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SECRET COLLECTION

OF

GEOGRAPHICAL, TOPOGRAPHICAL AND STATISTICAL
MATERIAL

CONCERNING

ASIA.

VOLUME LXXIX.

EASTERN BOKHARA.

A

MILITARY AND GEOGRAPHICAL DESCRIPTION

BY

LIEUTENANT-COLONEL SNYESAREF,
RUSSIAN GENERAL STAFF.

PUBLISHED BY THE MILITARY-STATISTICAL DIVISION OF THE HEAD
QUARTERS DEPARTMENT OF THE RUSSIAN GENERAL STAFF

AND

TRANSLATED IN THE INTELLIGENCE BRANCH, DIVISION OF THE CHIEF
OF THE STAFF, SIMLA.

1906.



SIMLA :

PRINTED AT THE GOVERNMENT MONOTYPE PRESS,
1909.

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CUSTODY AND DISPOSAL OF SECRET DOCUMENTS ISSUED BY THE CHIEF OF THE STAFF.

1. This document is to be treated as a "SECRET" work, and will be kept in the personal custody of the official to whom it is issued or subsequently transferred, in accordance with the orders contained in King's Regulations and the Official Secrets Act.

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4. Attention is directed to the letter reproduced opposite.

Copy of a letter from the Adjutant General in India, to the Lieutenants-General Commanding, No. 654-A., "Officers—Discipline," dated Fort William, the 17th March 1904.

It has come to the notice of the Commander-in-Chief that notwithstanding the very clear and precise orders which have from time to time been issued to ensure the secrecy of documents, there have been instances recently where the most reprehensible laxity has been shown in the observance of those orders.

2. This laxity can obviously only have arisen from a want of adequate appreciation of the responsibility resting upon those to whose care these important secret documents have been entrusted, and in order that there may be no misunderstanding in the future as to the serious nature of these responsibilities, the Commander-in-Chief wishes all concerned to be informed that he intends to take the severest notice of any future neglect of the orders.

3. Under His Excellency's directions a copy of this letter will be attached to all documents, the secret nature of which may necessitate their being issued for the personal information of those concerned.

PREFACE.

This translation is made, as the title-page shows, from one of a series of secret compilations by the Russian General Staff. It is not to be quoted in any but secret correspondence and then only when such correspondence is addressed to the undermentioned departments to which one or more copies of the translation are now issued:—

India Office,

Department of Chief of the General Staff, War Office,

Intelligence Branch, Division of the Chief of the Staff, India.

The author, Lieutenant-Colonel A. Y. Snyesaref, who belongs to the 1st Life Grenadier Yekaterinoslaf Regiment, was born in December 1865, entered the service September 1887, passed through the Russian Staff College in the first class in 1899, was promoted from "Staff-Captain" to Captain in April 1901, and from September of that year to November 1904 was on the Staff of the Turkistan Military District. During a part of this period, *viz.*, from June 1902 to November 1903, he was in command of the Pamirs Detachment. In December 1904 he became Lieutenant-Colonel and in the previous month was transferred to the Head-quarters Staff at St. Petersburg. On the separation of the General from the Head-quarters Staff in 1905 Lieutenant-Colonel Snyesaref remained with the former, in which he is now employed in the 3rd Sub-division of the Intelligence Division. That Sub-division is responsible for the issue of Intelligence compilations.

Accompanied by Lieutenant-Colonel A. A. Polevtsof, he visited India *viâ* Gilgit in 1899, arriving at Simla as the guest of the Government in October, and proceeding thence *viâ* Delhi, Peshawar, Lahore, Agra and Benares to Calcutta where he embarked for Colombo in the last week of December.

He is the author of "India: The Chief Factor in the Central Asian Question," an *anti*-British work published in 1906. In 1908 he lectured at St. Petersburg on the recent Anglo-Russian Convention which, in his opinion, is chiefly to the interest of Great Britain.

The Intelligence Branch accepts no responsibility for the author's statements or conclusions.

W. MALLESON, *Colonel,*
Assistant Quarter Master General,
Intelligence Branch,
Division of the Chief of the Staff.

SIMLA ;
6th May, 1909. }

NOTES BY TRANSLATOR.

From a note by the author it appears that lack of time and other reasons prevented the compilation of a special map to accompany the report. The Russian General Staff 40-verst map, therefore, has been used by him. The spelling of some of the names on this map is not accepted by him, and in cases when he differs he places the name as spelt on the map after his own rendering in brackets, thus :—Pakshif (Pakshiv).

The names of places as given on Indian Survey maps when they differ from the report are given, when they first occur, in brackets, thus :—Dorakh [Dorah].

Dates are O. S., *i.e.*, 13 days behind N. S.

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EASTERN BOKHARA.

(Map of the Colony of Turkistan, 40 verst to one inch, published by the Military Topographical Division of the General Staff.)

Introduction.

Under the title "Eastern Bokhara" in this account is included that tract of country which contains the four Bokharan Begships of Darwaz, Karategin, Baljuan [B'rijuan] and Kulyab [Kulab]. Presenting certain differences, which will be described later, in its physical and ethnographical features from other portions of Bokhara, this tract of country occupies, politically, a peculiar position for it was joined to Bokhara comparatively recently, and its union with that Khanate is to a considerable degree artificial. The military importance of this region is due to its proximity to Badakhshan, *i.e.*, to the line of operations: Kulyab—the group of passages of the Amu Darya at Chubek—Faizabad—the Dorakh [Dorah] group of passes in the Hindu Kush—Chitral—the Lauri [Lowari] Pass—the Malakand Pass—Peshawar.

The object of the following description is to point out the physical and political characteristics of this region and to explain its military significance.

Boundaries.

The boundaries of Eastern Bokhara are as follows:—

(a) on the north:—the Hissar and Alai Ranges from the Pakshif (Pakshiv) Pass on the former to the Gadai-Yula [Gadaili] Pass on the latter range;

(b) on the east:—the provisional frontier which crosses the Alai Valley below the natural feature of Katta-Karamuk and the River Muk [Muk-su] below Altin-mazar, then runs past the Fedchenko glacier to the Garmo Peak, and the former passes of Kashal-ayag [Kashal Ayak] and Tanimas, and finally ends on the Bartango-Yazgulem Range [the range between the Yaz—Ghulam or Ab-i-Madar and Bartong Rivers];

(c) on the south-east:—the last-mentioned range as far as the river Pyanj [Ab-i-Panja];

(d) on the south:—the River Pyanj, from the Bartango-Yazgulem Range to Khalk, half-way between the island of Urta-Tugai and the nomad settlement of Sarai;

(e) on the west:—the low watershed between the Rivers Vaksh and Kizil-su as far as the nomad settlement of Tut-Kaul [Tut'kaul], next the course of the Vaksh River for 17 to 20 miles, then the watershed, called Siya-kug (the Karategin Range), between the Rivers Kafirnigan [Kafirnahan] and Vaksh as far as the junction of the latter river with the Sorbukh, a tributary on the left bank of the Surkhob [Surkhab], and finally the Sorbukh as far as the Pakshif Pass on the Hissar Range.

On the north and east the portion of Bokhara now under consideration is contiguous with Russian territory, on the south-east with the Western Pamirs, or, in other words, the Shugnan (Shighnan) Begship, on the south with Afghanistan and on the west with the Kurghan-Tyube and Hissar Begships.

Orography.

General Description of the Country.—Eastern Bokhara is a mountainous country, cut by a whole series of lofty ranges except for a small part in the south-west which is low-lying with rounded watersheds.

The prevailing direction of the ranges is from north-east to south-west, and it should be noted that these ranges form a series of curves, having a common centre approximately in the heart of Afghan Darwaz.

All the ranges become gradually lower towards their south-western extremities and in the vicinity of the Pyanj take the form of elongated hillocks. The two eastern ranges of Vanch-Yazgulem and Bartango-Yazgulem are, however, of quite another character. They are short and straight and preserve a uniform height up to the Pyanj, where they terminate in steep cliffs.

Owing to the above-mentioned general direction of the mountain ranges, the main rivers of this district, such as the Surkhob-Vaksh and Pyanj, accompanying as they do the mountain chains throughout the whole of their length, have a bow-shaped course, parallel to the long ranges, while the secondary rivers, themselves of considerable size, such as the Muk, Khin-gou [Khingab], Yak [Ak]-su and Kizil-su, run in a direction from west to south, varying with the portion of the long range which they accompany. The minor rivers flow in every possible direction, depending on the directions of the numerous ramifications of the mountains.

Such is the general orographical character of Eastern Bokhara. I will now pass on to a more detailed examination of the separate mountain systems.

The Alai and Hissar Ranges.—The northern frontier of the region under consideration is formed by the Alai and Hissar Ranges which meet in a knot of mountains, situated at the upper extremity of the Zerafshan glacier; this knot of mountains on our maps, commencing with Baron Aminof's map of Kohistan, goes by the very doubtful name of Kok-su. Near this mountainous knot both ranges reach their greatest height; those who have been near this knot* affirm that the surrounding peaks have a height of not less than 18,000 feet. The Hissar and Alai Ranges, within the limits which interest us, reach an average height of 15,000—16,000 feet; the passes over them are 11,000—12,000 feet; and the snow-line is at a height of 12,000—13,000 feet. Both ranges form a serious obstacle to movement during the greater part of the year (8—9 months).

The Karategin Range.—Running parallel to, and south of, the Alai and Hissar mountain chains, and not far from the right bank of the Surkhob River, stretches a secondary range of mountains. In all probability it commences at the lofty peak of Shum-kara (Shumkar) which, according to the Alai Kirghiz, is loftier than all the remaining heights of the Alai Range; the peak in question is situated not far from our frontier with Bokhara, near the upper waters of the Kichik-Karamuk; one cannot but suppose that the Shumkara Peak lies to the south of the main axis of the Alai Range. Commencing with the said peak, the range stretches west-south-west and traverses the whole of Karategin. Its last offshoots end west of the meridian of the town of Faizabad.† The range forms the northern border of the Surkhob Valley.

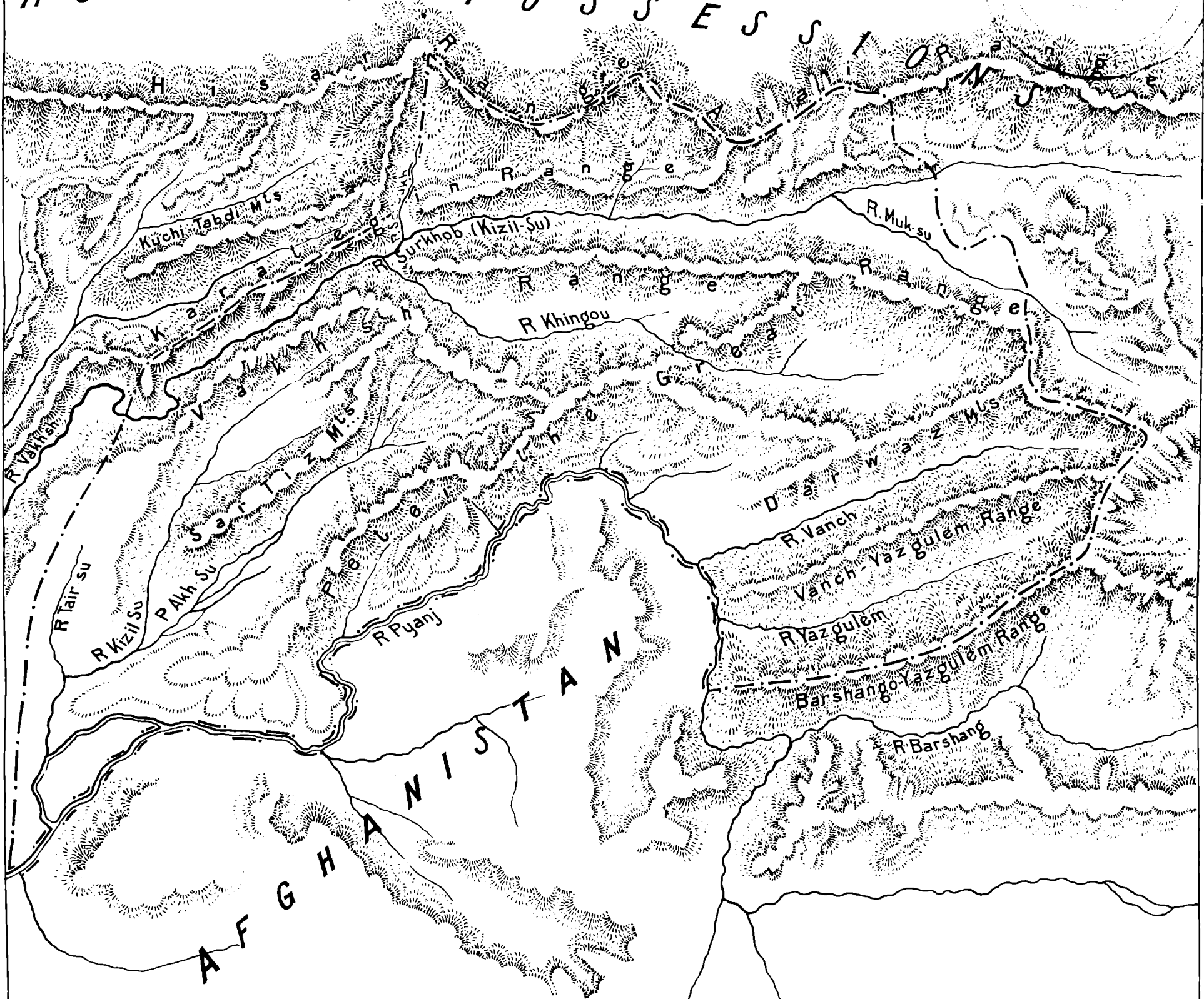
The western extremity of the range, which is called Karategin by Mr. Oshanin, bifurcates and throws out one branch along the Obi-Garm [Ab-i-Garm], a tributary of the Surkhob, and another along the Iliak, forming the watershed between this river and the Kafirnagan. The Karategin Range is pierced by three tributaries of the Surkhob, namely, the Obi [Ab-i]-Zanku, the Obi-Kabud and the Sorbukh. The distance between the summit of the range and the Surkhob River varies; in places it is not more than 5 versts (3½ miles), but in others is much more, and then the country between the range and the valley of the river is filled with spurs of considerable size, over the narrow parts of which are passes.

The Karategin Range is very broken and, judging by the distribution on it of patches of eternal snow, its peaks cannot be less than 14,000 feet in height. In its western portion the range becomes lower and here the highest point Khazretisha, just on the border of the Karategin District, is not more than 12,000—13,000 feet. The Karategin Range allows of movement, albeit with difficulty, both along the valleys of the rivers which cut

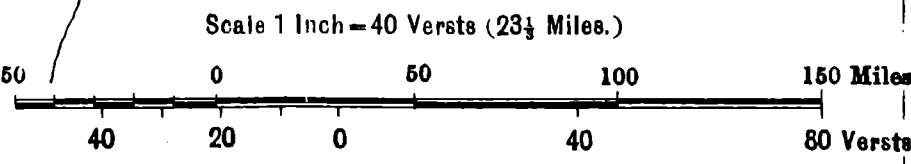
* Baron Aminof, A. P. Fedchenko.

† This is the town in the Hissar Begship and should not be mistaken for Faizabad in the province of Badakhshan.

R U S S I A N P O S S E S S I O N S



MOUNTAINS AND RIVERS
OF
EASTERN BOKHARA



through it and by the passes ; on the other hand, this range makes the main route along the valley of the Surkhob very difficult and wearisome owing to the numerous spurs which it throws out across this road.

Passes.—In the Alai and Hissar Ranges, in the limits already given, can be counted as many as 14 passes, including Tengiz-Bai and Kara-kizik ; these latter, although actually lying outside of Karategin, are of great importance in that they link Ferghana with Eastern Bokhara, and further mention, therefore, must be made of them.

Apart from the Tengiz-Bai, which is open all the year round, and the Pakshif Pass, which allows of movement during 6 months in the year, the remaining passes are practicable for people on foot for not more than 3—4 months in the year ; half of them, too, can be used by pack animals, but only for 1—2 months. The main obstacles to the crossing of the passes are falls of snow, closing the passes for a long time at a stretch, snow drifts which also close them but only for some days at a time, and the absence of pasture which hampers the movements of pack transport and cattle.

Commencing from the east, the passes are as follows :—

1. The *Tengiz-Bai Pass* (or its temporary substitute the *Koi-Juli*), height 12,805 feet, leads from the valley of Isfairan (Ispairan) to Daraut-Khurgan in the Alai Valley, and is open the whole year round for pack transport. In the summer (15th May—15th November) the Tengiz-Bai is used, and for the remainder of the year the substitute (to which the road bends somewhat to the left in the ascent from Ferghana). Snow falls on the pass to a depth of $1\frac{1}{2}$ —2 arshins ($3\frac{1}{2}$ —5 feet), but it is blown away by the winds from the Alai Valley ; although deep drifts of snow are formed on the very summit of the pass and in the deep hollows, yet they become so solid in these places that even in the late spring they will support a man on a horse or a pack animal with ease. If snow falls incessantly for 5 or 6 days or if it thaws rapidly, then traffic ceases for some days as in both cases dangerous avalanches occur. The people of Karategin, however, generally risk crossing during the period of avalanches, and so often lose their lives. Thus, according to the account of the forest inspector of the Alai district, during last year (1904) 18 Tajiks were buried under avalanches ; in 1903, 32 lives were lost, and before that year the death-rate reached 100 lives per annum.

Conditions for bivouacking during the crossing of the pass are favourable ; there is good water and a sufficiency of fuel everywhere and pasture can be found, but, in the event of a force crossing the pass, all grass-covered tracts must be guarded beforehand, otherwise everything will be eaten up by the cattle of the Kirghiz and by the droves of horses and flocks of sheep which the inhabitants of Karategin and Kulyab drive across the pass.

2. The *Kara-Kizik Pass* (14,300 feet) leads from the valley of Shakhimardan to the valley of the river Kok-su, a tributary on the right bank of the Kizil-su. The Kara-Kizik Pass is open from the end of June for three or four months. The steep slopes of the pass, particularly on the northern side, and the unfavourable surface of the ground, which consists of loose stones that slip under horses' feet, make the road an exceedingly inconvenient one. During the Alai expedition of 1876, notwithstanding the comparatively late time of year (17th September), a detachment crossed the pass in safety. But a detachment under Abramof, following this road in 1878, were unable to cross the Kara-Kizik Pass to the Alai in consequence of the snow which had fallen, and had to follow a round-about way *viâ* Osh.* The Kara-Kizik Pass may be considered as suitable for pack transport.

From the Kara-Kizik Pass it is possible to make one's way into the valley of the River Kizil-su by two alternative routes to the foregoing, *viz.*—

- (a) Across the Abramof Glacier (11,420'), then by the Gadai-Yuli Pass (15,350') to the River Loi-su† and thence by the valley of the Obi-Zanku to the valley of the Kizil-su ; and

* An account of the 1878 incident can be found in the article by N. A. Aristof, page 89, Russian Anthropological Journal, Volume I, of 1903.

† The River Loi-Su falls into the Pittau-Kul, which, meeting with the Taldi-kul-su, forms the River Obi-Zanku, a tributary on the right bank of the Kizil-Su.

(b) Across the Bokbash Pass (northern) (14,100') to the valley of the Katta-Karamuk and along it to the valley of the Kizil-su.

The Gadai-Yuli Pass (or Gadai-davan) opens at the end of June or beginning of July for 2½—3 months. This pass presents no difficulties for pack transport, a remark that applies also to the Abramof Glacier and Bokbash Pass.

3. *The Alaudin-davan Pass*—(or Kumb-Bel) leads from the valley of the River Sokh to the Gadai-Yuli Pass and thence to the valley of the Loi-su. As can be imagined; this pass is one of the most difficult. Mr. Oshanin could collect hardly any information about it.

4. *The Yangi-davan Pass*—leads from the valley of the Sokh to the Taldi-Kul-su, and thence to the Obi-Zanku and Kizil-su Rivers. There is a small glacier on the pass; it is passable for pack transport for a fortnight to a month in the year, and for travellers on foot during the two summer months. It is always a difficult pass to cross, and opens at the end of June.

5. *The Ishman-Saldi* Pass*—also leads from the valley of the Sokh River to the Taldi-Kul-su. The natives give very vague information about it. Probably the pass is a very difficult one and can only be crossed on foot.

6. *The (Tyulbe Tilve) Pass*—leads, too, from the valley of the River Sokh to the Taldi-Kul-su. There is a small glacier on this pass. The Tyulbe Pass is open from the end of June for 2½ to 3 months. The road is stony and difficult, and little adapted to pack transport.

7. *The Kulp Pass*—also leads from the valley of the Sokh River to the Taldi-Kul-su. The information concerning the pass, as given by the natives, is very vague. It is situated close to the Tyulbe Pass, and probably is an alternative to it.

8. *The Karagush-Khana Pass*—leads from the Sokh River Valley to the valley of the Karagush-Khana river, and thence to the valley of the Kabud-su (Yarkhich-su), a tributary on the right bank of the Kizil-su, and also to the last named river. The northern ascent to the pass runs for 10 to 12 versts (about 6½—8 miles) along a large glacier (the Shemanovski). The Karagush-Khana Pass opens at the end of May, or beginning of June, for 4 or 5 months; it is passable for pack transport for 3 months. Though there are not a few difficulties along the road for pack transport, none the less there is a considerable amount of traffic across the pass, because (1) the pass lies on the most direct route between Kokand and the centre of Karatgin, and (2) there is much pasture along the road across the pass. Avalanches of snow, however, often occur on the Karagush-Khana Pass, and many lives are lost through want of caution.

The River Taldi-Kul-su can be reached *viâ* the Karagush-Khana Pass, but, to do this, it is necessary to march along the ridge to the Kinchak-Jul-Bel Pass, and thence descend by the Kichik-Minbulak River to the River Taldi-Kul-su.

9. *The Tutek (Tutak) Pass*—leads from the Sokh River Valley to the Tutek River, a tributary on the left bank of the Kabud River. The pass is open for 3 months in the year and is very difficult to cross. The Tutek Pass is used from the time when the crevices begin to open on the glacier of the Karagush-Khana Pass. Avalanches occur also on the Tutek Pass, but as the pass is not used when the snow is thawing and there is generally little traffic on it, the loss of life is inconsiderable.

According to the natives, the distance between the valley of the Surkhob and Kokand across the passes, numbered 3—9, takes 3 days' rapid marching, 4 days at an average pace and 5 days' slow marching.

10. *By the Fiturak (or Nazar-Ailyau) Pass*—one can march, either from the west from the Zeravshan River Valley to the commencement of the Zeravshan Glacier, and thence *viâ* the Yarkhich Glacier to the valley of the river of that name, or from the east from the Sokh River Valley, *viâ* the Mach Pass and the Zeravshan Glacier and on by the Yarkhich Glacier, to the valley of the Yarkhich River. The second route

* Means "sold his breeches."

leads across 3 glaciers, viz., the Zardalya, the Zeravshan and the Yarkhich. The intermediate distances to these three glaciers are 6, 24 and 6 versts respectively, giving a total of 36 versts or 24 miles.

A. P. Fedchenko has already collected detailed information of the pass, but the difficulties of the road were exaggerated to him. An expeditionary force under Mushketof crossed the Zardalya and Zeravshan Glaciers without particular difficulty, but Mushketof acknowledged that success was to a great degree due to the good weather. "One average snow storm would have sufficed to frustrate the expedition and perhaps to destroy it."

Certainly the pass is a very difficult and dangerous one, but it is practicable even for pack horses, provided that the loads do not weigh more than two or three puds, i.e., 72—108 lbs each. But such traffic is only possible during a period of one month in the year, from mid-July to mid-August.

It is possible to cross the pass and glacier on foot during 4 months in the year, but certain appliances and good guides are necessary.

11. From the Zeravshan Glacier to the valley of the Sorbukh River (a tributary on the right bank of the Surkhob) lead a group of passes, 3—5 in number. The information given by the natives with regard to their character and their names is exceedingly vague. They call them the *Zamburkh-Khala*, *Khoja-Musa* (or Didegi), *Paldarak* and *Dubursa* (so called on the southern side, while on the northern side it is called *Piovrut*.*). These passes are passable on foot only, and are only open for a few weeks in the year.

12. *The Pakshif Pass*—leads from the valley of the Zeravshan and Ferghana (Samarkand, Ura-tyube, Khojent) to the Rivers Gorif and Sorbukh. It is open for pack transport from the middle of May for 6 months. The passage is convenient and not difficult.

Traffic across all the passes enumerated can be summarized as follows:—

The passes of Tengiz-Bai and Pakshif are the most suitable for pack transport. Many droves of cattle are driven across the Gadai-Yuli Pass, owing to the excellent pasturage along the road. Merchants on horse-back make the most use of the Karagush-Khana Pass by a road along which there is also excellent pasturage, and when crevices appear on this pass the traffic takes the Tutek-Davan. The other passes are only made use of by individuals or small parties.

Thus, the Hissar and Alai Ranges prove a great obstacle to intercourse between Ferghana and Eastern Bokhara, an obstacle negotiable all the year round in the extreme east (Tengiz-Bai), during 6 months of the year in the extreme west (Pakshif), and only during a period of 3—4 months in the remaining places.

The Range along the left bank of the Surkhob River, or the Vaksh Range.—Just as the Karategin Range accompanies the Surkhob River along its right bank, so another range accompanies it along its left bank. This range commences not far from the junction of the Muk with the Surkhob (or perhaps it may be said, it separates from the Peter the Great Range somewhat to the east of the Gardan-i-Kaftar Pass) and accompanies the Surkhob along its left bank, at an average distance of 20 versts (13½ miles) from the river. The range, after crossing the Khingou River which cuts through it, bends round with the Surkhob—Vaksh to the south-west, and forming here the watershed between this river and the Kizil-su, extends as far as the Amu-Darya, on which it abuts in the tract of country between Urta-Tugai and Sarai.

Before describing the character of the range, it is necessary to warn our readers that the geographical limits we have fixed for it differ to a considerable extent from those already accepted in geographies. In the range now under consideration we have included the western portion of the Peter the Great Range, i.e., the portion from

* Lipski did not find the Kauerg Pass of which he had heard much, and the Vadif Pass prove to be the Dubursa Pass.

the River Shakli-su* to the junction of the Khingou and the Surkhob, and also the long watershed between the Rivers Vaksh and Kizil-su, which has several native designations but more particularly is called Jiloni-Tau (the snake mountain).

That both portions, western and eastern, of the Peter the Great Range are not of the same origin, and that the eastern portion must be connected with the western portion of the Darwaz Range, *i.e.*, with the watershed of the Yakh-su and the Pyanj, is shown by numerous data. To begin with, the external appearance of both portions—of the western portion, with its rounded outlines covered with green except for isolated patches of eternal snow; and of the eastern portion, high and rocky with its pure white crown and innumerable glaciers—go to prove that (for an observer in the Surkhob Valley) it is only in appearance that they are component parts of one and the same line, because they rise to one and the same vertical plane, whereas, in reality, they have separate origins and are not in the same straight line. The early explorer of the range, V. F. Oshanin, noticed the difference between the two portions of the range, but, confining himself to points of resemblance, he failed to enter into the differences in detail.† But V. I. Lipski has entered somewhat more carefully into the question, although he does not attempt to make the deductions which force themselves on one. I will quote a very interesting passage in this connection:—

“The valley of the Kara-Shura and, generally, the course of the River Kulika have brought about a certain change in the Peter the Great Range. So far the latter has always preserved its west to east direction, with a slight inclination towards the north. This direction is also maintained by the offshoot along which I have just travelled and in which the lakes are found; so to a certain degree it might have been considered a continuation of the Peter the Great Range, if it had not soon terminated, gradually descending eastwards. But the main mass of hills, with lofty summits and huge glaciers, after the Gardan-i-Kaftar Pass leaves the former direction of the range and takes one slightly inclined to the south-east. Thus, there has been a kind of fracture in the range, as if it had somehow split, with the result that, while one branch for some distance maintains the original direction of the range towards the north-east and gradually becomes lower, the other branch, continuing the coldness and loftiness of the original range and even exceeding it in these respects, inclines somewhat towards the south, branching out at the same time into numerous ramifications. In the interval between these 2 branches, of unequal height, lies the valley of the Kara-Shura and the whole basin of the River Kulika. With its change of direction the range also loses its former appearance.

Even from the Gardan-i-Kaftar Pass one can see how complicated is the formation of the range. The range breaks up into branches. On the northern side these branches at first run to the north-west while the branches furthest to the east take a northerly direction. In the ravines between these branches lie glaciers. Three of these we had already seen. But later it soon appeared that towards the east all these ravines contained glaciers, and that the extremities of all these glaciers run into a high mountain valley. On the other hand, up to the Gardan-i-Kaftar Pass the direction of the range is quite different, its formation more simple, and there are no glaciers of any size.”

Thus the valley of the Kara-Shura and, in general, the basin of the Kulika River are of great interest for the reason that they occupy the cleft which has split the range at this spot.

In another place V. I. Lipski says: “all the eastern portion of the Peter the Great Range, commencing from the vicinity of the Gardan-i-Kaftar Pass, forms a continuous field of glaciers.”

* This is formed by the Rivers Kara-Shura, Kulika, Gardan-i-Kaftar and others; it flows into the Khingou at the nomad settlement of Lyangar.

† The author has no idea of introducing new names on a scientific basis; the attempt now made to modify the names is confined to this account and is introduced simply for convenience of explanation. Though there may be geological data to justify the innovation the same cannot be said of the orographical conditions of which we require clearer and more complete information.

A later traveller, V. F. Novitski, notes the difference between the western and eastern portions. He succeeded in marking the bifurcation of the range, of which the southern is the bolder and the northern the gentler. This is what he says:—"The northern slope of the Gardan-i-Kaftar Pass leads to the upper waters of the very river, the Shakhkuli-su, whose lower waters we crossed at the village of Lairon. Thus it seems as if the river belonged to both slopes of the range; it rises on the northern slope, cuts through the range, and on the southern slope flows into the river Khingou. But in reality it is not quite so. The Gardan-i-Kaftar Pass is not the crossing point of the whole range, but is only a pass across its southern crest, at that spot where the range bifurcates and consists of two ridges which meet to the east of the pass and of which only the southern ridge is of a distinctly mountainous character, while the northern is a low, hardly noticeable watershed. Hence, in order to reach the River Surkhob from the Gardan-i-Kaftar Pass, yet another pass must be negotiated which, although it is of no great height and hardly noticeable, still stands out fairly boldly, when seen from the north. The tract of country, occupied by the upper waters of the Shakhkuli-su between the two above-mentioned branches of the range, appears to be the only locality in the range where, in the very bosom of the snow mountains, are to be found grass-covered plains, low, sloping hills and a slow-running, peaceful river with meadow land on its low banks."

The above quoted remarks suggest the idea that the Peter the Great Range, having thrown out from itself, somewhat to the east of the Gardan-i-Kaftar Pass, a branch direct to the west, itself turns somewhat to the south, crosses the Khingou River between the villages of Lairon and Urfat, and beyond the river continues in the form of the range which bears the name of Darwaz, is defined at first by the Gushkhon, Zakh-Fursi, and Sari-Ob passes, and further to the south forms the watershed of the Rivers Yaka-su and Pyanj*.

Leaving, for the present, the examination of this range, I return to the western portion. On the supposition I have made, this portion, *i.e.*, from the Gardan-i-Kaftar Pass westwards, must be considered to be an *offshoot* of the Peter the Great Range, and to continue beyond the Khingou River in the form of the watershed between the Rivers Vaksh and Kizil-su, that is, it is a secondary range. Hence we obtain a symmetrical formation of the mountain systems on the left and right bank of the Surkhob River, *i.e.*, parallel to the main range exist secondary ranges, cut through by rivers. Hence it follows, as was noted by V. F. Oshanin, that in Karategin the predominating mountain formation is of the same type as that which is observed in the Province of Ferghana or along the upper waters of the Zeravshan.

We will designate this particular range the Vaksh Range for the convenience of further description. Its eastern portion, the watershed of the Surkhob and Khingou Rivers, is a ridge of considerable height, hardly lower than 14,000—15,000 feet, of somewhat complex formation, and with soft rounded outlines. The northern slope is gradual, rises in terrace-like plateaux and is covered with thick layers of loess. On these terraces there is plenty of water in the form of small lakes and streams; all around is a treeless steppe, with abundance of grass everywhere. The southern slope is steep, the sides of the valleys are bare, and white strata predominate; there is little grass, and in certain spots it is replaced by forest which on the higher slopes consists of coniferous trees and on the lower of deciduous. After crossing the Khingou River, the Vaksh Range is much lower, being perhaps not more than 7,000—8,000 feet in height. The range has the appearance of rounded hills whose slopes are composed of loess, and it is only under the very crest of the range or in certain parts of the south-eastern slope that outcrops of lime-stone are seen. The slopes are very gradual and are cut up by water in various and, at times very curious, directions. Thanks to the proximity of the subsoil the surface of the range is covered with luxuriant grass; of bushes and trees many wild rose bushes, hawthorn, maple, etc., etc., are to be found.

* In Syeverstov's publication "The Pamir Mountain System," there is an English map on which the mountains are marked according to the system suggested by us. The geologist Y. S. Edelshtein, who was in Bokhara last year, established a direct connection between the strata forming the Peter the Great Range and those of the Darwaz mountain ridges. (*Magazine of the Imperial Russian Geographical Society*, Vol. X of 1904, page 404).

As regards the importance of the Vaksh Range from a military point of view, we would point out that it separates Karategin and the Hissar and Kurghan-Tyube from the Baljuan and Kulyab Begships. Since the territory of the two last-named may be considered as our auxiliary base in the Badakhshan direction, this means that the Vaksh Range (a) separates the base from the areas with the greatest resources in supplies and other necessities of war, and (b) hampers the movements of troops from the north-west (*i. e.*, from Samarkand) or from the north-east (*i. e.*, from Ferghana) to the crossing places at Chubek.

In view of the unlikelihood of offensive undertakings on the part of Afghanistan and the improbability of that country seizing our base and this particular frontier range, both rôles of this latter merge into one which makes it a passive and merely physical obstacle, *i. e.*, the range is a hindrance to our columns and transport, operating in the direction of Badakhshan. As a physical obstacle the Vaksh Range is formidable in its eastern portion. Here the three following passes lead across it (beginning from the east and not including the very extreme passes since they lead to the passes of the Peter the Great Range), *viz.*, the Lyuli-Kharvi (11,400'),* the Kamchirak (8,400')† and the Yarich (7,500') passes.

The Lyuli-Kharvi Pass—leads from Central Karategin (the nomad settlements of Kalai-Lyabi-Ob and Safidau) to the Khingou Valley (the nomad settlement of Ishtion).

The pass is one of the difficult ones, though it is passable for pack transport. The ascent to the pass from Karategin is comparatively easy, and only close to the very summit, where the snow begins and swampy spots occur, does it become more difficult; under any circumstances not more than $4\frac{1}{2}$ —5 hours are necessary to reach the head of the pass. The descent is more difficult. At first it leads along the snow and is fairly easy, but it soon becomes exceedingly steep, as if leading into some bottomless abyss. To ride on horseback here is dangerous and tiring. Along the snow the road stretches for not less than 2 miles. The steep part then continues during nearly the entire descent. There is no accurate information as to the length of time during which the pass is open, but one is led to surmise that it is not used for more than 3—4 months in the year.

The Kamchirak Pass—leads from the Surkhob Valley (the nomad settlement of Sari-pul, about $3\frac{1}{2}$ miles from Garm) into the Khingou Valley (nomad settlement of Chil-Dara). The ascent to it is long and gentle. Only in one or two places is it necessary for a horse with a rider to stop to recover its breath. The descent, on the contrary, is exceedingly steep, strewn with small smooth pebbles, and in wet weather is very slippery; in one place the road leads across a bridge, resting on an excessively narrow backbone of a spur. The Kamchirak Pass is closed only for a few weeks in the year, although apparently the natives use it the whole year round; it is passable for pack transport during not less than 8 months in the year. In the summer the pass is entirely free from snow.

The Yafich Pass—leads from the Surkhob River Valley (nomad settlement Gardang, about 20 miles from Garm) into the Khingou Valley (nomad settlement Chil-dara). The pass is very easily negotiated and is open all the year round.

The south-western portion of the Vaksh Range or Jiloni-Tau‡ has no great importance as an obstacle. To cross the range, it is not considered necessary to make any preliminary arrangements. G. A. Arendarenko, for instance, mentions a march of about 53 miles without a halt across the Jiloni-Tau. Naturally the hills are a little more tiring for pack animals, but that is all. Moreover, a *telyega*§ or *arba*, could probably cross the hills, but with a good deal of difficulty. The main obstacle to the passage of vehicles is the narrowness of the deep corridors which are cut through the loess surface of the slopes of the hills. Further, in this soft surface are constantly found

* Novitski gives the height as 11,700 feet.

† Lipski " " " 8,911 " "

‡ A very appropriate name, as the ridge winds exactly like a snake.

§ Translator's notes. *Azalyega* is a light four-wheeled vehicle.

An *arba* is a tilted two-wheeled cart, used by Eastern nomadic tribes.

deep holes which form a kind of large staircase, and these hollows make the road either entirely impassable for wheeled traffic or, at least, exceedingly difficult. Thus the peculiarity of the surface is the sole obstacle to wheeled traffic. But it should be noted there are no difficulties in the way of making the road temporarily fit for a *telyega* as the soil can be quickly dug up even with light tools.

The passes across the Jiloni-Tau are numerous and very convenient. In the northern part of the ridge they reach a height of 4,000–5,000 feet while in the southern portion their summits are not more than 2,500 feet high. These heights show that the Vaksh Range is not a serious obstacle, as it is passable in many places and throughout the entire year, except in the extreme eastern portion. In case of necessity, by making the required improvements in the road (not a difficult undertaking), even a *telyega* would be able to cross this range.

