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PART II

THE KHÁNATE OF KHÍVA, RIVER AMU, AND
KÁRA-KUM STEPPE.

BY

LIEUT. J. M. GRIERSON, R.A.,
ATTACHÉ, INTELLIGENCE BRANCH, Q.M. G.'S DEPT. IN INDIA.

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MILITARY REPORT AND GAZETTEER

OF THE

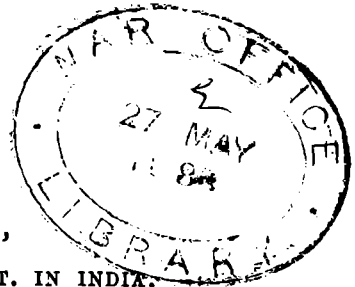
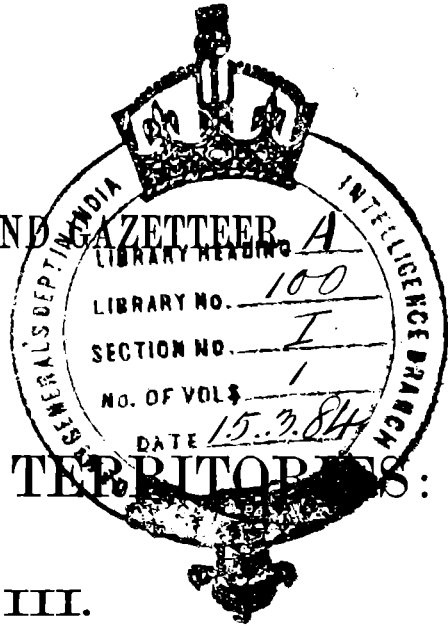
TRANS-CASPIAN TERRITORIES:

PART III.

THE KHANATE OF KHIVA, RIVER AMU, AND
KARA-KUM STEPPE.

BY

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AUTHORITIES CONSULTED.



IN the compilation of Part III, the following works have been consulted:—

Burnaby, Captain F.	...	A Ride to Khiva.
Collett, Captain H.	...	Gazetteer of Khiva, 1873.
Intelligence Department (Home)	...	Russian Advances in Asia.
Kostenko, Colonel L. F.	...	The Turkistán Region.
Kuhn, A.	...	<i>Ot Khivi do Kungráda, 1873.</i>
Kuropátkin, Colonel A. N.	...	<i>Turkmenia-i-Turkmeni (Voennyi Sbornik, 1879).</i>
Lerch, P.	...	Khiva or Kharizm.
Lockhart, Captain W. S. A.	...	Translation from the German of Murávieff's Journey to Khiva, 1819-20.
Marvin, C.	...	The Russians at Marv and Herát.
MacGahan, J. A.	...	Campaigning on the Oxus.
Michell, R.	...	Russian Abstracts.
Ditto	...	The Expedition to Khiva, 1717.
Murávtseff, Captain	...	<i>Turkestánski Otriád v. Akhál Tekinskoi Expeditsii (Voennyi Sbornik, 1882-83).</i>
Newspaper Cuttings		
Perovski, General	...	The Expedition against Khiva in 1839.
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Terentyeff, M. A.	...	Russia and England in Central Asia.
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Vámbéry, A.	...	Central Asian Sketches.
Venyukoff, Colonel M.	...	<i>Opit Voennavo Obozreniya Russkikh Granits v. Asii.</i>
Vincent, C. E. H.	...	Russia's Advance Eastward.
Wood, Major H.	...	The Shores of Lake Aral.
Wood, Captain J.	...	Journey to the Source of the Oxus.

Various official papers in the possession of the Intelligence Branch have also been utilised. As the above works have been used in the compilation of every sentence of this Part, and the various authors have freely availed themselves of one another's works, it is deemed unnecessary to quote their names in the body of this compilation.

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SECTION I.

MILITARY REPORT

ON THE

TRANS-CASPIAN TERRITORIES.

THE KHÍVAN OASIS, KÁRA-KUM AND AMU-DARIA.

THE Khánate of Khíva is bounded on the west by the foot of the *Chink**; southwards from Cape Urga and the Uzboi, or old bed of the Amu-Daria, the frontier towards the Caspian Sea being undefined from the point where the Uzboi turns west; towards the south the territory of the Khán extends as far into the Kára-Kum steppes as he can make his power felt; and on the east and north the Amu forms the frontier. In this compilation the towns, &c., on the left bank of the Amu from Háji-Sálíh to Meshekli, which are Bukháran possessions, are included; also the Russian Amu-Daria province, or at least that part of it which was formerly Khívan territory, as their connection with the Khívan oasis is too close, geographically speaking, to admit of separation.

The territory treated of in these pages consists of two sharply-defined portions—the oasis of Khíva on the Lower Amu, and the steppes of the Kára-Kum and Ust-Kum. The former comprised before the war of 1873 about 9,000 square *versts* of cultivated land (3,978 English square miles), on which lived about 760,000 souls; but by the treaty concluded in that year the cultivated strip on the right bank of the Lower Oxus, with a population of 106,585 and extending over 400 square miles, was ceded to Russia. This cultivated strip of country is about 80 miles long and 5 miles broad, and is bounded on the north by the Shaikh-Jaili and Sultán Oveis hills, which, opposite the head of the Laudán canal, approach to within 4 miles of the Amu, forming the hill of Bísh-Tapa (Tiube) with five peaks. Above this the hills approach to within 2 miles of the river, and opposite Kipchák a spur runs out to the river, on which is the ruin of Chilpik. A little above Kipchák the lake of Khwája-Kul is formed on the right bank by the Amu, and opposite this the Shaikh-Jaili hills descend to a neck, which rises again to the Sultán-Oveis range, which from Sháhbáz-Wali trends away into the interior. These hills are about 2,000 feet high, and are composed of metamorphic schist of a greenish blue color. Their slopes are bare and very steep on the south side; but on the north they descend gently to the sandy Kizil-Kum desert, which extends to the Sir-Daria. The cultivated strip extends from Tugai-Chátli on the west to beyond Shúra-Khána on the east, where the desert again

* The precipice bounding the Ust-Urt plateau on the east.

closes on the Oxus. This region is intersected with numerous canals, the principal of which are the Shúra-Khána, Buz-Yáb, Shán-Yáb, Bai-Yáb and Umur-Yáb, and many lakes, ponds and forests are met with. The oasis is thickly peopled, the settled population being estimated at 60,000. The principal towns in the oasis are Tugai-Chátli, Tugai-Mulla Ishán-Kildi, Gangázi-Khán, Khwája-Niáz-Bai, Kapkakli, Khwája-Kul, Bai-Bazár, Naiman, Yaman-Chugur, Shabház-Wali, Dart-Kul, Shúra-Khána, and Petro-Alexandrovsk. To the west of the oasis, near Nukus, the desert again closes in. The right bank of the Amu will be described under the heading of "Amu-Daria" in the Gazetteer.

The so-called delta of the Amu is now Russian territory, and forms the Nukus district. It is a network of branches of the river, lakes, swamps, and pasture ground, with a few isolated hills, and will be described in the article "Amu-Daria."

The cultivated portion of the present oasis of Khíva begins at Tunuklu, and extends for 165 miles down the river to Khwája-Ili, and even below that. About Kangrád too there are patches of cultivation. The greatest breadth of this oasis is about 60 miles, *i.e.*, between Gorlán and Zmukshir. Water is brought from the Amu for purposes of irrigation by large canals, many of which are navigable for large boats. The general appearance of the oasis is well described in the following passages from MacGahan's *Campaigning on the Oxus*: "There were little fields of waving grain, fruit trees of all kinds bending under their loads of ripe and green fruits, tall noble old elms spreading their long arms, thick green foliage, and dark shadows over little pools of water; grey battlemented walls of houses and farm-yards peeping out from among the trees * * * *. The country is most admirably adapted for defence * * *. Every few yards there is a bridge * * *. Everywhere there are walls, hedges, and ditches, clumps of trees, and houses in great numbers * * *. Every house is a fortress * * *. The road, crooked and tortuous, is lined with mulberry trees, and sometimes it is shut in by huge mud walls, over which the branches of the apricot trees hang in rich profusion, or bounded on each side by deep canals, full of running water, whose high banks are covered with verdure, and again it leads beneath giant elms, whose thick shade fell over us with refreshing coolness." The above is a description of the country near Hazár-Asp, but will stand without alteration for any other part of the oasis. To the west of Khíva, between it and Gázawat, strips of sandy desert penetrate into the oasis. West of Il-Ali the desert does not begin at the edge of the oasis, but there is an intermediate zone of pasture land, with patches of cultivation on which the Yamúds rear their cattle. Beyond Kuhna-Urganj, as far as the Aibugir gulf, now perfectly dry, the country is an open rolling steppe. Between Kuhna-Urganj and Khwája-Ili the country is very marshy, and, as recently as 1855, was covered with water. Two hills rise in the midst of these marshes, on which are the tomb of Shamun-Nabi and the ruins of the fort of Gyaúr-Kala. They once formed islands in the lake, which was fed by the Laudán branch. On the left bank of the Amu, from Khwája-Ili to Mangit, extends a forest some 2 to 4 miles in breadth.

The most populous portion of the country is that between Gorlán and Khíva; that between Gázawat and Tásh-Hauz is the most sparsely populated (Yamúds), but is as well cultivated as any other. MacGahan thus describes the farm-houses of the oasis: "They are enclosed by heavy walls, from 15 to 20 feet high, strengthened with buttresses and strong corner towers. The entrance is through an arched and covered gateway, closing with a very heavy wooden gate. Built on the same rectangular plan, from 25 to 75 yards

square, each farm-house is a little fortress in itself, and is actually intended to serve that purpose. The walls are composed of mud, but of a kind that gets comparatively hard. It is not worked up into small bricks, but into huge blocks like granite, 3 or 4 feet square, and as many thick. Within the enclosure are contained the stables for horses, cattle, sheep, and all the live-stock, as well as the dwellings of the inhabitants. Near the dwelling is always a little pool of clean water, 30 or 40 feet square, shaded by three or four large elms * * * * *. The interior of the houses is dark and gloomy, for they are only lighted by small holes in the walls, window glass being unknown. But they are often fitted up with a quantity of carpets, bright-colored mats, rugs, and cushions that render them very comfortable."

The towns in Khíva are mostly walled, but in few instances are these walls in a good state of preservation, and none could resist artillery. They were formerly intended as defences against the Turkumáns, and the cities were places of refuge for the rural population during the raids of those tribes, which accounts for so many towns having a large number of unoccupied houses; but the inhabitants of the oasis now look for safety to the Russian garrisons at Petro-Alexandrovska and Nukus, which probably form a more efficacious defence than the old walls ever did, and the Khívans now enjoy a state of peace and quietness formerly unknown to them. Houses in the towns are of two types of construction—"chubkari" or framework, and "paskba" or mud. The first is used for the houses of the principal trading towns—Khíva, Khanka, and Urganj; the latter generally throughout the Khánate, except for shops, bazaars, &c., which are "chubkari." The mud construction has been described above; the "chubkari" is a combination of wooden framework and small bricks. The only buildings of undried brick are the large colleges, palaces, mausoleums, caravanserais, graves, and baths. Few dwelling-houses in Khíva, except those of the Khán and the magnates, aspire to the dignity of two stories. The streets of the towns are narrow and crooked, and are lined by the back walls of houses, which, as in most Eastern cities, are built round court-yards.

