are Mongols; the wedge is alone occupied by the Chinese. These races do not intermingle. It is easy, it is said, to travel amidst the Nan-shan; pasture is abundant; range after range is met with, but easy passes exist. Milk can be obtained from the nomads; millet and flour must be carried; wild yaks, dogs, hares, partridges, and pheasants, abound in them.

It is not very hot about Su-chau in summer, and the winter cold is bearable when clad in skins. The nearness of the snowy range which rises abruptly out of the plain—a magnificent sight—tempers the summer heat. The abrupt rising of the Kan-su marginal range is stated by Prejevalsky to find its full development only on the side of the Ala-shan Plain; on the other side the declivity is short and easy. This is as I heard, and have stated. During March the nights are calm; at 8 a. m. a strong and cold wind springs up, which lasts till 10 a. m. It blows again from the north-west during the afternoon. The dry north wind chaps the skin. In April icy cold winds blow about Su-chau, accompanied by snow, rain, and mist. In July rain is to be expected; in the spring the season is very variable. We experienced, as stated, much rain for four days in May, and a few days later so dry was the air, that the seats of both my saddles split across and contracted an inch. One harvest only is gathered; in the winter nothing is done. In their season, grapes, apricots, peaches, apples, and pears are plentiful.

The Mongols trade here, bringing felts, skins, and European goods from Kalgan, taking grain in exchange. The Chentus or Turks bring dried fruits, cotton, &c., in exchange for skins for their caps and tea. There is about double traffic outwards to what there is inwards; a good deal of the traffic hence takes the line by Pau-to to Kwei-wha-cheng. There are no posts, but official despatches reach Peking in fifteen days by special mounted couriers. There is a Russian merchant established here, who keeps a large store, where Russian cottons, cloth, clocks, soap, candles, and all manner of odds and ends are sold.

To summarise now as regards communications between Peking and Suchau, the base for preparations to cross the Gobi to Hami, in the

extreme north-west of Kansu, an oasis in the desert, for over 50 miles of barren waste has to be crossed to reach it from Lan-chau-fu. The Wei valley, we have seen, the remote base of Kashgaria, 930 miles from Su-chau, is connected with the Yangtze valley via Honan-fu by two cart-ruts over a clayey soil, and with Tien-tsin by two cart-ruts over a similar soil and crossing loess hills 4500 feet high, the former ruts being from 600 to 700 miles long, and the latter about 800 miles. Mule-paths and navigable rivers exist, but I have been at pains to show that the latter, though affording cheap transit, waste much time, and as we do not live for ever, this waste is a consideration. Roads are unmetalled, and for miles and miles nothing but the narrow bottoms of deep perpendicular gorges, 8 feet to 10 feet wide, allowing but one line of wheeled transport, and liable to be closed to traffic after heavy rain or snow.

From the Wei valley northwards these four ruts become two, and remain so to Hami, 1350 miles. This is bad enough even if they passed through a fertile and populous country, but its depopulated and uncultivated state throughout its greater part, from Si-ngan-fu to Su-chau, 930 miles, must be seen to be appreciated. Scarcely a village has been left standing, although some of the walled towns escaped destruction at the hands of the rebels and the soldiery.

In six days from Su-chau, Ngan-si-fu (elevation 4120 feet) was reached, distant 178 miles. It is a poor place, where one lays in stores for the desert journey to Hami. On the road narrow strips of well-irrigated cultivation are met with at intervals, at times desert is traversed, at others fair grazing ground. Four considerable streams are crossed, from 50 to 150 yards wide, and deep and rapid. The villages met with are in ruins; a few are in part occupied; the country is generally depopulated and out of cultivation. This narrow strip of communication, occupied by Chinese alone as heretofore, is still bordered by the Nanshan Mountains, and the desert, occupied by Tibetans and Mongols.*

At 18 miles from Su-chau, Kia-yu-kwan, celebrated as one of the gates of China, and as a fortress guarding the extreme north-west entrance into the empire, is passed. The Great Wall circles round the town and across the neck, and is now left behind and seen no more.

Ngan-si-chau is a town of 400 to 500 houses and a few shops, of 1000 yards side; there is little or no cultivation about the town, and the water is brackish. Sand is heaped up against its dilapidated walls to such an extent that you can walk over them. A route runs to Sa-chu or Tengwan, a rich oasis, which is reached in four days.

* These Mongols, or Western Tatars, so called by Hue in contradistinction to the Manchus or Eastern Tatars, are the living representatives of the Huns, and the yet more ancient Scythians. Under Attila they reached the Rhine and the Mincio; Chenghiz Khan led them to victory in Asia and Europe; his memory still lives, and their ancient spirit is probably but dormant, for they desire to supplant the Manchus, in whom they see a rival race in possession of what was formerly theirs, viz. the Empire of China.

No information concerning the ancient trade route to Keria and Yarkand could be obtained. Governor Tzo sent a party to discover it, but they never returned, and are supposed to have been either overwhelmed by sand or to have been murdered. The Chinese say that bad men have closed the road, and refuse to act as guides. This only means that the route is not now in use, but that it can still be traversed. No doubt also the route from Tsaidam traversed by Prejevalsky along the valley between the Chaman-tagh and Kuen-lun, by which Cherchen is reached, was an ancient trade route. No Chinaman here had ever heard of Cherchen. These desert routes present no difficulties to well-prepared caravans.

From Ngan-si-chau, Hami (elevation 2650 feet), distant 240 miles, was reached in eleven ordinary cart-stages or days, over the Shamu (Gobi) desert, which for 200 miles is almost an absolute desert, in May, along the main caravan route by which we travelled; water can be readily obtained and is often close to the surface, and springs (brackish, but potable) occur apparently at intervals of 20 to 30 miles in any direction. It could be readily stocked with grass, for the country, 30 miles south of Hami, is a vast grassy prairie. Travellers like to make much of crossing the desert, but it has few hardships; and before we left Kashgaria we had reason to think the Gobi days pleasant in comparison with the Kashgarian desert hills and flats, and forests swarming with myriads of mosquitoes and horse-flies. The accounts of several travellers which I have read must be received with caution, for they appear to have mixed up the leaves of their note-books, or to have written from memory, and to have guessed at heights and distances.