Sar-Tiz.—Soon after the crossing of the River Khingou by the Vaksh Range, a parallel ridge branches off from it and forms the watershed of the Rivers Kizil-su and Yakh-su. This small ridge between the rivers is called the “Sar-Tiz.” Looking at the ridge from any high point, it appears to form a line of rounded hills, which are cut up by little valleys, hardly possess any marked ridge line, and imperceptibly descend eastwards and westwards to the two above-mentioned rivers. The surface of the ridge is of a purely “steppe” character—the same grass and herbs as in South Russia, the same little valleys with a stream of spring water running along them, and the same artificial ponds.

Only in the northern portion, where, apparently, the sub-soil water lies at a lower level, is the surface of Sar-Tiz less attractive, and here stretches of ground with no covering of grass are more frequent. As an obstacle Sar-Tiz is of no importance whatever; it is only necessary to remark that the continual ascents and descents make the crossing of this hilly ridge very tiring for both men and animals. Distinct roads across Sar-Tiz, with one small exception, do not exist; there is, however, a whole network of paths that connect the Uzbek [Uzbek] villages with one another or with their fields. It is necessary to be accompanied by a native, thoroughly acquainted with the locality; otherwise one may lose one's way in the network of never ending mule-tracks. Although on the map are shown passes across the Sar-Tiz, yet the inhabitants, apparently, do not acknowledge their existence, or else they simply mix them up, for there are as many passes as paths, and they are all almost imperceptible, being very short and having gently-sloping approaches.

The Peter the Great Range.—The next long range in the tract of country under our consideration is the Peter the Great Range. By this name we mean, in accordance with the suggestion we have made, the mighty ridge which commences at the gigantic knot of mountains that is situated close to the Fedchenko Glacier. The range runs at first from east to west, but before reaching the Gardan-i-Kaftar Pass takes a turn towards the south-west, next crosses the Khingou River, still maintaining its south-westerly direction, and then makes a gradual and more and more accentuated bend towards the south, until at its end, where it abuts on the Amu-Darya (east of the nomad settlement of Bogorak), the range runs in a due north to south direction.

Naturally under the name of the Peter the Great Range in this description is understood a composite range which includes the eastern portion proper of the Peter the Great Range, and what is commonly called the Darwaz Range, without its eastern portion. The natives call the northern portion of the Darwaz Range (without this eastern portion) “Darwazion” and the southern portion “Imam-Oskar.”

The Peter the Great Range in its first or eastern portion forms the watershed of the Sarkhob and Khingou rivers, in its centre the watershed of the Khingou and Pyanj, and in its southern portion the watershed of the Pyanj and Yak-su.

The total length of the range is 300 versts (200 miles). It forms the boundary between Karategin and the Baljuan and Kulyab Begships on one side, and of both the Darwazes (the Bokharan and the Afghan) on the other. In a military sense, it separates the central portions of the two following lines of operation: (a) the Baljuan line, *i.e.*, Kulyab (not including points further in the interior)—the crossings at Chubek—the Faizabad-Dorakh* group of passes—Chitral, and (b) the Pamir line, *i.e.*, Pamirski Post—the Kallik [Kilik] or Baroghil group of passes—Gilgit, etc. In particular, it separates troops operating on the Kulyab-Faizabad line from those operating on the Khorog (or Ishkashim)—Faizabad line.

A detailed explanation of the military importance and a more circumstantial description of the Peter the Great Range do not come within the limits of this work, for which reason it will be dealt with briefly, as, too, will the ranges to its south-east.

The Peter the Great Range is amongst those of the first rank, a mighty and not easily negotiable mountain chain, proving an absolutely impassable obstacle during the greater half of the year. In the eastern portion the range has an average height of 17,000—18,000 feet†, and in the centre, judging from the height of the passes, of not less than 16,000—17,000 feet; the southern portion is somewhat lower, say, 14,000—15,000 feet. The inaccessibility of the range and its impracticability may be gauged most clearly from the fact that in very ancient days it completely separated the inhabitants of the Western Pamirs, *i.e.* Vakhān [Wakhan], Shughnān [Shighnan], and Rushan [Roshan], including in the latter Darwaz, from the people of Eastern Bokharā, as can be surmised from the indications of Chinese and Arab geographers. The Peter the Great Range remains snow-covered the whole year round even in its southern portion,‡ and its eastern portion is a typical glacier region.

There are numerous passes across the range, but they are only open for 3—4 months in the year (some for only a week or two), and the majority are only negotiable on foot. Only in the direst extremity would it be possible to risk marching a small detachment out of Eastern Bokhara to the confines of the Western Pamirs. As an example, I may mention that in 1902, when the recently appointed Beg rode to Shughnān, out of a large number of horses that used the road, as he himself told me, only two arrived safely; some fell down precipices, and others went lame and were abandoned on the way. Along the roads to and in Darwaz the traveller will experience all the terrors of balconies, of oscillating narrow bridges, and of six-inch pathways that hang over the brink of abysses. Troops operating in Eastern Bokhara can keep touch with the posts of the Pamir force only by means of a postal *jigit* (or mounted messenger).

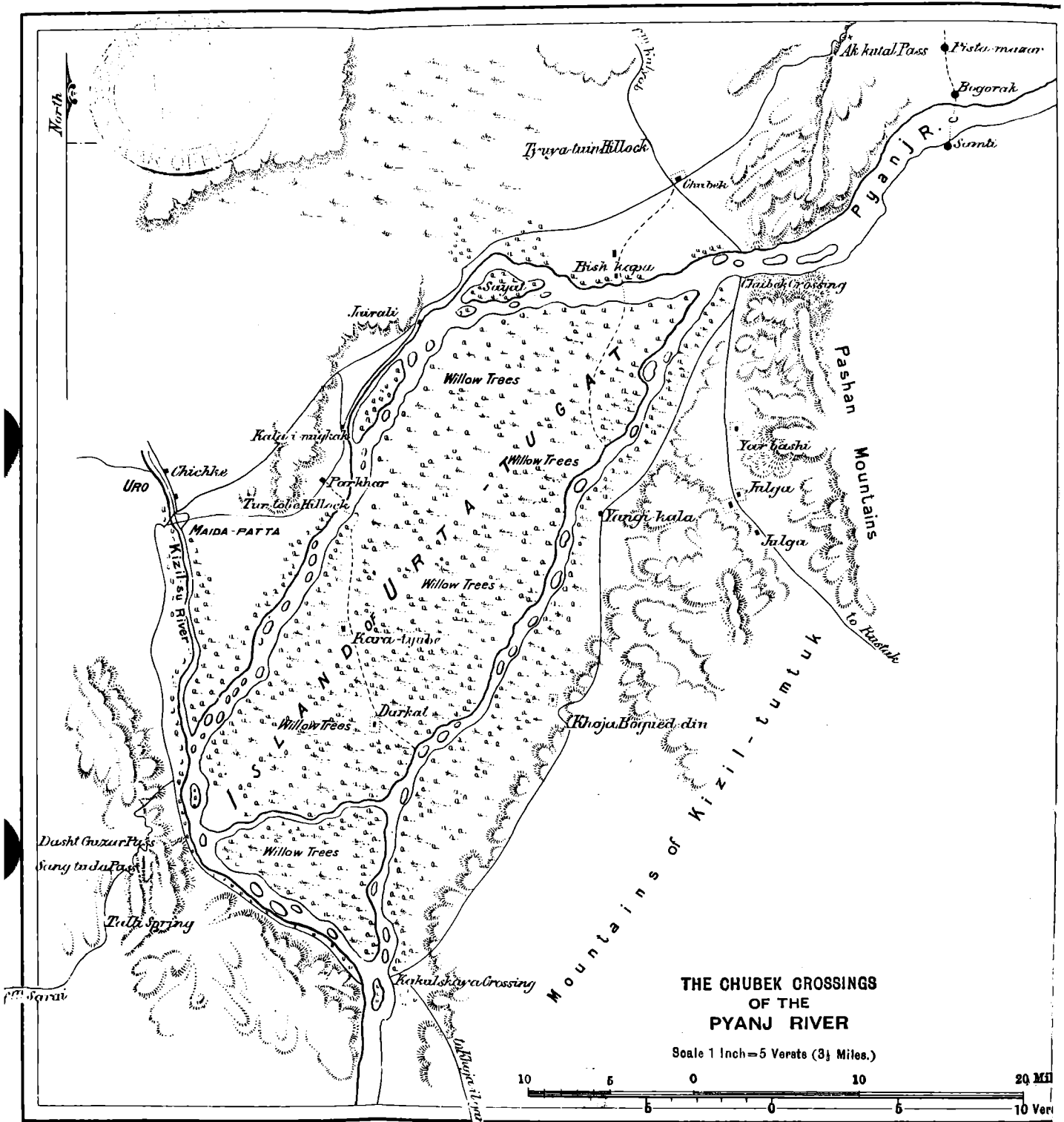
The Bartango-Yazgulem and Vanch-Yazgulem Ranges.—These ranges form lofty, rocky, narrow ridges which begin close to the Fedchenko Glacier and fall precipitously into the Pyanj. The length of the ranges is 130—140 versts (85—92 miles) and the average height 17,000—18,000 feet. The number of passes across the ranges is exceedingly small; the Yodudi Pass (14,800') in the Bartango-Yazgulem range and the Gushkhon Pass (14,500') in the Vanch-Yazgulem range are used, but they present many difficulties; horsemen have to dismount several times, and it is also necessary to select the coldest part of the day for crossing, so that the snow may be in a state to support the horses; it is only possible to cross with light loads, and guides and carriers, etc., are required.

Summarizing the orography, we see that the district is entirely broken up into lofty masses, and that the country is of a purely mountainous character. The river valleys are narrow and the whole area of level country is hardly more than 10—15 per cent. of the entire region; only in the south-western portion, where the mountains

* The passes of the Eastern Hindu-Kush, for convenience of study and description, may be divided into 3 groups, the eastern or Kallik [Kilik] group, *i.e.*, the Mwik-Teke [Mintaka], Kallik [Kilik], Irshod [Irshad] etc., the central or Baroghil group, *i.e.*, the Yonof, Gazan, Savitakht [Shawi-Takht], Baroghil, etc., and the western or Dorakh group, *i.e.*, the Khatinza, Nuksan, Agram, Dora, etc. Details may be found in my work entitled "The Northern Indian Theatre," Volume I, pages 120—153.

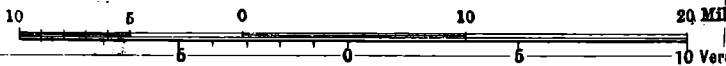
† G. Osbanin put the height of the range at 20,000 feet and even 25,000 feet.

‡ G. Arendarenko, page 429, talks of the hills of the Kamarau-Imam-Oskart Range with its eternal snow.



**THE CHUBEK CROSSINGS
OF THE
PYANJ RIVER**

Scale 1 Inch = 5 Versts (3 1/2 Miles.)



change into hills and the valleys widen, does the country assume the character of an undulating steppe. The lines of communication in Eastern Bokhara run solely along the river valleys and across the passes. Only pack-transport can be used.

Rivers.

The rivers of this tract of country belong to the basin of the Pyanj. The snow-covered summits of the ranges form an inexhaustible reservoir which feeds the numerous rivers, streams and rivulets, all of which have a rapid fall and run swiftly in narrow and generally rocky beds. When the water is at its highest, from June to August, the rivers are often deep, and fording them is a dangerous operation; during the rest of the year the rivers are shallow and can be crossed with ease.

The Pyanj River.—To Eastern Bokhara belongs the wildest and least explored part of the Pyanj, *i.e.*, the portion between the Bartango-Yazgulem Range and the nomad settlement of Sarai (or rather somewhat to the east of this latter place). In the course of 300—400 versts (200—260 miles) the river descends 4,000 feet, the average fall being from 10—11 feet in one verst (or 15—16½ feet in one mile).

The Pyanj runs in a canon of wild, narrow gorges, sometimes only 100—150 sazhen wide (230—350 yards). The pace of the current is as much as 15 versts (10 miles) per hour; the rocky bed and banks contribute to the formation in many places of cataracts and waterfalls.

The only method of crossing the river is by means of *tursuks* * (locally called *gupsar*), and even with them in certain places one risks one's life. The local inhabitants hold on with their hands to the *gupsar* which consists of one or more *tursuks* and guide it with their feet; at other times they fasten the "*gupsar*" to the mane or tail of a horse.

In the stretch of country between the Bartango-Yazgulem Range and the nomad settlement of Bogorak the Pyanj is fordable nowhere, no matter the time of year. The river is lowest from September to April and at its highest in June and July; the difference in level between high and low water is in some years as much as 3—5 sazhen (21—35 feet).

Crossings.—The most important part of the river Pyanj lies between the nomad settlement of Bogorak and the south-western extremity of the Island of Urta-Tugai, owing to the fact that there are 5 crossings by means of which intercourse between the inhabitants of Eastern Bokhara and Badakhshan has always been, and still is, maintained. The Pyanj†, having cut through the Chailya-kamar gorge, splits up into several channels which almost at once form the above-mentioned island of Urta-Tugai. The river by the time it reaches the vicinity of the crossings has become a river of the plains, and flows in numerous and widely separated channels; its banks are low and overgrown with willow; and its water is exceedingly dirty.

Urta-Tugai is a large flat piece of land—25 versts long by 15 wide (16½ miles long by 10 miles wide), overgrown with reeds and willow. At high water the island is almost entirely covered with water, and then movement is only possible by a few well-defined foot-paths; as soon as the water falls movement across the island is not difficult. The dense growth of bushes and the difficulty of access to the island have formed Urta-Tugai into a sort of natural zoological garden; up to the present day tiger and deer are to be found. (The latter are said to be in very large numbers.)

The crossings (we will call them by a collective designation, the Chubek crossings) have never played a great part in the Asia of the past, as have other crossing-places on the Amu-Darya, such as those at Termez and Kelif [Kilif]; in all ages they have been used solely by small detachments, ‡ smugglers, robbers, and fugitives of every kind and type. The late Abdur Rahman was fated to make the acquaintance of these crossings during the years of his peregrinations; Babur also knew the

* A system of inflated skins (usually goat-skins) strengthened by means of rods and branches.

(Translator's note.—"Tursuk" = Tussuk.)

† It would have been more appropriate to call the river here the Amu-Darya since it partakes much more of the characteristics of this river. Moreover, the name Pyanj (*i.e.*, the five rivers), given to the river in the mountains where five nearly equal-sized rivers feed it, has no significance here.

‡ This indeed was due not to the character of the crossings themselves, but to the nature of the neighbouring mountainous regions, in which large forces could not have operated.

crossings well, having studied them during his prolonged wanderings. At the present time these crossings are the only points of passage across the Amu-Darya in the Badakhshan direction; hence they have a military as well as commercial importance.

The crossings are 5 in number and, commencing from the east, are as follows:—the Bogorak, Chubek, Bish-kapa, Parkhar and Kakul [Kakul Guzar].

The Bogorak crossing is situated beside the nomad settlement of the same name, it is a permanent one, and the passage is made by means of “*tursuks*”; at high water the width of the river at the crossing place is more than one verst ($\frac{2}{3}$ mile), and at low water about $\frac{1}{2}$ verst ($\frac{1}{3}$ mile); the rate of the current is moderate. The landing at this crossing is not far from the Afghan post. The inhabitants on the Afghan bank have many *tursuks*, but the Bokhariots have few, and these are owned only by those who cultivate rice and cotton on Urta-Tugai.

Between Chubek and Bogorak, there are three roads:—one, along the valley of the Pyanj, is 20 versts (13 $\frac{1}{2}$ miles) long and is only accessible during the period of low water; the second, through the hills, is 28 versts (18 $\frac{2}{3}$ miles) long and is used most of all by the frontier guard patrol, but it is not a particularly easy road; and finally, the third, also through the hills and easy, but more round-about, is 32 versts (21 $\frac{1}{2}$ miles) long.

The Chubek crossing is 5 versts (3 $\frac{1}{2}$ miles) to the south-east of Chubek. It is permanent and crossed by *tursuks*. There is a small island in the river at this spot. First of all a channel, 60—70 sazhen (140—165 yards) wide, has to be crossed to the nameless island, and then a second but narrower channel, 40 to 50 sajens (90—115 yards) wide, to the Afghan bank; the rapidity of the current is considerable. The mountains on the Afghan bank are about one verst ($\frac{2}{3}$ mile) from the crossing, while those on the Bokharan bank lie somewhat back from the river, and their nearest point is not closer than 2 versts (1 $\frac{1}{3}$ miles) to the crossing; moreover, the Bokharan mountains rise abruptly from the valley, and it would be difficult (and indeed useless) to drag guns on to them; under these circumstances, the Afghan bank must be considered to be that which commands the crossing. The riverain inhabitants own very few “*tursuks*.”

The Chubek crossing leads to a knot of roads, one of which goes to Chiob (Chiab) and thence to Rustak, and another to Yangi-Kala [Yang-i-Kala] and thence follows the bank of the Pyanj. The latter road forms a chord to the curve of the river, and is used by the Afghan patrols to observe all the crossings.

The Bish-Kapa crossing owes its name to the small nomad settlement of Bish-Kapa, which is situated 6 versts (4 miles) to the south-west of Chubek, at the north-eastern extremity of Urta-Tugai. Between Bish-Kapa* and Chubek runs an excellent road; in some places it is beaten gravel and has new bridges across all the irrigation canals. From Bish-Kapa the road turns to the south, and runs through thickets of reeds across ariks† and narrow branches of the river to the site of old Bish-Kapa, where the approximate point of crossing is to be found. At high water, the fords across the ariks are difficult and dangerous; they are not only deep but also have dangerous, boggy or muddy beds. It is necessary to have a good guide,‡ and to carefully examine the road on the day it is to be used, since the channels of the canals and their dimensions change rapidly.

As has been stated, the crossing is situated at the north-eastern extremity of Urta-Tugai; not so very long ago the water used to cover the part of the island where the crossing now is. The river here flows in 2 main and numerous small branches; one large branch runs along the Bokharan bank, and the other, a smaller one, along the Afghan bank. The Bish-Kapa crossing is practicable during half the year, from October to March. The main difficulty is presented by the large branch along the Bokharan bank; the branch along the Afghan bank, on the other hand, can be crossed without any trouble.

* Not long ago this place was called New Bish-Kapa as distinct from Old Bish-Kapa which now, as a settlement, no longer exists.

† Arik is the native name in Central Asia for an irrigation canal.

‡ The frontier guards of Chubek post know the neighbourhood thoroughly, and full reliance can be placed on their services.

From the bank at old Bish-Kapa the road over the crossing runs in a generally southern direction, but makes numerous bends sometimes up-stream, sometimes down-stream and sometimes crosses the stream obliquely. The bends run (1) along the most shallow places, (2) where the bottom is most reliable, and (3) where there is the least pressure of water. They change every year, and possibly, even every month. As a rule, as soon as the water falls an examination is made of the river to ascertain the best crossing, but, if troops are to make use of the crossing, it should be verified periodically or, better still, a short time before it is actually used. The riverain inhabitants know all these bends so well that smugglers, for instance, cross the river on the darkest of nights.

The depth of the crossings is $1\frac{1}{2}$ — $1\frac{1}{2}$ arshins (3— $3\frac{1}{2}$ feet). The natives judge the depth by means of their horses; and, according to them, in a good year the water only reaches to the stirrup, and in a less favourable year to the pommel of the saddle. The current is as rapid as that of a mountain stream; the bed is almost entirely of gravel.

A pack animal can cross safely, and there are hardly any cases of any having been swept away. Smugglers' horses, with loads of 7—8 puds (250—290 lbs) besides the rider, cross the ford easily without transhipping their loads; a loaded camel crosses still more easily; usually, the load is taken off a mule, to prevent its getting wet, and the animal fords the river, holding its head in the air.*

After crossing the big branch of the river, the road is along Urta-Tugai in a southerly direction (with a slight inclination towards the west) for 5—6 versts ($3\frac{1}{2}$ —4 miles), and then, turning to the south-east, soon reaches the second or Afghan branch which is crossed without any particular difficulty, somewhat to the north-east of the nomad settlement of Yangi-Kala.†

Both the Bokharan and the Afghan banks are equally low and flat, so that the one has no tactical superiority over the other.

The Bish-Kapa crossing is more important than all the rest; its advantages are that it is easy and safe, and allows of the rapid crossing of a strong detachment. Tactically it is more advantageous for us than for the Afghans, for the most difficult branch of the river is at our disposal, and after crossing it there is a considerable level area which, according to local opinion, also belongs to us,‡ and is suitable for deployment, demonstrations and manoeuvring. Finally, the branch of the river along the opposite bank can be easily crossed in many places.

The crossing has this peculiar defect that it is open during those months when a campaign is improbable, or, at least, when military operations are difficult, and is closed during the best time of year for them.

The *Parkhar crossing* is so called after the Bokharan nomad settlement of the same name. This crossing can also be forded in the same six months of the year as the Bish-Kapa. Of the 2 large channels, that along the Bokharan bank alone offers any difficulty; this channel is 470 yards wide (not counting the bends taken by the ford). It is somewhat deeper than the Bish-Kapa and more rapid, but the bottom, being covered with gravel, is firmer and therefore more convenient. The ford so far as the channel and the shallow parts are concerned is fairly constant and does not require to be examined frequently.

In making use of the ford the following rules should be observed:—enter the ford straight from the Parkhar settlement, continue straight across the current for 100 paces (78 yards), turn down stream and continue parallel with the bank, for half a verst (565 yards), turn very slightly north of east, and continue in this direction to the bank.

* Very few dogs can swim across.

† On the original sheets of the 5-verst map at the site of the crossing on the Afghan bank is shown the nomad settlement of Kildish which, as a matter of fact, does not exist.

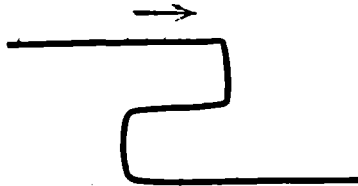
‡ The nomad settlements on Urta-Tugai are considered to be Bokharan.

In crossing there is a rise, and a fairly steep one, to the island of Urta-Tugai. On the island the road follows the bank for a mile, and then makes for the nomad settlements of Kara-Tyube and Darkat; not far from the last named is the ford across the Afghan branch; it is shallow, not more than 90—120 yards broad, and can easily be used by a man.

The Parkhar crossing is more difficult than the Bish-Kapa, but, as an alternative to the latter and as a means for making a demonstration, it may have some importance in war.

The *Kakul crossing* [Kakul Guzar ferry] is 57 versts (38 miles) from Chubek and lies at the southern end of Urta-Tugai. The river here flows in a single channel, 420—470 yards wide. The crossing is a permanent one and *tursuks* are required; the only owner of these in the immediate neighbourhood is the ferryman. The current is considerable. The Bokharan bank is much higher than the Afghan.

The river *Kizil-su—Surkhob—Vaksh*.—All the rivers of the region under consideration, as has been said, belong to the basin of the Pyanj (Amu-Darya); the most important of them is the Surkhob, called in its upper portion the Kizil-su, and in its lower the Vaksh; for 200 miles it runs through the country under description. The river has three names which are used by the local population as follows:—The Kirghiz call it the Kizil-su (red river) and, as they live along it down to the settlement of Sarion, the river to a considerable extent retains this name from its source to this settlement. Thence downstream the inhabitants are one and all Tajiks (Karategins) as far as, approximately, the settlement of Tut-Kaul, where the river makes 4 sharp bends in the following form:—



on this stretch the river is called Surkhob (i.e., red river, in the local Persian dialect). Finally from Tut-Kaul to the junction with the Amu-Darya the river preserves its ancient name of Vaksh;* the inhabitants near the river in this portion are Turko-Tajiks.

From the Alai valley the river bursts into Karategin in the form of a mountain torrent in a deep ravine. As far as the junction of the Muk-su† the river flows in a single channel and has a width of 35—70 feet; at the junction the width is 50 paces, (117 feet), and the current is 7 feet a second. Further to the west the river, breaking up into several branches, becomes very much wider, viz., 230—700 yards; at Kalai-Khoit [Kala-i-Khoit] where the Obi-Kabud joins the width increases for a short distance to 1½ versts (or 1 mile); the river then narrows rapidly and down to Garm has an average width of 465 yards; thence to the junction of the Sorbukh, except for the first few miles where it flows in a very narrow channel, it is 565 yards wide; below the Sorbukh it narrows and flows in a single channel down to the Obi-Garm.

Between the junction of this last-named river and the quadruple winding mentioned above, it is difficult to make investigations of the river; apparently, nowhere in this portion does it split up into branches but flows, with a swift current, between low, rocky banks. At Tut-Kaul the breadth is 350 feet, the current is 11 feet a second (more than 11 versts, or 7½ miles, per hour), and the depth, according to the natives, is considerable.‡

* The name was noticed by Arab geographers. According to Biruni, the local inhabitants, even in the 11th Century, called the Vaksh the protective deity of waters in general and of the Amu-Darya in particular.—V. Bartold, *Turkistan*, pages 66 and 71.

† N. Vasilyef calls the river the Mok-su, the natives the Myok-su. In this account the name used on the 40-verst map is retained.

‡ Measurements could not be taken owing to the want of boats.

The valley of the Surkhob River is diversified ; as far as the River Muk-su it forms a gorge, from which the mountains rise perpendicularly ; at the mouth of the Muk-su, on the left bank of the Surkhob, stretches a slightly undulating valley of considerable extent, in which the river has cut a deep bed for itself. Further to the west the valley has several broad, flat stretches, joined to one another by narrow gorges which are formed by the spurs that jut out to and even into the river. Apparently all these broad stretches were, at one time, lakes, for in them are always to be seen terraced banks, such as at Katta-Karamuk or in the country between the Obi-Zanku and Obi-Garm. In these wider places the valley of the river has a breadth of as much as 2 miles.

Below the Obi-Garm, the valley of the Surkhob forms a defile from $\frac{1}{2}$ verst to 1 verst in width (550—1,100 yards), and the mountains rise abruptly out of the valley, the bottom of which is stony and almost without life. The quantity of water in the Surkhob varies in a marked manner with the time of year. It is difficult to determine, from native reports, which is the season of high water ; thus, in the Alai, according to them, there is most water in the month of March ; near Kalai-Khoit high water in the Surkhob occurs between June and August ; near Tut-Kaul there is most water during May and June. These contradictory reports, due to many causes, such as ignorance of the months, incapacity to observe, forgetfulness, etc., force one, as a precautionary measure, to take as the season of high water the maximum period, viz., May to August ; from March to April and September to October the water is at mid-level ; and the remaining four months mark the season of low water.

As to the depth and rapidity of the current of the Surkhob one has only guesses to offer. In this connection, the river may be divided into two sections, viz., from the eastern frontier to the town of Garm, and from this town to the *kishlak** of Tut-Kaul. Throughout the first section the river flows in a broad bed, and is split up, as has been already stated, into several branches, for which reason, notwithstanding a considerable fall, there is but a moderate current of 6-8 feet† a second at high water, and of probably not more than 3-4 feet‡ at low water. At the junction with the Muk-su, the current of the Surkhob was found by me to be 7 feet§ ; not far from the settlement of Angolwich (Angakl-wik), 20 versts ($13\frac{1}{2}$ miles) before reaching Garm, the current proved to be over 9|| feet, but at this spot the slope of the channel must somewhat increase the current. The depth is still more difficult to determine, as the bed of the Surkhob consists of its own alluvium, which is far from solid and is easily carried away by a rapid current ; the direction, depth and even number of branches of the river are continually changing. At high water, Captain Vasilyef determined the minimum depth in those places where the Surkhob flows in several branches to be $1\frac{1}{2}$ sazhen ($10\frac{1}{2}$ feet), but in narrow places, particularly where the river enters a single channel, the depth, according to him, increases to 3 sazhen (21 feet). At low-water the Surkhob, in the stretch from the eastern frontier to Garm, is fordable at nearly every settlement, as very many natives have affirmed, and this implies that the depth of the river at the crossing places may be put at 2-3¶ feet. In the section, Garm—Tut-Kaul, the river flows in a well-defined channel, cut into the stony banks, and, although the general fall is less here than in the first section, still the current is presumably greater. At Tut-Kaul I found the current to be 11** feet per second. In those places where the Surkhob flows through gorges, and where, as a rule, bridges are erected across it, the velocity equals that of a waterfall. The depth everywhere is great, if the natives are to be believed from 4-5 sazhen (28—35 feet). In the gorges, indeed the depth must be calculated by tens of sazhen. Throughout this portion the river is fordable nowhere and at no time of the year ; even with *gupsar* (tussucks) natives cross with great difficulty ; according to a Tut-Kaul amlyakdar, many people are lost in the river and as a rule the drowned person is never found.

* *Kishlak* is the native word, in use in Central Asia, for any kind of village or settlement. Its literal meaning is a nomad settlement.—*Translator*.

† i.e., 4—5 miles per hour.—*Translator*.

‡ i.e., 2—2½ " " "

§ i.e., 4½ " " "

|| i.e., 6 " " "

** i.e., 7½ " " "

¶ V. F. Oshanin, in his article " Karategin and Darwaz ", in two places gives it as his definite opinion that the Surkhob, within the boundaries of Karategin, is nowhere and at no time fordable ; Captain Vasilyef, on the contrary, says that at low-water it is possible to ford the river everywhere.

And thus, passing to the practical deductions that follow from our examination of the depth and current of the Surkhob, we may say that during half the year, April to September, intercourse is maintained by the inhabitants across the river by means of bridges and *çapsar*, and only exceptionally and in very few places by swimming across on horseback, but* during the remaining months, in the section from the eastern frontier to Garm, in many places fords come to light.

Bridges on the Surkhob.—I noticed nine bridges across the Surkhob between the eastern frontier and Tut-Kaul. They were all of the so-called Caucasian type; that is to say, abutments, composed of alternate layers of beams and stones, are built on both banks of the river, in such a way that the higher the layer of beams the further does it project over the river†. The span of the bridge thus becomes narrower and narrower towards the top; it is then closed by beams, laid across the river, on which the roadway of the bridge, consisting of brushwood, earth and stones, is constructed. These bridges are the reverse of solid; they sway considerably even when crossed by a pedestrian, the roadway is often out of repair, and one must be accustomed to them and have strong nerves to venture to cross them on horseback.

In Mountainous Bokhara there are no *arbas* ‡ for which reason the bridges are narrow and suitable for equestrians only. The width of the bridges is, as a rule, $1\frac{1}{2}$ —2 paces ($3\frac{1}{2}$ — $4\frac{1}{2}$ feet); handrails are never provided.

Commencing from the upper waters of the river, the bridges are as follows:—

- (1) Near the hamlet of Kichik-Karamuk (not far from the frontier).
- (2) At the village of Sari-Gui (2 versts, *i.e.*, $1\frac{1}{3}$ miles, below the first bridge).
- (3) At the junction of the Muk-su with the Surkhob, near the settlement of Danr-burachi [Damburoch].

The entire length of this bridge is 24 paces, the span is 16 paces, and the abutments are each 4 feet long. The bridge, in comparison with others of its kind, is remarkable for its solidity; it bends and sways so little under a horseman that a horse will go across it quietly.

- (4) At the settlement of Kush-Muinok [Kosh-Mainak] (as it is called by the Kirghiz; the people of Karategin call it Kosh-Agba).

The bridge is situated on a very busy road between Upper Karategin and Upper Vakhia, or more generally Darwaz. A large number of the inhabitants of Darwaz go to Ferghana in search of work by this road. I saw the bridge on my outward journey; when I was on my way back, the bridge had been carried away by the water.

- (5) At the settlement of Saripul, 4 versts ($2\frac{2}{3}$ miles) west of Garm.

The bridge lies on the main road between Karategin on the one side and Darwaz on the other. The total length of the bridge is 35, and the span 25, paces; and abutments are each 5 paces long (*i.e.*, 82, 58 and $11\frac{1}{2}$ feet, respectively). The bridge is solid enough for a mountaineer, but, apparently, horsemen always dismount, as their horses become very nervous and frightened. Dismounting is unavoidable since the span is too wide, an accident is very possible, and, judging by the nature of the river, would probably be fatal.

- (6) Below the settlement of Saripul, opposite the settlements of Chainamak and Sangikho, on the road between Karategin and Hissar.

* The rider strips to the skin and, swimming alongside, directs the horse's head by the bridle, or by a blow from the palms of the hand. Without a rider a horse would get lost in these places.

† The cantilever principle.—*Translator.*

‡ *Vide note on page 8.*—*Translator.*

The total length of the bridge is 34 paces, span 18 paces, length of abutments 8 paces each (79, 42 and 18½ feet respectively). It is an excellent bridge. A horse will cross without getting nervous. Our party dismounted, but, apparently, it is possible to ride across the bridge.

- (7) At the settlement of Degi-Gulemon, 8 versts (5½ miles) below the settlement of Navdonak*, on the last mentioned road between Karategin and Hissar.

The total length of the bridge is 39 paces, span 19 paces and abutments each 10 paces (91, 44 and 23¼ feet respectively). The bridge is massive and new. A horse will become nervous, when crossing, as the bridge is built above a big water-fall. It is better to dismount. A few paces above the present bridge are seen the traces of the old bridge.

- (8) At the settlement of Darli-tut (in the Obi-Garm amlyakdarate).
 (9) Below the settlement of Tut-Kaul, or 7 versts (4¾ miles) above the settlement of Dagan.

The bridge is situated on the main road between Karategin, Hissar, and, generally speaking, Bokhara on one side, and Baljuan, Kulyab and Darwaz—that is to say, all the mountainous and south-western corner of Bokhara—on the other. At this spot, the tops of the sides of the deep ravine in which the river flows approach so close to one another that an interval of 6 to 7 paces (14—16 feet) only is left between the edges of the cliffs. The bridge is very solid. A row of upright branches forms a sort of railing along each side of the bridge; but these branches have a very slight power of resistance, and their object is not to prevent a fall of man or beast, but to conceal from the latter the terrifying abyss yawning alongside. During the crossing of the bridge the river would hardly be visible even without the branches; it seems to roar and boil somewhere under ground. Although the bridge is situated on the frontier of the Hissar and Baljuan Begships, still the revenues from it belong to the Beg of Karategin. The bridge is of considerable importance from the point of view of trade, but in the case of military undertakings, too it must be borne in mind.

During high water, the destruction of the bridges (the last one could be destroyed in 20 minutes) may separate the two banks of the Surkhob for a distance of over 200 miles, and, in this case, at Tut-Kaul only could communication be rapidly restored, for here are many trees close to both banks and the construction of a bridge would be an easy and expeditious matter.

To enter into the details of crossing by means of *gupsar* is not of much practical importance for the following reasons. Only a small detachment of single individuals could cross on *gupsar* as the inhabitants of Karategin own very few; they are kept as being of some assistance in agriculture and even then only by the wealthy. Moreover, and this is probably the most important point, during war time *gupsar*, being light and easily carried, will be so well hidden by the mountaineers that when they are required there will not be one single specimen to hand. The use of *gupsar*, too, is dangerous for, apart from the fact that people are often drowned while using them, they not infrequently, owing to some slight carelessness on the part of the passengers, are carried down stream or else are caught by the current and damaged without any warning.

Tributaries of the Surkhob.—A countless number of tributaries flow into the Surkhob river; they are by nature purely mountain streams, flowing along a stony bed with a very swift current. For one to two months of high water they form somewhat of an obstacle, but during the remainder of the year they are easily fordable in many places. The difficulty in crossing them depends not so much on the depth of the water as on the current (the great pressure of water overwhelms an animal), and the peculiarities of the bottom (stones of various kinds; if an animal stumbles on them he may possibly fall, and then he is sure to be swept away). To the crossing places roads lead along the valleys of these tributaries and, sometimes, along their beds. Small bridges, which get broken up at high water, are frequently met on these roads.

* On the 40-verst map it is called Naidonak.

On the right bank, the following rivers flow into the Surkhob:—*Kichik-Karanuk*; *Davana*; *Obi-Zanku* consisting of the rivers *Taldi-Kul* and *Pittau-Kul*, which is formed by the *Loi-su*, i.e., the dirty river and the *Kirchik*; *Kabud* formed by the *Yarkhich* and two streams flowing from under the *Tutek* and *Karagush-Khana* passes; *Yasman*; *Sorbukh*, composed of a whole network of tributaries; *Mujikharv*; *Khakimi* [*Haklim*]; *Lyagurn* and *Obi-Garm* which has numerous tributaries.

The tributaries on the left are the *Muk-su*; *Darai-Nushor*; *Tarabuiyuk*; *Obi-Ganshou* (*Ab-i-Ganshou*); *Fatkhat*; *Obi-Tudak* (*Ab-i-Tudak*); and many other small streams.

The Khingou [*Khingab*] *River*.*—The most important tributary of the Surkhob is the *Khingou*. For the greater part of its course, it belongs to *Darwaz*, and only for a small section—at its mouth—to *Karategin*. Maintaining a general direction from east to west, the river flows in a distinctly marked but broken line. It lies between steep banks, often splitting up into several channels and forming a series of islands; the upper and lower waters of the river are contracted by mountain-spurs, and in these places it runs between nearly perpendicular rocks. The valley of the river opens out at times to a width of 1 and even 2 versts ($1\frac{1}{2}$ miles), but in the majority of cases the slopes of the hills verge almost upon the river itself. The *Khingou* is not fordable in summer, except by one ford, viz.—somewhat below the junction of the *River Switargi*, but it can be crossed by 6 bridges, at the villages of *Tirshid* (*Arzwing*) [*Arzing*], *Sangvar*, † *Lajirk* †, *Tavil-Dara* † [*Tabi-Dara*] and *Khoja-Khullez*; it is also possible to cross by means of *gupsari*. The current is very rapid, the depth considerable, and the colour of the water muddy. At low-water many fords are to be found. Even during a severe winter this river only freezes in certain places.