With the exception of small cultivated strips on the left bank of the Oxus about Kára-Kishláq, Chahárjui, and Kárki, the whole of the remainder of the territory described in these pages is steppe land, and is known as the Kára-Kum or black sands, called also by the Turkumáns Ust-Kum. This so-called desert is far from being a sandy waste, but is an elevated table-land, whose surface is covered with sand dunes, solidified by herbage. In spring it presents a vast area of luxuriant vegetation; in certain directions (described in the routes) there are rows of wells, and good potable water is everywhere found at a small depth. Believing that by means of irrigation and by extensive planting of trees the Kára-Kum might be restored to its ancient productiveness, the Russians have lately been undertaking extensive reconnaissances of this steppe, with a view also to ascertaining whether the old Chahárjui bed of the Amu can be made available to conduct the waters of that river to the Caspian. These surveys, so far as details are available, will be described under the head of "Amu-Daria," but the country has been already made known to us by English writers. Abbott says that the Kára-Kum is broken into very irregular surfaces, dotted with bushes, wormwood, and camel-thorn. This applies to that part of the desert to the north-west of Marv, but nearer Khíva the steppe is ploughed into ravines and ridges, which are in general gravelly, but with no want of sand, and with water at long intervals. Between Marv and the Oxus Taylor Thomson speaks of a more

plentiful vegetation, and of a coating of verdure which covers the desert in spring, and gives it the appearance of a rich sward extending on all sides to the horizon. Nor is there a want of tamarisk thickets nor of scrub forest, and one kind of tree is mentioned as growing to a height of 15 or 20 feet. The rows of wells across this part of the desert are numerous. On the western confines, near the dry Uzboi bed of the Oxus, there is by no means a scarcity of vegetation, and in the early part of the year numbers of Yamúd Turkumáns find ample pasturage and water for thousands of camels, horses, horned cattle, and sheep. Later on, in the summer, this herbage is dried into tinder; and Vámbéry describes how a spark, accidentally dropped upon it, will cause a conflagration whose flames sweep like wildfire across the far stretching steppes, and are only arrested on the banks of some lonely salt lake. Besides the more or less sandy tracts, there are equally extensive areas of smooth, bare, sun-baked clay; and, generally speaking, it may be said that there is far less sand distributed over the surface of the country than is generally supposed. Major Wood, arguing from the deposit of sand per second in the oasis of Khíva, says that the sand of this desert has been deposited there by the waters of the Oxus. After the capture of Gok-Tapa, the Russians pushed reconnaissances into the southern part of the desert to Mergen, Muhammad-Diár, and Nazar-Kuli. The desert in this part is sandy, and forms ridges from 10 to 40 feet high, with saline hollows between, and "takirs," *i.e.*, depressions with salt incrustation, in which water lies after rain, sometimes extending over a square mile at intervals. The whole ground is covered with tufts of *saksál*, and the further from the Akhál oasis, the thicker and higher is the *saksál*, and the higher become the sand hills. The wells in this part, such as Kadjan, Khairábád, Bus-Pulát, and Nazar-Kuli, are in general very salt. The sand of the desert is said to be yearly encroaching upon the Akhál oasis.

The only river is the Amu, to which the oasis of Khíva owes its fertility.

Rivers and canals.

Rising in the Pámir, it flows after a course of 1,700 miles into the sea of Aral; but of those 1,700 miles, only 743 miles have to be considered in this Gazetteer. The last 80 miles of the river are comprised in an extensive delta, which begins at the town of Khwájá-Ili, and which is now Russian territory. The river is navigable from Khwájá-Ili up to the furthest point we have to consider; but the various branches in the delta are very shallow, especially at their mouths.

The canal system in the Khánate of Khíva is highly developed, the country being intersected by numerous large canals, the principal of which are the Pitnák, Palwán-Ata, Gázawat, Sháhábád, Yármish, Káragoz, Arna or Boz-Su, Laudán, Dariálik, and Suváli canals. These are also used as ways of communication; hence the command of the Amu is of great strategic importance, as by damming up the heads of the canals the inhabitants are reduced to subjection by being deprived of water. This method of chastisement has frequently been adopted by the Kháns in their dealings with the Turkumáns living on the edge of the oasis. The canals are lined with embankments, planted with trees, and their surplus water runs off into the desert, forming small lakes. Towards the end of November the canals are dammed up about 700 yards from their heads in the river, as the volume of water in the latter then diminishes greatly. The water in the canals is then allowed to dry up gradually, and in the following February their beds are cleared out to the proper depth by the inhabitants living in the vicinity—a most necessary precaution considering the enormous quantity of soil deposited by the river.

Lakes. The only ones of any importance are those of Sári-Kámish and Batandul-Kul, both on the Uzboi or old bed of the Oxus, in the west of the Khánate. The water of both is quite salt. The numerous canals form small lakes at the point where they flow into the desert, and these are noted in the Gazetteer under the heads of the canals which feed them.

The most considerable is the dried up gulf of Aibugir, but this by cultivation is gradually being desiccated. Between Khwája-Ili and Kangrád, as noted above, the country is also very marshy, and the delta of the Amu is, with the exception of a few patches of pasture land and cultivation, a vast reed marsh.

Marshes. The capital of the Khánate of Khíva is Khíva itself, and the two most important fortresses are Hazár-Asp and Tásh-Hauz. The principal trading centre is New (or Yangi) Urganj. Kangrád, Khwája-Ili, or Khodjeili, Il-Ali, Mangit, Górlán, Sháhábád, Khanka, and Pitnák are the other principal towns of the Khánate. In the oasis above Khíva we find the towns of Khwája or Hájí-Sálih, Kárki, and Chahárjui, all belonging to Bukhára, and in the Russian Amu-Daria province those of Shúra-Khána, Shahbáz-Wali, Nukus, and Chimbai. A description of all towns will be found in the Gazetteer.

Principal towns. Khíva, from its limited area, has pretty much the same climate in every portion of the oasis, and, owing to its distance from the sea and to the vast deserts by which it is surrounded, is characterised by great extremes of heat and cold. The winter is not exceptionally long, being said by Dr. Schmidt to begin at the end of November, and to end with the month of February; but during this time the thermometer sinks as low as 20° R., and the Amu and part of Lake Aral are covered with from 12 to 18 inches of ice for more than a month at a time. Abbott, however, speaks of 12 inches of snow at Tásh-Hauz on the 11th March, and says that the Amu remains hard-frozen for four months. On the ^{24th January} 1874 a Russian column from Nukus crossed the Amu on the ice. ^{5th February} The spring is the pleasantest season of the year, but it is short and succeeded by a long and usually rainless summer, during which the heat of the day is intolerable, the thermometer rising in the shade to 20 or 30° R.; but the nights are tolerably cool. In autumn the weather is very changeable. Rain sometimes falls in the oasis, but is generally accompanied by violent gales of dust-laden wind from the surrounding deserts. Snow seldom falls. In the Kára-Kum steppes the summer heat is intense, Burnes stating that the heat of the sand rose to 150° F., and that of the air to 100° F. In summer and autumn the passage of the desert becomes dangerous owing to the prevalence of hot winds and sand-storms, known as *tib-bád*, which sometimes overwhelm the caravans, and are even more dreaded than the *buráns* or tornadoes of snow and wind which occur there during the winter. Murávieff says that the *tib-bái* "fill the air with an impalpable dust, darkening the face of the land like a dense black fog, whilst the appearance of the sandy part of the desert completely changes in a few hours, new sand-hills rearing themselves everywhere, and old ones vanishing. In winter there is seldom any snow, but black frosts are continual, and those operate most unfavorably on the caravans, either keeping them back altogether, or, if they have started before the frost has set in, committing ravages among the camels on the road. These animals are unable to make their way over frozen ground, owing to the formation of their feet, and should frost overtake

a caravan *en route*, many succumb and have to be left to die in the wilderness. Nearly all the year round the sky is serene and cloudless, which may be ascribed to the flat surface of so vast an area of steppe offering nothing to attract the clouds to it. The clearness of the atmosphere makes every object look unusually bright, and charms the stranger, until his eye falls on the human beings of this shining region, and he is forced to think of their detestable character. The frost never shows itself in Khíva. The air is healthy, and both foreigners and natives thrive in it. Free indulgence in fruit, looked on as hurtful in all other countries, is here considered conducive to health."

Kostenko states that, during the campaign in Khíva, orders were issued that the men were to be kept out of the sun as much as possible, and sentries posted in the shade or under artificial shelters. The best preventative of sickness was found to be a regular and liberal issue of rations (groats, biscuits, and a pound of meat per man per diem, with an allowance of tea and sugar). The issue of spirits was absolutely forbidden, and *kibitkas* or *tentes d'abri* and felts to lie on at night were issued. The strictest cleanliness in camp was observed, and the usual sanitary precautions taken as to latrines, offal of slaughtered cattle, &c., and drinking water.

Agriculture is the principal occupation of the settled inhabitants of Khíva,

Agriculture.

cattle and horse-breeding being mostly in the hands of the nomads. Most of the vegetables known in Europe are grown in Khíva, except the cabbage; and in the market gardens and orchards near the large towns fruit trees of all sorts are cultivated, including apple, plum, pomegranate, fig, quince, walnut, cherry, and pear trees. The vine forms an important item, and the fruit is used to some extent for wine-making, and also in the manufacture of vinegar and of a syrup constantly drunk by the natives in summer. The grapes too are dried and exported as raisins. Khíva is about the northern limit of the mulberry tree, of which large numbers have been planted. The white mulberry is preferred in Khíva, because the silkworm thrives best on its leaves. Arboriculture is general, poplars, elms, and willows being planted all along the canals.

Of field crops perhaps the most generally cultivated is cotton, and the cotton crops of Khíva are of unequalled quality. Tobacco and the poppy are also cultivated, the cultivation of the former being encouraged by the Russians so as to supply their troops, and an intoxicating drink is made from poppy heads. The chief food crops are wheat, *javár*, generally called *jughára*, rice, lucerne, and melons. Of barley, millet, and maize little is sown, the latter mostly in the delta. Of wheat four kinds are said to be known, two of them identical with the white and red wheat of Europe. This grain is grown both on irrigated and rain lands (*lálmi*—see below). Lehmann mentions two sowings of wheat on irrigated and one only on *lálmi* lands, on which a spring crop only is raised. *Javár* is extensively grown. Its stalks are used as forage both for horses and cattle, and its leaves given to sheep. The grain is esteemed as food for horses from its being less heating than barley, and from its cheapness it is much consumed by the poorer classes. Lucerne is an important crop, and is peculiarly adapted to countries where the available land is limited, from the circumstance that it can be cut at least four times in the year. It is used in summer as green food for sheep, cattle, and horses, and is dried and stacked in bundles for winter forage. The Khívans grow oil-seeds in rather large quantities, sesame (*kunshut*) and *indau* (a small round seed like millet) being the most usual, the latter being used for greasing machinery, &c. Flax, hemp, and madder are also grown.

All garden produce and most of the purely field crops are cultivated by irrigation from the numerous canals already described under their proper heading. Three kinds of irrigation are distinguished—(1) that by waterwheels (*chigirs*) turned by horses, bullocks, or camels. They raise water out of ditches flowing from the large canals, and some of the largest wheels are turned by water-power. They have earthenware vessels fixed to the circumference of the wheel to raise the water; (2) by flooding from small ditches, as is generally practised in India; (3) by a balance pole and bucket. Bad harvests are unknown in Khíva; and although the implements are very primitive, the cultivation is very good. Nominally the crops, and thence the lands devoted to them, are known as *bogari* and *teremai*, spring and autumn, equivalent to *rabi* and *kharif* in Urdu,—arable land that cannot be irrigated, and the crops grown on it being classed as *láimi*, but in reality little rotation of crops is observed, and heavy manuring and constant irrigation give good harvests. Most tenements are of one to three *tanaps* (a *tanap* = .95 of an acre), but many have from twenty to a hundred *tanaps* of land. The general aspect of farm-houses and of the cultivated oasis has been described above.