Hami is a rich oasis of no size, not over 30 miles in any direction. The scent of its vegetation was marked, and we all made for the first stream of sweet water and halted to give the ponies a taste of green grass. The desert water is more or less brackish, but one has got used to that long before the Gobi is reached, and it is pleasantly cool and refreshing in June. We got over the eleven desert stages (240 miles) in eight days. The Chinese are behaving most foolishly at Hami. They give the Russian merchant established there no protection or justice, and we spent most of the day together chatting over his grievances. They will probably pay dearly some day for their foolishness for Russia is quick to take advantage of such folly when time is ripe to do so. The mandarins also treated me uncivilly, and I was greeted as a "foreign devil" at the Yamen as soon as my Chinese disguise was penetrated. Neither civil nor military mandarin would see me, and neither returned my card. I left a letter at the Yamen to be delivered to Lieut. Younghusband, and when, five weeks later, he called for it its receipt was denied. In Kashgaria proper I met with the greatest civility. Incivility from the authorities is met with only between the Gobi and Karashahar, a tract of country occupied by the scum and

overflow of the Chinese populations of the frontier towns of Liang-chau, Suchau, &c.

Let me now give a few details. Leaving Ngan-si-chau and crossing the desert stream, the Sula-hu or Buluntsir, 50 feet wide and $1\frac{1}{2}$ feet deep, a barren gravelly flat, heavy for carts, is crossed. At the first stage, Pahtungza (4850 feet), is a small stream of brackish water, which is said never to run dry, and some ponds fed by it. The second stage to Hung-leo-chuan (5500 feet) is through low hills, the Pejsan range of indurated clay and diorite, by easy slopes; the bordering low hills are crowned by *obes* or piles of stones built seemingly to mark the route, but said to have a religious meaning. On the 27th May the sun's rays were hot, and the temperature at times 92° ; on the 28th a bitterly cold wind blew from the north-west with a temperature of 42° , a fall of 50° . The climate of Kansu was found to be most variable in the spring. Roads branch off laterally to Yui-min-hsien and Tengwan from Sin-sin-sha, Ku-shui, and Huan-lu-gan. About Sin-sin-sha the hills are granitic and felspathic, or of sandstone or limestone veined with felspar. No mica was seen. All the stations, consisting generally of two or three inns, and perhaps as many huts, are held by Chinese, who charge high prices, but carters carry grain and chopped straw for their horses and food for themselves for the journey. There is a little grazing here and there. The desert ceases a little to the south of Chan-mo-shui where a stream of sweet water occurs, and the last stage is for the most part over a grassy prairie (grass one foot high and over, of the reed variety, but excellent forage). The Turks avoid this route, along which the inns are kept by Chinese, and take a route of their own. As several of the carts seen had no tires to the wheels, the alternative routes would seem to be over an easy soil. The camel-road from Huan-lu-gan (Hami oasis) to Yui-min-hsien keeps under the hills, where grass occurs.

There would appear to be no difficulty in laying out several cart roads over the desert, as water can generally be found close to the surface; soil, gravel or sand. The hills met with offer no steep inclines, and are traversed by wide valleys. They bear evidence of water action and rain of tropical force. The brackish water is potable; the roads could be stacked with grass, and provisions procured from Hami, Sachu, Ngan-si-chau, and Yui-min-hsien, &c. The general character of the road over the desert is the same throughout, viz. two cart ruts 6 inches deep, generally over a sandy gravel; at times over rock, and at times the gravel is more stony than at others.

In the suburb and old town of Hami are some 5000 souls, and in the Mohammadan town about 2000 souls, Taranchis, wearing turbans and the Turkish dress—unmistakable Turks. The shops in the old town are small, but well stocked with goods, chiefly Russian.

The indoor temperature at Hami (elevation 2600 feet) in June varies between 80° and 85° . The greatest heat experienced in summer is about

100° indoors and 122° out (in the shade). The winter temperature is bearable (8° F.). Snow or rain rarely falls to the south of the Tian-shan, from Hami to Toksun, but to its north both fall abundantly. The oasis produces wheat, millets, barley, maize, melons, water-melons, pumpkins, grapes, and various fruit. Opium is also produced. Its melons are famed. Russian merchants have been established here for six years. They receive consignments of miscellaneous goods, cottons, hardware, sugar, soap, candles, lamps, clocks, matches, vodka, &c., from Moscow, Nijni-Novgorod, Omsk, and Tomsk, viâ Biisk and Kobdo, where they have a branch house, two or three times a year. They employ their own camels. At Uliassutai there are four Russian shops, and at Kobdo, three; the Russians indeed supply all the out-stations of China with wines, tobacco, hardware, candles, cloth, cottons, &c. They report the Mongols to be an easy people to deal with. From Hami nothing is sent back to Russia; transactions are in lump silver. Uliassutai and Kobdo are each about 22 to 23 camel stages distant. Everything is very dear except flour, which costs 1 tael the picul (133½ lbs.) The town is well supplied with coal; also pine wood from the Tianshan, 30 miles distant.

Colonel Sosnoffsky crossed the desert in August by an alternative cart route. If his report be a true one, the line taken by him is far to be preferred to the main caravan route taken by myself, but this is not likely. Throughout his journey from Han-chung he appears to have slept a good deal in his cart, a more dignified thing to do in China than to ride on horseback, note-book in hand.

At Hami the two cart-ruts already described open out into four; two going to Kulja, or Ili (800 miles), two to Kashgar (1200 to 1300 miles). Here also a good camel road joins in from Peking, distant by it 1250 to 1300 miles. It passes through the desert, and supplies have to be carried; but, as camels can be levied from the Mongols, it is a practicable military route for an Eastern army; the journey is one of 70 to 80 days' duration. It is, however, chiefly used for the conveyance of war *matériel*.

From Hami I took the Ili road as far as Hunga-Miotza or Urumtsi, 408 miles, crossing the Tian-shan by its most easterly pass, a very easy one, elevated 9000 feet. Barkul is reached in 3 days, over a rich pasture country beyond the pass; the Barkul oasis is a small one, but is capable of being largely extended. At present its farmsteads are in ruins. From Barkul, for 130 to 140 miles, the Tian-shan range is traversed by an easy cart track, leading through natural valleys, with good pasture here and there, but otherwise all desert. Pines are plentiful in places under the northern snow-clad crests. On leaving the hills, to Hung-Miotza, 200 miles, a few towns are met with, and at intervals desert, pasture, and most fertile oases alternate. These well-watered oases are paradises of birds, trees, and vegetation, and the richest that we passed through, richer than those of Western Kashgaria, Kashgar, and Yarkand. They are only in part reoccupied. Towns

and villages are in ruins, and a rank growth of high grasses chokes many of the fields.