The Rivers Kizil-su and Yakh-su (Ak-su).—These rivers may be described simultaneously, as they are both very similar and of identical economical importance. These rivers rise from the lofty saddle which unites the *Vaksh* and *Peter the Great* Ranges, somewhat to the south of the lower portion of the *Khingou* River. After flowing in a south-south-westerly direction for about 80 miles the rivers unite and under the name of the *Kizil-su* after another 40—50 versts (25—35 miles) empty themselves into the *Pyanj* River, not far from the *Parkhar* crossing. In early spring the snow thaws rapidly in the basin of the rivers and they form at this season important waterways with a broad channel and a very rapid current; but the season of high-water is soon over, the *Kizil-su* and *Yakh-su* rapidly sink to a bed of moderate dimensions and for 9—10 months in the year call to mind an ordinary mountain stream. We cannot but imagine that at this season they are chiefly maintained by copious springs and only partly by the melting snows, which lie for a long time in the deep ravines. The valleys of the two rivers vary in width from 2—5 versts (about $\frac{1}{2}$ — $3\frac{1}{2}$ miles) and often form continuous stretches of shingle. There is marshland in some places in the valley, particularly along the lower course of the *Kizil-su*. The rivers, thanks to their high level and the purity of the water, form excellent reservoirs for irrigation, and nearly all the water is used on the adjacent fields. On the lower courses of the rivers the cultivation of rice is carried on to a considerable extent.

Except during the short period of high water, the rivers form no obstacles to crossing. It is only necessary to take into consideration the adjacent marshes, which should be carefully crossed, after a guide has been procured.

The Yazgulem River.—The *Yazgulem* River commences as two rivers (on the right known as the *Obi-Dara-i-Mazar-Peri-Sariab* and on the left as the *Obi-Bai-Bartang*) from the *Ku-Lazir* glaciers; it contains a very great volume of dark-blue water, and, falling into the *Pyanj*, forms a small delta. Its general direction is south-westerly; its

* G. A. Arendaryendko calls the river "Khingob"; Captain Vasilief calls it "Khullez-su," and Captain Kuznetsov "Khing-ob."

† The native pronunciation is *Sangvar*, *Lojirk*, *Tabi-dora*.

width is not more than 20 sazhen (140 feet) and its depth 2 sazhen (14 feet), but the rapidity of its current is considerable. It flows between steep, precipitous banks, opening out only now and then into a valley, in places some hundreds of sazhen wide. During the summer there are no fords across the river, but in the winter time they are formed in certain places. Throughout the entire length of the river, there are six bridges of the Caucasian type at the villages of Matraun,* Blun,† Pnyef, Vishkharv, Andergab‡ and Jamak [Yamar ?].

The Vanch (Vanj) River.—Finally mention must be made of an important tributary of the Pyanj River, namely, the Vanch; it commences as two rivers, viz., on the right as the Obi-Kashal-Ayak [Ab-i-Kohshal-Ayak], and on the left as the Obi-Abdukogar [Ab-i-Abdu-Kok-Jar], from the Ku-i-Lazir glaciers; it flows in a south-westerly direction, and for the most of its course split up into numerous branches and forms a large number of wooded swamps (*tugai*). Owing to the islands the river in many places attains a width of as much as $\frac{3}{4}$ versts ($\frac{1}{2}$ mile) and over; in narrow places the width is not more than 20 sazhen (140 feet). The depth in certain places reaches $1\frac{1}{2}$ sazhen ($10\frac{1}{2}$); the current is considerable; and the water is of a dirty milky colour. During high water there are no fords; the river is crossed by bridges or *gupçari*; there are in all 3 bridges, viz.—at the mouth of the river, at the village of Rakhav (Kalai Vanch) [Vani Vanj], and at Poi-Mazar [Mazar]. The river does not freeze at all even in winter. The valley is considerably wider than those of neighbouring rivers.

Streams.—The district under consideration is full of a complete network of small rivers and streams, which owe their origin to the snow mountains and the intricate nature of the country. Their general character is outlined above, but an enumeration of all the streams would unduly expand the dimensions of the present work.

Climate.

It is difficult to speak precisely on the subject of the climate of the district, because of, firstly, the insufficiency of accurate observations, and, secondly, the great variety of climates. Observers§ have made most use of the word “continental” to describe the climate of the region under review. It would, perhaps, have been convenient to use the word “mountainous,” because the expressions “continental,” “maritime,” etc., etc., do not apply to a mountainous locality. The climate of this region depends first of all upon the height above the level of the sea, and after that upon topographical conditions, such as whether a valley opens towards the snowy range or towards the Amu-Darya, whether the warmth of the rocks is reflected into the valley or is dispersed in all directions, and finally, upon the proximity or remoteness of the mountains, etc. ||

Over the whole extent of the district four varieties of climate may be observed, viz. :—

(a) *The climate of the lofty plateaux*, where, as a rule, the small rivers rise. It is similar to the climate of the Alai valley in the vicinity of Saritash, i.e., on the meridian of the town of Osh; the climate is continental, dry, and severe; for three to four months it is hot, and during the rest of the year cold. Of cereals, pure barley (a Himalayan grain) alone is able to ripen on these plateaux, and this only under particularly favourable topographical conditions (shelter from the winds, refraction of the heat from the rocks). But, on the other hand, excellent grass grows on these plateaux which serve as pasturages for the cattle of the mountaineers who have their summer quarters here. Snow falls in great quantities and remains for seven to eight months; after the snow thaws the frozen earth requires another two to three weeks to become completely heated, and then it allows the grass to spring up. The climate of the plateaux, although severe, is healthy.

(b) *The climate of the valleys at a height of from 3,000 to 8,000 feet above the level of the sea.*—This climate may be compared to that of Central Russia, although it is not so

* Motraun, *vide* page 78.—*Translator.*

† ? Bdun, „ „ 78 „

‡ ? Andarbad, „ „ 79 „

§ For instance, Captains Kuznetsof and Vasilyef.

|| Englishmen who have interested themselves in the climate of the mountainous districts of India arrive at approximately the same conclusions; e.g., Drew, in his work on Kashmir.

mild and the transitions from heat to cold and the reverse (during the space of a year or of a day) are more marked. Such is the climate of the portion of Karategin between the rivers Muk-su and Sorbukh ; we will study it in more detail. According to the unanimous accounts of the inhabitants, a great quantity of snow falls in Karategin, and lasts four to five months ; some reports have put the depth of the snow at the height of a man. Spring lasts for two to three months and is remarkable for its heavy rainfall which continues for one and a half to two months, not, however, incessantly ; still five to ten days' continuous rain is no rarity. During this season the roads become absolutely useless and traffic along them almost entirely ceases. From the accounts received it is difficult to give the precise period of the rainy season, but it may be presumed that the rain falls during the months of March, April and May. The spring is followed by a short and very hot summer, much hotter than that of Central Russia, as (1) the sun is nearer the zenith, (2) the heat is reflected into the valley from the rocks, and (3) in still weather there is very little movement of the air along the valleys. Finally, the autumn is equable and fresh, because the early snow on the mountains causes a marked fall of temperature in the valleys.

The list of the cereals and fruits which grow in Karategin strengthens the analogy between its climate and that of Central Russia, but it also shows that the products of Karategin are much more diversified. Apart from peculiarities of the soil this variety is no doubt due to the burning summer, which permits of the ripening of fruits for which the summer heat of Central Russia is insufficient.

The climate of Karategin is very healthy ; no mention is made by the inhabitants of any infectious diseases whatsoever. Cases of sore eyes, fevers and rheumatism are met, but only in small numbers, and, indeed, all these ailments are caused, not by the conditions of the local climate, but by the wild surroundings of the inhabitants and their want of precaution. For instance, the diseases of the eyes are mainly due to the mountain snow and dust, and the rheumatic complaints to swimming or fording cold mountain streams ; with care, it is not difficult to avoid all these ailments. The fevers are of a mild form, unless they have been imported by inhabitants from the banks of the Amu-Darya. In connection with the excellent and pleasant climate of Karategin, mention must be made of its good water ; even the water of the Surkhob, after it has been allowed to stand, is pleasant to the taste and, apparently, very good for the health.

(c) *The climate of the undulating steppes of the Kulyab and Baljuan Begships.*—As has already been mentioned the mountains of our district on approaching the Amu-Darya change into hills of 3,000 to 6,000 feet in height. The climate of these hills is very similar to the climate of our Black Sea steppes, except that it is hotter. The winter is of short duration, but the cold, when the wind blows hard, is severe. As regards the snow, the reports of the inhabitants are confusing ; in all probability, it does not fall regularly ; some years it may lie for several weeks, and in others there may be none at all. The summer is hot and long. There is, apparently, absolutely no spring or autumn in the sense of fixed seasons of the year ; the winter gives way to summer, and *vice versa*, almost imperceptibly. The climate of the hills in itself is probably not prejudicial to health, although on the steppes people are found to suffer, particularly from fevers. The fevers are probably to be traced to the valleys, as there is much intercourse between the inhabitants of the hills and those of the valleys ; it is, however, difficult to speak positively.

(d) *Finally, the climate of the valleys of the Kizil-su and Yak-su in their middle and lower courses.*—Here the characteristic features of the climate, as may be supposed, correspond to those of Termez, i.e., it is hot and unhealthy. There is hardly any winter here, and in the summer the unupportable heat continues for several weeks consecutively, and even the nights do not bring the longed-for coolness. Such great heat, combined with the marshy exhalations from the wooded swamps and rice-fields, generates malignant rheumatic fevers and all kinds of sicknesses. Of our reconnoitring party only one Cossack escaped fever, the remaining five were attacked by it, two Cossacks particularly severely. The types of fever are very varied, and their effect upon the organism of the human being do not admit of systematization. June, July and

August appear to be the particularly dangerous months ; and then the inhabitants, who are not forced to work in the valley, change their residence to the hills.

From the foregoing examination of the climate, the following military deductions may be drawn :—the climate of the mountain plateaux, although healthy, is not favourable on account of its severity to the movements of troops.

The climate of Karategin (or of the valleys within the above-mentioned limits of height) is very suitable for our troops, because it is so like that of Central Russia ; there is neither great cold nor great heat, and there are no infectious diseases whatsoever. The conditions for movement are less favourable. Although in the winter very soon after a fall of snow the inhabitants use men and horses to tread down the roads,* yet these latter remain difficult all the same ; and during the three spring months, March to May, the mire is such that horses sink up to their girths, and movement along the road is well-nigh impossible.

The climate of the hills would be somewhat hot for our troops, and probably not, as a rule, entirely healthy. The conditions for movement are favourable.

The climate of the valleys of the Kulyab and Baljuan Begships is very unsuitable for our troops, and during the summer is positively harmful. The conditions for movement are good.

Population.

The population of the district may be divided ethnographically into three groups, of which the predominant group is that of the Tajiks, including the inhabitants of Karategin and Darwaz, or the Tajiks proper ; the other groups are Uzbeks and Kara Kirghiz. The Tajiks represent the settled population, while the Uzbeks and Kara Kirghiz are in a transition stage ; thus in certain places we find absolutely settled groups of these races, while in others they are almost entirely nomads.

The Tajiks.—The Tajiks represent the original population of the country. In Darwaz they inhabit the whole country, and have no admixture of other races ; as many as 5,000 Kara Kirghiz live in the upper portion of Karategin, but the remainder of the population is Tajik ; and, finally, in the Kulyab and Baljuan Begships the Tajiks form two-thirds of the population, while the remaining one-third are Uzbeks.

We have designated by the general name of Tajiks all the settled population of the country who do not belong to the Turanian race ; but the reservation must be made that there is a great ethnographical difference between the Tajik mountaineers, represented in our district by the inhabitants of Karategin and Darwaz, and the Tajiks of the valleys, such as the Tajiks of the Kulyab and Baljuan Begships ; the former are representatives of the aboriginal Iranian with the sole admixture of the fair-haired Aryan, while the latter represent a variety of the Persian race with a strong blend of Arab and Turanian blood. The difference between the Tajiks of the valleys and those of the hills is noticeable in other respects, *e.g.*, language, racial characteristics, etc.

The Tajiks are, for the most part, agriculturists ; they go in little for cattle-breeding, except where there are good pasturages. Wherever they live side by side with the nomads, *e.g.*, in Upper Karategin or in certain places in Kulyab, the Tajiks adopt some of the attributes of a semi-nomadic existence, *e.g.*, they periodically depart into summer quarters, leaving their fields to be tilled by hired labour, but this must be considered exceptional. Where there is little arable land (in Darwaz) the mountaineers are forced to take to some other occupation besides agriculture, *e.g.*, they wash gold, busy themselves with some trade or other, but they always look upon such work as subsidiary to their agricultural labour.

The life of the Tajiks, their settlements, houses, peculiarities of character, etc., offer nothing which has not been sufficiently described already by explorers.

But, perhaps, it will not be superfluous to say a few words about the character of the mountaineers. Observers of the Tajik generally describe him as “ sympathetic ” ;

* The work is arranged by *amlyakdarates* ; the inhabitants of each are bound to take care of their own roads.

they emphasize his devotion to his country, his patience, his kindness of character, his strength of will and his endurance. All these virtues may be admitted, but it is necessary for the sake of greater accuracy not to forget the negative side of the Tajik's character, all the more so because it is most important from a military point of view.

The Tajiks are deceitful, reserved to an impossible extent, and miserly. In all probability these traits are ingrafted into the mountaineers by a prolonged existence in a state of slavery, either under conquerors or under their own ruler, but the fact remains a fact and must be taken into consideration.

One must always be prepared for the Tajik lying and concealing that which is in his interests to conceal. He will lie not only for some advantage or other, but also because he has a lively imagination and delights to dwell in the realms of fancy. As a scout, the Tajik is hopeless, although he knows how to apply himself diligently to work. His reserve is so great that attempts to find out from him, for instance, about a bed of gold (at Oroshor), of silver (at Gunt), the whereabouts of stores of various goods, or, finally, any religious secrets, have always been absolutely unavailing. The avarice of the Tajik has become a by-word among the surrounding population. The Tajik always goes in rags, no matter what his circumstances, always carries his shoes in his hand when on the road, even if he has to go through snow, and generally feeds himself badly. If, by any chance, he has not received any money that is due to him, the Tajik is ready to use violence, burst into tears, or to cringe. The Kara Kirghiz, the Uzbeks and even, at times, the Tajiks assert that all of them have a large (large certainly, according to their own ideas) accumulation of money, while the well-to-do allege that they have a reserve of corn sufficient for two or three years. The Alai Kirghiz told me that, no matter what the time of year nor how bad the harvest had been, there was always grain to be found among the Tajiks, and, *as much as was wanted*, provided that payment was made for it. Of course all this cannot be taken literally, still the existence of stores of corn amongst the Tajiks is an important fact which cannot be overlooked in any military study.

Next as to the religion and speech of the Tajiks. Owing to the reserve on the part of the mountaineers, it is always possible to meet some incorrect account of their religion.* The majority of the Tajiks in the region are Sunnis, *e.g.*, all the inhabitants of Karategin and the Tajiks of the hills and valleys, but amongst the inhabitants of Darwaz there are many Ismaelites.† Count Bobrinskoi calculates that in Darwaz, including only the right bank of the Pyanj River, *i.e.*, in Bokharan Darwaz, half of the population profess Ismaelism, and half belong to the Asno-Asharya (Ithna-Asharya) sect, *i.e.*, the "The Twelvers", as are designated those Shias who acknowledge the 12 Imams.‡ It is hardly possible to agree with the latter part of the Count's assertion; more probably of the second half of the population the Sunnis form the greater percentage, but there may, perhaps, be also isolated families of Shias.§

The Tajiks of Eastern Bokhara talk, for the most part, in two languages, *viz.*—Karateginese, which may be considered as a slight variation of the Badakhshan dialect of the Persian language, and the Darwaz language which displays considerable variation from this Badakhshan dialect, as it has taken into use many words of the languages of Shughnan and even Vakhan. In the Yazgulein valley, and along the upper waters of the Vanch, the inhabitants speak one of the dialects of the Shughnan language. It is quite possible to make shift among the Tajiks with a knowledge of Persian||, for the inhabitants of Darwaz understand it, though not very easily; and in the recesses of the Yazgulein and Vanch rivers in each settlement there are always to be found some men who speak Persian.

* For instance, the inhabitants of the western Pamir have for a very long time been accounted "Shias" (Polozof, Eggert and others), while Captain Kuznetsov, who has studied the country so closely, calls the inhabitants of Darwaz "Sunnis."

† (a) The Ismaelites, *vide* Encyclopædia Britannica, are the most powerful sect of the Shias.—*Translator.*

‡ (a) The Ithna-ashariya are a sect of modern Shias, followers of the 12 Imams, *v.e.* Ali and his eleven immediate descendants through Fatima, daughter of the Prophet.—*Translator.*

(a) *Vide* Encyclopædia Britannica.

§ It is most probable that amongst the second half there are many Ismaelites but that for some reason or other, they pass themselves off as either Sunnis or Shias.

|| The Badakhshan dialect.

It is difficult to say what are the political ideals of the Tajiks of Mountainous Bokhara. Do they wish to live, as formerly, under the authority of Bokhara? Are they being drawn to the side of the Russians? Or, finally, do they perhaps dream of the Amir of Afghanistan? They know scarcely anything of the Russo-Japanese War, and are very little interested in it. Russian methods please them, particularly our administration of justice; but on the other hand they are, to a considerable degree accustomed, or more exactly broken in, to the Bokharan regime. Their political frame of mind is chiefly characterised by indifference and only in places may be hidden in the depth of the national conscience a dim hope of falling "under the high hand of the White Tsar." The Tajiks are too reserved and too fearful of the Bokharans to openly display their cherished dreams; moreover, they are too deeply taken up in their domestic and agricultural cares to rise to a broader political horizon. As a rule, they are less developed politically than the Uzbeks, and in this respect are incomparably lower than the mountaineers of the Western Pamirs. If the English carry on a political campaign against Mountainous Bokhara, they will hardly begin by winning the Tajiks to their side.

The Uzbeks [Uzbaks].—The Uzbeks inhabit the undulating portions of the Kulyab and Baljuan Begships, *i.e.*, the most fertile portions and those most suitable for cattle-breeding, leaving to the Tajiks the unproductive regions or the valleys near which there are no good pasture lands. In Bokhara the Uzbeks lead a semi-nomadic form of existence and are mostly cattle-breeders. They busy themselves but little, and even then in a haphazard fashion, with agriculture; as a rule, they leave work in the fields to hired labourers. They occupy small nomad settlements, generally situated in ravines near spring water.

The main wealth of the Uzbek is measured by the quantity and quality of his cattle which, during the course of a year, move over a vast expanse of country; thus, during the summer months horned cattle are driven as far as the southern slopes of the Hissar Range, and sheep eastwards as far as the western foot-hills of Darwaz, while in the cold months both cattle and sheep move southwards as far as the wooded swamps on our side of the Amu-Darya.

By nature the Uzbek represents the pure type of Turanian nomad, *i.e.*, he is horribly lazy, a lover of freedom, proud, hospitable, kind, careless in his domestic economy, upright and simple, but not averse from gain in money matters, inquisitive, clever, and, politically, highly developed.

The Uzbeks speak the Uzbek dialect of the Turanian language, very like the Sart and particularly like the Kirghiz-Cossack dialect. Cossacks from amongst the Tartars, and still more those people of Semirechya who know the Kirghiz tongue, have no difficulty in making themselves understood by the Uzbeks. In order to do business with them it is necessary to know the "Turki" language, one of the Central Asian dialects, although it is possible to make shift with Persian* as the influential and wealthy Uzbeks generally know this language.

In ancient times, the Uzbek-Sunnis were distinguished for great religious tolerance, but of late years the Bokharan regime has succeeded in fanaticizing them considerably.

Politically, the Uzbeks, like the Tajiks, present somewhat of an enigma. Their political enlightenment and keen interest in external matters are palpable even at the very first conversation with them. The present war has interested them to a marked extent, the religion of the Japanese, the extent of their power, and their external appearance were always the main questions, with which the Uzbeks besieged me during conversation with them. It would be exceedingly interesting to know whether the Uzbeks consider themselves a single, united people in spite of the fact that they are to be found in different countries, *e.g.*, Afghanistan, Bokhara, Khiva, Ferghana and whether they perpetuate, so to speak, a common Uzbek stock. I did not succeed in clearing up this point. They know of the common origin of the various races, their history and also their modern geographical distribution, but all this information has a merely literary interest for them and, one may say, has little political importance in their eyes.

* Bokharan dialect.

Towards whom do the Uzbeks gravitate? As Turanians and nomads, they are bound to be inconstant, and political consistency is not to be expected of them. Of the three countries—Russia, Afghanistan and Bokhara—it is to be presumed that the Uzbeks are on the side of the last named, and we can hardly expect our country to be especially attractive to them. A common religion may draw the Uzbeks towards Afghanistan, but nothing else will. The implacable mutual hatred of the Uzbek and the Afghan has been remarked by many observers*: this hatred, nourished by tribal contrast, is actuated by the extreme contempt for, and oppression of the Uzbek, by the Afghan. For instance, as is well known, the Afghan considers that all tribes, including even the Tajiks, are suitable for military service, except the Uzbek.

The Uzbeks are bound to prefer Bokhara to Russia for the following reasons:—(1) the former professes the same faith as they do; (2) as the ruling race, they live in Bokhara under conditions no worse, and perhaps better, than they would find under Russia; and (3) the ruling dynasty of Bokhara belongs to one of the branches of the Uzbeks, by name the "Mangit".

In any case, in the Uzbeks of Bokhara we have a people politically unstable, lightly bound to us, and forming very impressionable material for any sort of political agitation. If we do not undertake in the immediate future to win the Uzbeks over to our side and, if we are prepared to leave them in their present state of political feeling, then, in the event of disturbances or war, our relations towards this people must be marked by distrust and caution.

The Kara Kirghiz.—The Kara Kirghiz form a small group in the general mass of the population of the territory under consideration. They inhabit the eastern portion of Karategin, beginning from its frontier with the Alai Valley and terminating at the settlement of Sarion, not far from the junction of the Obi-Kabud with the Kizil-su. They belong to the three families of Taitis, Kipchaks, and Gadirsh, *i.e.*, they are very near kinsmen to the Kirghiz of the Alai Valley and the Eastern Pamir.

The Kara Kirghiz lead a semi-nomadic form of existence, being mainly engaged in cattle-breeding, although also to a considerable extent in agriculture. This latter industry, however, is carried on only by the poor and the labourers of the wealthy, and little care is given to it.

The Kirghiz speak the Kara Kirghiz dialect of the Turki language, but this is not so harsh and pure as the Pamir dialect; there are many Persian words in it, and the influence of the Uzbek language is noticeable in the pronunciation. In ancient days the Kirghiz Sunnis were not particularly devout, but now, thanks to the proximity of the comparatively religious inhabitants of Karategin, they display considerable piety; in each nomad settlement there are prayer-houses (small mosques), and in each *volost*† (*mirakhurate*) there is one large mosque (for prayer on Friday); priests are to be met at every step; at daily prayers, it is no rarity to see middle-aged and, even at times, young people as well as the aged.

The Kara Kirghiz in Karategin form a separate, so-called Kazats or Cossack, *amlyakdarate* of their own, and enjoy great freedom; they have no permanent Bokharan official over them, nor do all the settlements have taxes imposed upon them, and the people are governed by their own *mirakhuri* from amongst the Kirghiz. They live in tolerable comfort and consider themselves wealthier than the Alai Kirghiz, the nearest Kirghiz to them, but poorer than those of the Pamirs whose prosperity, however, they greatly exaggerate.

Politically, the Kara Kirghiz are highly developed; they understand fairly clearly the mutual relationship of Russia and Bokhara, although in public they paint it in a colour too advantageous to the latter. Kara Kirghiz are often to be met in Kokand and Margelan (now Skobelev—*Translator*); they have examined our methods, and approve of them; their views of our organization are very broad and clear; they lose no opportunity, for instance, of pointing out that the Mussulmans

* I need only mention I. L. Yavorski's journey of the Russian Embassy in Afghanistan, Vol. I, page 116, and Vol. II, page 274.

† A *volost* is a district containing several village.—*Translator.*

lead a cheerful life amongst us but a wretched one amongst them, a remark which refers to the festivities and the native *tamashas* of our towns. Notwithstanding their immunity from taxation under Bokhara and their comparatively great liberty the Kara Kirghiz perceptibly incline towards us; they talk of the possibility of becoming Russian subjects, and consider our frontiers to be their sole asylum in the event of the re-appearance on the throne in Karategin of such a robber and ruthless savage as the predecessor of the present Beg. In the event of war we are justified in counting to a certain extent upon the goodwill of the Kirghiz, but we must not lose sight of their religion, which is inimical towards us, and their political instability as Turanians.

History.

The most recent history of Darwaz and Karategin has been written by G. A. Arendaryenko in his interesting notes on these countries; but in the history of this country there is nothing instructive, nothing conducive to practical deductions, or useful for our account. It is the ordinary history of small mountainous principalities, with the ordinary despot at the head, most often of foreign origin. Each of the four Begships—Kulyab, Baljuan, Karategin and Darwaz—used to form separate principalities; moreover, the two latter, enclosed by mountains covered with eternal snow, difficult of access and far removed from the theatre of operations of Arab, Mongol and various Turanian conquerors, have not participated in the general history of Central Asia, and politically have always been unimportant factors. Kulyab and Baljuan, on the other hand, have more than once been drawn into the current of great historical life, have entered into relations with the northern, western and southern countries, have raised themselves to the eminence of great principalities, and have fallen to the rôle of simple satrapies.

More than once all four principalities have entered into mutual relations of varying degrees; thus, for instance, under Ismael Shah (1845—1863) the people of Darwaz succeeded not only in converting Karategin, together with Shughnan, into a viceroyalty, but also in making Kulyab into their vassal, though not for long; at other times, the other states were the more fortunate.

Almost simultaneously, at the end of the seventies of the last century, all four states were conquered by the Bokharan Emir Muzaffar-i-Din Khan * and from that time have formed part of Bokhara. The union was effected mainly by military force, but partly also by political processes; the country did not offer much opposition. The diversity in the character of their past history has had this effect upon the Begships that in Karategin and Darwaz we have to do with a homogeneous ethnical mass, the direct descendants of the ancient inhabitants of these countries, who have preserved the speech, type and manner of national life since the days of old; on the other hand, in the Kulyab and Baljuan Begships we meet, as the ruling and numerically important class, the latest arrivals from beyond the Sir-Darya, *i.e.*, the Uzbeks, while the rest of the population consists of the descendants of the ancient inhabitants as well as the latest immigrants from the neighbouring countries of Karategin, Darwaz and Afghanistan. There is no predominant tongue spoken, the ethnical composition is alloyed, and the general manner of life shows a mixed and non-homogeneous origin.

This same variety in the past has also influenced the Begships in the following manner. Although they have all been for nearly 30 years under the authority of Bokhara, still Darwaz and Karategin up to the present day have preserved their peculiarities, have not yielded to Bokharan influence, and the ties uniting them to the governing country are purely mechanical and by no means strong. On the other hand, Kulyab and Baljuan have become entirely Bokharanised Begships, firmly united to Bokhara, both by the kinship of a considerable portion of their population with the ruling class and by mutual interests and rights.

Occupations of the inhabitants.

Passing on to a review of the occupations of the population, we will dwell only on the most essential sides of these occupations and especially on those which have a military significance.

* Such is the full name given by Vambery who knew him personally. The abbreviated form is Muzaffar-i-Din. Cf. History of Bokhara by Arminius Vambery, London 1873, pages 392, 401, etc.

Agriculture generally.—Throughout all the portions of the territory under consideration agriculture is, indisputably, of supreme importance. Its peculiarities vary somewhat with the climate and the properties of the soil, but the general character of the primitiveness and simplicity of methods is everywhere the same. In Karategin and Darwaz the ground is always tilled in the spring, and is watered by atmospheric deposits, and not by irrigation canals which are only to be met in the gardens of the lower settlements. In Kulyab and Baljuan it is the same in the hills, where the propinquity of the sub-soil water to the surface and the spring rains produce a harvest without artificial watering, but in the valleys agriculture is entirely dependent on irrigation. The harvest is the same everywhere. The ploughing of the fields takes place in March in the south of the Kulyab Begship, but in May in the upper part of Karategin and in the upper valleys of the tributaries of the Surkhob. In the first named locality the corn is carried in July and August and in the other localities in September. There are no winter crops.

Cultivation consists mainly of wheat, barley, the true* and great† millet, beans, flax, rice, Indian-corn (as an exception) and cotton (two kinds). In point of quantity and importance wheat occupies the first place in nearly all portions of the territory under consideration; the exceptions are (a) the high mountain plateaux where more barley is grown and where only the wealthy sow a little wheat in addition; and (b) the hot valleys where rice and cotton, as being the most profitable products, are exclusively grown. Barley occupies the second place; the quantity grown of it amounts to $\frac{1}{3}$ to $\frac{1}{2}$ that of wheat. In poor districts barley is always grown for the use of the population, and in wealthy districts of the horses; in the latter, during a bad year, the people also have to fall back on barley. Barley is, in fact, generally grown as a standby in case of a bad wheat harvest or a substitute for this cereal, either owing to the cultivation of this latter being unprofitable or to some other economical consideration.

The true and great millet, flax and beans are grown in small quantities, particularly in Karategin; but in Darwaz, where the land is poor and there is a great lack of food products, beans and the true millet are sown everywhere in considerable quantities as they give a good crop.

In the western Begships, of the four products just named, flax is found; the remaining three are very rarely seen.

In Karategin rice and cotton are hardly ever to be found; the latter is very often ruined by the early frosts, and for some reason the seeds often prove useless and give no crop whatsoever. But in the valleys of the Western Begships the cultivation of rice and cotton is very considerable, while in the hills is grown a particular kind of cotton which does not require artificial irrigation.

It is a very difficult matter, and almost impossible, to determine how much corn is harvested, on an average, in a Mussulman country. I will refer to this question once more in greater detail when I have dealt with trade and population in the four Begships (*vide* page 41).

I first of all will quote the words of G. A. Arendaryenko on this subject: "calculate the quantity of agricultural produce approximately as follows:—taking the population of Karategin with 512 villages of 10,740 houses at 60,000 souls of both sexes, and in Darwaz with 350 villages of 6,000 houses at 40,000 souls, and calculating the average sowing at 60 *puds* (2,166 lbs) per house for the former, and at 20 *puds* (722 lbs) per house for the latter locality, and the harvest at 5 and 10-fold respectively, we get the entire corn harvest of Karategin to be 3,000,000 *puds* (108,336,000 lbs) and of Darwaz, including Vakhia Khulyas and Vanch, to be 1,000,000 *puds* (36,112,000 lbs)."

Captain Vasilyef puts the yearly harvest in Karategin, counting wheat and barley together, at 1,160,000 *puds* (41,890,000 lbs).

* *Panicum milaceum*.—*Trans.*

† *Sorghum vulgare* or *Holcus spicatus*, i.e., jowar or bajra.—*Translator.*

One cannot but conclude that G. A. Arendaryenko's figures for Darwaz are too high since, after deducting seed for sowing and for minor wants there would still have remained for consumption 20 *puds* (722 lbs) per head, *i.e.*, the population would have had enough corn for their own subsistence with a very small surplus for external sale, whereas in reality there is never a sufficiency of home-grown corn in Darwaz* and it has always to buy corn from Kulyab and Karategin. The marked difference between the totals of these two enquirers who worked at an interval of four to five years after one another, *viz.*, 3,000,000 *puds* (108,336,000 lbs) according to Arendaryenko and 1,160,000 *pu*'s (41,890,000 lbs) according to Vasilyef, affords a striking confirmation of my statement as to the difficulty of arriving at the approximate amount of corn grown in a Mussulman country.

I will quote data collected by myself, with the co-operation of an intendance official, Churof, and will endeavour to extract from them some general conclusions.

Agriculture in Karategin.—The Kazats *amlyakdarate*, *i.e.*, Eastern Karategin, grows mainly wheat and barley (millet begins only in the Zanku valley). Throughout the whole *amlyakdarate* there are only two or three places, such as the nomad settlements on the Muk-su, where barley is grown for local consumption only, and two Tajik settlements, Kush Muinok and Shilbuli, where corn suffices only for local consumption; elsewhere in all the remaining settlements there is a surplus of corn which is sold either to the Kirghiz of the Alai or to the inhabitants of Macha†. According to the reports of one group of Khirgiz, in the Alai the annual average sales amount to about 2,500 *puds* (92,800 lbs) of wheat, and 500 *puds* (18,600 lbs) of barley; a *mirakhur*‡ assured me that in the year 1903 the sales to the inhabitants of the Alai amounted to 300 *puds* (10,800 lbs) of wheat, but he added that the same amount was sold from his "*aksakalate*," while from the nomad settlements on the left bank of the Kizil-su, as, for instance, Jailgan [Jail-ghan] Kara-Shura, Lyakhsh [Lyaksh] perhaps as much as 2,000 *puds* (2,400 lbs) would also be sold. The inhabitants themselves never take their corn anywhere for sale, as they have no means of transport, but, if Kirghiz come for corn from the Alai, they never refuse to sell to them. It is a noticeable feature that the sale of corn takes place twice in the year, *viz.*,—in July to August when the corn ripens, and in March when the Alai Kirghiz require grain for sowing. That the inhabitants are able to sell corn outside on the eve of sowing their own corn is evidence of the large reserves at their disposal.

Kheraj§ is taken only from 17 of the lower settlements of the Kazats *amlyakdarate*, and in the case of the nomad settlement of Kush-Muinok higher up the Kizil-su, instead of *kheraj*, are levied 2 *tengas*|| from every poor family and 20 *tengas* from every wealthy family, and instead of *zyaket*¶ are levied wool, felt and so on.

I did not succeed in determining how much is collected by the last method, but the 17 settlements pay to the Government in a good year 2,000—2,500 *puds* (72,200—90,200 lbs) and in a bad year 1,500 *puds* (54,100 lbs). Apparently a small portion of the grain is bought back by the inhabitants, but a large portion goes in kind to the nomad settlement of Khoit [Kala-i-Khoit].

Further, I succeeded in establishing the fact that in the upper portion of the Kazats *amlyakdarate* the average sowing per household is 10—30 *puds* (360—1,080 lbs) of wheat, and 3—10 *puds* (72—360 lbs) of barley; in the lower portion, in a rich household 50 *puds* (1,800 lbs) of wheat and 10 *puds* (360 lbs) of barley are sown, and in a poor household 20 *puds* (720 lbs) of wheat and 2½ *puds* (90 lbs) of barley.

Finally, I may add that April to July is the period when there is least corn in the *amlyakdarate*, and that the inhabitants occupy their summer quarters from the beginning of May till September when, therefore, all the cattle, milk products and stores of corn will be found in the hills, at a distance of 3 to 7 miles from the main road; these facts must not be lost sight of in the event of a campaign.

* Captain Kuznetsov, page 53.

† Macha is the upper portion of the Zerafshan valley below Pakshif.—*Translator*.

‡ An elder or headman of a small group of settlements, 5 to 10 in number.

§ See Appendix IV, a tax payed in agricultural produce.

|| The average value of 1 *tenga* is 15 *kopeks*, *i.e.*, about 3½ pence.

¶ See Appendix IV, a tax payed in goats.

Then follows the great tract of country lower down the Kizil-su, on the right bank of which is the Kalai-Khoit amlyakdarate lying, for the most part, along the Yasman and Kabud rivers and their tributaries. Owing to the continual presence during my enquiries of one Bokharan and several Tajik officials, information here was collected with great difficulty, and it was almost impossible to arrive at reliable conclusions. In this amlyakdarate are grown wheat, barley and millet.

The labourers who remain in the valleys subsist upon unripe corn, sour milk products, etc. All the corn, so I was unanimously assured, is consumed locally, and such sale as there may be is confined to the inhabitants on the spot. There are very many poor people, as many as 12½ per cent. of the population; about 10 such are to be found in each nomad settlement. For a short time before the harvesting of the corn in the month of August the poor are forced not infrequently to live on various grasses, or roots, such as, for instance (according to the native names), *roi*, *kin*, *loly-aji-jak*.

It proved later, when I was making enquiries of Kalai-Khoit in other places, that the picture I have given of the economical condition of the people is too dark. In Navdonak they went so far as to lay special emphasis on the richness of the land along the Yasman river. It is to be presumed that in the Kalai-Khoit amlyakdarate there is undoubtedly enough corn for local consumption, but either there is no outside sale or else but a small one.

The Garm (Gharm) amlyakdarate is the largest and most wealthy in Karategin. It is situated in the neighbourhood of Garm on both banks of the Surkhob and along its tributaries. The inhabitants grow wheat, barley and (for the cattle) millet. The fields are watered by rainfall and also by irrigation, but the latter method is rare. A wealthy household harvests up to 400 *puds* (14,400 lbs) of corn of all kinds and a poor household 30—40 *puds* (1,080—1,440 lb). The people live in comfort except for a few poor people; in Garm itself, for instance, there are only 20 poor families, the remainder eat meat nearly every day (“*pillau* one day and fowl the next”). Corn is sold every year. To Darwaz, for the Bokharan soldiers, are sent up to 200 horses' loads of corn, *i.e.* 1,000 *puds* (36,000 lb); to Macha 1,000 horses' loads, *i.e.*, more than 6,000 *puds* (216,000 lbs); to Childara about 2,000 *puds* (72,000 lbs); even the inhabitants from the Alai come to buy corn* and take away every year not less than 300 horse-1 ads.† A great deal of millet is grown every year and as much as 2,500 *puds* (90,000 lbs) are sold. In a word, one may take it that the Garm amlyakdarate sells outside every year not a whit less than 15,000 *puds* (541,000 lbs) of corn of all kinds; more probably this figure should be much increased. It must also be remembered that the *kheraj* collected from the amlyakdarate is brought into Garm and in the castle of the Beg, which is situated in this town, there is always a fair reserve of grain.