The vegetation of the Kára-Kum steppe is much the same as that of the Ust-Urt, and is described in Section II of this report. To the south-west of the Khívan oasis is good pasture land, on which large numbers of cattle and horses are reared.

Khíva is remarkably poor in minerals, the only productions being saltpetre and salt, the former being washed from the soil. Tradition states that there were once gold mines in Khíva, and that gold was washed from the sands of the Oxus; those rumours were one of the causes of Prince Bekovitch's expedition in 1717, which ended so disastrously. In some tributaries of the Upper Amu gold is washed from the sand, but there are now no gold mines in Khíva.

The horses of Khíva are of the Kirghiz and Turkumán breeds, those of the Turkumáns of the Kára-Kum being bred by their owners. They are said to be exceedingly good. In 1873 the Cossacks could not come near the Yamúds, if the latter were unencumbered and indisposed to come to close quarters. Donkeys are much used in Khíva and on the Kára-Kum, but little care or skill is shown in their management. A full account of the camels and horses of Turkistán will be found in the appendix. Cattle rearing is not much practised in the Khánate itself, but in the Amu delta the Kára-Kálpaks and in the steppes the Turkumáns have extensive flocks and herds. Oxen flourish in the reedy districts, and very large cows are bred by the Kára-Kálpaks. Oxen are used in the Khánate for agricultural purposes. The sheep bred by the nomads of the Kára-Kum are *dumbas*, described by Levschin as a hardy variety, with a Roman nose, long upper lips, drooping ears, tails weighing from 20 to 30 lbs., and so strong that children of from 10 to 12 years old ride upon them for amusement. Their weight varies from 140 to 180 lbs., and they are extremely prolific, the ewes generally producing two lambs at a time. Goats are also bred in some numbers by the nomads.

Among wild animals, the *bahr*, a species of tiger or lynx, with a light yellow and spotted coat, very sharp face, short neck, and great power in its claws, is found amongst the reeds of the Oxus delta. They attack men, horses, and camels, and are strong and fleet. They are about 6 feet long. Lions are also said by Vámbéry to frequent the wooded districts in the west

of the Khánate. In the steppes foxes, hares, wild horses, wolves, jackals, and rats are found. Murávieff says that of the lastnamed there are several species, and the most remarkable one is that called by the Khívans "elingirj. This rat is as large as a tom-cat, has short fore-legs, and a spotted skin, yellow marked with black. They all live in the sand. Jackals abound, and their howls at night terrify travellers unaccustomed to the sound. There are also many deer (*scrigak*) and wild goats (*jairán*). The former are hunted with hawks by the Khívans, who also use those birds for hare hunting. Tarantulas abound on the steppes.

The manufactures of Khíva are insignificant, the principal ones being satin, velvet, silk, and cotton stuffs, and tanned sheep skins. Trade and trade routes. Sesame oil and dye stuffs are also extracted from the seed, but the chief articles of trade are raw materials. The principal article of export to Russia from Khíva is raw cotton, one-seventh of the whole export from Central Asia to Russia coming from the Khánate. By the latest accounts about half a million *puds* (a *pud* = 36 lbs.) are exported annually. The value of the export of this article by Kazála was in 1868-69 60,000 *roubles* = £6,000. It takes from 6 to 8 months for the cotton to reach Moscow and the cost of transport is 2 *roubles* per *pud*. By the new route *viá* the Caspian it is calculated that the length of the journey will be reduced to about six weeks, and the cost of transport to $1\frac{1}{10}$ *roubles* per *pud*. Silk and madder are the other exports to Russia, but in nothing like the same quantity as cotton. The total value of the exports to Russia was in 1867-68 1,421,209 *roubles*, and in 1868-69 there passed by Kazála into Russia 294,887 *roubles'* worth of goods. The imports from Russia consist of sugar, green tea, silk, cotton, blankets, woollen and leather goods, iron and copper utensils, tea-urns, china-ware, needles and thread, toilet articles, and toys. In 1867-68 the imports from Russia were 486,897 *roubles*, and in 1868-69 112,045 *roubles'* worth of goods passed through Kazála *en route* to Khíva. In 1873 there was imported to Khíva from the Táshkand fair 14,981 *roubles'* worth of goods.

With Bukhára, *viá* the Amu, there is a good deal of trade, the principal articles of export being dried fish and grain; the imports tea, Chinese crockery, and tobacco. There is also a large transit trade through Khíva from Bukhára to Russia of calico, spun cotton, silk, Cashmere shawls, and Bukhárán lamb-skins.

The trade with Russia in grain has much fallen off of late owing to the opening up of that country to Russian merchandise, but with the nomads of the steppe there is a lively trade in horses and cattle, camels, felt, &c. The only English goods which reach Khíva are said to be chintzes and muslins. These come from the Caspian, but are being rapidly driven out of the market by Russian competition and by prohibitive tariffs.

The entire trade of Khíva is in the hands of the Sárts, and their principal centre of trade is New Urganj (*see* Gazetteer). There is no doubt that the trade route of the future between Khíva and Russia (at least till a railway is constructed or the Amu turned into the Caspian) is that discovered by M. Venushin from Kangrád to the Yaman-Airakti creek of the Mértvi-Kultuk bay of the Caspian. This is 447 *verst*s (298 miles) long, and is said to be perfectly practicable for carriages. It is described in the routes appended to this work. Goods would be brought by water from Urganj to Kangrád, thence by this route to the Caspian, and thence by water to the heart of Russia, or even to the Baltic, by means of Russia's magnificent canal system.

The old route for Khívan trade with Russia was *viá* Kazála, on the Sir-Daria, to Orenburg. Caravans crossed the Amu at Sháhábz-Wali or Shúra-Khána, and marched thence across the Kizil-Kum to Kazála (394½ miles), or, crossing at Nukus, to the same place by a road 372 miles long. From Kazála to Orenburg, the present terminus of the railway, by the postal route is 670½ miles. Another route, frequently taken by Khívan goods, was that by Sári-Kámish and Tuár to Krásnovodsk. With Persia, as has already been remarked, Khíva has now little commerce, but in former times caravans used to arrive *viá* Gok-Tapa, and it is reported that, if the safety of caravans can be guaranteed, they will again be sent to Kizil-Arvát, and there seems no reason why they should not travel by the route traversed by Kuropátkin's column in 1880.

To Bukhára the natural route for Khívan trade is *viá* the Amu to Chahárjui, and thence by road (about 100 miles) to the capital of the Khánate. It is reported (in the newspaper *L'Union Postale*, 1882) that the Amir of Bukhára contemplates organising a postal route from Bukhára to Meshed, *viá* Chahárjui and Marv, to join the Persian lines, and another from Bukhára to Khíva in connection with the Russian postal service.

The settled inhabitants of the Khánate of Khíva, who number about 250,000 or 300,000 souls, are mostly Uzbaks, Sárts, Inhabitants. Tájiks, and Persians, the latter being the descendants of slaves who have settled in the country. The Uzbaks are the ruling race, and to them belongs the Khán, while the Sárts form the mercantile and trading portions of the community. The Kára-Kálpaks number about 100,000 souls and occupy the delta of the Amu. Turkumáns of various tribes, to the number of 200,000, nomadise on the steppes to the south of the Khánate and on the Upper Oxus, and the inhabitants of the Russian Amu-Daria province, to the number of 106,585, are mostly Kirghiz.

The character* of the Klívans, owing possibly to the former despotism of the Government and the more than ordinarily vicious life led by the inhabitants of the towns, is below that of the average Asiatics. The Uzbaks are generally considered superior in those respects to the other elements of which the population is composed, and especially to the Sárts and other classes of mixed blood who form a large section of the inhabitants. The dress generally worn by all classes in the Khánate is a long-quilted gown or *khilát*, made of brown striped stuff, half cotton and half silk, or, in the case of the richer classes, of cloth, silk, or velvet. The head-dress is a high cylindrical cap of black sheep-skin, which, with stout yellow leather boots, completes the costume. A full description of the several nationalities will be found under their own headings in the Gazetteer.

Since the conquest of the Khánate by Russia in 1873, it has been little Government and admin- more than a dependency of the empire, and several istration. times since then the Khán has requested that his country might be formally annexed, as he was totally unable to control the Turkumán tribes inhabiting the southern part of the Khánate proper and nomadising far into the Kára-Kum, over whom he had nominal sovereignty.† Order in the Khánate proper is insured by the presence of a Russian force at Petro-Alexandrovsk, and since 1875 the country has been tolerably quiet, the Turkumáns having learned by experience the hopelessness of fighting against

* From Major Trotter's Gazetteer.

† The Khán maintains no troops now, except a body-guard of 30 or 40 men armed with scimitars (*Burnaby*).

Russian troops, and the severity with which offences against law and order are punished. The following account of the Government of Khíva has been compiled from various sources by Major Trotter: "The Government of Khíva, as in all Mussalman States, is founded nominally on the Kurán, but its precepts have had little effect in moderating the purely autocratic rule of the Kháns and the unscrupulous oppression of the Ministers of State and their subordinates, who are entrusted with the duty of collecting the revenue and disposing of minor cases. Many of the Kháns have during the recent history of the country gained their positions by their swords, or have been elected by their armies; and the character of their government has been affected by this consideration to an extent that has prevented the growth of the constitutional checks, which, in theory at least, tend to temper the tyranny of the rulers of the neighbouring State of Bukhára. The foreign relations of the State are now undertaken by Russia; but, as in the case of Bukhára, domestic concerns are left in the hands of the native ruler, the only material interference of the conquerors in such matters being the release of the Persian slaves to the number, it is said, of 30,000, and the deportation to a Russian fortress of the Díván-Begi, Muhammad-Murád-Khán, an able man, who had been the guardian of the Khán, and practically ruled the Khánate for many years. Colonel Venyukoff, in a paper written three years after the campaign, speaks of the entire freedom enjoyed by the Khán in his home government, and further says that the latter had been recently much indebted to the Russian troops for restoring order among his nomad and half-settled Turkumán subjects."

"The ruler whom Abbott found upon the throne was Aliah-Kuli, a monarch who appears to have conducted both the foreign and domestic concerns of his kingdom very much without reference to his council, though these were always in attendance in the palace, and he was somewhat less arbitrary in his procedure than his contemporary Nassr-Ullah of Bukhára. The present Khán, styled Syud Muhammad-Rahím-Bahádur-Khán, belongs to the same family as this monarch, and is represented by the Russians who have come across him as a weak but otherwise well disposed prince, inclined to a clement form of government, but without strength of character to abolish the barbarous punishments prescribed by former custom. The chief officers of State have titles corresponding closely with those of Bukhára, but their duties differ in some respects from those of the officials bearing the same names in that Khánate, and have varied very much during the reigns of the different Kháns who have ruled the country during the present century, most of the latter having either ruled without much reference to their ministers, or having left the general direction of affairs in the hands of one or other of those who have for the time being been their favorites. According to what may be called the theory of the constitution, the *Mihtar* is the principal official in the Khánate, acting for the Khán during his absence in time of war, collecting the revenue, and being charged with the entertainment of ambassadors and with the superintendence of the internal administration. He is ordinarily chosen from the Sárts in order to secure the business qualifications required for his office. The name of the *Mihtar* in 1873, and for some time after that date, was Abdullah-Bai. The *Kosh-Begi* ranks next to the *Mihtar*, and, being generally an Uzbek, has often been of greater consideration in the ministry. His duties used to be the superintendence of the army and of the irrigation works of the Khánate, and it appears from the Russian accounts of the campaign of 1873 that the negotiations of the Khán with the Russian Commander-in-Chief were in great part conducted

by this official, who was said to be a man of great influence, and partly by the Díván-Begi."