Hung-Miotza or Urumtsai, is now the capital of the province of Sin-Kiang, the new Chinese frontier province formed to include Kashgaria, Outer Kansu, Ili, Zungaria, &c., and extending to the Russian border



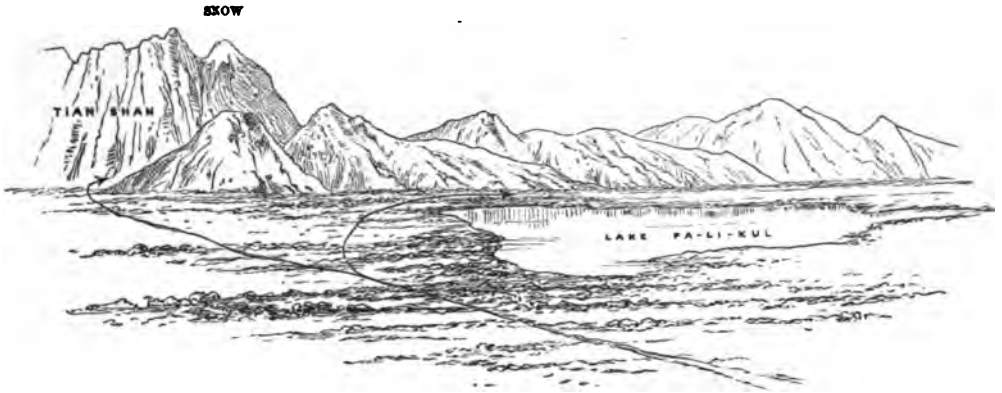
NEIGHBOURHOOD OF URUMTSI.

and Mongolia. Here the Chinese have concentrated their chief military strength, and here they are building a new city, and what they think to be an impregnable walled town; unfortunately they do not possess the military knowledge to see that they are occupying an indefensible site; there are some 2000 Taranchis here. One meets few Chentus (Turks) till Karashahar is reached, in the interval they are sparsely scattered, but get more and more numerous as Hung-Miotza is left behind. Neither are Tunganis, Chinese Muslims, met with in any numbers eastward of Karashahar; the Chinese are colonising the rich oases; they may serve to form excellent Russian subjects in the future. The cart road leads on to Ili, about 400 miles distant, and presents no difficulties, passing through a varied country, resembling that between Barkul and Hung-Miotza, desert and oasis, becoming more hilly and barren towards the descent into Ili.

A few more details may be interesting. From Hami a gravelly glacia reaches to the foot of the Tian-shan, 30 miles distant; thence the road winds up one of its stony ravines, averaging 150 yards wide, by a gradual ascent, i. e. from 5700 feet to 9000 feet in six hours; the hills are of indurated shales, the top slopes of which are clothed with pines, larch, and juniper; the descent is steep, and amidst clay hills, to an exceedingly rich pasture valley (elevation 6750 feet), whence an easy road continues down the widening valley, the pasture becoming less rich, to Barkul, the Chinese Pa-li-kul (elevation 5300 feet) distant 85 miles. The place consists of the Manchu and the Chinese cities, the former occupied by 1000 Manchu and 1000 Chebing soldiery (local militia); the latter by 1100 Chinese and 70 Tunganis. Camel roads lead to Kobdo, Uliassutai, and Kwei-wha-cheng—18, 22, and 54 to 58 days off respectively. Officials get

to Kwei-hwa-cheng in less than a month by the official route. Carts can go to Uliassutai. The elevation of the lake is about 5100 feet.

A cart road leads over the hills to Pechan and Turfan. From Barkul the road continues over the basin in which the lake lies, skirting the



PA-LI-KUL (BARKUL).

low, rocky and barren outliers thrown out from the main Tian-shan range, and at 19 miles beyond Gu-kei enters low gravelly hills, and finds by natural valleys, 100 yards to 400 yards wide, an easy passage through them, rising to 7320 feet. The Tian Shan here lowers in elevation, and is not snowclad. To the north and south, the hills, confused masses of cones of gravel, clay, and shale, afford pasture; springs are not plentiful, and streams almost wholly wanting. Nearing Spi-kho, 177 miles (elevation 5300 feet), the highest flat-topped part of the Tian Shan range, which again lowers considerably here, is traversed at an elevation of 5400 feet, and a view obtained over the Gobi to the south. The falling slopes are here barren and broken, and an easy passage down the valleys looks likely; indeed a cart road finds its way amongst them to Turfan, which is reached in five days; the hills 10 to 12 miles to the northward rise to a considerable elevation.

Baron Richthofen describes how, there being no outlets to the ocean for the silt brought down by the waters between the Kuen-lun and Tian Shan ranges, these results of denudation are washed or blown into the valleys, and the country is buried in its own detritus. I found this supposition to a certain degree true in all parts of the Tian Shan and its foot ranges traversed by me along the line Barkul, Hung-Miotza, Toksun, Karashahar, Aksu, and Kashgar; all the valleys and ravines are filled up, so that they are traversed by natural inclines, and the narrow rocky bottoms, the result of water action, are unknown; but the filling in is often of a size and nature—gravel, sand, and shale—to suggest other action than that of the wind alone as the levelling agent.

The hills are rocky and splintered ; of loose and rocky shale, and all are rounded in outline. There is pasture in the clayey bottoms, and ruined hamlets here and there. The lower range of hills here fronting the Tian Shan are rounded in outline, and covered with grass. Snow now again occurs on their summits. Wild sheep, mutton, antelope, and gazelle are found within them, and, they also say, wild horses. Before reaching Sang-kong-hsien (elevation 4850 feet, 216 miles), the Tian Shan are left behind, and their northern glacis traversed by an easy track, affording camel-grazing and pasture at intervals. After crossing the Mu-lai-ho, 240 miles, extensive oases of cultivation and pasture occur at short intervals.

Gu-chen is a place of importance and trade (elevation 2650 feet, 240 miles), occupied by 1000 Chinese, 25 Manchu, and 40 Turk families, with a garrison of 500 Hunan braves and 500 local militia.

Camel roads lead over the desert to Chuguchuk and Kobdo, and to Peking, 78 days ; to Uliassutai, 22 to 24 days. Camel roads also lead to the Zaisan prefecture ; water is scarce along them, and that by Biisk, over the Altai, is to be preferred. Coal is plentiful in the Tian Shan, both bituminous and a natural coke. The bullocks of the country are of a fine stamp and numerous, and the watch dogs, guarding the camel caravans met with at intervals, are exceedingly savage, and twice I had to canter for life with three or four of them jumping up and snapping at my legs and horse's nose. The feature of the landscape for many days before reaching Urumtsi is the Bogdo group of three uplifted snow-covered peaks of considerable grandeur.