There are no summer quarters such as the Kirghiz possess, although a small number of cattle, horses and sheep are kept at a distance from the settlements on the slopes of the hills and in the high valleys, and are not driven home at night.

The Navdonak amlyakdarate is situated on the left bank of the Surkhob River and adjoins the Garm amlyakdarate. Here are grown wheat, barley, flax and true millet. A good *kush*‡, *i.e.*, a good household,§ sows 35—45 *puds* (1,260—1,620 lb) of wheat, 25—35 *puds* (900—1,260 lbs) of barley and 3—4 *puds* (108—144 lbs) of flax. According to other accounts a rich man will harvest as much as 400 *puds* (14,400 lbs), a poor man 20—30 *puds* (720—1,080 lbs), *i.e.*, about 50 *puds* (1,800 lbs) per household is harvested on an average. The return of wheat or barley is five-fold. Taxes are paid in kind. The inhabitants themselves do not carry their corn for sale, but purchasers come to them from Hissar, Darwaz and Macha. “Little is sold, 2—4 *tovals*, *i.e.*, 27—54 lbs, per household.”

* Corn is cheaper in the neighbourhood of Garm.

† About 54,000 lbs.—*Translator*.

‡ A team of bullocks is called *kush*; the *kush* is used for calculating the pay of the native officials and for measuring land, corn, etc., for instance, by a *kush* of land is understood such an area as a pair of bullocks can plough; a *kush* of corn means the quantity required to sow a *kush* of land, and so on.

§ In Karategin there is generally kept in each household one pair of draught bullocks; if the management is good, then the pair of bullocks will be good and *vice versa*. Often instead of the word “household” or “house” the word *kush* is used.

The outward appearance of the inhabitants, the vast areas of ploughed land, the great number of grazing cattle force one to entertain grave doubts of the accuracy of such modest figures. If the assertions of the natives are correct, then the outside sales of the whole amlyakdarate cannot exceed 800—900 *puds* (28,800—32,400 lbs), whereas according to other reports one "volost," that of Khost, has paid more than 50 *puds* (18,000 lbs) yearly as *kheraj* and never bought any grain back again. With no data for more accurate conclusions, the probable inferences are that in the Navdonak amlyakdarate the locally-grown corn is ample for the local population, that its small surplus stock, not less than 1,000 *puds* (36,000 lbs), is sold outside, and finally that the *kheraj* in kind is sent across to Garm.

The Komarou [Komarau] amlyakdarate is situated on the Komarou River, a tributary of the Surkhob, and partly on the Surkhob itself. It is almost the poorest locality in Karategin; it is situated very high up and snow lies for about six months. Only wheat and barley, the latter in greater quantities than the former, are grown; the reasons are that in the higher localities wheat will not ripen and in the lower localities there is less risk with barley. The people are very poverty-stricken, and go away in considerable numbers to earn a living in Kokand. There is no doubt that in this amlyakdarate there is no surplus corn and that the population is only able to exist on the corn they grow themselves because so many mouths are fed outside.

Moreover, from the statements of some of the natives it would appear that in some years the Komarou amlyakdarate buys corn in the neighbouring amlyakdarates of Garm, Yakhak and Obi-Garm, but, apparently, only a little.

The Yakhak amlyakdarate is in the extreme west, on the left bank of the Surkhob River; it is small, but well-to-do. Wheat, barley and flax are grown. A good household sows 35 *puds* (1,260 lbs) of wheat, 13 *puds* (470 lbs) of barley, and about 3 *puds* (108 lbs) of flax. It grows always enough corn for its own consumption and sells its surplus in Hissar, Darwaz, Macha and Komarou; the inhabitants do not carry their corn for sale but wait for purchasers to come to them. In all probability there is always a certain surplus of corn in the Yakhak amlyakdarate.

The large and wealthy Obi-Garm amlyakdarate is the most westerly of those on the right bank of the Surkhob, and also of all in Karategin. The climate here is warm and equable; there is a good snowfall, for which reason the crops are large and certain and are probably the best in Karategin. It should be noted that the soil in the Begship is very much exhausted, the result of continual cultivation and no manure, and an average harvest is never more than five-fold; whereas in the amlyakdarate under consideration only in a bad year is the harvest five-fold, while in an average year it is 7-8 fold and in a good year reaches ten-fold. Wheat, barley, the true millet and flax are grown. All the fields depend entirely on the rainfall for their water-supply.

On a good farm as much as 50 *puds* (1,800 lbs*) of wheat, 20 *puds* (720 lbs) of barley and 10 *puds* (360 lbs) of the other grains are sown. Barley ripens in the middle of June; wheat, millet and flax a month later. Barley and millet are cultivated exclusively for the live-stock, and are used for human consumption only in years of bad harvests. As a rule, the corn is exported to Hissar, whence it is sent to Termez, Karshi, and other places. The Uzbeks also come to the amlyakdarate to buy corn. The total sales amount annually to more than 10,000 *puds* (361,000 lbs).

From what has been said it follows that in the Obi-Garm amlyakdarate, after supplying local demands, there remains a considerable surplus of corn which is exported to the west. In our account we have omitted certain small administrative areas, such as the volosts of Pumbachi (Pandachi) and Muji-Khavr (Mujai-Khor) because the only information we succeeded in getting about them was that their corn is sufficient for their own needs. As regards the great amlyakdarate of Kalai-lyabi-ob situated on the left bank of the Surkhob opposite the amlyakdarate of Kalai-Khoit, i.e., to one side of the main road, the reports are to the effect that its soil is good, its people live in comfort, and it sells much corn to Darwaz.

* The local estimate is 5 batmans, each of 9 *pud* 27 *font*, i.e. of 349 lbs., or 1,725 lbs in all.

From what has been said of agriculture in Karategin we see that the population, with a trifling exception which in no way weakens the general conclusion, subsist in ease and comfort on the corn they grow themselves (for example, they do not eat barley); moreover, a portion of the corn, not less than 30,000 *puds* (108,300 lbs) is sold outside the limits of the country, whilst another and more considerable portion, in the form of a tax, is used, not for the supply of the local population, but for some other purposes. Unfortunately, I was not able to ascertain the quantity of how much corn is collected as *kheraj* or its distribution owing to the fact that the recently appointed Beg and his officials pleaded ignorance in answer to all questions, for they had "only just" arrived. But the data I have given are sufficient for an approximate calculation of the total amount of grain in Karategin which I will make later.

Agriculture in Darwaz.—A detailed description of the agricultural development in Darwaz is not of great interest, not only because the country lies to one side of the main roads, but also, and this is the important factor, because there is not sufficient corn grown in Darwaz for local consumption. On this subject Captain Kuznetsov speaks very positively, carefully enumerating even the roots of those grasses which the people of Darwaz use every year in lieu of corn. The lack of corn in Darwaz is also confirmed by the evidence of the inhabitants of Karategin, already quoted, as to their systematic and continual sale of corn to Darwaz, and also by the fact that the Bokharan battalion, stationed in Darwaz, has to procure corn from Karategin, notwithstanding the difficulty of means of communication. Cultivation in Darwaz depends for its water-supply both on the rainfall and on irrigation. Wheat, barley, true millet, beans (*boklc*), peas (*nakhud*), flax, lucerne and cotton are grown; all these products are sown in exceedingly small quantities owing to the insufficiency of land, notwithstanding the fact that the steepest slopes and all possible heights are utilized. It would be very risky to count on the possibility of obtaining corn in Darwaz, even during a favourable season and for a small detachment.

Agriculture in the Western Begships—The character of the agriculture in the Kulyab and Baljuan Begships is of a somewhat different type to that in the two Eastern Begships. In the Western Begship it sub-divides into two main forms, *viz.*, the agriculture of the mountains and agriculture of the valleys. The former is entirely dependent on atmospheric deposits for its water, and embraces wheat, barley, flax, and the kind of cotton called "drought cotton," *i.e.*, that which is grown without artificial irrigation; in other words, agriculture is the same as in Karategin and Darwaz; the cultivation of the valleys is watered exclusively by artificial means, and consists mainly of rice and a little cotton. Ploughing takes place in April, and the harvest is ripe as early as July.

The fertility of the soil varies. For instance, in the Kulyab Begship the hills in the occupation of the Uzbeks consist of fresh soil, and in a good year give a very good crop. According to a Russian, of the name of Kiryakof who has lived for several years in Khavaling [Khawaling], the wheat and barley harvests are as much as twenty-fold; on the other hand, the lands on the upper waters of the rivers, where there are many stones and the soil is dry, give a very poor harvest. The same difference in soils is to be seen in the Baljuan Begship, too; in the west the land gives up to a twenty-fold harvest in the neighbourhoods of Baljuan and Khavaling, while on the upper waters of the rivers, whither the Tajiks migrate, the harvests are not more than 6 to 7 fold.

The reports as to the quantity of corn sown on an average farm are contradictory. In Kulyab I was assured that in their Begship 25 to 35 *puds* (900 to 1,260 lbs) of wheat and 10 *puds* (360 lbs) of barley, *i.e.*, as much as 50 *puds* (1,800 lbs) of corn of all kinds, are sown per "kush" (farm). In Baljuan the natives under official superintendence said that an average household, or, what comes to the same thing, "kush", sows 35 *puds* (1,260 lbs) of wheat, 23 *puds* (828 lbs) of barley, and 6 *puds* (216 lbs) of flax, *i.e.*, in all 64 *puds* (2,300 lbs). But one native, during a *tête-à-tête* conversation with me, stated that an average household sows 60 *puds* (2,160 lbs) of wheat, 35 *puds* (1,260 lbs) of barley, and 10 *puds* (360 lbs) of flax, *i.e.*, in all 105 *puds* (3,780 lbs). The afore-mentioned Kiryakof informed me that the average household sows about 100 *puds* (3,600 lbs) of corn of all kinds. Taking into consideration

the fact that the families in the Western Begships live in greater comfort than those in the Eastern Begship, the quantity of corn of all kinds sown by an average household will probably be not less than 60 *puds* (2,160 lbs.) and not more than 100 *puds* (3,600 lbs).

As regards *kheraj* the Beg in Kulyab and his officials, after enumerating a few *amlyakdarates*, perhaps not more than half the whole number, fixed the total amount of *kheraj* at 27,000 *puds* (976,000 lb.), probably a very low figure, as a native who is well-disposed to us informed me later. He, however, gave such a very large figure that it was still less probable to believe it than the one quoted by the Beg. The native stated that the total amount of corn, including *kheraj*, revenues to temples, and so on, would come up to 300,000 batmans, which equals 4,800,000 *puds* (173,337,000 lbs).

In the Baljuan Begship, according to officials, there is yearly collected for the Emir more than 80,000 *puds* (2,890,000 lbs) of corn. As far as was possible to calculate from Kiryakof's varied reports, about 300,000 *puds* (10,833,000 lbs) are collected from the Baljuan Begship for the use of the Beg. The figures of the above-mentioned native, with reference to Baljuan, were excessively high.

We can hardly make a mistake if we assume, but with a very uncertain degree of probability, that from both the Western Begships there is collected for the Emir not less than 500,000 *puds* (18,056,000 lbs.) of revenue grain.

As regards trade in corn, reports were inaccurate, although everything led one to assume that this trade was considerable. Officials of Kulyab stated that from this Begship more than 16,000 *puds* (507,000 lbs) are sent to Sarai yearly. The frontier guards reported that a great deal of rice, wheat and barley from the Kulyab Begship goes down river from Sarai in *kayuks*. Kiryakof's evidence was yet more decisive; "here," said he, "can be found 1,000,000 *puds* (36,112,000 lbs) of surplus corn; in fact, Khiva, Termez, Kerki, Charjui are fed by these two Begships." Equally unquestionable is it that there is a considerable export of corn to Hissar.

Thus, we find in Kulyab and Baljuan two corn-producing Begships which supply Khiva, the towns on the Amu-Darya and many places in Bokhara. The amount of surplus corn in these two Begships must be very considerable, if in it is included Government grain. Unfortunately the conditions under which the Intendance official, Churof, and I had to conduct our investigations made accurate results impossible and we could only make more or less successful guesses.

I may note, in case of future investigations, that the export of grain can be calculated with sufficient accuracy; all the *kayuks* which go down the Amu-Darya from Sarai are counted at Faizabad-Kala* (11 versts, or 7½ miles, below Sarai) and the list is made out under the following headings:—(1) Who is in charge of the boat; (2) What goods are on board; (3) Amount of goods; and (4) To what place is the cargo going. The senior man at the post or an official from Sarai makes the entry. Hence, the customs department must be in possession of reports extending over several years. With regard to the amount of grain imported into the interior of Bokhara and of the tax in corn, we are condemned to presumptions and surmises until progress in the matter is made by some special arrangement with the competent authorities in Bokhara or by the use of some productive scientific method.

The cultivation of fruits and vegetables in Eastern Bokhara.—None of the inhabitants take up fruit or vegetable growing as a separate occupation but look on them both as subsidiary to other pursuits. I mention them here owing to their connection with agriculture.

All the villages have gardens, but no one in particular looks after them, and the natives are often unable to say how they came to have a garden, and who planted it. Everything grows, as if spontaneously, though often in abundance and in wonderful condition.

* A settlement and quay on the Amu-Darya, from which *kayuks* (native boats) begin down-river navigation.

In Karategin, even at Achig-Alma, *i.e.*, at half a day's march from the Russian frontier, apples and apricots (uryk) are to be found; the apricots, it is true,¹ are very small and do not ripen every year. At the settlement of Pildon, a little below the mouth of the Zanku, begins the mulberry tree (tut), and at Sarion, above Khoit, the vine. In Kalai-Khoit itself there are water and other melons, but the latter do not ripen here every year. Below this point are to be found all the fruits that grow in the four Begships under consideration, *viz.*:—mulberries, peaches, apricots, grapes, plums, cherries, wild cherries, apples, pears, quinces, walnuts and pomegranates.

The inhabitants make use of wild, as well as cultivated, fruits, of which there is a fairly large quantity in Lower Karategin. There more particularly often is to be found a form of prunus, with yellow and red fruit* ; nuts, apples, hawthorn, barberries, pistachio nuts are to be met in a wild state.

The mulberry (white and black) is of some economical importance in the households of the natives, particularly in Darwaz and certain poor districts of Karategin. Pounded together and dried in the sun or in a stove, the berries of the mulberry tree are used as food; this mass, known under the name of *tut-tal-kan*, keeps well, and in winter forms the main substitute for bread. According to Captain Kuznetsov, in Darwaz the mulberry, even in years with an average harvest, forms the main food of the population; they also feed horses on mulberries when there is an insufficiency of grass.

Kitchen-gardening in the Begships is a very interesting, and also, from a military point of view, a somewhat important matter. There is reason to believe that certain kinds of vegetables have only recently been introduced into the country, and that amongst the inhabitants the demand for them is still insufficiently developed. In the kitchen gardens are grown tobacco, carrots, onions, beets, radishes and cabbages; in the year 1873, V. F. Oshanin found the latter in very small quantities in Karategin, but now, for example along the River Yasman, the cabbage is to be found invariably in every garden and, as a rule, occupies a considerable area of it. In the bazars in Kulyab and Baljuan I happened to see onions and carrots, and they are sold in all the other bazars as well. Merchants told me that as many onions and carrots as are required can be procured, and that cabbage is in demand and is largely cultivated. The potato is not to be met with, but the inhabitants have heard of it and are not against its introduction.

In any case there will be no insufficiency of vegetables in Eastern Bokhara; given certain measures of encouragement, it is not unlikely that, while the cultivation of cabbages will continue on a large scale, that of the potato will also be introduced.

Cattle-breeding in Karategin.—Cattle-breeding in the Begships attains considerable proportions, and amongst the Uzbeks and Khirgiz is at least of the same importance as agriculture.

In Eastern Bokhara are bred sheep (two breeds, *viz.*, one, the large "Turki" sheep with the fat tail, and the other a small one, *gadik*, without the fat tail), goats, horses, horned cattle, donkeys, and, in small numbers, camels. I will now give some information I acquired of the number of cattle in the Begships.

In the Kazats *amlyakdarate* of Karategin, in each nomad settlement there are two or three wealthy men (*bayas*) with as many as 200 sheep, 2-3 horses, 2 pairs of bullocks, 2 cows; the average farm has 20-30 sheep, 2 horses, 1 pair of bullocks and 1 cow. There are few camels. There is a large trade in sheep, and every year $\frac{1}{5}$ of the whole number are sold. In the *amlyakdarate* the inhabitants estimate that there are not less than 30,000 sheep, 1,000 horses and 2,000 head of horned cattle; as a matter of fact, there are far more. The sheep are exclusively Turki, big and fat.

Below the Kazats *amlyakdarate* cattle-breeding does not play a great part in Karategin, owing to the want of pasturages; the cattle here are smaller and the sheep

* In Turki *tag-alacha*, *i.e.*, mountain cherry.

exclusively *gadiks*. In the Khoit amlyakdarate, there are 5—20 sheep, 1—2 cows, 1 pair of bullocks, and 1 horse per farm. In the Garm amlyakdarate, there will be to a rich household 100 sheep, 2—3 pairs of bullocks, 5—10 cows, 2—3 horses; and to an average one 5—10 sheep, 1 pair of bullocks, 1—3 cows, and 1 horse. In the Navdonak amlyakdarate there will be to a rich household 20—30 sheep or goats, 3 horses, 2 pairs of bullocks, and 2—3 milch cows; and to an average household 5 sheep or goats, 1 horse, 1 pair of bullocks, 1—2 cows, 2—3 calves. In the Yakhak amlyakdarate the average household has 1 horse, 1—2 cows, 1 pair of bullocks, 2 sheep, and 4—5 goats. In the Obi-Garm amlyakdarate to a rich household there are 4—5 horses, 2 *kush* (pairs of bullocks), 5 or 6 young bullocks, 4 or 5 milch cows and 10 goats, and to a poor household 1 horse or donkey, 1 cow, 1—2 goats and a $\frac{1}{2}$ *kush* of bullocks, while an average household has 1 horse, 1 *kush* (one pair of bullocks), 2 cows and 5 goats. It may be noted that below Garm in a Tajik household there are goats instead of sheep, because they give more milk and are better at finding nourishment on the mountain slopes that are so sparsely covered with grass.

The foregoing figures, which are probably lower than the reality, determine the number of cattle necessary for the domestic requirements of the Tajik, the, so to speak, movable stock of his house; without the live-stock which have been enumerated it is impossible for the Tajik to till the ground, to move from place to place, or to feed his family.

In addition to such cattle, there are in Karategin special cattle-breeding farms in the amlyakdarates on the left bank of the Surkhob River. Here excellent horned cattle and very fine horses are bred, all of which are pastured in the valleys and on the mountain plateaux. It was a matter of impossibility to count these animals, since the inhabitants themselves, for fear of the Bokharan official eye, strive to hide them out of the way of all authority. However, along the road to the Tengiz-bai Pass I met some small herds of horses which were being driven for sale to Marghelan (now Skobelef); but it was difficult to find out whether the owners were of Kulyab or Karategin. When marching from Garm to Chil-Dara (in Darwaz), I happened to see a drove of 19 mares with foals, and a herd of fine bullocks to the number of 74 head. Judging by the mares, of which some were not less than 15 to 15·3 hands in height and beautifully built, the horses are bound to be big and powerful.

The Uzbeks stated that the horses of Karategin (excluding, of course, pack and draught horses), notwithstanding their powerful build, are very fast and were distinguished for great staying power. Unfortunately I was able to note only the existence of good horses and horned cattle in Karategin; I can give no details whatever and cannot even approximately calculate their numbers.

In Karategin few horned cattle are sold, but there is a regular sale of sheep. In the neighbourhood of Garm, according to the evidence of the natives, in the course of a year it is possible to obtain 700 head of horned cattle without difficulty, *i.e.*, about 400 rations a day. The whole of Karategin, if preparations are made in good time, would probably supply ten times the amount.

Taking the total number of households in Karategin approximately at 13,000, one may put the minimum numbers at 150,000 sheep and goats, 15,000* horses, and 60,000—80,000 head of horned cattle, of which one-third would be milch cattle.

Darwaz.—In Darwaz, cattle-breeding is carried on to a very limited extent, as there is no pasture anywhere for the cattle. In the winter cattle are fed on chopped straw and the leaves of trees, and horses on barley. Only the most opulent mountaineer will have 4 cows, 2 pairs of bullocks, 1 horse, 20 sheep and 30 goats; the majority keep no cattle, except for a cow and one or two bullocks, really for the supply of cowdung fuel.

The Western Begships.—Cattle-breeding in these Begships differs greatly, both in quantity and quality, according as it is in the hands of the Tajiks or the Uzbeks.

* *Vide* page 41.—*Translator.*

In the domestic economy of the Tajiks it occupies the same position as amongst the inhabitants of Karategin, and all the remarks that I have made of cattle-breeding in that country are so exactly applicable to the Tajiks that nothing further on this subject need be said so far as these latter people are concerned.

But with the Uzbeks it is quite another matter. They pay no less attention and trouble to cattle-breeding than to agriculture. I have already alluded to the huge extent of ground over which the Uzbeks wander. I may add here that the cattle-rearing of the Uzbeks is purely pastoral, *i.e.*, no system of selection is pursued in breeding, the animals are left to themselves to rear their young and to feed themselves on whatever grass may be obtainable at the temporary resting-places, and they die in large numbers whenever there are heavy falls of snow or fodder runs short. Amongst the Uzbeks there are people so wealthy that they have as many as 400—500 brood-mares, and, it is said, even more. How difficult it is to make any definite statement on this subject may be gathered from the fact that at times even the owner does not know the number of animals that he possesses, just as the Kirghiz never counts his sheep. These same Uzbeks have large flocks of sheep which are often pastured in the confines of Darwaz, *i.e.*, in a foreign Begship, owing to some prescriptive right which I have not been able to fathom, but which, apparently, the Uzbeks have retained for themselves as one of the privileges of their nomad existence which they acquired by force of arms.

The total of cattle belonging to the Tajiks is about 20—25 per cent. more than that given for Karategin.

As to the cattle belonging to the Uzbeks, it is absolutely impossible to form any estimate. I may, however, quote the figures of the totals for Kulyab and Baljuan, as given to me by a native, *viz.* —

| | | | | Kulyab. | Baljuan. |
|-------------------|----|----|----|---------|----------|
| Sheep and goats | .. | .. | .. | 250,000 | 300,000 |
| Horned cattle | .. | .. | .. | 60,000 | 120,000 |
| Horses and mares* | .. | .. | .. | 30,000 | 60,000 |
| Donkeys | .. | .. | .. | 25,000 | 50,000 |
| Camels | .. | .. | .. | 200 | 400 |

These figures appear to me to be less far from the truth than those which he gave for the quantity of Government corn; but it seems to me that his figures for horses and horned cattle are somewhat low,* and, of course, a native is hardly able to estimate the number of cattle that are always on the move with the Uzbek nomads.

Apart from the fact that it is impossible to form any estimate of the cattle belonging to the Uzbeks and that, consequently, no idea can be given of the numbers that would be available in the case of war, it is also to be remembered that it will be very hard to get possession of them at such a time. It is only during the short spring and autumn that the cattle are pastured near the dwelling places; for the greater part of the year they are far from all the main roads in places where it is quite easy to conceal them.

Another circumstance that must be borne in mind is that it will be impossible to make use of the horses of the Uzbeks immediately on the outbreak of hostilities, for they are absolutely wild and some time will be necessary to break them not only to draught and pack transport but also to saddle.

A matter of considerable interest is the possibility of using the horses of the Uzbeks as remounts in Turkistan or for a rational development of horse-breeding. Amongst the horses that the Uzbeks own are some remarkably fine breeds, with a well known reputation throughout the whole of Central Asia, such as the Lokai horses which take their name from one of the Uzbek clans. I happened to see some of them in Khavaling and others belonging to the Beg of Kulyab; they struck me as being very powerfully built, with exceptionally fine forehead, legs, and back, and great muscular development, but the head was somewhat heavy and they went off a little behind the saddle.

* *Vide* page 41.

In any case the large number of horses in the Western, as compared with the Eastern Begships strikes the eye at once. I always asked the question how many pack-horses could be collected in a given period in case of necessity. The answers that I received were as follows:—

In Kulyab and other prominent places in the Begship of the name, provided the goodwill of the Beg is assured and arrangements with the local authorities are made beforehand, say a week before the day the animals are collected, then it would be possible to obtain 3,000 horses, and, if it happened to be in the winter or autumn, 50 camels would also be available. Thus there would be sufficient transport for 24,000 *puds*, *i.e.*, for 867,000 lbs or over 10,800 maunds; the load for a pack-horse in Kulyab, it may be noted, is 289 lbs. As regards pack-saddles I received no definite information, but I imagine that the horses will have their own saddles. In Baljuan under the same conditions they are ready to supply 4,000 horses, *i.e.*, transport for 32,000 *puds*, or 1,155,600 lbs or 14,450 maunds. In my opinion, if timely arrangements are made and the assistance of the local authorities is obtained, then in both Begships it would be possible to obtain enough animals, *i.e.*, horses, camels and donkeys, for the transport of not less than 100,000 *puds*, *i.e.*, 3,611,000 lbs, or nearly 45,200 maunds.

Forage.—Of hay there are very small stores in the Begships, and it is very difficult to form an idea of what could be collected, if preparatory arrangements were made. The 4th section of the Frontier Guard is provided annually with 100,000 sheaves of hay, *i.e.*, 3·5 to 4 thousand *puds* or 48 to 64½ tons, at the price of 2 *kopeks* (a halfpenny) per sheaf, from the Kulyab Begship. The Sergeant-Major of the Frontier Guard, who has three years' re-engaged service, considers that a detachment of 4,000 men could easily find all the forage it wants in the Kulyab Begship, except lucerne, of which there is very little near the Amu-Darya. The fact is that the local inhabitants do not want either hay or lucerne, for the wandering herds live on grazing the whole year round and for the household cattle there is always a sufficiency of chopped straw. The best and most correct assumption to make is that in the Begships it is impossible to count on finding hay; hence it is necessary to know in what seasons, at what places, and in what quantities grazing may be found.

Of barley in the Begships, as will be seen from what has gone before, considerable quantities are to be had.

Trade.

Weights and measures.—This subject I will treat very generally and only in so far as it is of interest from a military point of view. I will begin with weights and measures. Up to the arrival of the Bokhari the mountaineers had no measures of length or capacity nor tokens of money; all of these appeared some 20 to 25 years ago from Bokhara and partly from Ferghana. But even before the arrival of the foreign measures the mountaineers had begun to use as a measure of capacity the *kalyatush* or skull cap, and as a token of value in the bazar a piece of local cotton cloth, *karbaz*, 28 yards long, *i.e.*, as much as is required to make one pair of trousers.

At the present time there is an extreme variety and indefiniteness in the units of measures. In Karategin I happened to hear of the following:—the *charik*, corresponding to 5 Russian *puds*, *i.e.*, 180½ lbs; the *batman*, which in this Begship equals 9 *puds* 27 pounds, *i.e.*, 349 lbs; the *tovak* or *chashka* equal to 1·32nd of a *batman*, or 12 Russian pounds, *i.e.*, 10·8 lbs; and the *tenga* equal to 15 to 20 *kopeks* or 3·8 to 5·1 pence. Our measures are very well-known in Upper Karategin, and our *pud* is well understood in the Begship everywhere and can easily be converted into the local measures and *vice versa*.

In Darwaz it would appear that the same measures are used as in Karategin, but I must admit I have never read or heard of any clear descriptions of the local measures.

In the Kulyab Begship the same *tenga* is also in use. Of other measures there is the *batman* which here is almost the biggest in the whole of Bokhara, being 16 *puds*, *i.e.*, 577 lbs; the *chupal* or *kan* equal to a half *batman*; the *nimcha*, equal to 2 Russian or 1·8 English pounds, and the *sank* or *tash*—the first name being the Tajik and the second

the Uzbek for a stone which is $\frac{1}{84}$ th of a *batman* and equals 10 Russian or 9 English pounds. The most common household weight is the *tash*, for which is used a stone that has been previously weighed; it must always be tested, as it is invariably a little bigger or smaller than the correct weight. In the bazar at Kulyab I saw a local arshin, probably much the same as ours (the Russian arshin is 2 feet 4 inches). There were also a variety of weights in metal or stone.

Prices.—Prices, like measures, are equally various and inconstant. In the immediate past the mountaineers had no idea of prices and confined themselves entirely to barter. And even now in many places in Karategin and Darwaz the inhabitants have a difficulty in fixing the price of anything. Prices are generally fixed by some point in which there is a bazar, and within a march of such a place the price remains unaltered, subject to a slight addition or deduction on account of transport. For example, in Upper Karategin the prices approximate to those of Ferghana, *i.e.*, of Kokand or Marghelan (now Skobelef), in Central Karategin to those of Garm, and in the Kulyab Begship in the neighbourhood of Kulyab to the prices that obtain in the bazar of that town.

Hence, in order to give a sketch of prices, we must examine them in the several parts of the territory we are describing and touch on the cost of transport between neighbouring points. The prices given below were those of the summer of 1904.

In the highlands of Karategin, within one march of the Alai Valley, the *charik* of wheat costs 5 *rubles*, and the year before as much as 7 *rubles*, and the *charik* of barley 3 *rubles*, *i.e.*, 6s. 6d., 9s. 3d. and 3s. 6d. a cwt., respectively. As far as Katta-Kurghan, in the west of the Alai Valley, a horse may be hired for 1 *ruble*; it will carry 180 lbs or if a large one 270 lbs. Cow's butter costs 6.25 *kopeks* a Russian pound, *i.e.*, 4.6 to 7.1 pence per English lb. Cattle are bartered or preferably sent to Ferghana for sale. There are no fixed prices lower down the Surkhob, but in the *amlyakdarate* of Kazats prices are approximately the same as those given above; a workman costs 1 *ruble* (2-1½) in apparently the summer; and horses carry a load of 180 lbs.

In the Kalai-Khoit *amlyakdarate* ideas of prices are equally indefinite; as a rule, little is sold. The prices with us, the natives say, are uncertain; formerly in a good year the *charik* of wheat was sold for as much as *kopeks* 60, but lately it has not been less than *rubles* 4 (9d. and 5s. 3d. per cwt., respectively). The prices of other articles are mere guesswork and vary with the purchaser's need for them; sometimes too much is asked and sometimes too little. A very high value is set on money; *e.g.*, a labourer will work from morning to night for 1 *tenga*, 3¼—5 pence.

In Central Karategin prices are fixed by the Garm bazar. In a good year the *charik* of wheat sells for *rubles* 1.60 and in a bad one for *rubles* 4.50 (2s. 1d. and 5s. 4½d. respectively per cwt.); barley is generally ½ or 2s. 3d. of these prices; millet in a good year is *rubles* 1.20 and in a bad year *rubles* 4½ per *charik* (1s. 8d. and 5s. 4½d. respectively per cwt.). An ox sells for as much as £4.5-0, a cow for £1-1-0 to £2-2-0, a calf for 6s. 4d. and a sheep for 6s. 4d. to 8s. 6d. Transport cannot be obtained, for the inhabitants will give no idea of the cost of hire of a pack-animal. They sow vegetables for their own consumption, but none can be bought and the natives will never quote a price for them.

In Lower Karategin prices are fixed by Obi-Garm. The *batman* of 349 lbs of wheat costs 45 *tengas* (*i.e.*, 5s. 11d. per cwt.); barley is 3s. 11d. and millet 3s. 3d. per cwt.; reports say that formerly prices were very much lower. Salt of very good quality is obtained in very large quantities near the village of Ragon which is on the left bank of the Surkhob, at a day's ride from the *amlyakdarate* of Obi-Garm; apparently salt has no market price, as each inhabitant produces just enough for his household requirements and none is for sale.

A good horse in Lower Karategin costs 1,000 *tengas*, *i.e.*, *rubles* 200 or £21-10-0; a bad one *rubles* 20 or £2-1-0. A pack-horse may be bought for *rubles* 40—80, *i.e.*, £4—8. A donkey's price is *rubles* 8—20, *i.e.*, 7s. to 42s. Wood is found in the foot-hills at two to three hours' march from the villages; the inhabitants carry all the wood they want or donkeys, of which there are not a few in the *amlyakdarate*; it is said that within one to two hours 100 can be collected in any fair-sized village. The inhabitants grow for their own use onions and carrots, but only a little, and no vegetables are for sale, although a small party can always find a sufficiency; the natives can give no prices for vegetables, and it is the same with fruits.

And so, as regards the prices in Karategin, especial attention is to be given to the statement, already made, that they are constantly changing and that any figures must be based on guesswork. The places that fix prices are too few, communications difficult, and, perhaps the most important, there is no need to sell, for there is nothing to be bought for money. Moreover, there is a very limited amount of money tokens in circulation and every householder is accustomed to satisfy his own needs with his own labour; hence the number of things to which a value is attached and which may be bought is very limited and practically consists of cattle and corn only. Many things, therefore, have no price, *e.g.*, salt, vegetables, wood, flour, and means of transport.

In the western Begships, however, it is quite another matter; here the system of prices, their complexity and fluctuations attain the dimensions of any wealthy trading community. Here, too, prices are fixed by some populous place where there are bazars; but of such places there are many, communications between the inhabitants are constant and active, a value is placed on an innumerable variety of the products of human labour, there are many money tokens; in a word, so far as prices are concerned, we are dealing with a country of the ordinary type.

In the south of the Kulyab Begship, not far from the Amu-Darya, the prices in the summer of 1904 were as follows:—

Wheat, per cwt. 4s. 4d. to 8½d.; wheaten flour, per cwt. 5s. 10d. to 6s.

Barley, „ „ 3s. 4d. to 3s. 8d.

Rice, „ „ 10s. to 10s. 4d.

Millet, not for sale.

Beef, per lb, 1·37d. to 1·59d., or even as much as 1·82d.

Mutton, per lb, as much as 2·74d., if bought killed; for a live sheep the price per lb is less.

A pack-horse from Kulyab to Chubek, 30 miles, with not more than 290 lbs of load, 1s. 10½d.

In the Kulyab bazar prices were as follows:—

Wheat, 90 *tenjas* per *batman*, *i.e.*, per cwt. 5s. 8d.

Barley, per cwt. 3s. to 3s. 4d.

Sheep, of large size, *i.e.*, 54 lbs of meat and 36 lbs of fat, as much as *rubles* 18, *i.e.*, 38s.; of average size, *i.e.*, 36 lbs of meat and 13½ lbs of fat, 15s. 10d. to 19s.

Mutton, per lb, 3½d. 4d.

An ox £3.4.0 and less; a cow £1.18.0 to 2.0.0 and less.

Beef, per lb 1.3d. to 1.9d.

Butter, *rubles* 2 per *tash*, *i.e.*, per lbs 4.6d.

A good horse up to £16; an average one £7.15.0; a bad one, but still able to carry a load, £4.4.0.

It may be noted here that in the western Begships the average load of a horse is 290 lbs and in the eastern 180—217 lbs.

A donkey, 18s. to 32s.; it carries a load of as much as 144 lbs.

A camel costs the same as a horse and carries 435—500 lbs, exceptionally 580 lbs.

Arbas: of these there are none in the Begship.

The cost of carrying a *batman* of goods from Kulyab to Sarai (on the Amu-Darya two to three marches) is *rubles* 4.8.0 to 5.0.0, *i.e.*, 2s. 6d. per cwt. if camels are used.

A pack-horse from the same place to Khawaling or Baljuan, one march, costs *rubles* 1.50—1.80 per 290 lbs, *i.e.*, 1s. 3d.—1s. 6d. per cwt.

In Baljuan the prices are almost the same as in Kulyab; the only differences are that corn is a little cheaper, *e.g.*, wheat of the best sort is 5s. 4d. per cwt., of average quality is 3s. and of the lowest is 1s. 10d. per cwt.; barley is 3s. 8d. to 3s. 3d. and 1s. 4d. per cwt., varying with the sort.

The prices of some other articles are as follows:—

Fuel wood, *perulau*, i.e., a bag weighing 54 lbs in good years is 11d. to 1s. 3d., and in a bad year as much as 2s. 6½d. (i.e., per cwt. 2s. 1d. to 2s. 8d. and 5s. 4d. respectively). A donkey's load of pistachio wood, if carried 10 miles, cost 3½d.—5d.

Leather goods.—An un-tanned skin cost 8s. 6d., and one locally cured 12s. 8d. to 14s. 9d.; the latter is suitable for inner soles and uppers, but is too rough for the leg of a boot and too weak and light for outer soles.

Melons and water-melons, ¼ to ¾d. each.

Onions, 10 per farthing.

A portion of *kabab*, i.e., grilled meat, as a rule mutton, as much as 7½d.

Fruits are in great variety and cost a mere trifle.

In the neighbouring bazars the prices are a little lower, e.g., in Khavaling, 20 miles to the east of Baljuan, the prices are 10—15 per cent. below the ordinary. Two to three years before our party went through the country prices were half and even one third of those that obtained in 1904; the natives even were astonished at the rise in prices and could not explain it. In the village of Kangurt, 12½ miles to the south-west of Baljuan, the prices were a little cheaper than in the last named town, and meat in the bazar was much cheaper; large quantities of onions and still more of carrots are for sale.

Imports and Exports.—I have already made some mention of the trade; it takes three main directions, viz.,—(a) northwards with the Russian possessions across the passes already mentioned; (b) southwards along the Amu-Darya with the towns on this river and with Khiva; and (c) westwards with Bokhara.

The chief articles of import into Eastern Bokhara are opium, calico, iron, haberdashery, Indian silk, tea, various manufactures and utensils, etc. The chief exports are cattle, corn, pistachios, astrakhan fur, ordinary sheep-skins, skins of the fox, panther and marten, stockings, kurjums of carpets, which is the Central Asian name for the saddle bags of the Cossacks, etc.