"The Díván-Begi* has, during the present reign, usurped much of the authority of the officials mentioned above. Before the war with Russia the Khán appears to have delegated much of his power to this minister, an Uzbek named Muhammad-Murád, said to be a man of considerable ability. He had formerly been guardian or tutor to Syud-Muhammad-Rahím, and made himself obnoxious to the Russians by heading the party in the State who were in favour of prolonging the war even after the fall of Khíva. He was made a prisoner by the Russians in 1873, and sent across the Aral to Fort Kazálsk. He was succeeded in office by another Uzbek, a cousin of the Khán, named Muhammad-Niáz, who is said to have died at St. Petersburg of an operation performed by Russian surgeons. He had distinguished himself throughout the late campaign as an able leader of the regular forces, the enlistment and organisation of which formed part of his duties. In addition to those ministers, there has at all times existed in Khíva a Privy Council, composed of the leading elders of the Uzbek tribe, who are still persons of consideration in the State, and at the end of last century, when the country was visited by Blankennagel, exercised under their president the entire control of the internal affairs, the powers of the reigning Khán, Abdúl-Ghází, being little more than nominal in such matters. Of late years this Council have had little power as an executive body, but many of its members belong to the family of the Khán, and are governors of towns, collectors of revenue, owners of *milk* property, or in other lucrative positions in the State. Among other minor officials may be mentioned Muhammad, the Yasáwal-Báshi, or Commander of the Guard; Kludai-Nazar, the Makhram, or Chamberlain; the Nahíb, an ecclesiastical official with the same duties as the Nahíb in Bukhára;‡ and *kázis*, *mufís*, and others in the various towns.‡ The above officials are the chief State servants in Khíva; but, as already mentioned, the whole executive power of the Khánate has for some time past been in the hands of the Khán, owing to the decay of the influence of the Council. The Russians so far recognised the old constitution that they insisted on the appointment by the Khán of a council of his chief nobles to deliberate with the Russian Commissioners as to the terms of the treaty that concluded the campaign, but the administration of justice and of all internal affairs of the territory not annexed was left in the hands of the native ruler. There is no more recent account available of the state of affairs in Khíva than the Russian account of the campaign written in 1874-75; but it is probable that the system of home government remains much as it was before the war, as it is contrary to the usual practice of the empire to interfere with, or assume any responsibility for, the internal concerns of the States they have allowed to remain semi-independent in the heart of the Asiatic empire, the most intelligible theory for their policy in those matters being that they have not found it to their interest to add to the vast extent of country which they have to administrate further than providing that the fiscal system of the unannexed territories should not interfere with the trading interests and revenue of their own provinces. Muhammad-Rahím-Khán of Khíva is thus virtually independent as regards the administration of justice in the territory still under his control to much the same extent as the Amir of Bukhára.

* Secretary to the Khán.

† He settles civil cases according to the Kurán.

‡ Each town has in its jurisdiction a number of villages (*kand*) divided into quarters (*mehel*)
Kuhn.

Most of his officials who are entrusted with the collection of the revenue are either insufficiently paid or receive no salaries, and the Khán undertakes the disposal of such complaints as are brought against these persons by the cultivators who are their victims, as well as most of the criminal cases in the Khánate. He appears by Schmidt's account to be assisted in these investigations chiefly by his executioners, who reside in an apartment by the palace gateway, and who are, he says, "employed every minute" in administering the bastinado, and cutting off the heads, ears, and noses of his subjects. On the other hand, other Russian writers speak of the Khán as an amiable man, and Schmidt himself allows that he repudiated with indignation the charge that seditious slaves were ordinarily impaled by his orders—a procedure which had been the usual one before the commencement of his reign."

It is very difficult to arrive at an idea of the present revenue of Khíva, which at the beginning of this century was estimated by Murávieff at £150,000. The cession of the district north of the Amu-Daria to Russia, and the yearly tributes of 200,000 *roubles* imposed by Russia, which will not be paid off till 1893, must have seriously crippled the finances of the Khánate. The Khán is said to have only £14,000 a year left now, after paying the war indemnity, but the Turkumáns are beginning to pay taxes.

Formerly the whole land was divided for revenue purposes into "Khívan lands" and "conquered lands." The former comprised Kat, Sháhábád, Kuhna-Urganj, Klíva, and Hazár-Asp, where the land was held in hereditary tenure; the latter, the districts north of the Amu-Daria, since ceded to Russia. There are three species of taxes—two paid in money (the *salgut* and *Zakát*) and a tax in kind. According to Dr. Schmidt, the *salgut* was levied in 1873 at the rate of 2 *tillas* (about 11s.) upon every 5 *tanaps* of land (4.75 acres), and was paid by the holders of hereditary lands in the five districts named above, and by the landholders of recent creation in the district of Kangrád and on the right bank of the Amu, whose estates (*milk* lands) had been conferred upon them in usufruct. The *zakát* was paid by the commercial and cattle-breeding classes. Taxes in kind were paid by the lessees of crown lands, and varied from one-third to one-half of the harvest. The total revenue in 1873 amounted to 408,000 *roubles* (£57,140). A further tax in labor is made for the irrigation works, 22,000 workmen being yearly required to remove and build the dams which regulate the supply of water from the Amu into the irrigation canals, which are the personal property of the Khán. On such canals as do not belong to the Khán, the people residing near them perform the necessary works. Many of the Uzbaks are exempt from the *salgut* tax in consideration of military service. The civil officials receive no pay, but remunerate themselves from their offices; hence fraud and extortion reign supreme.

The coinage of Khíva consists of—

The "small tilla" = 1 *rouble* and 80 *copecks* = Rs. 5-6 = 2 *roubles* paper.

The "large tilla" = 2 small *tillas* = Rs. 11.

These two are gold coins and are very scarce.

The "tanga" (silver) = 20 *copecks* = 7d. or 8d. = 60 (copper) "puls" or "chashkas."

The principal land measure is the "tanap" = $\frac{1}{3}$ of a Russian *desyatina* = .95 of an acre.

The Khívans are Mussulmáns of the Sunni persuasion. Even the Persians, for the sake of a quiet life, outwardly at all events, conform to the orthodox religion. Their language is a dialect of Turki, but the Sárt tongue appears to be tolerably distinct and

Religion and language.

to be still spoken by the people of that race. The Kirghiz have a language of their own. A grammar and dictionary of these languages has been published (in Russian), under the title of "The Russian's Guide in Central Asia," by A. Starchevski.

The early history of Khíva or Kharizm is but little known, the first authentic record dating from the first invasion of Timúr in the spring of 1372 A.D. It arose from claims of the latter to the Khánship of Khíva, and in it he defeated the army of Hussain-Sufi, the reigning Khán, laid siege to Urganj, and devastated the country. Peace was made in the same year, but was in 1373 broken by Yusuf-Khán, the successor of Hussain. The second invasion was averted by the submission of Yusuf, but in 1376 war again broke out. Again invasion was averted by a threatened attack on Sámarkand by the people of Jete. Subsequently Yusuf-Khán ravaged Bukhára, and in punishment for this, in 1379, Timúr undertook his fourth expedition against Khíva. Urganj was stormed and sacked after a siege of $3\frac{1}{2}$ months, and the notables and their families carried into slavery. In 1388 a fifth expedition took place, in which Urganj was razed to the ground. From that time till the end of the 15th century little is known of the history of Khíva. In 1486 A.D. Sháibani-Khán, the ruler of the tribes near the Aral Sea, conquered the country, which he held till his death in the disastrous battle fought by him at Marv with Sháh-Ismail-Sáfir of Persia, after which the Khánate fell under the power of the Sháh; but the people eventually turned out their hated Shiah rulers, and Khíva and Hazár-Asp fell into the hands of the Uzbaks, who soon set themselves to annex Khurássán. In this they succeeded, but the constant feuds between the various Uzbek princes weakened their hold upon the country. Their chief prince resided at Urganj. In 1570 this chief, by name Háji-Muhammad-Khán, undertook an expedition to Khurássán, and during his absence Abdullah, Khán of Maver-an-Nahr, invaded Khíva, but did not succeed in capturing Urganj. Shortly afterwards, repeating his invasion, he captured Marv, Abiverd, and Nessai, and in January 1571 captured Khíva and Vizir, defeating the princes who had assembled to oppose him, and annexed the whole country. A short time afterwards, Háji-Muhammad-Khán made an attempt to reconquer the country, but was defeated and forced to flee to Persia. Abdullah-Khán died in 1597, and Háji-Muhammad was again placed upon the throne at Urganj. Háji-Muhammad-Khán died in 1602, and was succeeded by his son Arab-Muhammad. In 1603 the first Russian invasion of Khíva took place. In the month of June the Cossacks of the Ural captured Urganj and carried off thousands of young men and maidens, besides a thousand carts laden with booty. On their retreat, however, they were overtaken by Arab-Muhammad and annihilated. Six months later the Kálmaks invaded the country from the north of the Shaikh-Jeli hills, and from them also the plunder was recovered on their retreat. A second Kálmak invasion, ten years later, was attended with success to the raiders. In 1621 Ilbárs, one of the sons of Arab-Muhammad, captured Khíva during his father's absence, and later put his father to death. In 1623, however, Isfandiar-Khán, the brother of Ilbárs, drove the latter from Khíva, put him to death, and was elected Khán in his stead. He employed the Turkumáns, by whose aid he had been placed on the throne, to disestablish the other Uzbek princes, and his reign was a stormy one till his death in 1641. He was succeeded by his brother Abdúl-Gházi, who, during the reign of the late Khán, had made several attempts to seize the throne, supported by the Uzbaks. He, however, had first to drive the Turkumán supporters of his brother from the country, and

was not finally seated on the throne of Khíva till 1644. Such is the picture of Uzbek history presented to us in the 17th century! The changes of government after Abdúl-Ghází's death possess little interest for us, and we now pass to the invasion of Khíva by Prince Bekovitch-Teherkásski in 1717.

The objects of this ill-fated expedition were nominally to discover whether there was gold in the Amu-Daria, to open commerical relations with Khíva, and to find out whether the Amu could be diverted into the Caspian. Besides in 1700 Khán-Sháh-Niáz had paid voluntary homage to Russia. In 1703 Khán Aran-Muhammad had done the same, and later the Khívans had begged for Russian aid against the Bukháriots. To lead the expedition Prince Bekovitch-Teherkásski, a Lieutenant of the Guards, was chosen, and on the 28th October 1714 he embarked at Astrakhán with 1,500 men and sailed for Gurieff. Here his fleet was stopped by the ice, and he had to return to Astrakhán. During 1715, and the earlier part of 1716, extensive preparations were made, and reconnaissances conducted on the eastern side of the Caspian. The troops placed at his disposal numbered 3,727 infantry, 617 dragoons, 2,000 Cossacks, 22 guns, and other details: 138 boats were employed in the transport service across the Caspian. Bekovitch's first step was the establishment of fortified posts on the eastern shore of the Caspian at Tiub-Káragan, Bektir-Limán bay, and Balkhán bay, in which he left the greater part of his infantry. His force, as finally organised, consisted of—

2 companies mounted Infantry	=	300 men, 297 horses, 200 camels.	
1 regiment Dragoons	... =	600 „ 900 „	
Yaik (Ural) Cossacks	... =	1400 „	
Gebensk Cossacks	... =	500 „	
Circassians	... =	22 „	
Kálmaks	... =	32 „	
Nagai-Tartars	... =	500 „	
Sailors and artillery	... =	100 „	6 guns.
Total	=	3,454 „ 1,197 horses, 200 camels and 6 guns.	