At 16 miles beyond Fu-khan (elevation 2000 feet, distance 270 miles) the glacis plain penetrates into the main range, which here wholly breaks away, and through a cultivated grassy and wooded valley, the undulations overlooking Hung-Miotza (elevation 2900 feet, distance 408 miles), are reached. The town has a side of about 1000 yards, and contains a population of 20 Chinese and 100 Turk families, besides 1000 Chinamen without their families ; its shops, large and small, number 500, many of them kept by men from Hunan, and many by Turks and Chinese from Su-chau and Ping-yang.

It is the headquarter town of the Sin-kiang or New province. The town occupies a unique position in an undulating valley five to seven miles broad, penetrating into the Tian Shan range, the ground rising to the south of the town to form the watershed. Coal costs $1\frac{1}{2}$ to $2\frac{1}{2}$ taels per 1000 catties (1333 lbs) ; flour 2 taels the 100 catties, and all provisions are about twice as dear as at Gu-chen. The winter is here severe ; three feet of snow lies, but does not block the road to Ili. It falls in May.

Urumtsi, the " Bish-balik " of the middle ages, has played an important part in history, and must always do so, because of its position on the Peh-lu the chief route from Zungaria to China, and commanding the

Nan-lu from Hami to Kashgar. Here the Ili route was left, and the Tian Shan recrossed to gain Tok-sun, 103 miles distant on the southern road from Hami viâ Turfan and Aksu to Kashgar. Between Urumtsi and Ili there are no passes fit for carts over the Tian Shan to Aksu and the southern road. The only passes for pack animals leading through Chinese territory are the Mustagh and Yulduz routes. The donkey transport is of an excellent stamp.

Imperceptibly from Urumtsi the road gains the watershed, and finds an easy passage over foot-hills of the Tian Shan, which range, indeed, is here, as stated, wanting altogether. The highest elevation reached is 4400 feet—hills, of shale with veins of felspar. The route is generally a barren one to Toksun: distance 103 miles; elevation 350 feet. High winds blow across the re-entering plain and over the depression, but little rain or snow falls in the locality. Hills rise out of the gravelly skirts of the range, which have been formed by the filling up of all the intervening valleys. Amidst this gravel occur now mica, felspar, and gypsum. Shale is held up in fan-like masses against some of the slopes, and all valleys are flat-bottomed.

Toksun is a town of military importance, and Kashgaria may be said to be here entered, for although Yákúb Beg extended his authority over Turfan and Hung-Miotza, yet nothing to its eastward was held except under a precarious sway.

The population consists of 400 Turk, 200 Tungani, and 15 Chinese families. Its climate is hot and oppressive. The oasis is a small one, lying in the lowest depression of this section of Asia. Toksun is elevated 350 feet, Hami 2600 feet, and Lobnor 2200 feet. Cotton thrives, and is of an excellent quality. The oases of Kashgaria are well suited to its growth. The direct cart road runs through Turfan (40 miles) to Hami (270 miles) keeping south of the Tian Shan, along its glacis or through its gravelly and shaley foot-hills. Lob-nor is reached in eight days.

From Toksun to Karashahar (150 miles) a hilly country is chiefly passed through—offshoots of the Tian Shan; road heavy for carts, over sand and shingle, and chiefly through deserts, the oases passed through being of very limited area and poorly occupied. Mosquitoes occur in myriads as soon as the wastes bordering the Baghrash lake are entered; they nearly killed our horses. The road is a natural one, over the gravelly and sandy slopes of hills and through the beds of the broad-bottomed basins; all is barren. During the second stage it is bordered by high perpendicular cliffs of indurated clay rock, and lies along a brackish stream, at times a torrent carrying everything before it. Granitic boulders occur towards the top of the highest pass crossed, i. e. 5600 feet. Kamish and Ushtaba are small oases, and Chinzi-kurza is a small village of twenty to thirty huts and a few shops. Near Kamish the low hills are of indurated clay, forced up by granite and gneiss. Water is fairly plentiful along the route, and of good quality.

All the valleys amidst the shaly hills and hillocks traversed are as heretofore filled in with shingle and triturated shale; near Ushagu the filling-in is granitic; it is more generally of shale. The Tian Shan, and these its offshoots, would be very difficult to traverse were it not for the natural roads thus formed over and through them. To the westward of Chinza-kurza several (four) well watered and wooded but narrow and unoccupied oases are traversed. This was the best timber seen along the whole line. The traffic met was not large—only one solitary traveller and a few carts.

The water of Baghrash lake is said to be fresh, and to be chiefly fed by springs rising in Tacheng, 30 miles from Wo-ho-bola, a station in the pass. It abounds in fish. We crossed streams at Ushtaba (212 miles), Chinza-kurza (236 miles), and between it and Karashahar.

Nearing Karashahar grazing gives way to cultivation, flies suddenly take the place of mosquitoes, and the poppy thrives. The oasis is chiefly a pastoral one. Mongols principally occupy the town and vicinity, and the hills to the north. The town, which lies on the left bank of the river, about 40 miles from the foot of the hills whence it flows, has a side of between 400 and 500 yards, with a surrounding rampart of mud with flanking bastions. It contains 460 Tungani, 250 Turk, 100 Chinese, and 400 Mongol families, with a garrison of 500 Mongol cavalry and 500 Shensi braves. In the vicinity are 1000 to 2000 Mongol families.

The reason for the existence of the town would seem to be to supply the wants and the requirements of the nomads of the Tian Shan and towards Lob-nor, and because of the strategic position it occupies. The country to Hung-Miotza produces little, and is a heavy ten days' journey for carts. By a hilly pack-road it can be reached in six or seven days. Lob-nor is ten days distant; grass is found on the road, but water is scarce. Ili is reached via the Narat Pass (10,600 feet), the Ungut Pass (6800 feet), and the Upper Kunges valley, a distance of about 280 miles. From the Narat Pass Urumtsi is also reached, distance 309 miles (180 miles from the Narat Pass, which is 173 miles from Kulja).

From Karashahar, Aksu, 373 miles distant, was reached in fourteen days; their respective elevations are 3550 and 3750 feet.