The most important exports are cattle and corn. Generally speaking, the country under description is the source of the supply to Bokhara and Khiva of its corn and meat; its importance in this respect increases every year and in the future will increase still more rapidly when commercial enterprise penetrates the country, communications are improved, and the cultivation of cotton in Central Bokhara becomes the absolutely predominating occupation. Even now in the month of June the Western Begships and to a certain extent Karategin are visited by merchants from Bokhara who buy up whole herds of horned cattle, while down the Amu-Darya float hundreds of *layuks* with wheat and rice. Many horses and sheep are driven into our territory in Ferghana, but corn does not penetrate beyond the southern limits of Ferghana and the upper waters of the Zerafshan Valley.

Administration.

The region under description consists of four Begships, each of them ruled independently of one another under some sort of ill-defined control of the Hissar *Kush-Begi*.

It is unnecessary for me to repeat here what sort of an administrative unit a Begship is, or of what this unit consists, as, so far as it is outwardly concerned, it is fully described by others. But not for many years shall we be in possession of the information that will enable us to fully understand the basic principles of the Bokharan constitution. Still I may venture to warn my readers from applying European standards and requirements to it. I now propose to touch only on two peculiarities of the Bokharan system of government which deserve attention in a military account of the country.

In the first place the form of government is extremely burcaueratic and centralized; it is marked by an excessive despotism and opportunities for every sort of exaction and injustice. This peculiarity has as its most immediate result the systematic and

irremediable impoverishment of the country; it is to be seen everywhere. Along the upper waters of the Khavaling three or four years ago 500 localities were under cultivation by the nomads, but of these only 40—50 remain as the people were unable to plough the ground and abandoned it. Even the Beg of Kulyab told me that a considerable area of ground is left uncultivated as it is worth no one's while to plough it; according to him, wherever there is a settlement of 400—500 houses there is room for 4,000—5,000.

If the oppression, exactions and robberies of the administrative personnel of Bokhara were a fit subject for a military report, I could quote a number of examples of which I heard during my journey; but I will confine myself to a mere mention that they exist and to the remark that the *Shariat*, which is the nominal basis of administration in Muhammadan States, is more often violated in Bokhara than any law in any other country in the world.

Another peculiarity of the Bokharan system of government is its firmness and strength, of which there can be no question. The authorities in Bokhara do not recognise the slightest weakness and are equal to all the tasks that devolve on them. The population, especially the Tajiks, may perhaps not like the Bokhariots, but they fear them and submissively fulfil their every order. One of the Begs said to me: "All the people under me should tremble at my look alone." In the case of a campaign or of the quartering of our troops in Eastern Bokhara all our orders and arrangements would have to be given and made through the Bokharan authorities, and of course first of all we should have to obtain the sanction of the Central Bokharan Government; then we would be assured of accuracy and punctuality in the execution of our wishes.

The essence of the Bokharan system of government is that each Begship is given by the Emir, absolutely and without any control, into the hands of its Beg for administrative purposes, subject to the one condition that the Beg pays annually to his ruler a varying amount in money and a proportion of taxes in kind, e.g., of horses, corn, khalats, etc. The average value of these taxes does not vary from year to year, except for a slight reduction in years of bad harvests and a slight increase where the Beg shows himself a man of energy and keenness. The Beg arrives in his Begship with a whole following of relations and devoted friends, to whom he gives portions of his Begship, the so-called *amlyakdarates*, on the same conditions as he receives his province from the Emir. Then begins not the government, but the exploitation of the country. The various taxes are described in Appendix IV.

The number of *amlyakdarates* in each Begship is a very varying quantity, and depends on the ideas of the Begship and the number of courtiers whom he brings with him; the more there are of such followers the more in number and the smaller in size are the *amlyakdarates*. One Beg may bring with him a swarm of attendants, but, being exceptionally greedy or distrustful, he tries to get every thing into his own hands and to directly rule several *amlyakdarates* that are near the centre of his Begship. Some have surmised that the size of an *amlyakdarate* depends on the number of *kush*, i.e., farms; thus a large *amlyakdarate* is said to have 1,000 *kush*, a small one 600—700. Perhaps at times it works out so in practice, but it is hardly possible that any number of *kush* whatever can be taken as the basis of definition of an *amlyakdarate*.

In certain parts of a Begship authority may be left in the hands of local influential people, who are given high Bokharan rank, such as that of a *Karaul-Beg*, a *Mirakhur*, or even a *Toksavo* (it is so pronounced in the mountainous parts of Bokhara, but should be *Tok:aba*). In these cases only a small portion of territory comes under the rule of these local men under the form of an *aminship*, but the powers of such *mirakhurs* are limited, for they are under the supervision and control of the neighbouring *amlyakdars* and are considered in every respect inferior to them, although these latter have always lower rank, generally that of *Mirza-Bashi* or *Jivachi*, and rarely that of *Karaul-Beg*. In a word the same procedure is observed as in India, where an English 2nd-lieutenant is considered higher than a native general.

Total figures of the population.

As regards the population, it is to be remembered that in Mussulman countries it is impossible to arrive at anything but very approximate figures, by, too, a variety of expedients.

Karategin.—A calculation of the houses in this Begship has been made by G. A. Arendaryenko and Captain Vasilyef; the former puts them at 10,740 and the latter at 10,119; the astonishingly small difference between their figures points to the probability of their accuracy. My figures are a little larger, but this is natural if one allows for the growth during the 20 years since their figures were compiled. Taking the number of houses at 13,000 in round figures at the present time, I should multiply this figure by 7 to get the lowest number of the population, and by 10 to get the highest, *i.e.*, the number of souls per house I put at 7—10. In so doing I have made a bold departure from the customary 5, and in particular from Arendaryenko's average of 3—7 for each house.

All the statements of the natives, as soon as they understood what was wanted from them and I made very many notes of them, tended to fix the number of inhabitants per house at 7—10, there is hardly a single household of only 3—4 souls, for domestic requirements are so many that such a number would be unequal to the work that is demanded of them. On the other hand, households of 15—20 and even more members were no rarity. Moreover, the Tajiks are averse from splitting up families, and married sons remain for long under the same roof as their father, a procedure that is the result of economical considerations in order to avoid the unnecessary sub-division of land, and also of the views that the Tajiks hold of the family as a unit. My figures are further supported by the following fact. In 1902 was made a house-to-house census of the population and of the resources of the Western Pamirs with the result that the average number of people to each house was in Shughnan 10·3, in Rushan [Roshan] 8·8, and in Vakhan [Wakhan] 13. The method of life, character, interior economy, etc., of the Tajiks of the Western Pamirs is very similar to those of the Tajiks of Karategin; and therefore the figures I have quoted tend to show that in Karategin, where the conditions of life are better, the average number of members of a household are even greater than those which I have taken. Moreover, I may add that Captain Kuznetsof, who most thoroughly and carefully reconnoitred Darwaz, a country that by comparison is poor and has but little supplies, arrived at the same figures as I have.

(1) *Karategin*.—On the assumptions that I have made, the population of Karategin would vary from 91,000—130,000, or say 120,000 of both sexes. But my personal opinion is that the population is at least 150,000.

(2) *Darwaz*.—In 1882 G. A. Arendaryenko put the population of Darwaz at 40,000; 10 years later Kuznetsof gave the approximate minimum as 55,000. The latter figure seems to me the more probable, for Kuznetsof made a much closer and more prolonged study of the country; moreover, there is almost no doubt that Arendaryenko made an under-estimate. Even allowing for the natural growth of population which in 11 years may be put at 10—15 per cent., still this would bring Arendaryenko's figures up to only 44,000—46,000, *i.e.*, considerably below the 55,000 given above. Since 1896 Darwaz has been divided into two, of which that on the left bank of the Pyanj has passed to Afghanistan, while that on the right bank of this river has remained with Bokhara. This latter portion is now called Bokharan Darwaz, and to it our attention is confined in the present work.

If we take the list of houses which Kuznetsof has made of Bokharan Darwaz and multiply the number of houses by the average number of members of a household, then we arrive at 4,430 and 35,335 as the minima of houses and people respectively in this portion of Darwaz. To these must be added the natural growth for 11 years, *i.e.*, 11 per cent. from which we may assume that the population is 40,000 of both sexes.

(3) *Kulyab and Baljuan*.—In these two Begships, owing to lack of time, it was difficult to obtain information of the population, and therefore my figures are mainly, if not entirely, guesswork.

An intelligent native who has lived for a long time near Kulyab assured me that this Begship contains 20,000 households, including nomad as well as settled; of these 10,000 belong to immigrants and 10,000 are permanent. He estimates the total population at 80,000, and that of the Baljuan Begship 160,000. These figures, especially in the case of Baljuan, may be exaggerated, but it is quite possible that they are close to the truth.

The Bokharan authorities have divided up Kulyab into 7 *amlyakdarates* and Baljuan into 13; these numbers have proved too little, and there is no question that these *amlyakdarates* are of considerable size. Assuming that each *amlyakdarate* has 1,000 *kush*, then the Kulyab Begship would have 7,000 and the Baljuan 13,000 households. If 9—11 members are allowed to each household, then we get a population of 63,000—77,000, say 70,000, in the first and 117,000—143,000, say 130,000, in the second of these two Begships.

We are, therefore, justified in taking the population of both Begships at 200,000 of both sexes.*

Final estimate of the corn harvest.

The consumption of corn may be treated under the following four heads:—(1) consumed by the local population; (2) sown; (3) tax in kind to the Government; and (4) sold.

As regards the local consumption the average may be put per head at 18 *puds*, *i.e.*, 650 lbs, in the case of the fully grown man or woman, and at half this amount, *i.e.*, 325 lbs in the case of children. If the number of children is taken at a third of the total population, then the average consumption per head will be 542 lbs. The natives themselves consider that far more than this amount is required for the support of their families; for instance, in Kulyab they told me that a good annual average store of corn for a family of five souls, including children and grown-ups would be 9 *batmans*, or 144 *puds*, *i.e.*, 5,200 lbs or 1,040 lbs per head. Unfortunately I was so pressed for time on the occasion that this information was given to me that I forgot to ask whether this figure did not include what is required for sowing and for minor domestic needs as well as for food. Even to meet these additional requirements 20—23 *puds*, *i.e.*, 720—830 lbs would appear more than sufficient, but still these figures may be accepted. The Tajiks eat a large amount of flour and especially bread; perhaps, therefore, 542 lbs per head in their case is really too small.

For seed generally one-fifth of the net harvest is put aside; this amount is nearly always more than is required, but prudence impels the land-owner to keep to this proportion.

The government due is a-tenth of the corn. In practice the Bokharan authorities take more, according to Kiryakof never less than a seventh, and often a fifth or even a quarter; but we may accept the proportion of a tenth, as a part of the *kheraj* is bought back by the people and is used by them for food or seed.

From the foregoing considerations we arrive at the following conclusions:—

(1) In *Karategin* where the population is 120,000 and the yearly sale of corn may be put at 30,000 *puds* or 9,610 cwt., the total corn harvested amounts to 2,500,000 *puds* or 806,000 cwt. This total is obtained from the following formula, in which x is the gross quantity of corn in *puds*:—

$$x = 120,000 \times 15 + 30,000 + 3 / 10x.$$

The $3 / 10x$ represents the quantity allotted to seed and paid as tax in kind.

(2) In *Darwaz* the harvest is unimportant, for it is clear that hardly 500,000 *puds* of corn are harvested, *i.e.*, a little over 161,000 cwt.

(3) In the *Western Begships* of Kulyab and Baljuan, where the population is 200,000 and the amount of exported corn may be taken at 60,000 *puds*, *i.e.*, 20,000 and 40,000 *puds* respectively for the two Begships, then using the above formula, we get a total harvest of 4,500,000 *puds*, *i.e.*, nearly 1,451,000 cwt.

Total number of cattle.

Avoiding a repetition of the considerations already given, I put the approximate and, probably, minimum number of cattle in *Karategin* and the two *Western Begships* at the following figures:—

| | |
|-----------------------|---------|
| Sheep | 450,000 |
| Horses | 45,000† |
| Horned cattle | 200,000 |

* Thus the total population of Eastern Bokhara is as follows:—

| | |
|--------------------------------|-----------------------------|
| <i>Karategin</i> | 120,000—150,000 |
| Bokharan <i>Dirwaz</i> | 40,000 |
| Kulyab and Baljuan | 200,000 |
| Total | 360,000—390,000—Translator. |

† *Vide* pages 33 and 34 from which minimum appears to be 15,000 + 90,000 = 105,000.—Translator.

The figure for horses includes only working horses; the brood animals of the Uzbeks and of the inhabitants of Karategin it is impossible to estimate. Of the horned cattle approximately a half are working cattle, *i.e.*, *kush* or oxen, and a quarter are milch-cows. In the 450,000 sheep are included only a small number of the large Kirghiz breeds; the remainder are almost entirely of the Tajik breed; it is difficult to form an estimate of the number in possession of the Uzbeks.

Supplementary information of military importance.

As I am now approaching the end of my work, I will add certain supplementary information which cannot be very well placed under any of the foregoing headings, but is of interest in a military report.

(1) *Mills*.—For grinding corn the inhabitants of the Begships use the ordinary native mills. As a rule, such a mill is built by the whole of the village community and is also kept in repair by it; then each inhabitant grinds his own corn for himself. Most commonly there is no attendant for the mill. In some places, *e.g.*, near Garm, where the villages grind corn for sale, the purely communal use of mills has gone out of fashion; here from the flour-dealer is taken a *chashka* per *charik** as payment for grinding; this profit goes into the pockets of the mill-owner, if there is such, or else goes to the mill-fund which covers the expenses of repairs to the dams, the mill itself, etc.

The productive power of mills varies; the Kirghiz of Eastern Karategin have as many as 20 mills, each with an average daily output of grain of 10—15 *puds*, *i.e.*, 300—540 lbs. The Tajiks of this same Begship have one to two mills in each village; their mills are larger and have a daily output of 35—50 *puds*, *i.e.*, 1,250—1,800 lbs, or, in the case of the less efficient mills 25—30 *puds*, *i.e.*, 900—1,080 lbs. The Uzbeks have fewer mills, for they often settle near springs which have not sufficient water-power to work a mill; such mills as they have are, approximately, of the same power as those of the Kirghiz. Often they have recourse to the mills of the Tajiks.

The quality of the grinding is bad owing to the stones being soft or badly cut.

(2) *Fire-places*.—The natives have no ovens, but use open fire-places, into which is often fixed a kettle for the preparation of the food. Hence troops will always have to provide their own utensils for baking their bread. Much care must be exercised if the native fire-places are used for boiling soup or porridge; it would be better to erect field kitchens outside the houses, for the inhabitants are very dirty in their habits, skin diseases are not infrequent, and, moreover, there are considerations of a lower order that make it desirable to keep aloof from a Tajik family as far as possible.

(3) *Wood*.—In the valleys there are gardens in every village, but, of course, they cannot be used except in case of extreme necessity. Wood is to be found within 2—10 miles of the main roads. Preliminary enquiries on this subject will never be found superfluous. For the transport of wood donkeys will prove the best means.

(4) *Salt*.—In Eastern Bokhara there is much salt. In Karategin the whole left bank (of the Surkhob—*Translator*) from the Alai Valley down to the junction of the Zanku, is a continuous salt-bearing tract, and below Navdonak, on the same bank, again begin deposits of salt. The salt in the upper part of the river is red in colour and only average in quality, lower down it is white and good.

In the western Begships there are a few salt mines, *e.g.*, the Khoja-Mumin mountain—a mass of salt, near Chubek. In the case of any prolonged halts on the main road Alai-Garm-Kulyab-Chubek deposits of salt will always be found at a distance of less than one to one and a half marches; they can be easily worked and the salt be made fit for the use of the troops.

(5) *Other articles*.—It would be better not to rely on finding smiths, horse-shoes, instruments for slaughtering cattle, tools, etc., amongst the natives.

Conclusion.

Finally, there are two questions of military importance to which I will supply the answers, *viz.*—(1) what places are suitable as permanent stations for a military force and what should be the maximum strength of this force; and (2) in case of military operations how far can we count on the resources of Eastern Bokhara?

* *i.e.*, 6 per cent., *vide* page 35.—*Translator.*

(1) The best place for a military station, so far as climate is concerned, is Karategin, Kulyab and Baljuan are not so good, and here, although troops could live in the hilly localities, it would be risky to quarter them in the valleys.

✓ If the force has a ration strength not exceeding 3,000, then it would find ample supplies, including vegetables, at any place in the three Begships. The cost of maintenance would be no dearer, and probably would be cheaper than in any town in Russian Turkistan, except, perhaps, some places in Semirechya.

(2) In case of a campaign in Eastern Bokhara one may count on a yearly total of 322,400 cwt. of corn, *i.e.*, 241,800 cwt. of wheat and 80,600 cwt. of barley, 100,000 sheep, 50,000 horned cattle and 20,000—25,000 pack-horses, and this without any encroachment on the food supplies required by the inhabitants or any risk to the economical welfare of the country. In other words, for operations in the direction of Baljuan, Eastern Bokhara supplies us with a very valuable (*lit. serious—Translator*) base.

APPENDIX I.

Amlyakdarates and villages in the two Eastern Begships.

KARATEGIN.

Note.—G. A. Arendaryenko's work is taken as the basis of the list of villages in the Begship. Where the names which I heard disagree with his version mine are placed in brackets.

A separate column has been added by the translator to give the names as shewn on English maps.

I.—The Kazats (Cossack—Translator) Amlyakdarate.

Note.—This amlyakdarate is situated on the upper waters of the Kizil-su and its tributaries. Its inhabitants are Kara Kirghiz.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|----------------------------------------|----------------|-------------------|
| | Kichik-Karamuk .. .. | ..... | 18 |
| | Sarigui | Sarigul .. | 23 |
| | Achig-Alma .. .. | ..... | 20 |
| | Duvana | Dubana .. | 32 |
| 5 | Ak-Sai (Kirghiz) | Ak-Sai .. | 12 |
| | Ak-Sai (Tajik) | Ak-Sai .. | 20 |
| | Kupryuk-Bashi .. .. | ..... | 45 |
| | Kishtou .. .. | ..... | 12 |
| | Saripul-Shaniaz .. .. | ..... | 18 |
| 10 | Damburachi | Damburoch .. | 36 |
| | Shilbuli .. .. | ..... | 18 |
| | Kush-Arba (Kush-Muinok) .. | ..... | 13 |
| | Koshka-Teryak-Paion (Koshka Teryak) .. | ..... | 1 |
| | Koshka-Teryak-Bolyo .. | ..... | 10 |
| 15 | Yar-Mazar (Yani-Mazar) .. | Yar-Mazar .. | 30 |
| | Pittau-Kul (Pitau-Kul) .. | ..... | 19 |
| | Kushai (Kushou) .. .. | ..... | 19 |
| | Kalta-Bulak .. .. | ..... | 20 |
| | Jirgatol (Jirgotol) .. .. | ..... | 70 |

| Number of villages | Russian names. | English names. | Number of houses. |
|--------------------|--------------------------------------------|-------------------|-------------------|
| 20 | Zanku (Zonku) .. .. | .... | 26 |
| | Chubai (Chuboi) .. .. | .... | 30 |
| | Pildoni-Bolyo (Tajiki-Pildon) .. | .... | 20 |
| | Pildoni-Kalyon (Pildon) .. | .... | 28 |
| | Pildoni-Chingak (Pildon-Chingak). gak). | .... | 18 |
| 25 | Yarash (Yarosh) .. .. | .... | 32 |
| | Sarion (Sariyan) .. .. | .... | 20 |
| | Gwilalgo .. .. | .... | 20 |
| | Mukur .. .. | .... | 30 |
| | Jalgan | Jailgan .. | 32 |
| 30 | Kara-Shura ; .. .. | .... | 1 |
| | Sorikh-Kenje .. .. | .... | 21 |
| | Kara-Kenje .. .. | .... | 28 |
| | Jumshugon .. .. | .... | 18 |
| | Khoja-Tabor | Khozya-i-Tagob .. | 27 |
| 35 | Muk | Mukh .. | 12 |
| | Mwin-Bulak | Minbulak .. | 30 |
| | Devshiar | Dabshiar .. | 10 |
| | Irigach | Prihat .. | 8 |
| | Kandou | Kandao .. | 12 |
| 40 | Kosh-Tigerman .. .. | .... | 18 |
| | Girdok .. .. | .... | 32 |
| | Yusuf-Dorotol .. .. | .... | 18 |
| | Sugot .. .. | .... | 16 |
| | Jilendi (Jikyandi) | Jilandi .. | 22 |
| 45 | Khush-Khal .. .. | .... | 18 |
| | | Total .. | 1,017 |

II.—The Kalai-Lyabi-Ob Amyakdarate.

Note.—This amyakdarate lies along the left bank of the Surkhob and the tributaries that join it on that bank. It begins opposite the mouth of the Obi-Zanku and finishes nearly opposite Garm. The inhabitants are Karateginese; along the upper portions of it Kara Kirghiz are also met.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| 46 | Ob-Chaka .. .. | .... | 20 |
| | Sari-Namak .. .. | .... | 16 |
| | Utol-Bolyo (Utol-Bolya) .. | Uital .. | 25 |
| | Utol-Paion (Utol) | Uital .. | 20 |
| 50 | Kamwish-Bek (Kamwishbek) .. | .... | 100 |
| | Chardara .. .. | .... | 8 |
| | Kizil-Jor .. .. | .... | 5 |
| | Ovchacha .. .. | .... | 20 |
| | Gurusak .. .. | .... | 2 |
| 55 | Kichik-Izi (Ki k-Zi) .. .. | .... | 40 |
| | Kajibek (Konjbet) .. .. | .... | 17 |
| | Navobot .. .. | .... | 12 |
| | Shavrwikuyun (Shaukion) .. | .... | 19 |
| | Mulla-Kenje (Mullo-Kehdiazha) | .... | 13 |
| 60 | Mulla-Timur (Diai-Mullo-Timur) | .... | 21 |
| | Naushor (Naushal) .. .. | .... | 40 |
| | Khudokak (Kundukok) .. .. | .... | 27 |
| | Naushor-Bolyo (Naushal-Balya) | .... | 30 |
| | Mertanian .. .. | .... | 24 |
| 65 | Kara-Shagor .. .. | .... | 23 |
| | Mazori-Sing (Shing) .. .. | .... | 36 |
| | Polizak .. .. | .... | 40 |
| | Tarbulyok (Tarbuluk) .. .. | .... | 20 |
| | Sarinai (Sirinai) .. .. | .... | 50 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------------|----------------|-------------------|
| 70 | Tarbulyok-Bolyo (Tarbuluk-Bolya). | .... | 1 |
| | Ka rma .. .. . | .... | 24 |
| | Almali .. . . . | .... | 30 |
| | Ganishou (Ganisha) .. . . | .... | 60 |
| | Markh (Morg) .. . . . | .... | 18 |
| 75 | Safidi-ob | Safed-ab .. | 13 |
| | Kuli-Mirzanchi .. . . . | .... | 27 |
| | Darai-Nazarak (Nazorok) | Nazarak .. | 20 |
| | Margazion .. . . . | .... | 14 |
| | Fatobod (Fatkh-abad) .. . . . | .... | 100 |
| 80 | Kalai-Lyabi-Ob .. . . . | .... | 50 |
| | Koldorion | Kaldari .. | 30 |
| | Kapali (Kapalwi) .. . . . | .... | 30 |
| | Kapali-Miona .. . . . | .... | 8 |
| | Kara-Sugur (Kara-sagwir) .. . . | .... | 26 |
| 85 | Kapali-Bolyo (Kapalwi-Balya) | .... | 18 |
| | Kelyanboki (Kelwin Baki) | Kalamboki .. | 14 |
| | Deg-Degi .. . . . | .... | 32 |
| | Golginch (Gorgwinch) .. . . . | .... | 40 |
| | Kuli-Mirzangi .. . . . | .... | 13 |
| 90 | Diglemon (Di-gilman) .. . . . | .... | 27 |
| | Biobak (Be-obak) .. . . . | .... | 18 |
| | Diglemon-Miona .. . . . | .... | 6 |
| | Diglemon-Bolyo (Di-gitman-Balya). | .... | 23 |
| | Kazhryaga (Konzhrogo) .. . . . | .... | 20 |
| 95 | Kaudal .. . . . | .... | 9 |
| | Kuchilik (Guk-lwik) .. . . . | .... | 34 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------------|----------------|-------------------|
| | Diyai-Ishan (Di-ishan) .. .. | .... | 26 |
| | Langar-sho (Langar-Sha) .. .. | .... | 20 |
| | Darai-Mazar (Dara-Mazar) .. .. | .... | 12 |
| 100 | Langar-sho-Bolyo (Langar-sha Balya). | .... | 28 |
| | Dara-Mazar Bolyo (Dara-Mazar-Balya). | .... | 40 |
| | Kuli-Sarigri (Kuli-Sori-Guri) .. .. | .... | 24 |
| | Kuli-Khuchak .. .. . | .... | 22 |
| | Kuli-Khalifa .. .. . | .... | 10 |
| 105 | Kuli-Kalyon (Kuli-kalyan) .. .. | .... | 36 |
| | Pshamar (Shchamara) .. .. | .... | 20 |
| | Kurtin (Kwirchin) .. .. | .... | 13 |
| | Uchturpas (Ushturpas) .. .. | .... | 26 |
| | Khwilyak (Khwilok) .. .. | .... | 22 |
| 110 | Ebdi | Egbi | 8 |
| | Zarangak .. .. . | .... | 8 |
| | Goziri .. .. . | .... | 12 |
| 68 | | Total | 1,667 |

III.—The Kalai-Khoit Amlyakdarate.

Note.—This amlyakdarate is situated along the valleys of the rivers Obi-Kabud and its tributaries and of the Yasman, as also on the right bank of the Surkhob, not far from the mouths of the rivers just named. The inhabitants are Karateginese.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|---------------------------|----------------|-------------------|
| | Yevgi .. .. . | .... | 26 |
| | Kalai-Khoit .. .. . | .... | 127 |
| 115 | Yarkhwich .. .. . | .... | 24 |
| | Degi-Siyo (Di-Siya) .. .. | .... | 28 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| | Purt (Purk) .. .. . | .... | 19 |
| | Igeli .. .. . | .... | 20 |
| | Purt-Bolyo (Purk-Balya) .. | .... | 19 |
| 120 | Chim .. .. . | .... | 8 |
| | Makgorwik .. .. . | .... | 18 |
| | Shabir (Shaur) .. .. . | .... | 13 |
| | Yarkhich .. .. . | .... | 23 |
| | Turatal (Turdi-ouval) .. .. | .... | 18 |
| 125 | Yarkhich-Miona | Yarkich | 36 |
| | Divana-su (Divo-sukh) .. .. | .... | 7 |
| | Kara-Kot (Karakat) .. .. . | .... | 32 |
| | Degi-Balyand (Di-balyand) .. | .... | 24 |
| | Dashti-Mogojan .. .. . | .... | 19 |
| 130 | Atai-ob .. .. . | .... | 10 |
| | Kizil-Rwim (Kizil) .. .. . | .... | 22 |
| | Kurum .. .. . | .... | 17 |
| | Dahti-Nuron (Nurun) .. .. . | .... | 20 |
| | Diuchi .. .. . | .... | 8 |
| 135 | Mazari-Dei-Mullo-Badad (Mazar) | .... | 28 |
| | Nazar-Ailyak .. .. . | .... | 16 |
| | Ba-Dyumlyuk .. .. . | .... | 20 |
| | Khisorak* .. .. . | .... | 28 |
| | Takht .. .. . | .... | 23 |
| 140 | Metanion .. .. . | .... | 17 |
| | Khoji-Kayon (Khoji-Kion) .. | .... | 22 |

* All the villagers from Khisorak (No. 138) downwards in this amlyakdarate are in the valley of the Yasman.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|----------------------------------------|----------------|-------------------|
| | Davrion .. .. . | ..... | 18 |
| | Vorwing .. .. . | ..... | 23 |
| | Utalak .. .. . | ..... | 36 |
| 145 | Shildwir (Shuldur) .. .. | ..... | 27 |
| | Sapolwing (Sipoling) .. .. | ..... | 30 |
| | Shildwir-Bolyo (Shuldur-Balya) .. | ..... | 28 |
| | Assiob-Dara (Siob-Dara) .. | ..... | 20 |
| | Kara-Shaar .. .. | ..... | 17 |
| 150 | Chapkildik .. .. . | ..... | 20 |
| | Kara-Shogor-Bolyo (Kara-Shogor Balya). | ..... | 22 |
| | Chapkildik-Mion .. | ..... | 10 |
| | Chapkildik-Bolyo (Chapkildik-Balya). | ..... | 20 |
| | Novabat .. .. . | ..... | 26 |
| 155 | Safid-ob .. .. . | ..... | 17 |
| | Mazor (Mazar) .. .. | ..... | 18 |
| | Morkhuno .. .. . | ..... | 36 |
| | Mazor-Bolyo (Mazar-Balya) .. | ..... | 30 |
| | Musafiron (Musafit) .. .. | ..... | 26 |
| 160 | Alichayuk .. .. . | ..... | 18 |
| | Khoji-Kishlak .. .. | ..... | 36 |
| | Bidi-Toka .. .. . | ..... | 32 |
| | Koilya-Most (? Bridge) .. | ..... | 27 |
| | Budonogo .. .. . | ..... | 32 |
| 165 | Kidinok .. .. . | ..... | 18 |
| | Khalifogo or Ishano (Khyastfaga) | ..... | 26 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------|----------------|-------------------|
| | Bulkolma (Bul-Kalili) .. | .... | 32 |
| | Sangi-Guch .. .. | .... | 24 |
| | Duoba | Doaba .. | 30 |
| 170 | Kiz-Dara (Khiz-Dara) .. | .... | 18 |
| 58 | | Total .. | 1,428 |

IV.—The Garm Amlyakdarate.

Note.—The amlyakdarate is situated on both banks of the Surkhob and its tributaries, e.g., the Sorbukh, in the neighbourhood of Garm. The inhabitants are Karateginese.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------------|----------------|-------------------|
| 171 | Lyugiosi (Ligdoz) .. .. | .... | 24 |
| | Chusal (Chusol) .. .. | .... | 27 |
| | Mirtob (Mirtop) .. .. | .... | 40 |
| | Ganjik (Gonjik) .. .. | .... | 29 |
| 175 | Numichi-Paion (Numich) .. | .... | 16 |
| | Numwichak (Numichak) .. | .... | 20 |
| | Numichi-Bolyo (Numich-Bolyo) | .... | 32 |
| | Jafr (Yaf) .. .. | .... | 27 |
| | Yangolwik (Yangwilwik) .. | .... | 30 |
| 180 | Khufak .. .. | .... | 22 |
| | Kalapak .. .. | .... | 18 |
| | Kharbok .. .. | .... | 30 |
| | Khalyanak (Kalanak-Mona) .. | .... | 40 |
| | Khnuoh .. .. | .... | 100 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------|----------------|-------------------|
| | Khufetkho .. .. | .... | 3 |
| | Yakhot .. .. | .... | 60 |
| | Murutak .. .. | .... | 27 |
| | Da-Oba .. .. | .... | 30 |
| | Kharbok .. .. | .... | 20 |
| 190 | Kaloi-Uchak .. .. | .... | 27 |
| | Kerki .. .. | .... | 20 |
| | Shamir-Zaun .. .. | .... | 20 |
| | Naubat .. .. | .... | 28 |
| | Belgi | Belgi .. | 19 |
| 195 | Yalyadwimwich .. .. | .... | 60 |
| | Poion .. .. | .... | 2 |
| | Kulya-Bolyo (Kulya) .. | .... | 23 |
| | Kulo-i-Chingak (Kulya-Saigok) | .... | 18 |
| | Kalyai-Shaikh .. .. | .... | 24 |
| 200 | Nandi (Naudwi) .. .. | .... | 50 |
| | Kochyoni-Bolyo (Kogak) .. | .... | 27 |
| | Kogak-Poion (Kogak-Payan) .. | .... | 20 |
| | Naushurion (Nijeraion) .. | .... | 12 |
| | Alkarf (Khal-Karf) .. .. | .... | 18 |
| 205 | Loiyak (Layak) .. .. | .... | 24 |
| | Bidak (Bidot) .. .. | .... | 22 |
| | Bidaki-Bolyo .. .. | .... | 20 |
| | Char-Shokha .. .. | .... | 20 |
| | Kalai-Makhsul (Makhsut) .. | .... | 18 |
| 210 | Garm | Garm .. | 300 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| | Shul .. .. . | .... | 80 |
| | Koznok .. .. . | .... | 30 |
| | Shumai-Kizi (Chashma-Kozi) .. | .... | 20 |
| | Kalyai-Mina (Kaloi-Mina) .. | .... | 20 |
| 215 | Govosiyon (Khavasiyan) .. | .... | 12 |
| | Barduch (Bardwich) .. | .... | 18 |
| | Kwizrok .. .. . | .... | 20 |
| | Moshkunok .. .. . | .... | 20 |
| | Kochamandi .. .. . | .... | 20 |
| 220 | Karalyuk (Karalwik) .. .. | .... | 20 |
| | Lyoj-Oba (Loi-Oba) .. .. | .... | 20 |
| | Kal-Acha .. .. . | .... | 3 |
| | Buni-Safiyon (Buni Safiyan) .. | .... | 20 |
| | Sangi-Maliki (Sang-Malk) .. | .... | 22 |
| 225 | Shulmak (Shilmak) .. .. | .... | 26 |
| | Kwirtwin (Kurtwing) .. .. | .... | 22 |
| | Khulezion (Khuruzian) .. | .... | 30 |
| | Saio-Diyon (Saedion) .. .. | .... | 18 |
| | Yashim (Yashm) .. .. | .... | 24 |
| 230 | Shoin-Dara (Shaindora) .. | .... | 20 |
| | Poje .. .. . | .... | 20 |
| | Dashti-Siok .. .. . | .... | 22 |
| | Poji-Bolyo (Poji-Balya) .. | .... | 18 |
| | Tavrok .. .. . | .... | 15 |
| 235 | Khoja-Ali .. .. . | .... | 27 |
| | Sangurokh .. .. . | .... | 13 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------|----------------|-------------------|
| | Kul .. .. . | .... | 20 |
| | Noskok .. .. . | .... | 19 |
| | Kuterma .. .. . | .... | 16 |
| 240 | Novabat .. .. . | .... | 20 |
| | Shandwi .. .. . | .... | 27 |
| | Rui-Khonvari .. .. . | .... | 18 |
| | Jingan .. .. . | .... | 26 |
| | Shakhi .. .. . | .... | 22 |
| 245 | Yavok .. .. . | .... | 24 |
| | Khup-Dora .. .. . | .... | 18 |
| | Tuda .. .. . | .... | 26 |
| | Koramondi .. .. . | .... | 30 |
| | Sayat .. .. . | .... | 26 |
| 250 | Dora-Ravat .. .. . | .... | 28 |
| | Dora-Rabat .. .. . | .... | 24 |
| | Nugbol-Bolyo (Nugbol-Balya) | .... | 22 |
| | Nugbol-Paion (Nugbol-Payan).. | .... | 15 |
| | Forkoka .. .. . | .... | 16 |
| 255 | Bi-ob .. .. . | .... | 20 |
| | Kurval .. .. . | .... | 10 |
| | Khokok .. .. . | .... | 8 |
| | Li-Klwich .. .. . | .... | 10 |
| | Di-Sha .. .. . | .... | 15 |
| 260 | Di-Mulla .. .. . | .... | 18 |
| | Pagomadra .. .. . | .... | 10 |
| | Jangal-Sukhta .. .. . | .... | 18 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------------------|----------------|-------------------|
| | Guri-Divana .. .. . | .... | 16 |
| | Joroka .. .. . | .... | 12 |
| 265 | Khirsong .. .. . | .... | 26 |
| | Dashti-Siokh .. .. . | .... | 18 |
| | Yapoloki .. .. . | .... | 20 |
| | Sangi-Kor .. .. . | .... | 26 |
| | Khuf .. .. . | .... | 18 |
| 270 | Ogongaron .. .. . | .... | 16 |
| | Siok-Poion (Siok-Payan) .. | .... | 18 |
| | Siok-Miona .. .. . | .... | 12 |
| | Siok-Bolyo (Siok-Balya) .. | .... | 19 |
| | Irtemchi .. .. . | .... | 15 |
| 275 | Di-Poion (Di-Payan) .. .. | .... | 22 |
| | Zarifi .. .. . | .... | 10 |
| | Khishtwirak .. .. . | .... | 26 |
| | Gilkon .. .. . | .... | 18 |
| | Khilnoni .. .. . | .... | 25 |
| 280 | Parvo .. .. . | .... | 22 |
| | Khoj-Shamsidin .. .. . | .... | 18 |
| | Shamsudin-Bolyo (Shamsidin-Balya). | .... | 20 |
| | Shil-Khazar .. .. . | .... | 12 |
| | Gorango .. .. . | .... | 27 |
| 285 | Pokishpagi .. .. . | .... | 23 |
| | Kolyandok .. .. . | .... | 18 |
| | Turkon .. .. . | .... | 20 |
| | Davtoni .. .. . | .... | 16 |
| | Kwirgizak .. .. . | .... | 26 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|----------------------------------|---------------------------------------------|------------------------------|-------------------|
| 290 | Shashkapago .. .. | ..... | 20 |
| | Du-Öbo .. .. | ..... | 18 |
| | Ptkani-Mash .. .. | ..... | 27 |
| | Chu hton .. .. | ..... | 13 |
| | Az-ati-Khoji-Abdulla (Khozret-Khoja-Abdul). | ..... | 27 |
| 295 | Dogoni-Gunwish.. .. | ..... | 20 |
| | Dimullyo-Badal (Mulla-Badal) | ..... | 20 |
| | Lyolya-Doron (Lyalya-Zorun) | ..... | 27 |
| | Khur Kham (Khuri-Khom) .. | ..... | 23 |
| | Ishana .. .. | ..... | 27 |
| 300 | Guzimot (Guj-mot) .. .. | ..... | 18 |
| | Dagana (Dogono) | Dahana | 25 |
| | Sholil (Shalwi) .. .. | ..... | 40 |
| | Kosa-Gardon (Kosogordun) .. | ..... | 15 |
| | Kosa-i-Bolyo .. .. | ..... | 5 |
| | 305 | Bolyo-Shar (Balya-Shagor) .. | ..... | 20 |
| Shagor-Miona .. .. |  | ..... | 27 |
| Shagor-Poion (Shagor-Payan) .. |  | ..... | 23 |
| Sari-Bichyon (Sori-Pichung) .. |  | ..... | 24 |
| Shamshai-Sangak (Nashma-Saigok). |  | ..... | 19 |
| 310 | Degi-Gulemon (Gulyamom) .. | ..... | 12 |
| | Samsali (Samsakal) .. .. | ..... | 40 |
| | Zordo .. .. | ..... | 15 |
| | Shikho .. .. | ..... | 18 |
| | Pandauchi | Pandechi | 30 |
| 315 | Pitar (Pita) .. .. | ..... | 25 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------------------------|----------------|-------------------|
| | Ishoni-Khoji .. .. . | .... | 2 |
| | Pandauchi-Bolyo (Pondauchi-Balya). | .... | 12 |
| | Torgok .. .. . | .... | 24 |
| | Folyoma (Foloma) .. .. | .... | 20 |
| 320 | Azor-Guzar-Chashma-Bolyo (Guzar-Chashma-Balya). | .... | 15 |
| | Azor-Guzar-Chashma-Poion (Guzar-Chashma-Payan). | .... | 26 |
| | Talkhak-Chashma (Tolkhok) .. | .... | 19 |
| | Khieh-Borak (Khijborok) .. | .... | 26 |
| | Sevi-Surkhak (Siobu-Surkhob) | .... | 18 |
| 325 | Bodrovak (Bodrovek) .. .. | .... | 23 |
| | Kalai-Chak (Uchak) .. .. | .... | 16 |
| | Darai-Angur (Angur) .. .. | .... | 15 |
| | Yarkhou (Yarkhob) .. .. | .... | 15 |
| | Ditto .. .. | .... | 50 |
| 330 | Khudorion-Ita (Khidorion) .. | .... | 16 |
| | Khudorion-Bolyo (Khidorion-Balya). | .... | 25 |
| | Kuzillyo (Kizil-Loi) .. .. | .... | 17 |
| | Yakhak-Pas (Yakhokpost) .. | .... | 100 |
| | Kamoliston (Komolistan) .. | .... | 12 |
| 335 | Zugbet (Zigibet) .. .. | .... | 40 |
| | Kamoliston-Bolyo (Komolistan-Balya). | .... | 20 |
| | Kuli-Soyari (Kul) .. .. | .... | 20 |
| | Sharkhon-Poion (Shorkho) .. | .... | 16 |
| | Kul-Avtovru (Kul-Balya) .. | .... | 30 |