At Easter 1717 the Cossacks marched to Gurieff, the remainder of the force being brought thither in boats, and in the beginning of June the expedition marched. The Emba was reached in 10 days, the Irket hills in 5 more, 533 miles of hilly country were traversed in 49 days, and in 2 days more (67 miles) the delta of the Oxus was reached at a point 100 miles from Khíva on the 15th August. On the 17th the Khívans attacked the camps, but after a combat, which lasted for three days, they were repulsed with heavy loss, the Russians having only ten men killed. Force having failed, treachery was employed, and after some negotiations Bekovitch and the Khán met, and the latter proposed peace. To feed the Russian troops more easily, the Khán proposed that they should be dispersed among the villages; and dispersed they were despite the protestations of several commanding officers. Directly the dispersion was accomplished, the Khívans fell upon the troops and massacred them almost to a man. The troops in the Caspian forts were withdrawn to Russia in 1717-18. In 1731 Colonel Kerberg was sent to Khíva to open commercial relations if possible, but was not permitted to enter the Khánate. In 1741 Abdúl-Khair, the Khán of the Lesser Kirghiz Horde, who ten years before had voluntarily submitted to Russia, was elected Khán of Khíva. At this time Nádir-Sháh invaded Khíva, but on hearing of the election of Abdúl-Khair, a Russian subject, offered to relinquish Khíva to him. Abdúl-Khair, however, mistrusted the Sháh and fled to his Horde, whereupon the Sháh, to prove his friendly intentions, collected and released all Russian

prisoners. On the withdrawal of Nádír-Sháh from Khíva, he left a Lieutenant-Governor behind him; but the latter was soon murdered, and the son of Abdúl-Khair, Noor-Ali-Khán, was placed on the throne in his stead, where he reigned till 1750. Towards the end of the 18th century, from 1770 to 1780, another Russian subject, Guib-Khán, a Kirghiz, was ruler of Khíva. On those various Russianised Kháns Russia based claims to the sovereignty of Khíva, which were about as valid as a claim to the sovereignty of Roumania by Germany would be now-a-days. During the latter part of the 18th and the beginning of the 19th century Khíva was the chief disturber of Russian trade in Central Asia, and not only did Khívian robbers plunder Russian caravans, but Khívian emissaries stirred up religious fanaticism among the Kirghiz tribes, which led to inter-tribal wars and raids into Russian territory. A mission to Khíva in 1819 under Captain Murávieff was well received, but the negotiations led to nothing, and Russia from the want of consolidation of her Asiatic possessions was not in a position to remedy the situation by force of arms. In 1825-26, when a report spread that the Russians were about to attack Khíva, an ambassador was sent by the Khán to the Emperor; but as the Khán refused to agree to the indemnification of Russian traders and the surrender of prisoners, the ambassador was not allowed to proceed to St. Petersburg. Matters went on in the old way, and in 1830 it was calculated that there were no less than 2,000 Russian prisoners in bondage in Khíva. Still the state of the Russian Asiatic possessions prevented an advance, though rigorous measures were taken to introduce order amongst the Kirghiz of the Orenburg steppes. An attempt was first made to obtain the release of the prisoners without an appeal to arms; so in 1863 an *ukás* was issued ordering all Khívian subjects and their merchandise in Russia to be seized and detained. In all 572 Khívians and 1,400,000 *roubles* worth of goods were seized. The Khán of Khíva was informed of the measures taken, and he at once sent an envoy to negotiate; but the latter was informed that the release of all Russian prisoners must take place before negotiations would be entered upon. The Khán dissembled and expressed himself willing to release all, but with his envoy there only arrived 25 released prisoners. He also tried to induce the Amir of Bukhára to join him against Russia, but the latter rejected his alliance. Accordingly, to further put off war, the Khán sent in August 1839 eighty more prisoners to Russia. It was now evident that war was inevitable, and in the summer of 1839 preparations had already been made for the formation of advanced posts in the steppes. The objects in view were to obtain an advanced base for the expedition, to which stores could be transported by carts, camels alone accompanying the troops to Khíva. £86,000 were assigned by the War Department for the expedition, and the command was entrusted to General Perovski, at that time Military Governor of Orenburg.

The troops were furnished by the Orenburg corps, and consisted of—

		Men
3½ battalions	...	3,041
1 division Orenburg Cossacks	...	244
2 regiments Ural Cossacks	...	1,180
2 divisions Orenburg Cossacks	...	181
Báshkirs	...	175
Artillery (22 guns and 4 rocket stands)	...	268
Various branches	...	130
Total	==	5,219

Two hundred and fifty Kirghiz were to join in the steppe. It was resolved to spare the infantry as much as possible, to transport a portion of them on camels, two men to each, changing them by turns on the march; 10,000 camels in all were required, and 7,750 three-horse carts were supplied by the Báškirs to carry stores to the advanced depôts. On the $\frac{15}{7}$ th July 1839 a detachment reached the Chushka-Kul wells on the Ak-Bulák, and set about erecting a fort. Twenty-five thousand *puks* of hay were mown and stacked, and this was to be made the main depôt; but on account of the great difficulties of the journey an intermediate depôt, afterwards transformed into the main one, was established on the Emba, at the mouth of the Ati-Yakshi rivulet, on the $\frac{10}{22}$ nd August. Here also 25,000 *puks* of hay were mown and stacked. Sheds for large quantities of other stores were established. The garrison of the Emba post consisted of 634 men; that of the Ak-Bulák post of 399. At these posts camels were collected by hiring, and in all 10,400 animals were brought in. Four columns were formed for the advance from Orenburg to the Emba, the two Ural Cossack regiments marching with 1,800 camels from Kálmakovski to the Emba. The four columns left Orenburg on the $\frac{1}{6}$ th, $\frac{1}{7}$ th, $\frac{1}{8}$ th, and $\frac{1}{9}$ th November; the 1st and 2nd by Berdiáno and Kázalinsk; the 3rd and 4th by the Iletskaia Zashitshita, and after most fatiguing marches in heavy snowstorms the four columns united near the Caravan lake on the $\frac{24}{6}$ th November, whence they proceeded up the right bank of the Iletskaia by échelons at a distance of a quarter or half a day's march. After most distressing marches, during which the frost ranged from 10° to 30° R., accompanied by a biting wind called "burán," on the $\frac{10}{31}$ st December the column reached fort Emba, where it was joined by the Ural Cossack regiments. The whole march of 472 *versts* (314 $\frac{2}{3}$ miles) was performed in 32 days. Not a single man had died from cold, though there were numerous cases of frost-bite. On the $\frac{19}{31}$ st December 2,000 or 3,000 Khívan cavalry had attacked Ak-Bulák, but were beaten off with heavy loss, and an attack on a small party north of the fort on the following day also failed. On the $\frac{1}{4}$ th January the last column left fort Emba for Ak-Bulák, distant 160 *versts* (107 $\frac{2}{3}$ miles), and reached it in 15 days. This march was accomplished under enormous hardships. The snow was so deep that the infantry had to advance in line to tramp a way for the unloaded camels, the cavalry doing the same for the loaded ones. Of the 10,000 camels with which the expedition started but 8,900 reached fort Emba, while at Ak-Bulák the number was reduced to 5,188, 1,200 having died on the road, and the remainder having been abandoned as useless. The guns had frequently to be drawn by men, so exhausted were the horses. Only rest and ample food could have put the transport of the force in a fit state to reach Khíva, but for these supplies did not suffice. On the $\frac{1}{13}$ th February, therefore, General Perovski resolved to turn back, and the return march was attended with enormous hardships. Out of over 10,000 camels which started only 1,500 were alive on April 13th. Thus this expedition succumbed, as others have done, to difficulties of transport and an adverse climate, the expedition having been undertaken at a totally unsuitable season of the year.

In the interval between this expedition and that of 1873 the old state of matters continued more or less unaltered, with this difference that the Russians, by extending their frontier to the Sir-Daria, by consolidating their Asiatic possessions, and by the construction of posts on the east side of the Caspian (see Section II) were much more able to act vigorously when the time for

action arrived. From 1825 till 1842 Allah-Kuli-Khán (with whom Abbott had negotiations in 1839) ruled in Khíva. He defeated and reduced to subjection the Turkumáns, carrying away the Gokláns, Alailis, and Émrelis to Khíva, and exacting tribute from the Tekkes. He was succeeded by two of his sons, the latter of whom, Muhammad-Amin, fell at Sarakhs in battle with the Persians in 1855, and after four other Kháns had in one year been raised to the throne and deposed in the same year Syud-Muhammad-Rahím-Khán, grandson of Allah-Kuli-Khán, ascended the throne. Various Russian missions were sent to Khíva, but none succeeded in attaining a settlement of affairs or a guarantee against the repeated attacks on traders. In 1866 the Yamúd Turkumáns were subjugated by Khíva, and in 1867, by diverting the course of the Laudán canal, she cut off the water-supply of the other Turkumán tribes nomadising on the borders of the oasis, and ten of their elders submitted. The other clans destroyed the dam made, whereupon they were attacked by the Khívan troops and forced into submission. The most powerful tribes were forcibly settled about Chimbai and Kubet, the rest scattered throughout the Khánate. One Khán, Ata-Murád, moved away and settled on the Caspian. In consequence of repeated complaints in 1872, the Khán of Khíva sent an envoy to the Viceroy of the Caucasus, but was informed that his envoy could not be received until—

I.—All the Russian captives in Khíva had been released.

II.—The Khán's explanation in writing of his former insolent replies to Russian despatches had been received.

The Russian Government sent accredited envoys to Khíva with those despatches, but their demands were not complied with, and the Khán of Khíva sent embassies to Turkey, India, and England praying for protection against Russia. Khíva had been once looked upon by English statesmen as the point in Central Asia to which Russian influence must not extend, but at this time the British Government did not see fit to interfere in Central Asian affairs, and contented themselves with Russian assurances of non-annexation, and there can be little doubt but that Russia was justified in her attack on Khíva. Even in 1872 the Khívans penetrated to the lower Emba and to Mangíshlák, stirred up disturbances among the Kirghiz tribes, and tried to shake their allegiance to Russia, and also prevented the passage of the mails on the Táshkand road. On the 21st December 1872 war was declared against Khíva with the object of freeing Russian prisoners, preserving order in the Russian frontier districts, providing for the security and regularity of trade, and putting an end to the slave trade in Khíva.

The troops detailed for the expedition were divided into three columns, advancing from Turkistán, Orenburg, and the Caucasus—

I.—The Turkistán column, under the personal command of General Von-Kaufmann 1st, Aide-de-Camp to the Emperor, who was also Commander-in-Chief of the entire expedition. It consisted of two detachments—

(a) The Jizák detachment under Major-General Golovátcheff was to advance from Táshkand by Chináz and Jizák. It consisted of—

6 companies of Rifles.	}	14 field guns.
5 companies of Infantry.		2 light garrison guns.
1 company of Sappers.		4 mortars.
5½ <i>sotnias</i> of Cossacks.		1 rocket stand.

(b) The Kázalinsk detachment under Colonel Goloff was to advance *vid* Irkibai to the Bukán range, and there unite with the Jizák column. It was composed of—

4 companies of Rifles.		1 half battery of Mountain Artillery (guns).
5 companies of Infantry.		2 mitrailleuses.
1½ <i>sotnias</i> of Cossacks.		2 10-pr. unicorns (<i>edinorogi</i>).
1 rocket stand.		

The total strength of the two detachments was 3,120 rifles, 1,150 sabres, 677 gunners (total 5,247 men), 1,654 horses, 250 non-combatants.