Karashahar is the natural eastern limit of Kashgaria, Toksun being its outpost to the east. On its west lies the difficult pass leading to Khur, 33 miles off, whence the 340 miles to Aksu consists of much desert, a little pasture land, with oases at intervals, some of them large, i. e. Kuchar, Bai, &c., producing grains and fruits plentifully. The Karashahar river, or Haidin-kua, or Kaidu-gol, or Koncheh-daria, has a width at the city of about 500 yards; a sluggish current, yellow, and loaded with silt; average depth 3 feet, with 2 feet of banks showing above this level. The high reedy grass, the characteristic of

the country on this side of Hami, and south of it, on the deserts towards Su-chau, grows abundantly to a height of 2 feet 6 inches; beyond the river, passing a ruined city, sand-hills soon occur, and beyond Szuni-Chenza, 14 miles, the road gradually descends. Skirting the river Karashahar, the rocky, steep, and barren hills are entered, the road becoming a broad and undulating ledge on its right bank, and at 32 miles the fertile oasis of Khur is reached (elevation 3100 feet). The pass and the approaches to it on either side are easy of defence; in the pass the river is a rapid torrent; coal is found in the hills, and pits are worked by the roadside. The town contains 2000 Turk, 50 Tungani, and 10 Chinese families. We here see how the Turks predominate in numbers, and therefore judge that the true Kashgaria is being entered. Twenty-five Mongol cavalry garrison it. Corn is largely grown in this rich oasis, and is the chief grain given to horses. The mulberry tree grows plentifully, as well as in all the oases to Kashgar. Ili can be reached by bridle-paths through the hills in five days; grass is plentiful within them.

The route to Sa-chu by Lob-nor, and that by Lob-nor to Khotan, are not now in use; and to exemplify the general ignorance of the Chinese of geography, I may state that their idea is that the waters of Lob-nor flow under the sand to issue again near Sa-chu and Barkul, and to flow thence into the Yellow river. This would mean that the water flows up hill, for the level of Lob-nor is 2200 feet; of Barkul, 5100 feet; Sa-chu, 3700 feet; and the Yellow river at Lan-chau-fu, 5500 feet.

The Kunges and Yilduz Valley route to Ili is described by Prejevalsky, and the country between Korla, Lob-nor, and the Altyn-tagh mountains, 13,000 to 14,000 feet high, by Prejevalsky and Carey. With well equipped caravans there is no difficulty in traversing these inhospitable regions.

Beyond Korla the cart road runs along the foot of the barren hills skirting the oasis, which is about 10 miles long, when all becomes a desert waste of sand and gravel, with the exception now and then a growth of tograk trees and tamarisk. Cherchu is a small oasis occupied by 30 Turk and two or three Tungani families, at an elevation of 2900 feet, beyond which the road again continues over a plain of sand and gravel and amidst low sandy hillocks. Tamarisk and a coralline shrub plentifully cover it, and at intervals tograk woods are traversed; the woods are crowded with mosquitoes, which insect, however, ceased to be a pest at Khur. Yeh-in-go (91 miles) is a small oasis, capable of extension; the same may be said of Chedir (101 miles), whence to Yang-i-hissar is through bush, or a growth of grass. The large village and oasis of Yang-i-hissar (distance 118 miles, elevation 3370 feet) is occupied by 800 Turk and five Chinese families; wheat and the poppy are largely cultivated. The population of these oases I calculate to average 200 per square mile. Thence to Bugur, with the exception

of a little grass, the country is barren; this is a large oasis occupied by 1500 Turk, 15 Tungani, and eight Chinese families. The waters of all the streams irrigating these oases are warm, and loaded with silt, although their sources in the snow-clad hills are not far distant. The indoor day temperature reaches 90°; that of the night, still influenced by the snows of the Tian Shan, falls to below 70°. Seven miles out of Bugur the river Chan-bar-kai-chor is crossed, a rapid stream two feet deep, with a bouldery bed, rapid current, and difficult to ford; it is said to fall into Lob-nor. Five miles beyond it cultivation ceases, and a gravelly waste is traversed to Yangi-ábád (elevation 4600 feet, distance, 164 miles). Here live 270 Turk families, amidst muddy streams, ripening fields of corn (June), and a luxuriant growth of Indian corn and poppy. To Yaka Arik (29 miles) the waste grows nothing but desert shrubs and tamarisk.

Some of the Chentu women simply wear a handkerchief tied lightly round the head and falling behind; others wear fur hats of a dark brown colour (like seal-skin), pyjamas and loose blouse bound round the waist; the latter, of chintzes, generally part red, which is a favourite colour. They have the Mongol class of face, that is, round and bloated; but not so the men, who generally have thin faces and features. They call themselves "Hassan," i. e. Shiah Mohammadans. All ride, and the women then wear top-boots. Many of the boys are good-looking and slim, with olive complexions, aquiline features, fair eyes, and brown hair. It was pleasant to look upon the comely, buxom, good-looking Turk woman, after that distressingly hideous deformity of her sex, the Chinese woman. Woman in Kashgaria takes her proper place and does her proper work. She never dreams of hiding her rosy cheeks and large black eyes. The men are tall, 5 feet 9 inches in height on an average, and well made, and the women also have good figures. They develop early, marry young (12 years), and make helpful wives; a family of five or six children is common. The people thus multiply rapidly, and will in a few years overflow their present limits into Kansu, and history would seem likely to repeat itself and the people of Kashgaria to return to repeople Kansu if only a long interval of peace ensue, and they become tributary to an aggressive power. A man marries as many wives as he can afford; they are cheap, costing but a few clothes and 15 rupees each. Temporary marriages are the custom. I heard of a woman having had thirty-six husbands, and thought it no shame. This is bad for the children and the country, and the result of centuries of Chinese heathen rule.

Excellent milk, cream, curds, fowls, and eggs, can be obtained in abundance in the oases; sheep, goats, and cattle are fairly plentiful. Some of the inns are of a superior class. From Yaka Arak small unoccupied oases extend at intervals to Kuchar, a walled town in a rich oasis occupied by 3050 Turk, 1200 Tungani, and 30 Chinese families.

There are in it 300 shops kept by Turks and 150 by Tungani and Chinese. No English cloth is sold here. Kashgar and Russian cottons find a good market. In the district are said to be 7000 Turk families. Copper ore is found in the neighbouring hills in nodules and concretions in red and white sand, or a sandy clay. The ore from about Aksu occurs in thin layers of a dark-brown colour. The Turks have plenty of donkey and pony transport; mules are rare.

Beyond the oasis the road ascends the barren skirts of the range here running across the front, and passes through a sea of low and intricate sand-hills, formed by water action on an elevated level of deep sand, by a broad and gently inclining roadway. The top of the pass has an elevation of 5000 feet, beyond which the broad shallow Muzart valley opens out to view for many miles; in it lie several oases, amongst which the road passes through Khwordza (elevation 3950 feet), Bai-chen (elevation 4150 feet), Selimu and Charki (elevation 4770 feet), whence its barren border hills of indurated clay and sand to the south are traversed by a natural ravine with, as usual, its bottom filled in level with gravel and sand; beyond, a broad basin of coarse felspathic sand leads to Yargum, a small village of 30 Turk families, elevation 4050 feet.