| Number of villages. | Russian names. | English names. | Number of loc. es. |
|---------------------|----------------------------------|----------------|--------------------|
| 340 | Sharkhon-Bolyo (Shorkho-Balya) | .... | 24 |
| | Dagani-Nai .. .. . | .... | 5 |
| | Sari-Chukhun (Sari-Shokhor) .. | .... | 40 |
| | Askalyon (Azkolyan) .. .. | .... | 56 |
| | Dodbakh (Dodo-Bokhsh) .. | .... | 22 |
| 345 | Dukuni-Sang (Dukunwi-Song) | .... | 20 |
| | Bwilkos (Bulkos) .. .. | .... | 60 |
| | Safitundak (Safitwindak) .. | .... | 36 |
| | Tugak (Tugok) .. .. . | .... | 15 |
| | Runau .. .. . | .... | 26 |
| 350 | Burjyon .. .. . | .... | 3 |
| | Chakikho (Choki-Khob) .. | .... | 18 |
| | Sari-Pul .. .. . | .... | 18 |
| | Sari-Namak .. .. . | .... | 22 |
| | Pasi-Khom .. .. . | .... | 15 |
| 355 | Babashoi .. .. . | .... | 18 |
| | Makholya-Paion (Makholya-P yan). | .... | 24 |
| | Makholya-Bolyo (Makholya-Balay). | .... | 20 |
| | Saidan .. .. . | .... | 18 |
| | Kablokha .. .. . | .... | 10 |
| 360 | Sofid-Kha .. .. . | .... | 26 |
| | Lyangar (Liangar) | Liangar .. | 18 |
| | Chor-Chirok .. .. . | .... | 20 |
| | Damou (Domau) .. .. . | .... | 17 |
| | Oftob .. .. . | .... | 24 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------|----------------|-------------------|
| 365 | Gugom .. .. . | .... | 20 |
| | Shurob | Shur .. | 18 |
| | Guyum-Bolyo (Guyum-Balya) | .... | 27 |
| | Sorikhaul .. .. . | .... | 18 |
| | Songi-Kho .. .. . | .... | 22 |
| 370 | Chokdabion (Chigdobion) .. | .... | 25 |
| | Lyangarak .. .. . | .... | 28 |
| | Ka-Dara (Kodoro) .. .. . | .... | 30 |
| | Kulyabo .. .. . | .... | 22 |
| | Surkh-Dara (Swirkhdora) .. | .... | 19 |
| 375 | Sarbanda (Sorbondi) .. .. . | .... | 27 |
| | Kolai-Kazi .. .. . | .... | 22 |
| | Shilonak (Shulonok) .. .. . | .... | 32 |
| | Olichako (Alichak) .. .. . | .... | 26 |
| | Di-Amiryak .. .. . | .... | 28 |
| 380 | Komborian .. .. . | .... | 12 |
| 210 | | Total .. | 5,088 |

V.—The Kamarou (Kamirau) Amyakdarate.

Note.—The amyakdarate lies along the valley of the Kamarou, a tributary of the Surkhob, and partly also along the last-named river. The inhabitants are Karateginese.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------|----------------|-------------------|
| 385 | Gorif (Garif) | Gorif .. | 40 |
| | Oba-Khalf .. .. . | .... | 26 |
| | Namnarut (Nomnarut) .. | .... | 18 |
| | Nasrut .. .. . | .... | 16 |
| | Du-Bursa | Dubursa .. | 22 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------|----------------|-------------------|
| | Didi-banya .. .. . | ..... | 15 |
| | Siya-Jangal (Ziya-Jangal) .. | ..... | 18 |
| | Didi-Poion (Didi-Payan) .. | ..... | 12 |
| | Khoja-Chobuk (Khoja-Gubok).. | ..... | 18 |
| 390 | Shingilich (Shinglich) .. .. | ..... | 30 |
| | Surkh-Ku (Surkhu) .. .. | ..... | 27 |
| | Sorbukh (Sor-bug) .. .. | ..... | 27 |
| | Ruos (Rubos) .. .. | ..... | 16 |
| | Kishimbokh (Kshinbag) .. | ..... | 20 |
| 395 | Pingon (Tsingon) .. .. | ..... | 28 |
| | Kobokh (Konobok) .. .. | ..... | 19 |
| | Sevoi-Nigori (Sibi-Nogari) .. | ..... | 10 |
| | Kamarou (Komarou) | Kamirau | 22 |
| | Darai-Tangak (Doroi-Pongok) | ..... | 28 |
| 400 | Shulye .. .. . | ..... | 10 |
| | Diai-Khojali .. .. . | ..... | 25 |
| | Chashma-Ishon .. .. . | ..... | 6 |
| | Bodravat .. .. . | ..... | 9 |
| | Biobak .. .. . | ..... | 10 |
| 405 | Sauzikharv .. .. . | ..... | 12 |
| | Kaurak .. .. . | ..... | 5 |
| | Dashti-Khirson .. .. . | ..... | 10 |
| | Nobokh .. .. . | ..... | 20 |
| | Biobaki-bolyo .. .. . | ..... | 7 |
| 410 | Andal .. .. . | ..... | 7 |
| | Varzi'on .. .. . | ..... | 13 |
| 31 | | Total .. | 536 |

VI.—*The Navdonak Amyakdarate.*

Note.—This Amyakdarate, like No. V, is situated along the valley of the Kamirou, a tributary of the Surkhob, and partly along this last-named river.

The inhabitants are Karateginese.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| | Nishirion .. .. . | .... | 22 |
| | Navdonak (Namdonak) .. | .... | 40 |
| | Dashti-Givar (Gevar) .. .. | .... | 23 |
| 415 | Boi Dara (Boidara) .. .. | .... | 30 |
| | Shilkhau (Shilkhau) .. .. | .... | 24 |
| | Chok-Dara (Chikdara) .. .. | .... | 35 |
| | Nigova (Nigovo) .. .. | .... | 20 |
| | Turmush (Turmwish) .. .. | .... | 24 |
| 420 | Siyou (Siye-Ob) .. .. . | .... | 15 |
| | Nioz-begion (Niaz-begium) .. | .... | 20 |
| | Sari-kosh .. .. . | .... | 14 |
| | Khufak .. .. . | .... | 20 |
| | Uch-Turgel .. .. . | .... | 27 |
| 425 | Kalyui-Sukht .. .. . | .... | 29 |
| | Nobobot .. .. . | .... | 10 |
| | Kaulyakho (Kovlyakha) .. | .... | 18 |
| | Buni-Rubaun (Bini-Rubogun) | .... | 17 |
| | Tukhchi (Takhchi) .. .. | .... | 22 |
| 430 | Jauchi (Javchi) .. .. . | .... | 20 |
| | Jauchi-bolyo (Javchi-balya) .. | .... | 20 |
| | Ob-Lyurd (Aulurt) .. .. | .... | 26 |
| | Toi-Kul .. .. . | .... | 18 |
| | Di-Mahomed-Ziya .. .. | .... | 22 |
| 435 | Khundon (Khundun) .. .. | .... | 15 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| | Khumdun-bolyo (Khumdun-balya). | ..... | 20 |
| | Gardanga (Gordongo) .. | ..... | 18 |
| | Makhzori-Soi .. .. | ..... | 22 |
| | Naudon (Naudun) .. .. | ..... | 20 |
| 440 | Lavijar (Lyaba-Jar) .. .. | ..... | 23 |
| | Yenur (Jonur) .. .. | ..... | 28 |
| | Kazakun .. .. | ..... | 12 |
| | Tirgar (Tirger) .. .. | ..... | 27 |
| | Dushambi .. .. | ..... | 20 |
| 445 | Muro .. .. | ..... | 28 |
| | Di-ta .. .. | ..... | 14 |
| | Bargoch (Borgoch) (4 villages) | ..... | 100 |
| | Kaftar-Guzar (Kaftarguzar) .. | ..... | 28 |
| | Gwizi .. .. | ..... | 25 |
| 450 | Yafuch .. .. | ..... | 12 |
| 39 | | Total .. | 928 |

VII.—The Yakhak Amlyakdarate.

Note.—This amlyakdarate is situated along the left bank of the Surkhob at and below the junction of the Khingou.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|----------------|----------------|-------------------|
| | Yakhak .. .. | ..... | 50 |
| | Sarikosh .. .. | ..... | 2 |
| | Ku .. .. | ..... | 8 |
| | Poiyuz .. .. | ..... | 20 |
| 455 | Dara .. .. | ..... | 10 |
| | Fairob .. .. | ..... | 12 |
| | Zamanak .. .. | ..... | 10 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------|------------------|-------------------|
| 460 | Yakhsh .. .. . | .... | 16 |
| | Novako .. .. . | .... | 6 |
| | Sari-Jui .. .. . | .... | 5 |
| | Mina Dara .. .. . | .... | 20 |
| | Sang-Divol | ? Sangi Diwan .. | 6 |
| 463 | Istun .. .. . | .... | 5 |
| 13 | | Total .. | 170 |

VIII.—*The Obi-Garm Amlyakdarate.*

Note.—This amlyakdarate is situated mainly on the right, and partly on the left bank of the Surkhob down to the boundary of the Hissar Begship.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------|----------------|-------------------|
| 465 | *Zyngar .. .. . | .... | 24 |
| | Tegirmi .. .. . | .... | 17 |
| | * Tutkhor .. .. . | .... | 27 |
| | Dusha-Khazmin .. .. . | .... | 15 |
| | Digogi .. .. . | .... | 18 |
| 470 | Shakhundoz .. .. . | .... | 15 |
| | * Pumbachi (Pombachi) .. | .... | 28 |
| | * Chinor (Chinar) .. .. . | .... | 12 |
| | Dil-Bakhok .. .. . | .... | 27 |
| | Di-Kombor .. .. . | .... | 17 |
| 475 | Shamduni .. .. . | .... | 15 |
| | Darvish-bolyo (Darvish-balya) | .... | 24 |
| | Dikdona .. .. . | .... | 18 |
| | Obi-Garm | Abi-Garm | 20 |

The villages marked * sometimes are considered to form a small separate amlyakdarate, viz.—the Pumbachi.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|----------------------------------|----------------|-------------------|
| | Sabzi-Kodom .. .. | .... | 25 |
| | Sori-Mazor .. .. | .... | 28 |
| 480 | Khulyas .. .. | .... | 25 |
| | Novobad .. .. | .... | 20 |
| | Dibolyand .. .. | .... | 27 |
| | Kolonok.. .. | .... | 12 |
| | § Kaskon (Kazakun) .. .. | .... | 18 |
| 485 | Chormayazok .. .. | .... | 27 |
| | § Mujikhavr (Mujigorf) .. .. | .... | 15 |
| | § Zoron (Zorun) .. .. | .... | 20 |
| | § Siyaglak .. .. | .... | 14 |
| | § Tai-kamar (Tai-komar) .. .. | .... | 20 |
| 490 | § Sori-zok.. .. | .... | 26 |
| | § Lairon (Laikhol) .. .. | .... | 25 |
| | Kilyak .. .. | .... | 18 |
| | § Jyauchi (Jouchi) .. .. | .... | 29 |
| | § Koskon.. .. | .... | 20 |
| 495 | § Khasan-Dara (Khosondoro) .. .. | .... | 24 |
| | § Shakhtut (Shokhtut) .. .. | .... | 24 |
| | § Khakimi .. .. | .... | 18 |
| | Lugur .. .. | .... | 30 |
| | Di-Bustun .. .. | .... | 26 |
| 500 | Pushtai-Khalifa .. .. | .... | 18 |
| | Sori-Kari-Sharif .. .. | .... | 20 |
| | Songi-burkh .. .. | .... | 19 |

The villages marked § sometimes are considered to form a separate *amlyakdarate*, viz. —the *Mujikhavr*.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------------|----------------|-------------------|
| | Siu-no .. .. . | ..... | 25 |
| | Kolyakun .. .. . | ..... | 32 |
| 505 | Zurion .. .. . | ..... | 20 |
| | Lijok .. .. . | ..... | 15 |
| | Dilva-khak .. .. . | ..... | 27 |
| | Abdwilvakhion .. .. . | ..... | 20 |
| | Dignun .. .. . | ..... | 15 |
| 510 | Loyak (Layak) .. .. . | ..... | 20 |
| | Kuka-Bulak (Kokabulak) .. .. . | ..... | 18 |
| | Chor-Khona (Chorkhona) .. .. . | ..... | 17. |
| | Desh-Lyashkar (Diloshkar) .. .. . | ..... | 25 |
| | Ishonon (Ishinush) .. .. . | ..... | 29 |
| 515 | Koltago .. .. . | ..... | 18 |
| | Dimirza .. .. . | ..... | 20 |
| | Bozarok .. .. . | ..... | 27 |
| | Khundora .. .. . | ..... | 12 |
| | Gromovo (a warm spring) .. .. . | ..... | 18 |
| 520 | Mulla-Sheikh .. .. . | ..... | 27 |
| | Siva .. .. . | ..... | 12 |
| | Jovani .. .. . | ..... | 18 |
| | Safidoron (Sofidorun) .. .. . | ..... | 15 |
| | Prwidora .. .. . | ..... | 23 |
| 525 | Charokul .. .. . | ..... | 19 |
| | Pugachi .. .. . | ..... | 10 |
| | Konjbet .. .. . | ..... | 27 |
| | Shagidon (Shoidon) .. .. . | ..... | 20 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|--------------------------------|----------------|-------------------|
| | Glyu-Surkh (Gulo-Surkhi) .. | ..... | 15 |
| 530 | Sovrokh .. .. | ..... | 28 |
| | Godumak .. .. | ..... | 19 |
| | Boswigion (Bosogion) .. .. | ..... | 24 |
| | Khingoi .. .. | ..... | 20 |
| | Chormaz (Chormokzi) .. .. | ..... | 10 |
| 535 | Poru .. .. | ..... | 22 |
| | Navobod (Novobod) .. .. | ..... | 27 |
| | Forukh .. .. | ..... | 12 |
| | Songova .. .. | ..... | 18 |
| | Bidok .. .. | ..... | 13 |
| 540 | Pichokzor .. .. | ..... | 15 |
| | Zorkozhor .. .. | ..... | 10 |
| | Komari-mogul .. .. | ..... | 12 |
| | Rin-Maidan (Maidan) .. .. | ..... | 10 |
| | Sari-Kamwish .. .. | ..... | 12 |
| 545 | Pasti-Murago (Pasi-Magrago) .. | ..... | 20 |
| | Kurvich .. .. | ..... | 13 |
| | Ar-Arak .. .. | ..... | 16 |
| | Obi-Luliyak .. .. | ..... | 10 |
| | Kojbet .. .. | ..... | 12 |
| 550 | Tut-Chelma .. .. | ..... | 10 |
| | Kovak-Dora .. .. | ..... | 16 |
| | Pista-Mazar .. .. | ..... | 20 |
| | Chushun .. .. | ..... | 12 |
| | Dilvak .. .. | ..... | 18 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------------------|----------------|-------------------|
| 555 | Obi-Garm | Ab-i-Garm .. | 100 |
| | Murdon .. .. . | .... | 10 |
| | Rogun-bolya (Ragun-balya) .. | .... | 12 |
| | Rogun-Poion (Rogun-payan) .. | .... | 13 |
| | Bedikho (Bidikha) .. .. | .... | 20 |
| 560 | Lyabi-dora | Lyavi-dare | 10 |
| | Khoja-Balisho (Khoja-Bali-sha) | .... | 18 |
| | Tagi-Komar (Tai-Komar) .. | .... | 10 |
| | Sech (Sej) .. .. . | .... | 12 |
| | Talkhak-Chashma (Takh-ta-chashma). | .... | 10 |
| 565 | Tagi-agva (Tai-ogba) .. .. | .... | 15 |
| | Kishra .. .. . | .... | 12 |
| | Naro .. .. . | .... | 8 |
| | Juruch .. .. . | .... | 12 |
| | Khoja-Khorer .. .. . | .... | 10 |
| 570 | Khoja-bolyo (Khoja-balya) .. | .... | 12 |
| 107 | | Total .. | 2,055 |

IX.—Separate Settlement.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|----------------|----------------|-------------------|
| 517 | Iofut .. .. . | .... | 70 |
| 517 | | GRAND TOTAL .. | 12,949 |

B. DARWAZ.

I.—The Vakhya-Bolyo Amlyakdarate.

Note.—The list is based on the works of G. A. Arendaryenko and Captain Kuznetsof. In brackets are given the names according to G. A. Arendaryenko when they differ from those of Kuznetsof.* The population are 1 arwazese.

The villages to Nad inclusive are on the right bank, and those from Sangvar onwards on the left bank of the Khingou.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------------------|----------------|-------------------|
| 1 | Kala-i-Lajirk .. .. . | .... | 15 |
| | Lajirk (Lyajirk) .. .. . | .... | 30 |
| | Robat-i-Khun .. .. . | .... | 6 |
| | Rekhch .. .. . | .... | 12 |
| 5 | Sivikat (Sikot) .. .. . | .... | 18 |
| | Tushk .. .. . | .... | 2 |
| | Birsa .. .. . | .... | 6 |
| | Dasht-i-Bun .. .. . | .... | 5 |
| | Roga (Rogo) .. .. . | .... | 26 |
| 10 | Madingat .. .. . | .... | 1 |
| | Arzunk (Arzung) .. .. . | .... | 29 |
| | Pashingar (Pashimger) | Pashingar .. | 48 |
| | Dasht-i-Bolyo .. .. . | .... | 2 |
| | Dara-i-Kaln (Doroi-Keln) .. .. . | .... | 30 |
| 15 | Nad .. .. . | .... | 8 |
| | Sangvar (Sangi-Vor) | Sanar .. | 37 |
| | Naiguf .. .. . | .... | 30 |
| | Roba | Roga .. | 12 |
| | Nisai .. .. . | .... | 20 |
| 20 | Khazret-i-Burkh (Khazreti-Burkh). .. .. . | .... | 38 |
| | Barshid | Barshid .. | 13 |

* These remarks apparently apply to all the Darwaz amlyakdarates.—*Translator.*

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------|----------------|-------------------|
| | Dara-i-Darkhorvak .. .. | .... | 2 |
| | Darakhtak (Darakhtan) .. | .... | 25 |
| | Urfad (Urfot) .. .. | .... | 30 |
| 25 | Urfad-i-Bolyo .. .. | .... | 6 |
| | Pissoda (Pisada) .. .. | .... | 28 |
| | Switarkha (Sitarkha) .. .. | .... | 36 |
| | Bieb .. .. | .... | 3 |
| | Sari-Sang (Sara-Sang) .. .. | .... | 33 |
| 30 | Rogola .. .. | .... | 27 |
| 30 | | Total .. | 578 |

II.—The Tavil-Dara Amlyakdarate.

Note.—As far as Lyangari-Bolyo [Liangar] inclusive all the villages are on the right bank, and the remainder on the left bank, of the Khingou.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------|----------------|-------------------|
| | Iosgan (Yazgon) .. .. | .... | 30 |
| | Lyangar .. .. | .... | 40 |
| | Sari-Jangal (Sari-Jangi) .. | .... | 28 |
| | Sari-Dasht .. .. | .... | 10 |
| 35 | Dikalon (Dikolyan) .. .. | .... | 30 |
| | Gyurkham .. .. | .... | 6 |
| | Ioftag .. .. | .... | 6 |
| | Khur .. .. | .... | 33 |
| | Prum .. .. | .... | 10 |
| 40 | Aksayat (Sayat) | Sayat | 40 |
| | Uijun .. .. | .... | 12 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------------|-----------------|-------------------|
| | Savzikhary (Sabzikhor) .. .. . | ..... | 30 |
| | Ifan .. .. . | ..... | 10 |
| | Penarvo (Pinorvag) .. .. . | ..... | 32 |
| 40 | Shipulyon .. .. . | ..... | 10 |
| | Ishtion (Ushtion) .. .. . | ..... | 40 |
| | Lyuli-Kharvi .. .. . | ..... | 12 |
| | Khipchun .. .. . | ..... | 8 |
| | Argankun (Argankon) .. .. . | ..... | 50 |
| 50 | Lyairun (Lyairok) .. .. . | ..... | 30 |
| | Lyairun-i-Bolyo .. .. . | ..... | 6 |
| | Ali-Surkhun (Ali-Sarkhan) .. .. . | ..... | 30 |
| | Kala-i-khaidar .. .. . | ..... | 1 |
| | Didudi .. .. . | ..... | 3 |
| 55 | Nissuani .. .. . | ..... | 5 |
| | Lyangar-i-Bolyo (Lyangar) | Liangar | 26 |
| | Dasht-Khasan (Khasang) .. .. . | ..... | 32 |
| | Jirog .. .. . | ..... | 42 |
| | Kalpak (Kolpak) .. .. . | ..... | 22 |
| 60 | Zigori (Zigora) .. .. . | ..... | 28 |
| | Tavil-Dara .. .. . | ..... | 60 |
| | Pagulya .. .. . | ..... | 4 |
| | Karanak (Koranak) .. .. . | ..... | 30 |
| | Farking .. .. . | ..... | 8 |
| 65 | Biging .. .. . | ..... | 27 |
| | Shorak (Shoron) .. .. . | ..... | 36 |
| | Bakhcha .. .. . | ..... | 2 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------------|----------------|-------------------|
| | Sirkhuni .. .. . | .... | 4 |
| | Khai-Dara .. .. . | .... | 5 |
| 70 | Dasth-i-Shir (Dashni-Shir) .. | .... | 32 |
| | Yak-boro .. .. . | .... | 22 |
| | Kala-i-Kbisain .. .. . | .... | 8 |
| | Lyangaro .. .. . | .... | 10 |
| | Inku .. .. . | .... | 10 |
| 75 | Bunju .. .. . | .... | 8 |
| | Pastwirokh (Postwirog).. .. | .... | 30 |
| | Pshtarokh (Pishtorog) .. | .... | 100 |
| | Margak .. .. . | .... | 8 |
| | Margak-i-Bolyo .. .. . | .... | 7 |
| 80 | Chirsun .. .. . | .... | 40 |
| | Kos-Kara (Kos-Karon) .. | .... | 30 |
| | Gundora (Guni) .. .. . | .... | 27 |
| | Gundra-i-Poion .. .. . | .... | 20 |
| | Dara-i-Khairun (Khairon) .. | .... | 32 |
| 85 | Khirz .. .. . | .... | 15 |
| | Zuvai .. .. . | .... | 25 |
| | Miono .. .. . | .... | 23 |
| | Minadu .. .. . | .... | 50 |
| | Novd .. .. . | .... | 15 |
| 90 | Gau .. .. . | .... | 28 |
| | Jur .. .. . | .... | 100 |
| | Govdi-Past .. .. . | .... | 8 |
| | Passi-Avrunch .. .. . | .... | 15 |
| | Gavdi-Bolyo .. .. . | .... | 8 |
| 64 | | Total .. | 1,487 |

III.—*The Chil-Dara Ambaklarate.*

Note.—The villages to Dasht-i-Gurk inclusive are on the left, and the remainder on the right, bank of the Khingou.

| Number of villages. | Russian names. | English names | Number of houses. |
|---------------------|----------------------------------|---------------|-------------------|
| 95 | Pustun-Duzun .. .. . | .... | 4 |
| | Dibalyand (Dibolyand) .. | .... | 60 |
| | Nurunch (Nurung) .. .. | .... | 55 |
| | Bidak ... .. . | .... | 30 |
| | Khoja-Shain .. .. . | .... | 40 |
| 100 | Khoja-i-Khillas (Khoja-Khulyas) | .... | 30 |
| | Pashaar (Pashor) .. .. | .... | 60 |
| | Pafiti-Chirog .. .. . | .... | 23 |
| | Kosa-Gordon .. .. . | .... | 27 |
| | Gurdob .. .. . | .... | 9 |
| 105 | Yaam-Dara (Khamboro) .. | .... | 22 |
| | Farki-Shaabdi (Shaabdwi) .. | .... | 30 |
| | Sarwi-Sel.. .. . | .... | 6 |
| | Dara-i-Ju.. .. . | .... | 20 |
| | Dasht-i-Kabak .. .. . | .... | 4 |
| 110 | Pas-Ban .. .. . | .... | 12 |
| | Dasht-i-Gurk (Dashti-Giri) .. | .... | 32 |
| | Dam-ob .. .. . | .... | 2 |
| | Passi-obi-Talk (Posiabi-Talkh).. | .... | 30 |
| | Yavolyuk.. .. . | .... | 4 |
| 115 | Razak (Rozok) .. .. . | .... | 30 |
| | Shak-ob (Shokau) .. .. | .... | 30 |
| | Surk-ob (Sirkhau) .. .. | .... | 100 |
| | Chil-Dara.. .. . | .... | 30 |
| | Shur | Shur .. | 30 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|---------------------------|----------------|-------------------|
| 120 | Rabodnol (Ribodnal) .. .. | .... | 25 |
| | Bushalyak .. .. | .... | 4 |
| 27 | | Total .. | 899 |

IV.—The Vanch Amlyakdarate.

Note.—The villages up to Swikat inclusive are on the right, and the remainder on the left, bank of the Vanch.

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------|----------------|-------------------|
| | Dashtak .. .. | .... | 10 |
| | Uzva .. .. | .... | 15 |
| | Lyakhsh .. .. | .... | 10 |
| 125 | Biniga .. .. | .... | 15 |
| | Birau .. .. | .... | 10 |
| | Jangal .. .. | .... | 1 |
| | Bichkharv .. .. | .... | 5 |
| | Uskurog .. .. | .... | 8 |
| 130 | Rokharv (Rikhor) .. .. | .... | 40 |
| | Boud .. .. | .... | 2 |
| | Odshet .. .. | .... | 5 |
| | Bunau (Banou) .. .. | .... | 24 |
| | Potau .. .. | .... | 3 |
| 135 | Sadvad .. .. | .... | 2 |
| | Sycl .. .. | .... | 3 |
| | Tekharvi .. .. | .... | 4 |
| | Torshir .. .. | .... | 2 |
| | Breshir .. .. | .... | 4 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|---------------------------|----------------|-------------------|
| 140 | Vudob (Budob) .. .. . | .... | 32 |
| | Dich .. .. . | .... | 1 |
| | Shirgovad (Khargovat) .. | .... | 27 |
| | Mdekharv (Mudwikhor) .. | .... | 29 |
| | Skoswim .. .. . | .... | 1 |
| 145 | Switarg .. .. . | .... | 2 |
| | Morgutka-poion-i-bolyo .. | .... | 3 |
| | Van-Van .. .. . | .... | 3 |
| | Rog-bolyo-i-poion .. .. | .... | 9 |
| | Swikat .. .. . | .... | 1 |
| 150 | Gushkhon .. .. . | .... | 20 |
| | Gumayak .. .. . | .... | 2 |
| | Rau .. .. . | .... | 9 |
| | Sitvar .. .. . | .... | 1 |
| | Gardobak .. .. . | .... | 1 |
| 155 | Jauvid .. .. . | .... | 2 |
| | Ubgo .. .. . | .... | 2 |
| | Barau .. .. . | .... | 2 |
| | Chidakh .. .. . | .... | 3 |
| | Raugada .. .. . | .... | 4 |
| 160 | Gujovas (Gujob).. .. . | .... | 8 |
| | Vwirshkhorvak .. .. . | .... | 4 |
| | Puli-Jangal .. .. . | .... | 1 |
| | Gumas | Gumas .. | 4 |
| | Yazgo .. .. . | .... | 2 |
| 165 | Lyangar .. .. . | .... | 1 |
| | Rauvan | Wanvan .. | 5 |

| No. of villages. | Russian names. | English names. | No. of houses. |
|------------------|---------------------------|----------------|----------------|
| | Garam-Chashma .. .. . | ..... | 3 |
| | Sungat | Sungat .. | 2 |
| | Poi-mazar (Po-i-Mazar) .. | Poi Mazar .. | 28 |
| 170 | Gulkhur .. .. . | ..... | 28 |
| 49 | | Total .. | 399 |

V — *The Sagri-Dasht Amyakdarate.*

Note.— This amyakdarate is on the Sagri-Dasht, a tributary on the left bank of the Khingou.

| No. of villages. | Russian names. | English names. | No. of houses. |
|------------------|--------------------------------|----------------|----------------|
| | Kulimba-i-bolyo (Kilumba) .. | ..... | 29 |
| | Kulimba-i-poion .. .. . | ..... | 12 |
| | Ogingorn (Agongorn) .. .. . | ..... | 30 |
| | Olioni .. .. . | ..... | 13 |
| 175 | Dara-i-Milo (Dora-Milo) .. | ..... | 22 |
| | Gumbez .. .. . | ..... | 2 |
| | Mir-Idion (Mirodion) .. .. . | ..... | 35 |
| | Saidon (Seidona) .. .. . | ..... | 23 |
| | Sagri-Dasht .. .. . | ..... | 60 |
| 180 | Chikhhak .. .. . | ..... | 11 |
| | Lukhch (Lyakhch) .. .. . | ..... | 38 |
| | Gurbo-Dara -(Girdoro) .. .. . | ..... | 24 |
| | Safet-Darun (Safidarun) .. | ..... | 66 |
| | Safet-Sang (Safitsong) .. .. . | ..... | 35 |
| 185 | Gulion (Gulban) .. .. . | ..... | 36 |
| | Khavdak .. .. . | ..... | 8 |
| | Zarako (Zoroko) .. .. . | ..... | 27 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------------|----------------|-------------------|
| 190 | Pastelyak (Posti-plyan).. .. | .... | 22 |
| | Azuni .. .. . | .... | 28 |
| | Kamchak .. .. . | .... | 36 |
| | Charkan .. .. . | .... | 23 |
| | Shokolyandor .. .. . | .... | 32 |
| | Sodwiko .. .. . | .... | 30 |
| 23 | | Total .. | 642 |

VI.—*The Kala-i-Khumb (Kala Khum) Amlyakdarate.*

Note.—This amlyakdarate is on the right bank of the Pyanj (Ab-i-Panja).

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------------|----------------|-------------------|
| 195 | Pitkinau (Pashkunau) .. | Patki Nan .. | 54 |
| | Durovak (Duravak) | Darwak .. | 50 |
| | Sangi (Songi) .. .. . | .... | 60 |
| | Zing .. .. . | .... | 90 |
| | Umarak (Umarok) .. .. . | .... | 70 |
| | Kala-i-Khumb .. .. . | .... | 100 |
| 200 | Goshon | Gashun .. | 40 |
| | Ogwir (Omwir) .. .. . | .... | 27 |
| | Avshun .. .. . | .... | 10 |
| | Khost | Khost .. | 25 |
| 205 | Khob .. .. . | .... | 15 |
| | Robat .. .. . | .... | 40 |
| | Zyef .. .. . | .... | 80 |
| | Tugak .. .. . | .... | 3 |
| | Shirk (Shirion) .. .. . | .... | 40 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------------------------------------|----------------|-------------------|
| 210 | Vishkhokhvak .. .. . | ..... | 15 |
| | Lijak .. .. . | ..... | 4 |
| | Khik .. .. . | ..... | 30 |
| | Anjirak .. .. . | ..... | 27 |
| | Khumb-i-Vari .. .. . | ..... | 20 |
| | Madrasa .. .. . | ..... | 6 |
| 215 | Zingirak .. .. . | ..... | 7 |
| | Ruzbai (Ruz voi) .. .. . | ..... | 70 |
| | Kevron .. .. . | ..... | 60 |
| | Kobas .. .. . | ..... | 10 |
| 220 | Jorf .. .. . | ..... | 50 |
| | Vishkharv (Vichkharf) .. .. . | ..... | 30 |
| | Guga .. .. . | ..... | 5 |
| | Dargoza .. .. . | ..... | 3 |
| | Burrout .. .. . | ..... | 15 |
| | Khurk .. .. . | ..... | 6 |
| 225 | Ubagwin (Ubogin) .. .. . | ..... | 27 |
| | Sarviskharv (Viskharvi-poion-i-bolyo), .. .. . | ..... | 15 |
| | Shodak .. .. . | ..... | 6 |
| | Togmai (Tazmai) .. .. . | ..... | 28 |
| | Gog .. .. . | ..... | 23 |
| 230 | Kurgovad (Korchavaz) .. .. . | ..... | 40 |
| | Poshkharv .. .. . | ..... | 25 |
| | Pshikharv (Pishkharf) .. .. . | ..... | 50 |
| 39 | | Total .. | 1,276 |

VII.—*The Shikai Amyakdarate.*

Note.—This amyakdarate is on the right bank of the Pyanj River

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-----------------------------|----------------|-------------------|
| | Shirgovad (Shirgovod) .. .. | .... | 27 |
| | Iochit .. .. . | .... | 100 |
| 235 | Shkev (Shkep) .. .. . | .... | 50 |
| | Sangev (Sangeu).. .. . | .... | 30 |
| | Vishkharv (Vshikhor) .. .. | .... | 46 |
| | Punishoor .. .. . | .... | 12 |
| | Mulvan .. .. . | .... | 8 |
| 240 | Jak (Jar) .. .. . | .... | 26 |
| | Varjuch .. .. . | .... | 8 |
| | Marg .. .. . | .... | 13 |
| | Garm-kho .. .. . | .... | 12 |
| | Budun (Gudun) .. .. . | .... | 29 |
| 245 | Khostau .. .. . | .... | 16 |
| | Zwigar (Zigor) .. .. . | .... | 30 |
| | Yagwit .. .. . | .... | 28 |
| 15 | | Total .. | 435 |

VIII.—*The Yazgulem Section (on the River Yazgulem).*

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|-------------------|----------------|-------------------|
| | Motraun .. .. . | .... | 40 |
| | Shavud .. .. . | .... | 5 |
| 250 | Bdun .. .. . | .... | 20 |
| | Vishkharv .. .. . | .... | 20 |

| Number of villages. | Russian names. | English names. | Number of houses. |
|---------------------|------------------|----------------|-------------------|
| 255 | Andarbad .. .. . | .... | 12 |
| | Jamak .. .. . | .... | 20 |
| | Zaich .. .. . | .... | 5 |
| | Jafak .. .. . | .... | 6 |
| | Ubagwin .. .. . | .... | 5 |
| 9 | Total .. | | 133 |
| 256 | GRAND TOTAL .. | | 5,849 |

APPENDIX II.

The Western Begships.

The following list shows the amlyakdarates in the two Begships. I had neither the time nor the facilities for compiling a census of the houses, nor could I make use of any previous work on the subject as such a work can hardly be said to exist. It is hardly necessary to say that the figures which are given are but the merest approximations and even the list of the amlyakdarates is lacking in completeness.