II.—The Orenburg column was to concentrate at fort Emba and march by Kára-Tamak and along the west coast of the Sea of Aral. It was under the command of Lieutenant-General Verevkin, and consisted of—

9 companies of Infantry	}	3,461 men. 1,797 horses.
1 division of Sappers		
6 <i>sotnias</i> Orenburg Cossacks		
3 <i>sotnias</i> Ural Cossacks		
1 battery Cossack Horse Artillery		
2 garrison guns		
6 rocket stands		
4 siege mortars		

III.—The Caucasian column was divided into three detachments as follows:—

(a) The Kinderli detachment under Colonel Lomakin of—

18 companies of Infantry,		6 <i>sotnias</i> of Cossacks,
1 division of Sappers,		10 guns,
3 rocket stands,		

was to advance by Bish-Akti and Ilti-Iji to the Aibugir lake, and there unite with the column of General Verevkin.

(b) (c) The Krásnovodsk and Chikíshliar detachments under Colonel Markozoff were to unite at Burúdjí, and thence march by Igdi on Zmukshir. It consisted of—

12 companies of Infantry	}	2,200 men.
1 division of Sappers		
4 <i>sotnias</i> of Cossacks		
16 field guns (12 3-pr., 4 4-pr.)		
2 rocket stands		

Finally, the steamers *Sámarkand* and *Perovski* of the Aral flotilla, each with 4 small guns, 3 long boats, and 260 sailors, were to support the land troops by operations on the Amu-Daria.

The equipment of the troops, &c., will be noticed in Appendix I.

The Khívans were alarmed by the preparations of Russia, and did their utmost to stir up the Kirghiz tribes of Mangíshlák against the Russians. The effective population of the Khánate and the Turkumáns were hastily collected and armed, and pushed forward to the west, from which direction the attack was expected. The outposts were at Min-Bulák. As a last effort an envoy was sent with 21 Russian prisoners towards Fort No. 1, near the mouth of the Sir-Daria, to meet and, if possible, stop the advancing column. But the time for negotiations had passed.

The Kázalinsk column left fort Kazála on the $\frac{6}{13}$ th March and three following days, marching in four *échelons*, and on the $\frac{13}{30}$ th March reached Irkibai.

Here a small fort was built and a garrison of two companies and 100 Cossacks, with two "unicorns," left to secure the routes to Dau-Kara and Min-Bulák. On the 28th and 29th March (9th and 10th April) the march was resumed in three *échelons*, and on the $\frac{2nd}{14th}$ April the Bukán range was reached, when an order was received from General Kaufmann to advance to the spring of Yaz-Kúdúk, there to await orders; and here the column arrived in two days more. The first *échelon* of the Jizák column left the river Kly on the $\frac{13th}{25th}$ March, followed by the other three, and after considerable hardships caused by the snow-storms, frost (the thermometer sometimes fell to 18° F.), and rain, on their march by Ushma, Farish-Simtap, Tamir-Kabuk, and the Nauráta range, reached Balti-Sudir on the $\frac{24th\ March}{4th\ April}$. During this march fuel, forage, and camels were furnished to the column by the Amir of Bukhára. After a short halt at Balti-Sudir the march was resumed, and on the 29th and 30th March (10th and 11th April) Aristán-Bel-Kudúk was reached, where the troops halted for a fortnight to recruit their strength after their great hardships. The number of camels having been made up by the Kirghiz of the Kizil-Kum, on the 11th and 12th (23rd and 24th) April the column advanced again, an order having been sent to the Kázalinsk column (which had reached Tándi on the 9th and 11th (21st and 23rd April) to follow and unite with the main force at Khál-Ata. After a most fatiguing march this column reached Aristán-Bel-Kudúk on the $\frac{1}{2}$ $\frac{3}{5}$ th April, one day's march behind the last *échelon* of the Jizák column. The vanguard of the Jizák column reached the Khál-Ata on the $\frac{21st\ April}{3rd\ May}$, the Kázalinsk column arriving there on the 24th. During the march the Bukhára Government supplied the force. At Khál-Ata a halt was made till the 30th April, the heat being very great. A redoubt (Fort St. George) was finished here on the 26th April, containing artillery, engineer, and commissariat depôts, and a hospital with 30 beds and garrisoned by 1 company, 1 *sotnia* and two mountain guns. On the 27th April a reconnoitring detachment had the first skirmish with the Turkumán cavalry, in which the latter were defeated. The detachment halted at the wells of Adám-Krilgán and began to clear them out. On the 30th the column marched to Adám-Krilgán and halted on the $\frac{1st}{13th}$ May. On the 2nd May the advance was resumed, and it was only with the greatest difficulty that the column succeeded in reaching Altí-Kúdúk. Had it not been for the skill of a Kirghiz *Jigít* in finding these wells, a disastrous retreat must have been the fate of the column. As it was, a large part of the force had to be sent back to Adam-Krilgán next day to dig more wells, refill all the available water vessels, and return to Altí-Kúdúk. This they did not succeed in accomplishing till the morning of the 9th, and in the afternoon of the same day the column resumed its advance. But out of the 2,800 camels which had left Khál-Ata, only 1,240 now remained with the column, so severely had the march told upon them. A large part of the baggage, 2 companies of infantry, and 2 guns had to be left behind for want of transport, and with 10 companies, 10 guns, and 5 *sotnias* the column marched. On the evening of the $\frac{10th}{22nd}$ May it bivouacked opposite the Uch-Uchák heights on the Amu-Daria, which were alive with bodies of the enemy. On the 11th the column advanced in order of battle, camels in the centre, and were shortly attacked by the Turkumán cavalry, who were repulsed by the fire of the infantry and pursued by the cavalry. The lake of Uch-Uchák was reached in the evening, and on the $\frac{1}{2}$ $\frac{6}{8}$ th May the column, marching down the Amu-Daria, reached Ak-Kámish, 20 miles from Shúra-

Khána. The means of crossing the river available consisted of three small pontoons belonging to the Kázalinsk detachment, and eleven small and four large boats captured by the troops on the river. The Khívan troops were entrenched about the small fort of Shaikh-Arik, north-east of Pitnák, where they had 4,000 to 5,000 men (including some inhabitants) and four guns. On the $\frac{1}{2}$ th they were shelled out of this position. The river is here about 2,000 paces broad, and on the $\frac{1}{3}$ th May the troops began to cross, and by the 22nd (including the two companies and two guns left at Khál-Ata which by this time had come up), 12 companies, 12 guns, 1 *sotnia*, the staff, field hospital, baggage train with 300 camels, and artillery and engineer parks had crossed to the left bank, the remaining camels being sent back for the baggage which had been left behind, and the cavalry and rockets remaining to protect them and the point of crossing.

We must now turn to the Orenburg column, whose vanguard (2 *sotnias*) had left fort Emba on the $\frac{26$ th March, followed by the main body on the $\frac{7$ th April, ^{30th March} _{11th April}. Marching by lake of Chushka-Kul, on the $\frac{11$ th April _{23rd} the main body ascended the Chink by the Aris ravine. The weather was at first very cold, but gradually improved, and no opposition was offered to the column. Kazárma, on the Aral coast, was reached on the 25th, the waterless stretch between Issen-Chágil and that place having been crossed in four *échelons*. Leaving Kazárma on the 28th, 29th, and 30th April (10th, 11th, and 12th May), on the 2nd, 3rd, and 4th (14th, 15th, and 16th May) the column arrived at Urga.

Colonel Lomakin's column had assembled at Kinderli bay, and marched thence in three *échelons* on the 14th, 15th, and 17th April. These arrived after great sufferings from the heat and sandstorms at the wells of Bish-Akti on the 19th, 20th, and 23rd (O. S). Here on account of the losses in camels and the enfeebled state of the surviving animals one company was left and another sent back to Kinderli. A fort was built here and garrisoned by two companies, 1 *sotnia*, and 1 gun (Fort St. Michael). On the 23rd Major Navrotski, who had been raiding with two *sotnias* in Mangíslák, arrived at Bish-Akti, bringing with him 300 camels, 160 horses, and a large number of sheep and goats captured from the refractory Kirgh'z. From the 20th to the 25th the column resumed its march in three *échelons*, commanded by Lieutenant-Colonels Skobelev, Grodekoff, and Buyemski, and on the 30th the column, after nearly succumbing in the desert to thirst, on account of the failure of wells on which it had depended, and, like the Turkistán column, owing its salvation to the *Jigils*, was concentrated at Ilti-Idgi. Here a fort was erected, garrisoned by one company. After two days' halt the advance was resumed, and on the $\frac{3$ rd _{15th} the staff and cavalry arrived at Tabins-su, where intelligence was received of the arrival of the Orenburg column at Urga. As the originally intended concentration of the two columns at the latter place could not now take place, Colonel Lomakin concentrated his forces at Alam, the advanced *echelon* under Lieutenant-Colonel Skobelev having a smart skirmish there with the Turkumáns on the $\frac{6}{17}$ th. Leaving his infantry to follow on the $\frac{7}{19}$ th, Colonel Lomakin with the cavalry pushed on and joined General Verevkin at Kangrád on the $\frac{1}{24}$ th.

Meanwhile the Orenburg column had taken Kangrád on the $\frac{2}{20}$ th May. The fort of Jáni-Kala had been occupied by 500 to 800 Uzbaks, but these retired before the Russians, by whom a redoubt, garrisoned by a company, 109 cavalry, and 2 rocket troughs, was constructed near the Khívan fort.

On the $\frac{8}{10}$ th May the Orenburg column advanced against Kangrád, before which the Khívan forces under Yesaul Muhammad were drawn up, their number being variously put at from 500 to 1,500 men, but without artillery. On the approach of the Russians the enemy fled, the difficult nature of the country preventing an effective pursuit, and Kangrád was occupied without fighting. On the $\frac{1}{2}$ $\frac{4}{6}$ th May the main body of Colonel Lomakin's column reached Kangrád, after a march of 5 days, without a mouthful of good water. The march of this column must be considered truly brilliant. The 450 *versts* from Mangíshlák to Alam had been accomplished in 22 marching days—an average of 26 *versts*, or 17 miles, per diem; the 166 *versts* (110 miles) from Alam to Kangrad in 5 days—22 miles a day.

Thus the whole Russian force destined to conquer Khíva was across the frontier of the Khánate by the end of May. Exclusive of the troops left behind at the various *étappen* posts, the strength of the three columns is given at :—

	Men.	Guns.
Turkistán column	3,888	16
Orenburg column	2,304	6
Mangíshlák column	1,447	4
Total	<u>7,639</u>	<u>26</u>

The Krásnovodsk column under Colonel Markozoff was not destined to share in the conquest of the Khánate. Advancing in four *échelons* from Chikíshliar, on the $\frac{8}{10}$ th April, after a march of 238 *versts* (159 miles), it arrived at Aidin, and on the $\frac{11}{23}$ rd April reached the well and freshwater lake of Topiátan, having been joined on the way by two *sotnias* of Terek Cossacks from Krásnovodsk. Continuing the advance, on the $\frac{1}{2}$ $\frac{6}{8}$ th the Cossack advanced guard cavalry had a sharp skirmish with the Turkumáns at the Igdi wells, the result of which was the capture by the Russians of 267 prisoners, 1,000 camels, and 5,000 sheep, with slight loss. On the same day the rest of the column reached Igdi. During this march the camels had perished in large numbers. On the $\frac{1}{3}$ $\frac{8}{10}$ th the advance was continued by the first *échelon*, the remainder being ordered to follow on the 19th, 20th, and 21st.