In the town of Bai-cheng are 1100 Turk and 140 Tungani and Chinese families, and in the district 40,000 souls; in Selimu and district are 4000 Turk families. Beyond Khwordza lies the Kizil-su, 100 yards wide and one to two feet deep, a branch of the Shah-yar, and beyond Bai-cheng seven streams are crossed—each rapid, one to two feet deep and from 100 feet to 100 yards wide—before the Muzart is forded, a river 400 feet wide, rapid, and $2\frac{1}{2}$ to 3 feet deep. Its valley is well cultivated and irrigated, with good grazing, 30 miles broad, and remarkable for the fine clumps of dark green poplars growing about several of the villages.

From Yargum the road passes through a growth of tamarisk and through cultivation to Yamatai or Jam, a village of 140 Turk families, and thence through cultivation to within a few miles of Aksu, before reaching which a barren sandy plain is crossed. The ground becomes uneven at Aksu, and the town, 373 miles from Karashahar, lies in a hollow surrounded by sandy clay cliffs. Houses mount up their sides; all are built of clay, flat-roofed, low, and entered by narrow doors—a very poor class of dwelling; the town looked squalid and a hotbed of disease, such as fevers and small-pox. Goitre and eye diseases are also prevalent. In the Aksu circle are 180,000 souls; its district extends to within three marches of Maralbashi and two of Bai. In the town are 4010 houses; there are 100 foreign traders here (mostly Russian subjects, Andijani), three only are Panjabi; an Afghan Aksakál or agent looks after their interests.

Rice is largely grown in the valley; apples and apricots and fruits generally are abundant in season, and in July the markets were well

stocked with vegetables. In my passage through the bazárs a Chentu accompanied me, informing the curious that I was a Farangi, i. e. one of a race known as the conquerors of India, and the successors to the inheritance of its Moghul dynasty; of which I hope my readers are as proud now as I was then, for this fact connects the British in the mind of the Oriental with the dynasty of Chenghiz and Timur. A Chinaman or a Mohammadan Chinaman, a class who have retained all the facial and other hateful characteristics of the Chinese, such as pride and impudence, would, however, never fail to equally proclaim that to him I was a *yanquesah*, a "foreign devil."

The Turks are not considered to be brave; they like the Chinese, who do not interfere with their religion or customs, and give them their daughters in marriage. The country needs to be fostered, and this the Chinese do not do. They take what they can, one-tenth of the produce, and one-fortieth of the value of the merchandise sold, but do nothing to improve the country. Rule scarcely exists, and money is all powerful. The Turk Beys, who work as sub-officials under the Chinese, themselves oppress the peasantry if the opportunity offer. Both English and Indian goods are sold in the bazar, coming by way of Leh; but prices are unremunerative, and trade is not brisk; as the Chinese buy little and never make presents; the rich Turks are ruined, and the peasantry have no silver. The Russian cottons and chintzes sold far outnumber the Indian varieties. They are of thicker texture, brighter and faster colours, and more suited to the cold of Aksu, elevated 3750 feet. The Chinese have built a new and fine walled city, 7 miles from the Turk town. The work was done chiefly by forced labour at a low rate, and it is said that several hundred men died during the construction from accidental causes; the Chinese are oppressive in this way at times.

From Aksu to Kashgar by the cart road is 310 miles, the intervening country consisting of forests, deserts, and oases, some of the latter of considerable extent. The stretches of forest are 30 to 50 miles wide, and must be passed by forced marches at night; from dawn till dusk horse-flies occupy these tracts in millions, and the horses suffer fearfully. A few details of the route may be interesting. From the Chinese city of Aksu, the road passes through cultivation for 3 miles to the Janart valley, the stream flowing in a broad shallow bed bordered by low cliffs of clay; several streams, 100 and 200 feet wide, with rapid currents, are crossed before the main stream of the Janart, 300 yards wide, is reached. It is crossed in a ferry boat, the horses swimming; thence the road, often winding and narrow, traverses cultivation before reaching I-crow, a village of 500 Turk families crossing a meadow stream 50 to 60 yards wide by a rough combination of earthen piers and waterways. Wheat is harvested here in the middle of July.

Two and a half miles beyond Soi Arik (elevation 3500 feet, distance

31 miles), a desert waste is entered, with a saline soil in places, and a sparse growth of tamarisk, which continues to Chilian, a village of 30 poor houses on the confines of the Maralbashi district; continuing over a more or less barren waste, and passing through Jaidi, a few huts and a little grazing, the track often heavy, and amidst sand-hills or tograk woods, traverses the stations of Yaka Kuduk and Chadir before reaching Tumshuk (elevation 3600 feet, distance 120 miles), a village of 40 Turk families drawing its water supply from a pond. From Jaidi the country is almost unwatered by streams; thence the track winds through forests and amidst sand-hills to gain a passage through the low hills here stretching across the plain.

Before reaching Chahar-Bagh (elevation 3600 feet, distance 138 miles) the Kashgar river is lost in canals and streams which here intersect the country: grazing is plentiful, and it would seem possible to reclaim land here and to Maralbashi before reaching the cultivation of which oasis (distance 154 miles), the Kashgar river, a sluggish stream flowing in a sunken bed 50 feet broad, is skirted.

Maralbashi is a walled town, with about 2000 Turk families living outside its walls. Indian merchants trade here from Yarkand, bringing cottons, tea, pepper, ginger, and sugar, &c. Those settled in Kashgaria like the country, because of the facilities, already mentioned, of taking many wives; a poor man can afford to keep two, whilst in India he can only keep one.

The present rule is preferred to that of the Badaulat, Yakub Beg; it is a slack one, and the Indian traders complain of being unable to recover bad debts, and of the cost of buying justice, and of the confiscation of their teas. The indoor temperature in July rises to 85° at 9 a.m., and at 9 p.m. is about the same, but reading 95° in the open air.

The oasis is comparatively a poor one, but is well watered. Leaving it at 4½ miles, a more or less barren country, with stretches of tamarisk growth, and of forests infested by horse-flies, with stations at intervals, is crossed to Faizábád (elevation 3920 feet, distance 265 miles), a village of 450 scattered houses, each accommodating two or three families; it is noted for its local cottons. Passing through the rich oasis of Shabdár, the road crosses a rapid stream at 16 miles, into which our carts upset in the darkness of the night, the stream having washed away the road; and keeping a mile or two to the south of the Kashgar river, reaches the Yangi-shahar of Kashgar, whence it is five miles to the Turk city, a collection of mud huts and enclosures, with trees plentifully scattered here and there, without any building of architectural beauty, and perhaps but one of interest, i.e. the mosque raised by the Kashgarians to the memory of the Badaulat.