A. KULYAB (KULAB).

I. *Kulyab Amlyakdarate (Dauri-Kurghan)*.—This amlyakdarate is situated on the middle and lower courses of the Yakh-su (Ak-su). Its inhabitants are Uzbeks and Tajiks, the latter predominating. In it are the following villages:—

| Russian names. | English names. | No. of houses. |
|-----------------------------------|----------------|----------------|
| Pushion (3 villages of this name) | Pushion .. | 70 |
| Dagana .. .. . | .... |  |
| Oftoblwik (Avtaulyuk) | Aftulak .. | |
| Koftar-Khona .. .. . | .... |  |
| Ulbak .. .. . | .... | 100 |
| Kara-yagach .. .. . | .... | 100 |
| And 75 others with each .. | .... | 30—80 |

The chief town and residence of the Beg and high officials is Kulyab.

II. *Muminabad Amlyakdarate*.—It is situated 25—30 versts (13-28 miles) to the north-west of Kulyab, and consists of a flat, spacious valley, encircled by rounded heights. The inhabitants are Tajiks. In it are the following villages:—

| | | |
|-----------------------------------|------------|-------|
| Sarimaidon .. .. . | .... | 200 |
| Khana-Tarash .. .. . | .... |  |
| Muminabad, the chief town .. | Muminabad. | |
| Chargi .. .. . | .... |  |
| Diglomon .. .. . | .... |  |
| And at least 30 others, each with | .... | 30—60 |

III. *Kul Amlyakdarate*.—It is situated to the south of the Muminabad Amlyakdarate. Its inhabitants are Tajiks. In it are the following villages:—

| | | |
|-------------------------------------------------|-----------|-------|
| Tibalyak .. .. . | .... | 80 |
| Diudar .. .. . | .... | 60 |
| Kul, the chief place, consisting of 3 villages. | ? Khalil. | 160 |
| Tutu .. .. . | .... |  |
| Sandara .. .. . | .... |  |
| And 40 other small villages, each with .. .. . | .... | 15—30 |

IV. *Sari-Chashma Amlyakdarate*.—It is situated along the valley of a small stream, the Sari-Chashma, which falls into the Pyanj at the village of Bogorak. The inhabitants are almost entirely Uzbeks. In it are the following villages:—

| | | |
|----------------------------------|------|-------|
| Sara-Chashma, the chief place .. | .... | 80 |
| Adinobai .. .. . | .... | 25 |
| Jigla .. .. . | .... | 50 |
| Bogarak* .. .. . | .... | 15 |
| And 20 others, each with .. | .... | 15—25 |

* Bogorak on pages 9, 11 and 12 and 5 lines above.—*Translation*.

V. *Kabrai Amyakdarate*.—It is situated on the hilly steppes that lie between the valleys of the Yakh-su and the Sari-Chashma. The inhabitants are Uzbeks. In it are the following villages:—

| Russian names. | English names. | No. of houses. |
|---------------------------------|----------------|----------------|
| Murghabi-bolyo | | 15-25 |
| Tut-bulak | | |
| Maslwik | | |
| Dagna | | |
| Maidon | | |
| Kabrai, the chief place | | |
| And 30 others | | |

VI. *Chubek Amyakdarate*.—It is situated to the south-west of Mount Khoja-Mumin. The inhabitants are Uzbeks. In it are the following villages:—

| | | |
|-----------------------------------|-------|----|
| Chubek, the chief village .. .. . | ..... | 60 |
| Ak-mazor .. .. . | ..... | 25 |
| Bish-Kapa and others .. .. . | ..... |  |

VII. *Sayat Amyakdarate*.—It includes the island of Urta-Tugai, on which is Sayat, and the country lying north-west of that island as far as the Kizil-su. The inhabitants are Uzbeks. In it are the following villages:—

| | | |
|--------------------------------|-------|----|
| Sayat, the chief place | Sayat | 40 |
| Parkhar .. .. . | ..... |  |
| Darkat .. .. . | ..... |  |
| Kizil-su .. .. . | ..... |  |
| And 15 others .. .. . | ..... |  |

VIII. *The upper waters of the River Yakh-su*.—From the village of Degres up the valley of the Yakh-su as far as the boundary of the Baljuan Begship there are many small hamlets. The land here, which is bad, is rented—from whom I do not know—by the Tajiks who pay taxes amounting to 40,000 *te.ga*, although they are poor; they are the only inhabitants of the region which has never been made into an amyakdarate.

B. BALJUAN BEGSHIP.

The Baljuan Begship naturally falls into two portions which form a sharp contrast to one another. The north-eastern is hilly and has a dense population, entirely of Tajiks. The south-western portion is steppe country, and its inhabitants are mainly semi-nomadic Uzbeks, with a few Tajiks. The boundary between these two portions may be drawn through Baljuan town in an east-south-east to west-north-west direction, leaving, however, the villages along the Kizil-su below Baljuan to the northern or Tajik portion.

The following list was made in haste and under most unfavourable conditions. Probably all figures should be increased; the number of amyakdarate also seems under reality.

I. The mountainous portion of the Begship includes the following amyakdarates:—

I. *Baljuan Amyakdarate*. (*Dauri-Kurghan*).—In it are the following villages:—

| | |
|---------------------------------|----------------------|
| Baljuan, the chief town | at least 400 houses, |
| Aibar | 20 " |
| Faizabad, 2 villages | 30 " |
| Ak-bulak | 50 " |
| Se.-Mali | 15 " |
| A 50 others, each with | 15—30 " |

Baljuan, the residence of the Beg and of the high officials, is situated on the right bank of the Kizil-su at the junction with it of the Talkhok, a considerable mountain stream; the town lies on the hills surrounding the mouth of this stream and on the right bank of the main river. The town has a good bazar, in which there are markets twice a week, viz:—a large one on Wednesdays and a small one on Saturdays. On Wednesdays not less than 30—40 horses and 200 *puds* (7,200 lbs) of corn are brought into the town for sale.

The Beg lives in a fort or citadel, situated on a high spur which is formed by the right bank of the Kizil-su and the left bank of the Talkhok. From the valley of the former river the fort is unapproachable owing to an almost precipitous cliff; the approach from the south is also no easy one, as the road runs through narrow streets, rises somewhat steeply, and is closed by a thick wall and solid gates. But on the north-east side the fort is commanded by a height and it is quite easy to make one's way from the latter into the fort along a short viaduct which connects the 2 heights. The fort is of a type that strongly reminds one of the "Eagles' Nests" which form the keys to the valleys in such places as Daghestan and the Western Pamirs, etc.

The Beg of Baljuan is a son of the Hissar *Kush-Begi*, and is a man of inactive habits and of not irreproachable morals; he is also said to be a drunkard. The whole of the government of the Begship is in the hands of *Yesaul-Bashi* Ishan Kosim Khuja, an active and energetic man.

In Baljuan is a Bokharan battalion. The men live in small mud huts which are partly alongside the bazar, and partly stretch in a line from it northwards. This unit, left to itself in a distant mountainous Begship, far from the eyes of the central authorities, and under the control of a young and weak Beg, is entirely demoralized and, apparently, has forgotten whatever it once may have known. The soldiers do not know how to salute, and the inhabitants complain of their immorality and allege that every man of them is an opium-eater or drunkard.

II. Dashtak Amlyakdarate.—It is situated along the Talkhok. In it are the following villages:—

| | | | | | | |
|-------------------------|----|----|----|----|----|------------|
| Dashti-Maidon | .. | .. | .. | .. | .. | 30 houses. |
| Lyulauchi | .. | .. | .. | .. | .. | 30 " |
| Kazlyagat | .. | .. | .. | .. | .. | 30 " |
| Lyalkoni | .. | .. | .. | .. | .. | 20 " |
| Chishmainimat | .. | .. | .. | .. | .. | 20 " |
| Muinak | .. | .. | .. | .. | .. | 40 " |
| Safedou | .. | .. | .. | .. | .. | 20 " |
| And 6 others, each with | .. | .. | .. | .. | .. | 25-30 " |

Dashtak is the chief place.

III. Kadi-obi-Surkhob (Kadi-Abi-Surkhab).—It lies to the north of the Dashtak amlyakdarate along the Kizil-su (Shurab-su). In it are the following villages:—

| | | | | | | |
|--------------------------|----|----|----|----|----|------------|
| Lashmandi | .. | .. | .. | .. | .. | 40 houses. |
| Dashti-Kwirka | .. | .. | .. | .. | .. | 30 " |
| Bochizogan | .. | .. | .. | .. | .. | 40 " |
| Chaidon | .. | .. | .. | .. | .. | 50 " |
| Sari-Khosor | .. | .. | .. | .. | .. | 20 " |
| And 80 others, each with | .. | .. | .. | .. | .. | 20—30 " |

IV. *Mull-Murjon Amlyakdarate*.—In it are the following villages:—

| | | | | | | |
|--------------------------|----|----|----|----|----|------------|
| Khoja-Bulak | .. | .. | .. | .. | .. | 30 houses. |
| Challya-tash | .. | .. | .. | .. | .. | 20 „ |
| Sinjalyoni | .. | .. | .. | .. | .. | 25 „ |
| Zuvai | .. | .. | .. | .. | .. | 30 „ |
| And 30 others, each with | .. | .. | .. | .. | .. | 20—30 „ |

V. *Boimush Amlyakdarate*.—It lies along the middle course of the Khavaling, a tributary of the Kizil-su on its left bank. In it are the following villages:—

| | | | | | | |
|--------------------------|----|----|----|----|----|------------|
| Boimush | .. | .. | .. | .. | .. | 40 houses. |
| Navrugo | .. | .. | .. | .. | .. | 25 „ |
| Sangaki | .. | .. | .. | .. | .. | 20 „ |
| Deishing | .. | .. | .. | .. | .. | 20 „ |
| Obi-Dara | .. | .. | .. | .. | .. | 15 „ |
| And 40 others, each with | .. | .. | .. | .. | .. | 15—30 „ |

VI. *Khavaling Amlyakdarate*.—It lies along the upper course of the Khavaling and of its tributaries; it is perhaps the largest of all the amlyakdarates in Baljuan. The chief place is Khavaling, a large village or town, where there is a small bazar which is opened twice a week. In the amlyakdarate are the following villages, each of which has some 20—30 houses:—

| | |
|-----------------|--------------|
| Darai-Khurdak | Chikrak |
| Darai-Kishkok | Doroun |
| Khal-Kayor | Sam-Tuda |
| Kozitut | Kadagi |
| Arari-Taka | Zagara |
| Achka-Chukrak | Boshwibron |
| Paromak | Chanorak |
| Dumbakshi | Jidablyon |
| Lishion | Kurbakogo |
| Bedak | Daragion |
| Sifi-boki | Shvainajav |
| Sangirama | Tushnankajav |
| Bokhcha | Tien |
| Darai-Mukhtor | Umargasht |
| Dioshur | Rozgan |
| Jarnokak | Khujaigor |
| Jembak | Sumbulkho |
| Dorabi | Nauchodara |
| Ak-jar | Khujagilton |
| Sofecharak | Tokak |
| Darai-Mirin | Urokhchi |
| Panjyurt | Diangur |
| Zardaki-i-Bolyo | Saidon |
| Naubad | Okhtwirak |
| Tutak | Kulyak |
| Kush-Chashma | Bestachyori |
| Guza-boi | Khosion |
| Kuchaizarang | Khonako |
| Sirzorak | Darai-Kalyon |
| Daganishon | Khangurtak |
| Kalyolyon | Daraiduzdan |
| Choolyon | Safedor |
| Chishekhvaion | and others, |

VII. The Kurnaicha or Bidora Amlyakdarate.—This amlyakdarate is sometimes separated from the preceding one, if the amlyakdar is lacking in experience or if it is not desired to entrust to him too many farms.

II. The steppe country of the Baljuan Begship includes the following amlyakdarates :—

VIII. Zardalyu-Dasht Amlyakdarate.—It is situated in the hilly steppes between the Kizil-su and the Yakh-su. The chief place in it is the small village of Zardalyu-Dasht. The total number of villages is about 30 with 500 houses in all.

IX. Dekhtur Amlyakdarate.—It lies to the north-west of the Zardalyu-Dasht amlyakdarate on the same hilly steppes. The chief place is the large and very rich village of Dekhtur ; there are in all 40 villages with an average of 20—30 houses to each.

X. Kangurt or Kangut Amlyakdarate.—It lies in the basin of the Upper Tair-su. The chief place is the large village of Kangurt (? Kangurd) where there is a bazar on Thursdays and Sundays. There are in all 60 villages with 20—30 houses in each.

XI. Pushin Amlyakdarate.—It lies to the south of the Kangurt amlyakdarate, is considered one of the richest of all the amlyakdarates, and has 40 villages, each with 15—25 houses.

XII. Jurikul or Davatak Amlyakdarate.—This amlyakdarate is the most southern of all. It has 40 villages, each of 15—20 houses. Its inhabitants are very comfortably off and are largely engaged in horse-breeding.

XIII. Tutkaul Amlyakdarate.—It is situated in the west of the Begship, near the large bends of the River Vaksh. It has in all 50 villages, each with 15—20 houses. The population consists of Uzbeks and Tajiks, of whom the latter are the most numerous.

XIV. The upper waters of the Yakh-su and Kizil-su (otherwise the Surkhob and Shurab-Darya) are occupied with settlements of the Tajiks, but do not form a separate amlyakdarate. The inhabitants are very poor, paying either little or nothing at all in taxes per household.

APPENDIX III. ROUTES.

ROUTE No. 1.

Skobelej, late New Margelan, to Daraut-Kurghan (Alai Valley), 123 versts or 81½ miles.

General description.—The whole of the road is fit for pack-transport (but see stage 1) and can be used by all arms, provided the artillery is mountain.* The march would require 6 days, including a halt of 1 day at Karaul. Water and fuel are available everywhere and grazing almost everywhere. The distance can be covered by a forced march in 4 days, with night-halts at Uch-Kurghan, Karaul and Lyangar. The best times for movements are the summer and autumn; in the winter movements are difficult, and in the spring dangerous owing to the avalanches on the Tengiz-Bai. The inhabitants along the route are not unfriendly to us, but in the case of military operations our relations with them must be marked by caution and severity.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|-------------------|-------------------------|--------|-------------------------|--------|----------------------------------------------------------------------------------------------------------------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |
| 1 | UCH-KUR- GHAN. | 30 | 30 | 19·9 | 19·9 | Direction south-west. The road has a smooth surface and is almost straight. It is quite fit for a carriage, provided |

some small repairs are made to the bridges and the holes are filled up. For the first 5½ miles it runs through steppe and then through cultivated fields. The following Tajik villages are met *en route*:—Ak-Tepe, Tai-Gildi, Kadi-Siyop, Avval-Uzbek-Lyogon and Kara-Tepe. In all the villages may be found every thing that is to be had in any Sart town. Water is from canals. Inhabitants who are settlers of 2—3 generations ago from Karategin are devoted to us and comfortably off.

At Uch-Kurghan all the requirements of a fair-sized force can be satisfied. The water is excellent from the mountains. Above Uch-Kurghan live the Kirghiz; 3 months, June—August, they spend on the Alai, the winter in the valley of the Isfairan-Sai, and the rest of the year on the foot-hills. Fuel is found everywhere. There are small stores of corn and clover (lucerne). Grazing is good. In times of disturbance the inhabitants wander off to the hills; they should be treated with caution and severity.

| | | | | | | |
|---|------------------------------------|----|----|------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | KARAUŁ, winter set- tlement. | 26 | 56 | 17·1 | 37 | For the first 2 miles the road runs past the walls of the houses and gardens of a village; the surface of the road is firm and rocky. It afterwards follows the valley of the Isfairan-Sai. At 2½ miles is the village of Kosh-Terek, and at 4 miles on the right hand side of the road the large one of Dangi. In places are seen the winter quarters and graves of the nomads. At 5½ miles the valley, which so far has been 1½ miles wide, narrows, and the river is hidden by steep, but not high, banks. Up to 8 miles a carriage or <i>arba</i> can easily use the road, but thence it becomes more difficult and would have to be repaired and widened for wheels. At this spot the valley widens and assumes the character of the steppe, while along both sides is a series of Kirghiz villages, isolated houses and graveyards. At 10 miles the valley changes into a gorge, houses become more frequent, |
|---|------------------------------------|----|----|------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

* *Note by Translator.*—The Russian Mountain Artillery gun is carried on a limbered carriage wherever the ground permits.

ROUTE No. 1—*contd.*

| Stago. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

and the road passes through orchards. At 11·9 miles the road runs between rocks along the slope of the hills. At 14·3 miles is the winter settlement of Auspan.

| | | | | | | |
|---|------------|----|----|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | LYANGAR .. | 30 | 86 | 19·9 | 56·9 | The valley soon assumes the appearance of a gorge, and the villages cease. On both sides of the road branch off valleys along which are paths |
|---|------------|----|----|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|

to the nomad settlements of the Kirghiz. The road is only fit for pack-transport. The mountains which shut in the gorge are everywhere broken and precipitous, overhang the river and are covered with bushes and trees. The river is narrow, 14—35 feet wide, and $4\frac{1}{2}$ —7 feet deep; it is fordable only in a few places as the current is very strong and the bottom is covered with boulders. The road runs from one bank to the other, crossing the river by little ricketty, wooden bridges, of which there are 10 in all as far as Lyangar. Everywhere the ascents and descents are steep; in many places are land-slips; and often the road is carried on cornices.

The march is a very difficult one, but at no place is it necessary to take the loads off the pack-animals. All along the road there is excellent water and much fuel, but grazing is to be found only in the side-valleys. The bridges require to be examined and repaired before a march, as the present ones are somewhat shaky. A day's halt should be made at Lyangar, for there is no other suitable place along the valley.

Lyangar is a settlement, $2\frac{2}{3}$ miles long and 500—600 yards wide. It has excellent water, fuel, both wood and cow-dung, grazing, some lucerne and small stores of corn.

| | | | | | | |
|---|------------|----|-----|------|----|---------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | KOK-SAI .. | 19 | 105 | 12·6 | 69 | After Lyangar the valley becomes a gorge, and both it and the road bend sharply to the west. A series of bridges is met at $4\frac{2}{3}$, |
|---|------------|----|-----|------|----|---------------------------------------------------------------------------------------------------------------------------------------------|

$5\frac{1}{3}$ and 6 miles. At this last distance the road becomes steeper, and winds through forest undergrowth and heaps of stones; on either side the mountains rise in huge cliffs, and the ground becomes rocky. This steep slope which forms the most trying part of the road continues for $4\frac{2}{3}$ miles, and ends at $10\frac{2}{3}$ miles, where a broad, gently undulating valley, with a bright stream running along it, opens to view, and the rocks entirely disappear. The last 2 miles are along soft, grassy soil over a gentle slope.

The water all along the road is excellent, but very cold. Fuel everywhere in abundance, but grass is to be found in only small patches.

The settlement of Kok-Sai is a convenient halting place; the water is excellent, grazing good, fuel obtainable from 2 miles back along the road; but it lies very high, about 12,000 feet and the nights may be cold.

| | | | | | | |
|---|---------------------|----|-----|----|-----------------|--------------------------------------------------------------------------------------------------------------------------------|
| 5 | DARAUT- KURGHAN. | 18 | 123 | 12 | $81\frac{1}{2}$ | The road runs at first south-east over soft ground. At $\frac{2}{3}$ mile it inclines to the left (? east), and begins a steep |
|---|---------------------|----|-----|----|-----------------|--------------------------------------------------------------------------------------------------------------------------------|

ascent to a pass; the ascent must often be slippery, but the ground is soft. The top of the

ROUTE No. 1—*concl'd.*

pass is a small, bow-shaped plateau. The descent is at first steep, so much so that it is difficult to keep one's feet, but after some 230 yards becomes more sloping and in 200 yards further it is possible to ride. The road follows the left side of the gorge, and at 3½ miles inclines to the left (? east-north-east); for the first 5½ miles after the pass the road is good, the river can be easily forded, and the ground is soft. But at the 6th mile from the pass the road becomes more difficult and rocky, and the river has often to be crossed either by bridges or fords. This bad part of the road continues for 2 miles, after which the road again becomes fair; shortly before entering the Alai Valley it runs through a remarkable gorge along the bed of a stream, where it is dangerous to ride when the stream is in flood; thence the whole way into Daraut-Kurghan the road runs over firm and fair ground. The total number of bridges along the road is 7. Water and fuel are to be found everywhere, and grazing at the upper ends of the valleys, but elsewhere it is to be met with only in patches.

Daraut-Kurghan is a convenient halting place; there is excellent water, grazing, and an abundance of fuel. Owing to the height, 8,200 feet, the nights may be cold, but, on the other hand, there are no flies, horse-flies, etc., to trouble animals.

ROUTE No. 2.

Daraut-Kurghan (Alai Valley) to Garm (Karategin), 185 versts or 122½ miles.

General description.—The whole road is fit for pack-transport and passable for all arms; mountain artillery* must be carried on pack-animals between the Alai Valley and Achig-Alma, between Sariop and Khoit if the upper road is used, and between Yangoglik and Upak. The march can be made in 9 days, including a halting-day at Damburachi and another at Kalai-Khoit. As the first of these 2 places is poorly supplied with grazing and food it would be possible to make but one day's halt, *viz.*, at Jirkatol, and to do the march in 8 days. For a forced march 6 days would suffice, with stages as follows:—Daraut-Kurghan to Katta-Karamuk, 23½ miles; to Duvana, 18½ miles; to Koshka-Teryak, 21·2 miles; to Pildon-Kalyon, 18½ miles; to Mazor, 19½ miles; and to Garm, 21·9 miles. Water, fuel, meat and corn are to be found everywhere, but there is little grazing. The best time for movement is summer or autumn, as the road is difficult in winter owing to the snows, and in spring owing to the floods which damage it. To the inhabitants of the Kazats Amlyakdarate the same remarks apply as are made of the Kirghiz in Route No. 2; it is especially with the Tajiks that our dealings should be marked with extreme caution; their main characteristics are reserve, avarice and cowardice.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|---------------------------------------|-------------------------|--------|-------------------------|--------|-----------------------------------------------------------------------------------------------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |
| 1 | JAKENDI, a winter set- tlement. | 26 | 26 | 17½ | 17½ | From Daraut-Kurghan roads run along both banks of the Kizil-su to the limits of Karategin. The road |

along the left bank is the best. † From Daraut-Kurghan the road follows the right bank over

* *Vide* page 87.—*Translator.*

† A description of the right bank road will be found on page 37 of Captain Vasilyef's work or on pages 100-102 of Captain Kuznetsov's. The full titles of all works are given below in Appendix V.

ROUTE No. 2—contd.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

soft ground for $\frac{2}{3}$ mile where it crosses the shallow branches of the Kizil-su, on the shoals between which are pasturages and bushes. For the next $\frac{2}{3}$ mile the road runs along a rocky overhang over the water. At $1\frac{1}{3}$ miles is the bridge of Ishan-Kupryuk, so called because it is said to have been built by an Ishan or Saint. It is a strong bridge, with a gap of $30\frac{1}{2}$ feet, and baulks of $16\frac{1}{2}$ and $11\frac{2}{3}$ feet respectively, and can be ridden over with ease. The road crosses by this bridge to the left bank, soon rises on to a low spur after which it runs over a level plateau, and at 2 miles crosses the broad channel of the Altin-Dara which flows from the Ters-Agar Pass. After $5\frac{1}{2}$ miles are scattered Kirghiz winter settlements to the left. Between 6 and $6\frac{2}{3}$ miles the broad channel of the Tarash stream is crossed, and for the next $1\frac{1}{2}$ miles the road runs over a water meadow, after which it again rises to a plateau and at $1\frac{1}{2}$ miles further descends to thickets of juniper. At $10\frac{2}{3}$ miles the channel of the Kizil-su narrows to 26 yards. Here there is a bridge, called Sarbulak-Kupryuk, $30\frac{1}{2}$ feet long with baulks $16\frac{1}{2}$ feet in length; it is lacking in strength and horses should be led over it. After crossing this bridge the road at first is carried on a cornice, then follows a series of ascents and descents, and spurs alternate with level stretches. At 13.9 miles is a considerable descent to a *tugai* or thicket of dwarf trees; here the hills slightly recede from the river and the road runs for 2 miles through the *tugai*. This is a suitable place for a night-halt, as there is water, grazing and fuel; moreover, it is protected from the wind which is an important matter in the Alai valley.

At 15.9 miles the road ascends a hill and for $1\frac{1}{2}$ miles runs along a slope over the water. At $17\frac{1}{4}$ miles is a descent to the Kizil-su and a bridge over it at the junction with it of the Shibia. On the descent, just mentioned, which runs athwart the hill, a road branches off to the right to the large winter settlement of Jakendi, lying about $\frac{2}{3}$ — $1\frac{1}{4}$ miles distant from the main road. This is a good place for a night-halt. At the halting-place are water, grazing and fuel while at Jakendi corn, meat and lucerne are obtainable. In the settlement lives the forest-keeper of the Alai forest district. He knows the Kirghiz and their resorts thoroughly; he can be employed to take charge of reserves of stores, as a scout, etc.

High water, it may be noted, occurs in the Kizil-su in March when it is unfordable; at low water there are many fords through it.

| | | | | | | |
|---|---------------------------|----|----|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | AOHIG-ALMA, a village. | 30 | 56 | 19.9 | 37.2 | For the first two miles the road runs across a level; at 3 miles is a small descent and the road then follows a bottom, crossing the little stream of the Mukur several times. At 6 miles is the broad ravine of Katta-Karamuk, at the bottom of which runs the stream of the same name. Here the road divides; the main road continues along the right bank, of the Kizil-su, while the other, a circuitous one, follows the right bank of the Katta-Karamuk to the Bok-Bash Pass.* The main road after crossing the Katta-Karamuk rises to a small |
|---|---------------------------|----|----|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

* The road runs *via* the named pass to the river Loi-su and the hamlet of Loi-su Chati, and finally rejoins the main road at the village of Yar-Mazar at the junction of the Pittau-Kul and the Taldi-Kul. The distance from Katta-Karamuk to Yar-Mazar is 46.4 miles. This route has been traversed and is described by Captain Kusnetsof, pages 102-109.

ROUTE No. 2—contd.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

pass which lies on the boundary between our and the Bokharan possessions, *i.e.*, Karategin. This is a suitable spot for a night-halt as it has water, fuel and grazing. From this pass the road becomes entirely a mountain one. The Kizil-su lies deep down in the valley, and runs almost in a gorge. The descent from the pass is long but not steep. Then the road runs by a path along a narrow terrace which divides into 2 slopes down to the river, the upper being the longer of the two. Then are frequent ascents and descents. At 13.9 miles the road crosses the deep ravine of the Tur-Tol-su by a small bridge, after which it rises steeply and is carried along cornices which overhang a gorge, and then runs aslant and down a slope amongst rocks. Opposite the junction of the Tur-Tol-su there is a bridge across the Kizil-su. At 15.9 miles the valley somewhat widens to the left and the road runs on a perfectly level stretch for some 500 yards. This is a suitable spot for a day or night-halt. To the right is the winter settlement of Sari-Gui, a little below which there is a bridge over the Kizil-su. The road now rises again to a low pass of the same name as the settlement and then runs along level ground for some 500 yards, when it is again carried along cornices for a few miles. Then there is another ascent to a pass, the Koshka-Teryak, at 19½ miles. Descending from this pass, the road by a steep slope enters the broad tract in which is situated the winter settlement of Achig-Alma.

The whole of this stage is fit for pack-transport only, and in places requires repairs; packs must be adjusted with care. Along the stage from Katta-Karamuk live Kirghiz who are related to those in the Alai, and, like them, are in their summer-quarters from mid-May to mid-September (end of both of these months according to the Gregorian calendar). The Kirghiz of the Alai have their summer-quarters in the foot-hills of the Alai and Trans-Alai, 3—7 miles from the first part of this stage.

The Alai Valley is passable all the year round, but in the winter only the road along the left bank of the Kizil-su can be used. The snow which falls between November and February is heavy, being as much as 3½—5 feet, but it is always easy to make a road along it.

| | | | | | | |
|---|-----------------------------|----|----|------|------|------------------------------------------------------------------------------------------|
| 3 | DAMBURA- CHI, a village. | 22 | 78 | 14.5 | 51.7 | The road for the first ¾ mile runs along a soft, level stretch across canals, and, |
|---|-----------------------------|----|----|------|------|------------------------------------------------------------------------------------------|

after a slight ascent, follows the side of a hill with a rocky soil and often winds through rocks. Between 1½ and 2 miles the Gulama-su enters the Kizil-su, and about 1½ miles up it is seen the village of Gulama near which the neighbouring villagers obtain salt. At four miles the gorge which has been followed widens into a valley, and a little further on enters from the right the Shukur-Sai, at the mouth of which is the village of Duvana. Before reaching the stream of the same name on the left hand is a graveyard which is so rare in Karategin. Between 3 and 3¾ miles the road crosses a stream and then a meadow which is often flooded with water; right and left are ploughed fields. The hills recede a considerable distance from the left bank of the Kizil-su which becomes a huge, slightly undulating plateau, somewhat higher than the right bank. At 5½ miles the road rises somewhat gently through a grove of trees where there is a spring, and then runs along another level stretch among fields of corn. At 8 miles the Kirghiz village of Ak-Sai is left to the left and within ¾ mile is passed the Tajik village of the same name. The road then ascends and, after some 500 yards, comes out on an undulating plateau, which it

ROUTE No. 2—*contd.*

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

crosses, ascending and descending, through a series of villages to the bridge over the Kizil-su at 11½ miles. Here the river flows in a crevice not more than 16 yards wide; the bridge is a strong one, but owing to the deep and turbulent river below horses get frightened and therefore it is better to dismount. After crossing, the country is hilly and the soil soft, ascents and descents are gentle and easy. About 14 miles is a descent to a valley that is common to the Kizil-su and Muk-su, and after crossing a bridge the road enters the village of Damburachi. The river is about 40 yards in width and the bridge some 12, with baulks about 9½ feet long. Here a day-halt may be made, but it depends on the size of the detachment.

| | | | | | | |
|---|----------|----|-----|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | JIRGATOL | 32 | 110 | 21.2 | 72.9 | The road rises by rocky slopes, and then traverses a narrow level stretch, crossing ravines, some with water, by slight ascents and descents. At 4 miles on the right is the small village of Shilbuli. Then, after a rise of ¾ mile by a steep, rocky slope, the road comes out on a plateau with a heavy, black-clay soil where almost imperceptibly begins the ascent to the Muinok Pass, which is at 6 miles, and, though low, is still difficult. The ascent takes 12--15 minutes. The descent is steep and by zigzags, and owing to the softness of the soil large holes are met with. After the descent the road runs along the level ground at the foot of the Khush-Muinok Mountains. At 7.9 miles is the small and poor village of Kush-Muinok, to give it the Kirghiz name, or Kush-Agba in Tajik. The road soon rises to the Yul-Terek or Jyul-Tiryak Pass. The slope is long, at first very steep, then more gentle, and again at the top steep. The ascent which lasts a half-hour is by very cleverly designed zigzags, for the gradients are gentle and uniform. To the left is a bridge over the Kizil-su on the high road between Karategin and Vakhi. From the top of the pass which is between 8.6 and 9½ miles, the descent is by a grassy and very gentle slope to the valley of the Obi-Zanku. At 9.9 miles is the village of Yul-Tiryak and some 500 yards further the road enters the spacious valley of this river, 6--6½ miles in length and 1½ miles broad. All around are endless fields of corn, viz.—wheat, barley, millet and stubble. The road then follows the left bank of the Obi-Zanku to the junction of the Rivers Pittau-Kul and Taldi-Kul where it crosses these rivers by small bridges after which it runs in the opposite direction along the right bank of the Obi-Zanku, passing a series of villages, surrounded with gardens, viz.—at 11½ miles Koshka-Tiryak, at 15 miles Yar-Mazar, and on the right bank at 18½ miles Kushai, and at 19.9 miles Kalta-Bulak. Opposite the first of these villages a bridge is often thrown across the Obi-Zanku, but it is also frequently swept away. In the case of a campaign it would be well to rebuild this bridge, as the material is close at hand and the distance would thereby be shortened by 8 miles. The road then passes over perfectly level ground between corn-fields and across wet meadows; canals too are occasionally met with. Jirgatol is a large and rich village, with good water, fuel and grazing; one can count on considerable stores of corn, and also on lucerne, meat and butter. It is also suitable for a long halt during the day, as it is warm, dry and protected from the wind. |
|---|----------|----|-----|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | | | | | |
|---|----------------------------|----|-----|-----|-------|--------------------------------------------------------------------------------|
| 5 | KALAI-KHOIT, a village. | 26 | 136 | 17½ | 90.20 | For the first 3½ miles the road passes through corn-fields and goes over level |
|---|----------------------------|----|-----|-----|-------|--------------------------------------------------------------------------------|

ROUTE No. 2—*contd.*

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

ground. At $\frac{2}{3}$ mile is the village of Karshi and at $2\frac{2}{3}$ miles that of Zanku, after which is a descent to the valley of the Surkhob (Kizil-su). From Zanku to Pildon there are 2 roads, one is along the gravelly bed, and frequently crosses channels, of the Surkhob; the other is a mountain road along the spurs above the water, and is very difficult and unsuitable, having steep ascents and descents; the first is used when the river is low and the second when it is high; more often both roads are used in combination, first a part of one and then a part of the other. In the case of a campaign or a march with troops it would be better to use the mountain road after making some improvements in it.

At $7\frac{1}{2}$ miles is the small stream of the Chubai-su along the valley of which the road runs as far as Jirkatol. At 8 miles is the village of Pildoni-Bolyo. Before reaching it the road rises to a low plateau across which it runs between corn-fields and trees; many canals are crossed. At 8.6 miles is the village of Pildoni-Kalyon and a little further that of Okhat. At 9.9 miles the road passes the village of Yarash and then runs along rocky slopes. At $13\frac{1}{2}$ miles it enters the village of Sarion which is the limit of the Kirghiz population. From Sarion to Khoit there are also two roads, a lower and a mountain one. The former is the shorter of the two, but is not practicable everywhere, and is only used at low water; in the summer it can only be used with caution as the river and its branch often change their course. The mountain road is difficult, with very steep ascents and descents, but is the most used from Sarion. It begins with a steep rise to a rocky pass, on the top of which are seen the traces of old fortifications, and winds up between huge rocks along cornices which overhang the valley. The pass to which the inhabitants give no name must have been in old days, when the Kizil-su ran along the right side of the valley, of great political and military importance. It is obvious that it checked the waves of migration which moved up or down the valley, and even now it sharply divides the Kirghiz and the Tajiks.

After the pass follows a series of tiring ascents and descents. At $1\frac{1}{2}$ miles from Sarion, i.e., at $14\frac{1}{2}$ miles, the road descends very steeply to the valley of the Surkhob, runs right into one of its branches, and follows its gravelly bed for 2—3 miles when it crosses it, and, turning to the right, quickly rises to the outskirts of the large village of Kalai-Khoit, along the gardens and streets of which it continues for another $1\frac{1}{2}$ miles.

Kalai-Khoit is a rich village with everything that is necessary for the bivouac of a considerable detachment. The best place for a halt is the garden of the "kala" which commands the whole neighbourhood. The fort is quadrangular, the northern and southern faces being 58 yards and the other faces 35 yards in length; the height of the wall, which is of earth, is 20 feet. It is also a suitable place for a halt by day; in the garden there is a pond in which the men can bathe and wash their linen.

| | | | | | | |
|---|-----------|----|-----|------------------|-------------------|-----------------------------------------------|
| 6 | NUMICH .. | 25 | 161 | 16 $\frac{1}{2}$ | 106 $\frac{1}{2}$ | The road descends to the valley of Obi-Kabud, |
|---|-----------|----|-----|------------------|-------------------|-----------------------------------------------|

after 550 yards crosses a bridge and then runs for a short way along a cliff into the village of Khisorak. The bridge is crossed on horse-back; but owing to its great length it shakes badly and it would probably be dangerous for several riders to cross it simultaneously. The road next runs along the valley of the Yasman past a whole series of villages, between fields and gardens and across canals. It is an excellent road, fit for wheeled

ROUTE No. 2—concl'd.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

traffic of all kinds. The villages on or near the road are :—about 1 mile, Takht; at 2½ miles, Metanion; at 3½ miles, Khoja-Kayon; at 4 miles, Davrion; at 6½ miles, Utalak; at 5½ miles, Shildwir; about 5½ miles, another Shildwir; at 6 miles, Sapolwing; at 6½ miles, Assiob-Dara; at 8 miles Kara-Shaar; at 9½ miles, Chah-Kildik; at 9·9 miles, Safid-Ob; and at 10·6 miles, Mazor. In the latter village a day-halt can be made. In it is the tomb of Khazrat-Khoja-Oshkur, which is visited twice a year, viz., at the beginning of June and at harvest-time, by pilgrims.