The heat rose to a terrible pitch, the highest measured being 155 $\frac{3}{4}$ ° Fahrenheit, after which all the thermometers burst, and the supply of water ran short. Men and horses fell fainting, and it was only by diverting the column to the well of Bála-Ishem, 10 miles to the east of the road from Igdi to Ortakui, that the force was saved from annihilation. Water was sent back to the stragglers, and by those means most of them were brought in. On the $\frac{21}{3}$ rd April the first *échelon* and cavalry were concentrated at Bála-Ishem, the latter having gone some distance further than the infantry towards Ortakui. They had lost 86 horses since leaving Igdi, and 40 more died at Bála-Ishem. To advance further was impossible in the enfeebled state of the troops and camels. The distance to Ortakui was waterless, thence to the wells of Nafas-Kulu and Dandir was 50 *versts*, and to the Khívan oasis from the latter 210 *versts* through a waterless desert. Colonel Markozoff therefore ordered the return march to Igdi on the $\frac{22}{4}$ th April, 100 Cossacks and 100 infantry having to be carried on camels. Thence to the Caspian the retreat was comparatively easy, but on return of the troops half of them were found unfit for duty, 60 had died of sunstroke, almost all the horses had been lost, and out of 3,000 camels only 800 remained alive. The advance of this column

had, however, this advantage, that it engaged the attention of 10,000 of the best troops of the Khívan army, and thus contributed materially to the success of the expedition.

It is difficult to arrive at an estimate of the total forces put in the field by Khíva. The troops, or rather "men with arms," gathered near Kangrád are estimated at 4,000 men, those at Khodjeili at 6,000 men with 6 guns, at Mangit 3,000 with 3 guns, and at Shaikh-Arik 4,000 to 5,000 men with 4 guns. The leaders were Kafar-Karadjigetoff, the Mangíshlák chief; Sadik, a Kirghiz chief who had long lived on Khívan territory; the two ministers (Diván-Begi) of the Khán, Muhammad-Niáz and Muhammad-Murád (latter commanding at Kangrád); Muhamamd-Karim and Yákub-Beg, Aides-de-camp of the Khán.

On the $\frac{11^{\text{th}}}{23^{\text{rd}}}$ May Verevkin's advanced guard was 17 miles beyond Kangrád, and on the $\frac{12^{\text{th}}}{24^{\text{th}}}$ his main body advanced on Khodjeili. The following was the composition of the united columns:—

MANGÍSHLÁK COLUMN.	{	81st (Apsheron) Regiment, 5 companies	} 9 companies.
		83rd (Samursk) Regiment, 1 company	
		84th (Shirván) Regiment, 3 companies	
		} 4 sotnias.	Daghistan Irregular Cavalry, 2 sotnias
			Two sotnias of (Terek) Cossacks, 2 sotnias
2 field, 2 mountain guns, and 3 rocket troughs.			
		1 section of Sappers.	
ORENBURG COLUMN.	{	1st Orenburg Line Battalion, 3 companies	} 7 companies.
		2nd Orenburg Line Battalion, 4 companies	
		2nd and another Ural sotnias, 2 sotnias	} 7 sotnias.
		2nd, 3rd, 6th, and two other Orenburg sotnias, 5 sotnias	
		An Orenburg Horse Artillery Battery, 6 guns.	
		Two garrison guns, 4 rocket troughs, 4 mortars.	
		1 section of Sappers.	

On the $\frac{15^{\text{th}}}{27^{\text{th}}}$ the force—Caucasians on the right, Orenburg troops on the left—advanced on Khodjeili. Threatened by a cavalry attack on their left flank, and played on by the artillery, the Khívan troops (6,000 men and 6 guns) drawn up for the defence of the town retreated hastily through it, and in the evening the place was occupied without resistance. Some of the Khívans were chased into the river; the remainder retired towards Mangit. The Russian troops halted at Khodjeili on the $\frac{16^{\text{th}}}{28^{\text{th}}}$ and $\frac{17^{\text{th}}}{29^{\text{th}}}$ May.

On the 18th the troops advanced on the Mángit road, and on the 19th crossed the Laudán canal and halted near fort Band. On the $\frac{20^{\text{th}} \text{ May}}{1^{\text{st}} \text{ June}}$ the column moved in order of battle on the town of Mángit, cavalry in the advanced guard and on the flanks. The enemy (mostly cavalry) were in position on a range of sand hillocks half way between Band and Mangit, and on the approach of the Russians they began to manœuvre to gain the left flank of the latter. In this, however, they were checked by a timely charge of Cossacks, supported by the rockets. Their next effort against the Russian reserve was repulsed by the infantry and guns, as was also a third attack on the flank and rear of the baggage trains. The attack lasted about two hours, and at 9 A.M. the Russians occupied the range of sand hillocks, where a final attack was made by the Turkumán horsemen. Repulsed in this by the united fire of the infantry and guns they fled in disorder to the eastward. Towards 3 P.M. the Russians occupied the town, and encamped to the south of it. The Khívan army under Jambi-Beg had numbered 3,000 men and suffered considerable losses. Those of the Russians (according to the official return) were 1 officer and 2 men killed, 1 officer and 3 men wounded.

On the ^{22nd May}_{3rd June} the column approached Gorlán, before which the main body of the Khívan forces, estimated at 10,000 men, was said to be posted. After a few feeble attacks by the Khívans, the town was occupied almost without fighting, with a loss of only 1 officer and 2 men wounded. The most determined attack (upon the baggage train) was repulsed by Lieutenant-Colonel Skobeleff. It had been originally intended that the Orenburg and Mangíshlák columns should await the arrival of the Turkistán troops at New Urganj; but as after the capture of Gorlán the Khán had begged for an armistice, which was evidently a ruse to gain time, and the resistance of the Khívans appeared to be only half-hearted, General Verevkin resolved to advance straight on Khíva. Fortunately for the Russians, the Khívans in their retreat neglected almost invariably to destroy the bridges over the numerous canals. It was only on the ^{23rd May}_{4th June} that a successful attempt was made to destroy one 189 feet long, and then the Khívan working party was dispersed by a few well-aimed shells, and was pursued by Colonel Leontieff's Cossacks. The bridge over the important Gázavat canal was found untouched, and on the ^{25th May}_{6th June} the whole column reached Kosh-Kupir, a day's march from Khíva. Here a letter was received from General Kaufmann informing General Verevkin that the troops of the Turkistán column had crossed the Amu, and General Verevkin resolved to await their arrival, and moved 8 *verst*s to the south to a large garden of the Khán on the Khatir-Tut canal. On the ^{27th May}_{8th June} a body of 3,000 Khívans, horse and foot attacked the camp, but were repulsed with a loss of 300 killed by Colonels Skobeleff and Leontieff, the Russians losing only 1 killed and 11 wounded. As rumours of the retreat of the Turkistán column had reached the camp, General Verevkin resolved to hesitate no longer, and on the ^{28th May}_{9th June} he advanced through gardens and cultivation towards the capital, and finally came under fire from the walls between the Russian column and the town. At a distance of 700 feet from the latter runs the Palwán-Ata canal, 20 to 30 feet broad, with a strong current and a bridge across it, which was barricaded. Despite the artillery fire from the walls and from a battery at their fort, and the repeated attacks of the Khívan cavalry on their flanks, the Russians pressed forward, and the Apsheron regiment stormed the bridge and took the battery at the foot of the wall. Eight guns were now brought up to near the bridge and opened against the city walls. While watching the effect of their fire, General Verevkin was struck by a bullet on the left eye, whereupon Colonel Saranchoff took command. Having attained the object of the reconnaissance, the troops were withdrawn behind the canal, taking the captured guns with them, and in the afternoon deputies from the city announced that the Khán had fled and begged for an armistice. The conditions dictated were—(1) that the Khívans should give up all their guns and arms; and (2) that their principal men should at once go to General Kaufmann's camp to treat for peace. If the terms were not agreed to, the bombardment of the city was to commence in two hours. Meanwhile two batteries were constructed—one for 8 guns, the other for 4 mortars—at 585 yards distance from the northern gate of the city. Shortly after the departure of the deputies fire was again opened from the wall, and, in spite of the protestation of a second deputy that this was carried on by the Turkumáns who would obey no orders (which was only a ruse to gain time), the bombardment was carried on by the mortars. In the evening orders were received from General Kaufmann, who was then encamped on the Yangi canal, 10 miles east of Khíva, ordering the cessation of the bombardment as negotiations had been

entered upon for peace. The Turkistán column was to arrive next day. The Orenburg and Mangíshlák columns losted 5 killed, 6 officers and 45 men wounded, 3 officers and 11 men contusioned on this day.

Till ^{27th May}_{8th June} the Turkistán column had remained halted at Hazár-Asp, which had been reached on the ^{23rd May}_{4th June} after a sharp skirmish between a reconnoitring party and Muhammad-Niáz's force on the 22nd. Three companies and two mountain guns were left here, and on the 27th the column marched. Including the force at Hazár-Asp, it consisted of 12 companies,* 12 guns, 3 *sotnias*,* and 2 rocket troughs. The remaining 3 *sotnias*† were left at Shaikh-Arik to guard the flotilla and ferry. On the ^{28th May}_{6th June}, as above stated, the force, without having met with opposition, bivouacked on the bank of the Yangi-Arik canal, 10 miles from Khíva. Here envoys appeared before General Kaufmann announcing the surrender of the Khán. Meanwhile in Khíva anarchy prevailed, and the war party placed Ata-Ján-Tora, brother of Syud Muhammad-Khán, who had been imprisoned for seven months, on the throne. On the ^{29th May}_{10th June} the Turkistán column arrived before Khíva, and was met by the Khán a few miles from the city. In the north of the town desultory firing still went on, and, while two companies, 2 *sotnias*, and 2 guns were sent to join the Turkistán column, the remainder of the Orenburg and Mangíshlák columns pushed forward towards the town from the north, a siege battery being established at 250 yards from the wall. At 10 A.M. the guns opened, and at the twenty-fourth round the walls showed several practicable breeches, whereupon Colonel Skobeleff, with a company of the Samursk regiment and one of the two Orenburg battalions, advanced to the storm. The town was soon in the hands of the Russians, whose losses were 1 officer and 10 privates wounded. General Kaufmann's announcement of the surrender of the city put an end to the fighting. The strength of the Khívan garrison was 2,000 Yamúds, 1,000 Uzbek horse, 700 Uzbek infantry, 112 *Sarbázes*, and 500 men armed with wall-pieces. At 2 P.M. the Turkistán column entered Khíva, and the object of the campaign had been attained.