The Turks are poor architects; their mosques are most primitive constructions, as a rule, and their minarets are crooked and winding. Here pack roads radiate to Ili, Osh, and a cart road to Yarkand, Ladakh,

and India. The most direct road to Ili is via the Terek Pass, which is a fair pack-track; the easiest road is that via Chakmak and Chadir Kul. Carts can reach Chakmak, and but for low passes, over which it would not be difficult to construct a cart-road, they could reach the Russian postal cart-road at Narin (180 miles).

The Osh roads leading to Fergana are pack-tracks, difficult to cross in the spring from the melting snows and in the autumn from swollen streams. September and November are the best trade months. The cart-road towards Leh leads to Kargalik (235 miles), whence it is a pack-track to Leh (400 miles) and Srinagur (660 miles).

A Russian Consul is settled in Kashgar, with an escort of fifty Cossacks under two officers. He is assisted by a secretary, and has his wife with him. The detachment is not in favour with the people. In the Kashgar district there are said to be 160,000 families, and in that of Yarkand 300,000 families. A fertile district lies between these two towns, and the latter (Yarkand), a town of 29,000 families, is the centre of trade from India. Goitre in Yarkand is extremely prevalent, almost universal.

The stouter Russian cottons and chintzes sold here, as elsewhere, are preferred to the finer Indian varieties; they are cheaper, and look to be of better quality, so that they are even retailed by Indian merchants. Chinese tea alone is allowed to be sold, and there were in 1887 some 300 to 400 horse-loads of Indian tea practically confiscated. The Kashmiri shops had been closed in the Turk city and ordered to be re-opened in the Chinese walled town, much to their disgust. I have never heard whether they were actually opened there, or whether money bought a remission of the order.

There are reported to be some 15,000 souls in Western Turkistan who look to England for help in trading, viz. Badakshis, 8000; Kashmiris, Pathans, Hindustanis, 3000; Baltia, 2000, &c. An Englishman in Western Kashgaria is regarded by them all with esteem, as belonging to a nation able to help them. At least this was the impression I formed from their words and their uniform attention and kindness.

We have many advantages to gain by organising the Oriental trading material at our command. Enterprising Kashmiris are found in Western Kashgaria in large numbers, as stated; and as in Nepal, Tibet, and parts of Central Asia, they carry on a large trade with India. They are the chief merchants in Lhassa, a centre of communication and of influence. Pathans also exhibit great trading enterprise, and are found as far east as Aksu. Shikapur Hindus are scattered over Russian Turkistan, where they chiefly, however, live by usury. By associating these scattered elements with large Indian and Parsee firms, and by regularising our trade with China on the footing of that enjoyed by the most favoured nation, much good might be effected.

Several roads lead from Yarkand into Kashmir. The Mustagh route,
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some twenty or thirty years ago, was the shortest; it is now closed by glaciers. The Kugiar road is a good one; there are no high passes on it, but during August the streams met with cannot be forded. The Kilian route is now in universal use, by order of the Amban. The Sanju road is the best, but is not allowed to be taken by traders; there are, comparatively speaking, no high passes along it, and it is better than the Kilian. The Khálik pass is described as the most difficult of the four.

Taking the Kilian route, the cart road is followed to Kargalik across a fertile district; thence the pack track commences; the animals most suited to it are the Bactrian camel and the Yarkandi, Badakshi, and Kirghiz ponies. All have to be trained to endure its hardships; still to them, even, it is a passage through "the valley of the shadow of death," for remains of their fellows are strewn along it at every 500 yards during a considerable part of the route. It should be made into a good track three feet wide; a few seráis should be built and stocked with grain, and the growth of grass and shrubs encouraged at intervals. The chief passes along it are the Kilian, elevation 17,000 feet; the Suget, 17,100 feet; the Karakorum, 18,500 feet; the Sásir, 17,800 feet; Karawal Dawan, 14,100 feet; the Khardung, 17,700 feet, above Lq̄h. After crossing the Karawal Dawan, the Nubra valley is entered, and the traveller passes from death to life, for he will probably not have seen even a Kirghiz tent since leaving Shahidulla.

To summarise: Kashgaria must, I think, be considered to be an unnatural dependency of China, impossible to defend against Russia, so long as Chinese troops are not both trained and led by European officers, and communications by rail exist between it and the Wei valley, and with Peking. For it lies on the wrong side of the Gobi desert, an obstacle almost, if not altogether impassable to an army, if its only outlet, Hami, be held by an enemy; and impossible to cross at any time except by small detachments of troops at intervals of both time and distance, without very considerable preparation, such as the Chinese do not seem likely to give to it.

The chief points regarding the route connecting it with China, the Great Central Asian trade route, and main communication between east and west are: the great length of this one-cart communication—(1) Peking to the Wei valley 770 miles; (2) Wei valley to Hami 1322 miles; (3) Hami to Ili 800 miles; (4) Hami to Kashgar 1347 miles; i. e. 3439 miles to Kashgar, and 2892 miles to Kulja.

It is for very many miles suited for a single line of traffic only, passing through deep and narrow gullies in löess hills; unmetalled throughout, becoming impassable after heavy rain or snow; and even light rains halving the rate of progress over it.

It passes for hundreds of miles, between the Wei valley and Hami, to a great extent, through a depopulated and uncultivated country, partly

peopled by Chinese Mohammadans inimical to the Chinese Government, and who are thought to court the opportunity to again revolt; a people who have proved themselves to possess a prowess much superior to the Chinamen amongst whom they dwell, and by whom they are feared.

The people of Kashgaria, although not disaffected against their present masters, would not aid them against Russia, whom they are gradually being taught to regard as their future mistress; and the troops along the whole line are either of the Green Standard, i. e. Chinese braves, practically uninstructed, under totally uninstructed officers, of no value against a trained European force; or Chebing, i. e. a local militia, a force of negative value, because requiring to be clothed and fed.