From this village the road crosses a small and strong bridge over the Yasman, turns to the south and rises to the Turpi Pass by a gentle ascent over a soft, grassy soil. Then for two miles it follows the valley of a stream, when it makes a short but steep ascent to a long ridge which separates the streams of the Obi-Turpi and Bulage; this ridge is followed up to the top of the pass at about 13½ miles. The ascent from Mazor when the going is good takes an hour; and the slope is so moderate that a horse can negotiate it without stopping. The descent is at first very gentle and is westwards for some 300 yards, but then it becomes steep and consists of zigzags, some natural and some artificial, for 1½ miles; some portions for 6—12 yards are steep and rocky or slippery from the constantly flowing water. At 15½ miles the road again turns south, traverses a narrow ravine and enters the large village of Numich at 16½ miles. Here a convenient bivouac can be found in a grove beyond the village; and everything that is necessary is obtainable.

| | | | | | | |
|---|---------|----|-----|------|--------|---------------------------|
| 7 | \| GARM .. | \| 24 | \| 185 | \| 15·9 | \| 122·66 | \| The road runs by a gentle |
|  |  |  |  |  |  | \| easy slope between trees |

and meadows to the south-west. After 1½ miles it reaches the bed of the Surkhob and rises across the slope of a hill which it then follows. At 2½ miles is the top of a small pass from which there is a descent to a horse-shoe shaped valley. About 2½ miles is the village of Nuwichak, 230 yards to the right of the road. Soon the road crosses a small spur and then enters a valley similar to the last. At 4 miles is the village of Yaf or Jafr ¾ mile to the right of the road; close to it is another small spur which the road avoids by running round it along the water, after which it follows the low, rocky bank of the Surkhob. At 5½ miles pass the village of Yangolwik. From here there are two roads, the one along the edge of the river and around another spur, while the other crosses this spur by a very steep ascent and descent. The writer used the lower road on his outward journey, but returned by the upper as the other was under water. This is a very bad portion which requires to be repaired before troops use it, or better still it should not be used at all. After crossing the spur the road follows a valley for 1½ miles, then runs for a little distance athwart a hill and round a narrow valley in which lies, at 550 yards from the road, the village of Upak at 8 miles. Next after crossing 2 small off-shoots it enters a wider valley which sends a branch, like a deep wedge, to the right into the mountains. At 8·6 miles is seen ¾ mile to the right of the road a group of villages with the common name of Khnwich. After crossing 2 more long spurs with a short valley between them, the road at 9·9 miles crosses a flat stretch past the village of Belgi which is 550 yards to the right. It next follows the river round the end of a spur; at 11 miles it passes the village of Yagdilug and, at 550 yards to the right, that of Yaldimich; at 11·9 miles it crosses a little spur and descends from it into the broad valley of the Surkhob; beyond are seen Garm and numerous villages; from the spur the road runs along perfectly level ground with a hard, sandy soil.

ROUTE No 3.

Chubek (right bank of the Amu Darya) to Garm.

General description.—The route is fit for pack-transport and can be used by all arms, but artillery must be mountain. From Chubek to Mazori-Sultan *arbas* can use the road without much difficulty. The whole road requires 7 days, including a halt of one day at Khavaling, but could be done by a forced march in 5 days as follows :—

| | | | | | |
|---------------------------|----|----|----|----|-------------|
| Kulyab, 28 versts | .. | .. | .. | .. | 18.5 miles. |
| Zardalyu-Dasht, 29 versts | .. | .. | .. | .. | 19.2 „ |
| Mazori-Sultan, 35 | „ | .. | .. | .. | 23.2 „ |
| Chil-Dara (Darra), 30 | „ | .. | .. | .. | 19.9 „ |
| Garm, 31 versts | .. | .. | .. | .. | 20.5 „ |

Water, fuel, meat and bread are obtainable everywhere, but it is safer to make enquiries and arrangements beforehand for troops marching by this route. Grazing is good except in the neighbourhood of Chil-Dara and of the upper waters of the Khavaling.

Up to Khavaling Uzbeks predominate and only occasionally are small colonies of Tajiks to be met with. Both Turkis and Uzbeks must be treated with reserve for they have numerous relations in Northern Afghanistan, and, while on the one hand information can be obtained through the local inhabitants by the Russians, on the other hand the movements of the Russians may be betrayed through the same source. From Khavaling onwards Tajiks occupy the villages along the route.

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------------------|-------------------------|--------|-------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |
| | CHUBEK village. | 13 | 13 | 8 $\frac{3}{4}$ | 8 $\frac{3}{4}$ | Fuel, meat and bread obtainable. Water should be boiled before drinking. It is also advisable, if materials are available, to |

provide men with mosquito nets.

Direction north. The road is smooth and runs along the bank of the Yakh-su ; it is crossed by a few canals.

At 3 $\frac{1}{2}$ miles is the village of Al-Mazor, 270 yards east of the road, and another village of the same name is met with at 3 $\frac{3}{4}$ —4 miles. At 4 $\frac{1}{2}$ miles the top of the ascent from the Yakh-su Valley is reached and the road then curves to the east around the Khoja-Mumin Hill, runs up a valley to 5 $\frac{1}{2}$ miles where it resumes its direction north, and rises gently to 8 miles where there is the first of two villages, named Kara-Yagach, lying on the west of the road. The second is at 8 $\frac{3}{4}$ miles. Near these villages on the slopes of the Khoja-Mumin are salt mines.

| | | | | | | |
|---|-----------------------|----|----|----|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | KULYAB (KULYAB) TOWN. | 15 | 28 | 10 | 18 $\frac{1}{4}$ | The road rises imperceptibly across a wide high-lying valley to the pass over the Khoja-Mumin at 10 miles whence it descends by a long gentle slope to 11 $\frac{1}{2}$ miles; at 12 miles a branch road strikes south-west to villages near the Khoja-Mumin Hill, and the road then runs over a level plateau with soft soil until it makes a short descent to the village of Bish-Kapa at 15 $\frac{1}{2}$ miles. It then runs under a hill, in places over wet meadowland and in others carried |
|---|-----------------------|----|----|----|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

ROUTE No. 3—*contd.*

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

on a gallery ; there is an alternative route along higher ground which is used when the river is in flood. From this valley there is a short ascent at 16 miles whence the road runs along the level, left bank of the Yakh-su to Kulyab.

Kulyab is situated on a plateau. It is suitable for a night or day-halt, but the latter should be avoided from June-August inclusive as fevers are prevalent ; these are of various kinds and severe. All requirements of a strong force can be met in Kulyab where there are mills and a bazar and where 2,000—3,000 pack-animals are obtainable.

| | | | | | | |
|---|-------------------------------|----|----|----|-----|--------------------------------------------------------------------------------------------------------------------------------------|
| 2 | ARDALYU- DASHT VILLAGE. | 29 | 57 | 19 | 37½ | Direction north. At about 1 mile is a short descent from the plateau to the Yakh-su Valley. At 2 miles the village of Mul'o-Su tani. |
|---|-------------------------------|----|----|----|-----|--------------------------------------------------------------------------------------------------------------------------------------|

At 3½ miles the road leaves the eastern side of the valley and turns north-east across water meadows and then across gravel for 1 mile, and at about 7½ miles crosses a stream by a ford beyond which is a stretch of gravel for ¾ mile, followed by marshy grass as far as Pushion at 8½ miles. From 3½ to 8 miles canals and marshes are frequent. Pushion is a suitable half-way halting-place. From it a long gentle slope leads up from the Yakh-su Valley to a ridge whence there is a descent to Chigak, at 12¾ miles, where the road is rejoined by Route 4, Kulyab-Dekhtur-Baljuan. The road then follows a ravine whence it rises to a line of water-parting from which it descends to the village of Bulyuk-Sai at 14 miles. It then follows the western side of a small valley from which it rises to the village of Digasuni at 17½ miles. At 18½ miles to the east is the Uzbek village, Kagir-Sai. Thence the road follows the western side of a ravine at the bottom of which flows a spring.

Zardalyu-Dasht is a large Uzbek village and the head-quarters of the amlyakdarate. Firewood (cowdung) and meat are to be had ; so too is bread, but enquiries should be made beforehand ; water from the spring.

| | | | | | | |
|---|--------------------|----|----|----|----|---------------------------------------------------------------------------------------------------------|
| 3 | KHAVALING town. | 20 | 77 | 13 | 51 | Between the 2nd and 6th miles are crossed 2 passes with gentle approaches and soft ground ; the country |
|---|--------------------|----|----|----|----|---------------------------------------------------------------------------------------------------------|

too becomes intricate and irregular with steep ascents and descents. From the 6th to 8th mile the road winds, running now north and now east. Between 7th and 8th miles lies ¾ mile to the left of the road the village of Naurago (or Nauravo) and the road rises by a gentle slope westwards to 8 miles. At 8¾ miles lies the village of Sizorak, 1¼ miles to the right of the road. All around are steppes with a mass of cultivated fields, which depend on the rainfall, and broad grassy glades. The road then runs along level steppe-land and descends north past the village of Okhjar into a narrow valley as far as 9¼ miles, before which a road strikes off west along the Khavaling valley to Baljuan (Birjuan). At 9¼ miles the direction of the Khavaling Valley which the road follows is north-east and at 9½ miles is the small Uzbek village, Dani-Sho. At 10 miles there is a small descent to the gravelly bed of a stream which is followed for 1½ miles where there is a slight ascent. When the stream is in flood the route taken is along a higher level. The road for the last 1¼ miles into Khavaling runs across canals, between villages and over meadows.

ROUTE No. 3—*contd.*

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

The whole road from Zardalyu-Dasht to Khavaling is an excellent road for pack transport and with a little preparation could be made fit for wheels.

Khavaling, a large village or town, has all that is required by a fair-sized force; there are three to four barns in each of which there are 160—320 cwt. of grain in a good year. A bazar is held bi-weekly.

| | | | | | | |
|---|----------------|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | NAZORI-SULTAN. | 15 | 92 | 10 | 61 | At 2 miles another road branches to Chil-Dara (Darra) which is open all the year round, and, though 15—20 versts or 10—13 miles longer, is easier than that here described, which is closed for 5 to 6 months of the year. The branch road uses a pass east of that mentioned below in the Khoja-Abadu-Shai Mountains and crosses the Khingou at Tavi-Dara. |
|---|----------------|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The road taken runs along the left bank of the Khavaling through a valley, at first more than, and then some $\frac{2}{3}$ of, a mile wide, enclosed by hills; grass and firm sandy soil alternate. It is practicable throughout for *arbas*, in spite of some difficulties caused by the muddy, heavy bottom of the canals which cross it. After 6 miles the hills change into mountains, and at $7\frac{1}{4}$ miles the valley narrows and the road is crossed by small ravines and streams. At 550 yards from Mazori-Sultan is the tomb of Khozret (Khuzrat) Sultan, an object of great veneration locally.

At Mazori-Sultan water, fuel and meat are obtainable; bread can be brought, if arrangements be made beforehand, from Khavaling.

| | | | | | | |
|---|-----------------------|----|-----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 | CHIL-DARA, a village. | 30 | 112 | 20 | 81 | The road runs along the left bank of the Khavaling, the valley of which is 550 yards broad up to 2 miles where it narrows. At 3 miles the road crosses the stream by a bridge to the right bank. It is level and grassy, with occasional short stretches of gravel, and passes wretched little hamlets, in places, up to 4 miles whence it runs along the valley of the stream and over gravel for $1\frac{1}{2}$ miles; on this portion, though it is not difficult, caution must be used. |
|---|-----------------------|----|-----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

About $5\frac{1}{2}$ miles a short ascent, in places carried by cornices, leads up to a low pass at 6 miles, where the ground is soft and the road runs along a gallery. (This pass is apparently on the line of water-parting between the Khavaling and the tributaries of the Khingou.—*Trans.*) Thence the road descends through a narrow valley, which has rounded sides and is watered by a stream that soon becomes a rivulet, to 6 miles where the valley widens out and road turns from north to east as far as 8 miles. Here the northerly direction is resumed; the road is good and so continues to 19 miles where is situated the small village of Lya-Kovak. Here the valley narrows, the hills become mountains and the road runs along level ground, but stony and inconvenient for animals, along the left bank of a stream (a tributary of the Khingou) which it crosses at 10 miles. Thence the road is steep and rocky and ascends along a ridge which separates the last mentioned stream from a tributary. So large are the rocks and boulders that pack-horses slip and loads can pass only with difficulty.

ROUTE No. 3—*contd.*

| Stage. | Place. | DISTANCE. | | | | Description. |
|--------|--------|-------------------------|--------|-------------------------|--------|--------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |

The ascent ends at a pass which, though high, is not on the line of water-parting (*vide* above). The surrounding mountains are locally known as the Khoja-Abadu-Shai. From the pass the descent is at first comparatively easy by a ridge, 2 miles long, then it becomes steep and very difficult for $\frac{2}{3}$ mile and here horses have frequently to stop when ascending; for the last 2 miles it consists of a gentle slope past one village and past a group of them on the left of the road; after these it again becomes steep and difficult for some 550 yards, and then continues gradually down to 18 $\frac{1}{2}$ miles where it crosses by a strong bridge from the left to the right bank of the Khingou. It then runs over firm ground along this river and crosses a tributary, the Obi-Kamchirak, by a bridge at 250 yards from Chil-Dara. Continuing along the right bank of the Khingou, the road passes round the large village Chil-Dara. Here water and fuel are obtainable and one can count on getting meat but hardly on much bread.

| | | | | | |
|----------------|----|-----|------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GARM, town. | 31 | 153 | 26 $\frac{1}{2}$ | 101 $\frac{1}{2}$ | Direction east. At $\frac{2}{3}$ mile the road crosses by a bridge to the right bank of the Obi-Kamchirak which it then follows, running for 1 $\frac{1}{4}$ —2 miles through a forest; the road is smooth and quite fit for wheels here. At 4 $\frac{2}{3}$ miles begins a long and tiring ascent for 1 $\frac{1}{2}$ miles along a precipitous ridge which in one place is so narrow that planking has been put down to add to the width of the road; in wet weather the road becomes very slippery and unsuitable for horses that are unshod. At the top of the ascent at 6 miles, <i>i.e.</i> , on leaving Darwaz, there is a marked change in the country which during this stage has been characterized by alpine vegetation on the slopes and cliffs, little grass, a good deal of straight and high forest trees which grow even on the steep slopes, a lack of cultivation and the poverty-stricken appearance of the inhabitants. From 6 miles the ascent continues imperceptibly by the mountain valley of the River Chashma-Talib up to the Kamchirak, or, according to the Tajiks, Akhbai-Kamchirak Pass (8,890 feet) at 7 $\frac{1}{4}$ miles. Thence is a descent, so easy that horses can ascend it without stopping, by short zigzags over soft, grassy ground down to a marshy spring, whence there is a rise by a mountain terrace to a small pass, the Kutali-Khora from which the road drops to the Assiob stream which it crosses at 9 $\frac{1}{4}$ miles. This is a suitable place for a half-way halt, as there is water and excellent grazing, but fuel is entirely wanting. |
|----------------|----|-----|------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The road then follows the stream for some 150 yards, when it turns back sharply and, rising and falling over little hillocks, runs over soft soil through corn and rich grass past the small village of Damou at 15 $\frac{1}{4}$ miles where there is a mill and whence a road forks south-west to the village of Artad on the Assiob. The main road immediately afterwards crosses the river Obi-Chashmai-Shur, and soon falls by a fairly gentle ascent which, however, is somewhat difficult owing to the numerous holes in the soft soil. About 17 $\frac{3}{4}$ miles is a series of villages having the common name of Khost, and at 17 $\frac{9}{10}$ miles the village of Sari-Namak. At 18 $\frac{9}{10}$ miles the Surkhob is crossed by a sound bridge, but it is advisable to dismount, if riding, as horses get frightened. Soon afterwards the road runs across a level stretch of hard sandy soil and then crosses a small spur where the Surkhob is contracted into a narrow channel which continues as far as Navdonak. About 20 $\frac{3}{4}$ miles the foot of the spur is reached and thence the road runs into Garm, where water, fuel, meat and bread, but little grazing, are obtainable.

ROUTE No. 3—*concl'd.*

There is an alternative to this stage which passes over the Yakhbai-Sari-Yafuch* Pass (7,990 feet) and through the villages of Gardanj and Navdonak; it is longer, being 36½ miles, but easier and has the advantage of never being closed.

ROUTE No 4.

Kulyab-Baljuan (Birjuan).

General description.—There are several routes from Kulyab to Baljuan; they vary from 50 to 60 versts, 33—40 miles, except that here described which is 47 versts, or 31 miles.

This route is suitable for pack-transport only, and in the second stage is very trying. In case of necessity the distance could be covered in one march, provided proper arrangements were made for a long halt at Dekhtur.

The inhabitants along the route are Tajiks and Uzbeks, the latter being far the most numerous.

Owing to sickness the route was traversed at night; consequently it was not easy to estimate distances exactly, or to collect detailed information.

| Stage. | Place. | DISTANCE. | | | | Description. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------|--------|-------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | VERSTS. | | MILES. | | |
| | | Inter- me- diate. | Total. | Inter- me- diate. | Total. | |
| 1 | DEKHTUR | 28 | 28 | 18½ | 18½ | The first 13 versts, 8·6 miles, correspond with Route No. 3, stage 2, i.e., the road runs nearly north, along the valley of the Yakh-su (Kaftar-Khana); it passes close to a Pushion (Pushyan) which is situated about 1½ miles lower down the valley than the Pushion named in Route No. 3, stage 2. |
| 2 | BALJUAN OR BIRJUAN. | 19 | 47 | 12½ | 31 | Thence the route runs along ravines for a considerable distance. At 10 miles cross a pass; and at 11 miles arrive at Chigak from the south and rejoin Route No. 3, stage 2. Thence the route runs west-north-west over a hilly steppe, in some places being along ravines and in others crossing the lines of water-parting, of which the highest is met at mile 13½. At mile 14½, the village of Gummi-Sai, and at mile 16 that of Khatiker. At mile 16½ is a low pass, whence a long descent leads down to the village of Dekhtur. Here supplies of all sorts may be found in sufficient quantities for a fair-sized detachment. Direction west-north-west. The route makes a small ascent on the right side of a long and narrow ravine. At 2 miles cross a small pass. At about 3 miles pass a large village, Kara-Namar. |
| Direction is now north. The route crosses a very hilly steppe and several passes through which it runs in corridors which have been cut into the loess. | | | | | | |

* ? Yafich Pass on page 8.

† Gardang on page 8.

ROUTE No. 4—*concl'd.*

At 7½ miles the route approaches the valley of Khavaling, and continues sometimes near, and sometimes at a distance from it. At 10 miles it descends steeply to the Khavaling stream, and for ¾ mile runs along its left bank which is raised; at 11¼ miles it begins to cross the gravel at the bottom of the valley, then crosses the stream which here runs in several channels, and at the 12th mile passes a small village which forms a suburb of Baljuan and has a well-known bazar.

Direction is west. The route, on leaving this village and after running along the gravelly valley of the Kizil-su, crosses this river and enters Baljuan (Birjuan). This is a large town where supplies of all sorts may be obtained in sufficient quantities for a fair-sized detachment.

APPENDIX IV.

TAXATION IN EASTERN BOKHARA*.

Amongst the numerous and various taxes which fall every year on the inhabitants of Bokhara the most important are (a) the tax on cattle, *i.e.*, *zyaket*, and (b) that on agricultural products, *i.e.*, "*kharaj*." Both of these taxes are prescribed by law and form the main source of revenue.

Zyaket.—Originally the word *zyaket* implies the idea of purification from which comes the sense of sacrificing a portion of one's property for the benefit of the poor, with a view to the sanctification of the remainder which goes to the use of the owner. Some commentators call *zyaket* obligatory charity. It is of divine origin, compulsory for every Mussulman who is born free, of sound mind and full age, provided that he has absolute possession of movable or immovable property to the value defined in the law of the prophet by the term *Nisyab*, and that this property has been in his possession for at least a whole year. The compulsory nature of *zyaket* is founded on the command of the prophet who prescribed in the Koran in so many words that it should be paid. This command is also found in the traditions; moreover, the tax is allowed by universal custom, *vide* pages 69 and 70 of the "*Khidai*," vol. 1, translated under the editorship of N. I. Grodekof at Tashkent in 1893. Thus *zyaket* dates from the time of Muhammad who disposed of it as he thought fit, mainly for the support of his poorer followers. For some generations after Muhammad *zyaket* was regularly collected and distributed exactly as he had directed.

In the majority of Mussulman countries *zyaket* is levied even to the present time, but it has long ago been diverted from its original objects; and that which was originally destined for the lightening of the lot of the poor now, even in the best ordered countries, enters into the treasury of the ruler, who strives to quiet his conscience for the *zyaket* that he has thus converted to his own use by the building of mosques and the maintenance at his court of idle, beggarly *fakirs*. This state of affairs, the result of the poverty or the avarice of the ruler, has now become something in the nature of established custom, and the income which he receives from the collection of *zyaket* is considered by all as his rightful property.

During the last few centuries *zyaket* has ceased to be levied on immovable property and is now taken only from the flocks and herds which have from time immemorial formed the wealth of all Mussulman countries. The laws as to *zyaket* have long survived their time and have lost all their original sense. Moreover, they are often changed in accordance with the prosperity of the people or the voices of the rulers.

According to Muhammad's definition *zyaket* is not to be levied on articles of first necessity, as such articles cannot be considered wealth which is susceptible of increase. Hence from cattle destined for immediate use it cannot be taken. It is levied mainly on cattle which for the greater part of the year subsist on grazing; to this category belong sheep, goats and camels. But further it is necessary to observe a condition which was fixed by the prophet himself, *viz.*, *zyaket* is not leviable on property that has not been in its owner's possession for at least a year, for that is the period which is required for an increase of wealth.

The proportion of *zyaket* fixed by the prophet was:—for every 5 camels, 1 goat; for every 40 goats which have subsisted for the greater part of the year on grazing, 1 goat; for 120—200 goats, 2 goats; and for every 100 in excess of 200, 1 goat. It is lawful to pay the *zyaket* in money instead of kind. The collector of *zyaket* is to take average animals from each flock.

Let us now pass to the collection of *zyaket* in Bokhara. Statistical information of the cattle in each Begship is obtained by officials appointed by the Beg; sometimes, too, the Beg himself takes part in this work. Generally the officials go from village to village,

* This article appeared over the initials of A. P. in the "*Turkistanskiya Vedomosti*" of the 10th, 11th and 13th January 1906 (O.S.). The writer had in view mainly the Begship of Hissar, as the largest and most influential.

check the cattle on the spot and then make summarised lists of each class of animal from which *zyaket* is leviable. Such censuses of the cattle are made at different times, fixed by the authorities, but they can also be made at the request of the people in the case of epidemics or plague amongst the cattle. The last census of the Hissar Begship was made 6 years ago. The collection of the tax begins every year in June and lasts for 2—3 months. The collector of the tax is a man in the confidence of the Beg, and he fixes various periods for the payment of the tax by each *amlyakdarate*. The head of each *amlyakdarate* is responsible for the collection and payment to the collector of the tax by the date fixed.

The amount of *zyaket* collected in Bokhara up to 1904 we were unable to ascertain, but last year, *i.e.*, 1905, the following proportions were fixed by the Government of Bokhara :—from every 5 camels not engaged in transport work and fed for the greater part of the year on grazing is levied 1 sheep ; from every 40—100 sheep or goats is levied 1 sheep or goat, and from every additional 100 of these animals 1 animal is due. Moreover, for every complete year since the compilation of the census, the *zyaket* is to be increased in proportion to the natural growth of the flocks. For every such year an addition of $\frac{1}{2}$ animal is made in the case of an owner of 500—900 sheep or goats, of 1 sheep if he has 900—1,000, and $\frac{1}{2}$ an animal for every additional 500.

Of course under such a system there are constant complaints from the owners each year, but they finally have to yield to those who hold the reins of power.

Comparing the Bokharan *zyaket* with that of the prophet we see that Bokhariot greed has led to a many times greater demand than the modest one of Muhammad.

In Bokhara the tax is levied, not in kind, but in money. For years the value of a sheep for this purpose has been fixed at 33 *tengas*, *i.e.*, *rubles* 4·95 or 10s·6d, and of a goat at 18 *tengas*, *i.e.*, *rubles* 2·70 or 5s·8 $\frac{1}{2}$ d.

In the absence of all check any irregularity in the collection in money of the *zyaket* or *kharaj* depends on the conscientiousness of the Beg. The fact that, when Karategin was united to Bokhara, its former Beg, Khudai-Nazar-Atalik, obtained for himself the right of collecting the *zyaket* from the Baljuan, Kurghan-Tyube, Hissar and Denau Begships proves that the Begs are personally interested in the collection of this tax. Restrictions have now been placed on this privilege and the Beg of Karategin is only allowed to collect the tax from certain definite portions of the Baljuan and Kurghan-Tyube Begships.

I know for a fact that in 1904 the *zyaket* sent from the Hissar and Baljuan Begship amounted to 800 *tengas*, *i.e.*, £12-12-0. From this sum it is possible to calculate the approximate number of cattle in these 2 Begships.

Kharaj (or Kheraj).—We have already said that in recent centuries *zyaket* has not been levied on immovable property. But to this statement the Bokhariots form an exception, for there is a yearly tax on the products of the earth, called *kharaj*. According to the Mussulman law all products of soil that is naturally watered should pay a *tithe* or one-tenth. In Bokhara the tax is maintained in this form, and every land-owner pays out of the harvest of artificially watered soil a tax of one-tenth and in the case of naturally watered soil of one-fifth.

In Eastern Bokhara the most widespread forms of cultivation are wheat, barley, rice, maize, flax, beans and sesamum. The crops of these cereals, no matter whether they require grinding or not, are taken as a rule to a threshing-floor which is the common possession of several people ; sesamum alone is left in stacks to be counted. Flax, it may be noted, is used in Bokhara only for the extraction of the oil ; the stalks are given to the cattle.

As soon as the land-owners begin grinding there appears on the scene a special class of people who are in the employ of the *amlyakdars* and bear the name of "*Dargas*". The number of these people varies with the density of the population and size of each *amlyakdarate*. Each *Darga* is responsible in his district that not a grain of corn, etc., is hidden until the total quantity of the harvest has been ascertained. The detection of any attempt at such concealment is facilitated by the fact that several people make use of the one threshing-floor and thus they are all held responsible for one another. Each *Darga* has a certain number of assistants who watch the grinding by day and act as guards over the threshing-floor by night.

On completion of the grinding each kind of cereal is placed in a separate heap which is then sealed by the *Dargas*. The seals which are used are of wood, and either square with $3\frac{1}{2}$ inches sides, or round with a diameter also of $3\frac{1}{2}$ inches. The sealing of the heaps is carried out in the following manner:—Some clods of damp earth are stamped with the seal, on which are carved the names of the owners of the seals or some other conventional sign, and then the clods are placed on the pile of grain at a certain height from the ground and around it at a fixed distance from one another. The clods are so placed that only the tops with the impression of the seal are exposed. After sealing the guards are removed, and for the shifting of the seals and any theft the owner is now made responsible.

As soon as all the heaps have been sealed, the *amlyakdars* are informed by the *Dargas*. Then the former and some trusted assistants travel around the *amlyakdarate*, examine each heap, and estimate the quantity of grain in them by eye.

The quantity in each heap is expressed in *batmans*, which are different in almost every Begship and vary from 8 to 16 puds, *i.e.*, 260–574 lbs. As a rule the *amlyakdar*, in consideration of the interests of the state and of himself, exaggerates the quantity. The owner, of course, disputes the measurement; then follows a long dispute to settle which an arbitrator in the person of an *Amin*, or village elder who is specially competent in such matters, is called in. As a rule he strikes an average between the estimate of the *amlyakdar* and the owner, and generally his decision is accepted by each side. If, however, it is rejected, then the heaps are weighed. After this the *amlyakdar* enters against each owner the amount of *kharaj* which has to be paid.

As with *zyaket*, so with *kharaj* the tax is collected in money. It is paid in winter at current prices which are fixed by the Bokharan Government. These prices are determined by the *Kaiz-Raises* or members of the court of justice in each Begship. These officials watch the course of prices in the local markets for some time; these prices are fixed by the people for every product of the new harvest; from them an average is struck by the officials and becomes the "current price." These current prices are then sent by the *kaiz-raises* to the Bokharan Government for confirmation; when confirmed, they are returned to the *kaiz-raises* who communicate them to the Beg, by whom they are forwarded to the *amlyakdars*; they are then published and the *kharaj* is collected in money.

I will now pass to the taxes which, except the *kosh-puli* and the *zyaket-chakan*, are collected at the same time as the *kharaj*. These taxes owe their origin to the peculiar system of administration of the Bokharan Khanate. The administrative officials of the country receive no pay from the Government and, therefore, their only sources of livelihood depend on the prosperity of the population under their rule. This is the basis of all the taxes enumerated below; for the description of them I am indebted to the late Beg of Karategin, Khudai-Nazar-Atalik.

Zyaket-chakan.—This tax is levied from those people who do not pay the real *zyaket*, *i.e.*, those who have less than 40 sheep or goats. For the collection of this tax the Beg appoints an official every spring in each *amlyakdarate*; this official has to travel round all the inhabitants who do not pay the real *zyaket*, and exacts from the flocks which he sees a half *tenga*, *i.e.*, nearly 2 pence, per sheep and a quarter *tenga*, *i.e.*, a penny, per goat. The whole of this tax goes into the pockets of the Beg.

Kosh-puli.—In the spring before the beginning of the work in the fields every landowner has to pay for each pair of working cattle, whether horse or ox, from 4 to 8 *tengas*, depending on the fertility of the soil. The whole of this tax, too, goes to the Beg.

Yak-sira.—In addition to *kosh-puli* for every pair of working cattle must be paid one *batman* of wheat; even those who have but one horse or ox have to pay this tax, which in their case is half a *batman*. This tax also goes to the Beg.

Kajsan.—The official next in importance to the Beg is the *amlyakdar*, whose share of the taxes is almost as much as the former's. For every *batman* of the harvest, after deducting the *kharaj*, he receives *i.e.*, one pud, or 36 lbs. *Panj-sir* is the name given to a stone which is used as a weight and is equivalent to one pud.

Mirabana.—*Mirab* is a person appointed by the Beg for the supervision of irrigation in a given area. Much care and attention is required on the part of this official to make

a timely and proportionate distribution of water without injury to any individual. His work repays itself four-fold. Every land-owner with irrigated fields on which rice is grown pays the *mirab* one *batman*, in money or in kind, of rice for every pair of cattle he employs.

Kafsan-Darga.—The *Dargas*, too, whom I have already mentioned, are not left out in the cold. The payment to be made to them is not fixed, but is the result of mutual arrangement with the land-owner.

Rates.—It may, perhaps, be thought that after the payment of the taxes, enumerated above, to the various officials more or less in accordance with their deserts, the land-owner is free to take to the bazar his surplus products, if he should happen to have any for sale. But this is not the case. Here, too, he must pay a special tax for the right of selling, called *Amin-ana*.

Amin-ana.—All the bazars of the Hissar Begship are farmed out to three so-called *Amin Anachi*. Thus to one man are let the bazars in Hissar, Karat, Khanak, Ghazimaleki, Shurian, Ak-Kurghan, Regar and Sufian. His duties consist in seeing to the cleanliness of the bazars and maintaining the necessary number of weights. For the lease of the bazars I have mentioned he pays an annual rent to the Beg of 50,000 *tengas*, i.e., Rs. 7,500 or £778. Of the two other farmers, one pays yearly 70,000 *tengas*, i.e., Rs. 10,500 or £1,100, and the other 13,000 *tengas*, i.e., Rs. 1,950 or £200.

Next as to the profits of the tax-farmer. For every *batman* of any product that is sold he receives from the seller 3 *tengas*, for a camel or horse 2, an ox or cow 1, a sheep $\frac{1}{2}$ and a goat $\frac{1}{4}$ *tenga*. Naturally each farmer has a crowd of people who look after the sales in the bazars. Moreover, as sales may take place outside of the bazars in some village or other, the farmer has also special agents in each village where they carefully follow every purchase or sale and make the seller pay his due.

Assiya-puli and Abwi-juvaz-puli.—Every Beg, being more or less remarkable for avariciousness, arbitrarily imposes a tax in his Begship on all mills for his own benefit. The tax on mills varies from 20 to 100 *tengas* annually, and on mill stones from the value of one *batman* of ground rice to that of 2 *batmans* of uncleaned rice (*shali*). The amount of the tax depends on the capacity of the mill.

Tanap-puli and Alyaf-puli.—Fruit gardens and lucerne fields which bring any profit to the owner by the sale of whatever is surplus to his requirements also have to pay a tax. Thus from every *tanap*, i.e., 60 square *sazhen* or 327 square yards, the Beg receives 16—18 *tengas*. From the same area of lucerne the tax amounts to 4 *tengas* a year.

Bajgir.—In conclusion I must mention 2 peculiar institutions which bear the local name of *bajgir*, i.e., Customs-station. One of these is on the boundary of the Hissar and Baljuan Begships and the other in the town of Mershad in the Denau Begship.

The road from the village of Nurek in the Hissar Begship to that of Tut-Kaul in the Baljuan Begship runs for nearly the whole distance of 8 miles through a gorge along which flows in a deep, rocky bed the Vaksh (Waksh), a river that forms in this neighbourhood the boundary between the 2 Begships. The right flank of the gorge is formed by the offshoots of somewhat high and rocky hills, called Sarimaulyak, and the left by the spurs of the Rozi-Barra mountains which are of the same nature as the first named. At approximately $3\frac{1}{4}$ miles from Nurek the deep and rocky bed of the Vaksh contracts into a narrow canon not more than $10\frac{1}{2}$ feet in width and makes a bend. Here once upon a time parts of the clifty banks of the river fell in and made a natural bridge which in the course of time was completely destroyed. But at this very spot has since been built a wooden one-arch bridge of the Caucasian (cantilever, *Trans.*) type. The parapet of the bridge consists of dried brushwood. At the right end of the bridge is a double door which extends across the whole breadth of the bridge and is closed at night. Here, too, on the right bank is perched a building of mud on some large rocks. In this building which is a native customs-post, or *bajgir-khana*, dwells the *Ijaradar*, or farmer of the bridge, with a number of attendants. The tolls levied on animals are as follows:—Each camel, horse, or donkey with loads, 2, 1 and $\frac{1}{2}$ *tenga*, respectively; the same without loads half of these rates; each cow $\frac{1}{2}$ *tenga*, and for 100 sheep 25 *tengas*. Foot-passengers, Government officials, and all people travelling on Government duty are exempt. According to people who should know, the farmer of the bridge

collects annually 50,000—60,000 tengas, *i.e.*, £842—948 ; and pays to the Beg of Karategin a rent 44,000 tengas, *i.e.*, £695. It is to be noted that this bridge is on the only road along which cattle are driven in any considerable number from the Kulyab and Baljuan Begships to the town of Bokhara. For example, at the end of September 1904, I happened to meet on it 12 flocks, each of several hundred sheep. These flocks were being driven from the Kulyab Begship for the impending Mussulman fast of *ruza* in Bokhara.

A brief explanation of the reason why part of the proceeds of the tolls from the bridge goes to the Karategin Beg may be of interest. On the union of Karategin with Bokhara the then Karategin Beg, Khudai-Nazir, obtained for himself the very highest Bokharan title, *viz.*, *Atalik*, and for the up-keep of his table (*dasterkhwan*) the tolls above-mentioned. His successors, however, have lost the title of *Atalik* ; and it would appear to be high time for them to be also deprived of the above-mentioned sumptuary allowance which acts as a serious drag on the freedom of trade amongst the inhabitants of their own country.

A similar institution with exactly the same amount of revenue exists also in the town of Mershad in the Denau Begship. This town stands on the one road that leads from Karategin and Bokhara through the whole of Eastern Bokhara to Karshi, Bokhara and other towns of Western Bokhara. The whole proceeds of the tolls go to the Bokharan Minister of Finance.

The taxes and tolls described above show what an astonishing amount the poor Bokharan agriculturist has to pay. There can be no doubt that at least half of the population of Bokhara has hardly enough to keep it alive. No doubt you will ask what does the Bokharan Government give in return for all this taxation. The answer is absolutely nothing, and one can confidently assert that, if no impulse comes from outside, then the Bokharan people will continue to drag on a miserable existence without the slightest hope of improvement in the future.

APPENDIX V.

LIST OF THE MOST IMPORTANT SOURCES OF INFORMATION CONSULTED
IN THE COMPILATION OF "EASTERN BOKHARA".

A.—BOOKS.

1. I. Mianayef. "Information of the countries along the Upper Waters of the Amu-Darya". St. Petersburg, 1879. Page 270.
2. Oshanin. "Karategin and Darwaz." In the Proceedings of the Imperial Russian Geographical Society, XVII, 1881.
3. Mushketof. "A Geological Expedition to the Zerafshan Glacier in 1880". In the same Proceedings, 1881. Issue I, pages 79-103.
4. Putyata, Captain, General Staff. "Summary of an Expedition to the Pamirs, Sarikol, Shugnan and Vakhan." Issue X of the "Collection of Material concerning Asia," 1884.
5. Pokotilo, Captain, General Staff. "An Outline of the Bokharan Possessions on the left bank of the Pyanj". Issue XXV of the same Collection, 1887.
6. Vasilyef, Captain, General Staff. "A Short Statistical Description of Karategin". Issue XXXIII of the same Collection, 1888.
7. G. A. Arendaryenko. "Idle Moments in Turkistan". St. Petersburg, 1889. Pages 426—478.
8. Kuznetsof, Captain, General Staff. "Darwaz". New Marghelan, 189?.
9. V. I. Lipski. "The Peter the Great Range". Proceedings of the Imperial Russian Geographical Society, XXXIV, 1898.
10. Idem. "Mountainous Bokhara". Parts I and II. St. Petersburg, 1902.
11. Count Bobrinski. "The Sect of Ismail". Moscow, 1902.
12. V. F. Novitski. "A Journey to the Peter the Great Range". St. Petersburg, 1904.
13. A. Gudareyich-Radobwilski. "An Economical Outline of Bokhara and Tunis." St. Petersburg, 1905.

B.—MAPS.

1. Sheet No. XIX of the 40-verst to one inch Map of the Southern Frontier District of Asiatic Russia. Issued by the Military-Topographical Branch of the General Staff.
2. The corresponding sheets of the 40-verst to one inch Map of Turkistan. Issued by the Staff of the Turkistan Military District.
3. Sheets of the 10-verst to one inch Map of Central Asia. Issued by the same Staff.
4. Original surveys of portions of Bokhara on a scale of 5 versts to one inch.
5. The Maps accompanying N. A. Syeverstsof's "An Orographic Outline of the Mountain System of the Pamirs".
6. The 30-verst to one inch map accompanying I. Mianayef's work, *vide* Books, No. 1.

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| „ „ Ganshou, <i>vide</i> Obi-Ganshou. | |
| „ „ Garm, <i>vide</i> Obi-Garm. | |
| „ „ Kohshal-Ayak, <i>vide</i> Obi-Kashal-Ayak, | |
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