Mr. Carey, who travelled through Kashgaria, considers that the chief characteristic of the country is its extreme poverty. "It may, indeed," he writes, "be described as a huge desert fringed by a few small patches of cultivation. In fact the only really good strip of country of considerable size is the western portion, comprising Kargalik, Yarkand, and Kashgar. To the north a succession of very small oases extends along the foot of the Tian-shan mountains, the stretches of intervening desert becoming larger as the traveller goes further to the east. The eastern extremity of the province is desert, pure and simple, and so is the southern extremity as far west as Kiria, with the exception of the small oases of Cherchen and Chaklik. The central portion is chiefly desert, excepting that pasture of a coarse and inferior description is found in the neighbourhood of the Tarim river and of parts of the Lob-nor system. There are probably many districts in India in charge of a single collector and magistrate which are richer and better worth having than the whole of this huge province, extending over not much less than 30 degrees of longitude and 6 degrees of latitude."

This will doubtless be the opinion of all who regard the Sin-kiang province as a unit of territory, and not as a part of an integral empire. The merchant or soldier, however, sees in it a territory fairly rich in the precious metals, producing cereals in abundance, besides cotton and silk, of a healthy and enjoyable climate, rich in all fruits—grapes, figs, apricots, melons, &c., and vegetables—well watered by cool streams, and supporting over two millions of a hardy race, of excellent physique: affording two secure lines of communication, both cart roads—the Peh-lu and Nan-lu—the natural and only lines of conquest and of commerce leading from the West to the East, from Russian Central Asia to the Central and South-western Provinces of China, and to fame and fortune.

True it is that cultivation is almost limited to the narrow strips of rich oases traversed by them, excepting as noted, in the extreme west (Kashgar, Yarkand, Khotan), but they suffice to meet all military requirements of good communications, can be stocked with supplies of food for man and beast, and pass through large towns capable of supply-

ing all the refitment requirements of an army. Its peoples are easily ruled, are not fanatical, and will, with assured peace, increase rapidly in numbers and constitute a rich store whenever emigration may be directed into neighbouring and under-populated regions—Kansu, for instance. It is certainly a possession not to be despised, one whose inhabitants have never had an independent past, but whose possible dependent future must surpass its most palmy days of old under Chenghiz Khan, when it attained its greatest degree of prosperity.

One cannot travel through Eastern Turkistan without forming a very high opinion of Russian enterprise. Russian goods, cottons, chintzes, candles, sugar, cutlery, &c., are found everywhere. Russian merchants settled in Hami, and dressed as Chinamen, in Suchau and Lan-chau, press the sale of their goods. Their cottons and chintzes, as already noted, are strong, well dyed, and suited to the country; could the lighter Indian varieties reach Toksun and Hami they might sell.

Acknowledging that Russia cannot compete with western nations for the maritime trade of China, Prejvalsky writes: "But in the provinces beyond the Great Wall, and, indeed, in the north-west provinces of China proper, Kansu and Shansi, the trade of which has long taken the direction of Mongolia and Tibet, we may be able to develop and consolidate our commercial operations." As the injurious causes operating against the development of Russian trade in Central Asia and China, such as the absence of large capitalists, insufficiency of financially sound trading firms, &c., are gradually remedied, competition with ourselves will become more keen and require on our part corresponding exertions. Throughout the journey I was struck with the want of British commercial enterprise in the interior of China, when compared with that exhibited by Russian Central Asian merchants.

British merchants are content to settle at the treaty ports, and to lose sight of their goods when once they leave them; but travelling for trade purposes is within our treaty rights, and there is always the fear that, if we do not avail ourselves of these rights for any length of time, the Chinese may be apt to consider them as lapsed; for China exhibits in a marked degree one of the characteristics of a barbarous people, viz. that of regarding intercourse with foreigners as a deplorable violation of that isolation which it is its greatest aspiration to preserve. She desires no reciprocity.

The solitary exception to our want of enterprise in Central Asia was Mr. Dalgleish, who deserved well of India, for in Yarkand his name stood high amongst all classes; the prestige gained for us by such men of enterprise and morality is great; unfortunately he was murdered whilst passing by the route I have briefly described between Leh and Yarkand, the year after I passed over. At Su-chau a European agent of the Chinese Imperial Customs Department is stationed to regulate Russian trade. In sending caravans to Lan-chau the Russians have stretched their treaty rights to the utmost. Goods left unsold on

arriving at Suchau may be sent inland to find markets, but eight tons of unsold goods which have never been unpacked is a somewhat large unsold surplus!

Poverty instigates Russian commercial enterprise, and wealth causes ours to retrograde; and throughout China, clerks and agents of Continental birth are supplanting those of the British nation, even in British mercantile houses. It is very necessary now that China should regulate her trade by European customs agencies at Kashgar, Ili, Uliassutai Chuguchak, Kobdo, Urumtsi, &c., that is, that she should add a frontier branch to the Foreign Treaty Ports Customs Department.

Commercial enterprise would seem to be a marked instinct of the Russian race, and the completion of the Siberian line of railway, and its connection with the Trans-Caspian line, will cause them to turn their attention to the construction of a feeder to it by the Kulja, or one of its adjacent inlets, via Urumtsi, Hami, and Su-chau to Lan-chau-fu, to gain the trade of the north-west, mid, and centre China, and another further to the eastward to Peking, if the Chinese do not do so. By such means she will add largely to her customers and to her imports and exports. These lines cannot be built without the conquest of trans-mural China.

Prejvalsky's last utterances show that he travelled not in vain, and that he justly appreciates China's weakness in the west, resulting, amongst other causes, from want of rapid communications, and his views on the necessity of a Russian occupation of Kashgaria are very plainly expressed. He considers the leading characteristics of Chinese rule there, to be "crying injustice, espionage, rapacity, grinding taxation, tyranny of officials—in a word, entire absence of all ideas of legality in all administrative or judicial matters." My impressions do not altogether agree with those of the eloquent explorer quoted. The Chinese have learned a lesson from the late rebellion, and now treat the Kashgarians well. They are lightly taxed, as content as they can be in a country wherein no law exists, and as wealthy as they can expect to be without an increased trade. They are lax Muslims, and have in Kashgaria a Muslim's paradise on earth, where a poor man can afford two wives; to gain these joys they are content to put up with their masters, to whom they even give their daughters in marriage. They fear the advent of the Russian tax-gatherer, and prefer to suffer a little injustice to the certain evils of his presence amongst them. In proof of what I say, all the Indians I met with praised the Chinese rule, and have settled permanently in the country, preferring it to India.

Mongolia is equally at Russia's mercy, granted that she pushes on her communications and China does not. Mongolia gives easy access to Chili and Shansi, and Kashgaria to Kansu, the rich Wei valley and Thibet. Good communications alone can make these provinces defensible in the future, and China is slow to perceive their necessity.