The Khán of Khíva had, when he quitted his capital on the ^{28th May}_{9th June}, taken refuge among the Yamúd Turkumáns, but upon the invitation of General Kaufmann, on the ^{2nd}_{14th} June he returned to the camp of the Turkistán column and was reinstated as Khán. While the Russian troops remained in the Khánate, he was assisted by a council of three Russian officers and three Khívan dignitaries. On the ^{11th}_{23rd} June he issued an order emancipating for ever the slaves in Khíva, and measures were taken for sending them to their former homes. Explorations and reconnaissances were undertaken on a large scale by the Russian troops, the details of which will be found in other chapters. These reconnaissances were especially directed towards ascertaining whether the Oxus could be diverted into its old bed. It soon became apparent that the maintenance of order in the Khánate was closely connected with the behaviour of its Turkumán subjects, and that the influence exercised by the Khán over the latter was of the feeblest description. It was necessary (according to Russian ideas) to show these wild and turbulent tribes that the reign of lawlessness had ceased, and therefore General Kaufmann laid upon the Yamúds a contribution of 300,000 *roubles* (£42,855), and by the ⁵₁₇th July the elders had all arrived and announced their willingness to pay. To supervise the payment of the fine,

* Two each from 1st, 3rd, and 4th Rifles, and two from 4th and 8th Turkistán Line Battalions.
† 8th, 12th, and 17th Orenburg, 1st and 3rd Ural, and 5th Semeraitchia.

on the $\frac{9^{\text{th}}}{21^{\text{st}}}$ July, Major-General Golovátcheff marched from Gázavat with 8 companies, 10 guns, 6 *solnias* and a rocket battery. On the march a large caravan of Turkumáns was seen, attacked, and dispersed, and large numbers of the people killed. Marching by Isamud-Ata and Zmukshir, on the $\frac{1}{5}$ th the detachment reached Chandir, where its camp was fiercely attacked by Turkumáns, who were repulsed with small loss and hotly pursued. On the $\frac{1}{27}$ th the Turkumáns renewed their attack with astounding bravery. At one time success appeared to incline to their side, but the steadiness of the Russian troops gained the day, and Turkumáns were driven off with a loss of 800 in killed alone, the Russian loss being 1 officer and 3 men killed, 5 officers and 32 men wounded. During the 16th, 17th, and 18th July, the Russians pursued the retreating tribes, captured 5,237 cattle, 119 camels, and 3,000 *arabas*, and killed a large number of the nomads. The resistance of the Yamúds was completely broken, and little more trouble was to be anticipated from them. The above is the Russian official account, but Schuyler says that an impossible contribution was imposed on the tribes, and that before the time fixed for its payment the troops of the Turkistán column were ordered to massacre the nomads so as to gratify their tastes for fighting and military glory. How far this accusation is well-founded it is impossible to say. On the $\frac{6}{18}$ th August the Turkistán troops returned to Khíva, and on the $\frac{9^{\text{th}}}{21^{\text{st}}}$ the Mangíshlák column received orders for the return march. It reached Kinderli bay on the 10th and 12th (22nd and 24th) September. With it marched Prince Ata-Ján Tora, brother of the Khán, who has since entered the Russian service. The Orenburg column, which had moved to Kizil-Takir in support of General Golovátcheff's detachment, marched back on the $\frac{4}{16}$ th August to Kuhna-Urganj, whence marching by Urgá it reached the Emba river on the $\frac{4^{\text{th}} \text{ September}}{6^{\text{th}} \text{ October}}$. On the $\frac{1}{4}$ th August the Turkistán column left Khíva, and on the 13th reached Khanka on the Amu, where it crossed the river, the crossing lasting ten days. Near Shúra-Kháua a site was selected for a fort, which was commenced on the 20th August, and named Fort Petro-Alexandrovsk. In it were left 9 companies, 4 *solnias*, and 8 guns, and on the $\frac{11^{\text{th}}}{23^{\text{rd}}}$ September the column resumed its return march. On the $\frac{1}{25}$ th October the last troops entered Táshkand. The cost of the campaign was estimated at 3,725,000 *roubles*, and the total Russian loss on the battle field was 2 officers and 32 men killed, 22 officers and 150 men wounded.

The text of the Treaty of peace signed at Khíva on the $\frac{1}{4}$ th August runs as follows:—

“Syud-Muhammad-Rahím-Bahádur-Khán, professes himself a devoted servant of the Emperor of Russia. He renounces all direct and friendly relations with the neighbouring sovereigns and Kháns, as well as the conclusion of any commercial or other treaties with them whatsoever, and binds himself not to undertake any warlike operations against them without the knowledge and sanction of the supreme Russian authority in Central Asia.

“2. The boundary between the dominions of Russia and Khíva shall be formed by the river Amu-Daria from Kukertli downwards to the point at which the western channel of the river diverges from the main stream, and thence by the western channel to its embouchure into the sea of Aral. Further, the boundary shall run along the sea coast as far as Cape Urgá, and from thence follow the old bed of the Oxus along the foot of the Ust-Urt precipice.

“3. The entire right bank of the Amu-Daria and the lands adjoining it, hitherto regarded as appertaining to Khíva, together with the settled and

nomad population dwelling thereon, pass over from the Khán into the possession of Russia. The same applies to those lands on the right bank, which at present form domains of the Khán, and of which the usufruct has been given by him to Khívan dignitaries of State disregarding all claims of previous owners. It rests with the Khán to recompense them by other lands on the left side of the river.

“4. In the case that His Majesty the Emperor should cede a portion of the right bank to the Amir of Bukhára, the Khán of Khíva binds himself to recognise in the Amir's person the lawful owner of any such portion of this former dominion, and renounces all intentions of re-establishing his authority therein.

“5. The right of free navigation on the Amu is exclusively conferred on Russian steamers and other Russian vessels, whether the property of the State or belonging to private persons. Khívan and Bukháran craft can only enjoy the same right by permission of the Russian authority in Central Asia.

“6. Russians shall be entitled to establish harbours at such points on the left bank where it may be deemed to the purpose and necessary to do so, the Government of Khíva being responsible for the security and good preservation of such harbours. The localities for the establishment of harbours cannot be chosen without the approbation of the supreme Russian authority in Central Asia.

“7. In addition to harbours, the Russians are at liberty to construct factories for the storage and safe keeping of their goods on the left bank. For these factories the Government of the Khán is bound to allot sufficient uninhabited land at such points as may be selected by the supreme Russian authority in Central Asia for the erection of dwelling houses for employés of, or persons trading with, the factories, for commerical offices, and for the establishment of economical farms. Such factories with all their inhabitants and the goods stored in them are to be placed under the immediate protection of the Khán's Government, which is responsible for their preservation and safety.

“8. All towns and settlements without exception are henceforth open to Russian commerce. Russian traders and Russian caravans can traverse the entire Khánate without hindrance and enjoy the special protection of the local authorities. The Government of the Khán is responsible for the safety of the caravans and warehouses.

“9. Russian merchants carrying on business within the Khánate are exempt from paying the *ziaket* or any dues on trading whatsoever, in the same way as Khívan merchants have for a long time past paid no *ziaket* on the road *viá* Kazálink, or at Orenburg, or on entering the harbours of the Caspian Sea.

“10. Russian merchants are entitled to convey their goods free of custom through the Khán's dominion into neighbouring countries (duty-free transit trade).

“11. Russian merchants have the right to keep agents (*caravan-báshis*) at the city of Khíva and other towns throughout the Khánate, who will keep themselves in communication with the local authorities and superintend the regularity of business.

“12. Russian subjects are entitled to the possession of immoveable property within the Khánate of Khíva, subject to a land-tax to be fixed by agreement with the supreme Russian authority in Central Asia.

“13. Commerical engagements entered into between Russians and Khívans shall be sacredly and inviolably carried out on both sides.

“14. Complaints and claims of Russian subjects against Khívans must be without delay inquired into by the Khán's Government, and be adjusted if substantiated. In examinations of claims, preferred by Russian subjects and Khívans, Russians shall have the preference over Khívans in respect to the payment of debts.

“15. Complaints and claims of Khívans against Russians must be inquired into and settled by the nearest Russian authority, whether the (Russian) defendants be residing within Khívan territory or otherwise at the time.

“16. The Government of the Khán undertake to admit no emigrants from Russia unless they be provided with a permit from the Russian authorities; this applies to all cases to whatever nationality such emigrants may belong.

“If criminals, who are Russian subjects, attempt to evade justice within the limits of the Khánate, the Khan's Government are bound to take them into custody and make them over to the nearest Russian court.

“17. Syud-Muhammad-Rahím-Bahádur-Khán's proclamation of the $\frac{1}{4}$ th July 1873 regarding the liberation of all slaves throughout the Khánate, and the abolition in perpetuity of slavery, together with the trade in human flesh, remain in full force, and the Khán's Government are bound to employ every possible means at their command for the strict and conscientious fulfilment of this obligation.

“18. To recompense the Russian exchequer for the cost of the expedition, which was provoked by the Khívan Government and people themselves, a contribution of 2,200,000 *roubles* (about £314,280) is imposed upon the Khívan Khánate. But owing to the prevailing dearth of money in the country, and especially in the public treasuries, the Khívan Government cannot pay the whole sum within a short time, and in consideration of this difficulty the contribution may be paid by instalments, the balances bearing interest at the rate of 5 per cent. per annum in the following manner:—During the first two years the Khívan Government pay annually 100,000 *roubles*, during the next two years 125,000 *roubles* annually, then for two years 175,000 *roubles* annually; in the year 1881, *i.e.*, after 200,000 *roubles*, and afterwards not less than 200,000 *roubles* per annum till the entire contribution shall be discharged in full. The payments can be made in Russian bank notes as well as in the current coin of Khíva. The 1st December 1873 is fixed for the payment of the first instalment, on account of which the Khán is empowered to levy the usual taxes for the current year on the right bank of the Amu-Daria. The collection of these taxes must be concluded by the 1st December by agreement between the local Russian authorities and the Khán's collectors. Subsequent instalments, together with interest due, must be annually paid on the 1st November until the entire contribution shall have been discharged. After 19 years, *i.e.*, on the 1st November 1892, on which day the instalment of 200,000 *roubles* for 1892 falls due, the balance of the debt will be 70,054 *roubles*, and on the 1st November 1893 the Khán's Government must pay that balance with interest amounting to 73,557 *roubles*. In view to reduce the amount of accruing interest, it rests with the Khán's Government to enlarge the annual instalments.”

The above conditions, which shall be exactly fulfilled and constantly respected, were stipulated and accepted on the $\frac{1}{4}$ th August 1873 (on the 1st day of the month Rajab of the year 1290) in the garden of Gendemian (encampment of the Russian troops under the walls of Khíva) by the Governor

General of Turkistan, General Aide-de-Camp of the Emperor Von Kaufmann Ist on the one part, and by the sovereign of Khíva, Syud-Muhammad-Rahím-Bahádur-Khán, on the other part.

In pursuance of article 4 of the above treaty, the lands on the right bank of the Amu-Daria, from Kukertli to Meshekli and from Meshekli to the point where the old Khívan-Bukhárían frontier met the frontier of the Russian Empire, were annexed to the dominions of the Amir of Bukhára.

After the evacuation of Khíva by the Russians the Turkumáns again became troublesome, pillaging to such an extent that numerous Kirghiz left the Khívan territory and settled on the right bank of the Amu above the point where the Kuván-Járma leaves the main stream. Fort St. George (at Khál-Ata) having been abandoned by the Russians the stores were being brought to Petro-Alexandrovsk on camels, when they were attacked near Lake Sardabakul by Turkumáns, who had crossed to the right bank of the Amu, and captured together with the escort. On hearing of this Colonel Ivánoff, Commanding at Petro-Alexandrovsk, sent on the 24th September three *sotnias* with rockets under Major Andercas with three days' provisions, followed by two companies with two mountain guns. On the 26th Major Andercas came upon the band, who had in the meantime plundered a convoy proceeding by water to Khíva from Bukhára, and cut them up, 100 falling under the sabres of the Cossacks, the remainder being driven into the Amu. The plunder was recovered.

The Turkumáns, in spite of their heavy punishment, still remained in an unruly state, especially in the west of the Khánate. Accordingly, early in January 1874, a field force was formed at Nukus of 4 companies, $2\frac{1}{2}$ *sotnias*, 4 guns, and a rocket detachment, a moveable reserve column being formed at Petro-Alexandrovsk. The Khán of Khíva professed himself powerless to keep the tribes in order; so on the receipt of news that a band of 6,000 Turkumáns was assembling in the delta and pushing towards Kipchák and the Laudán district, on the $\frac{1}{2}$ ^{$\frac{5}{7}$} th January Colonel Ivánoff ordered the reserve column to Nukus, and on the ^{24th January}_{6th February} crossed the Amu on the ice. The Turkumáns retired before the column, pillaging and burning. Colonel Ivánoff advanced by Kube-Tau and Mángit, being obliged to make a circuit owing to the Turkumáns having pulled down the dams, and at the latter place received the submission of the Gázavat Turkumáns. He then marched on the Chádur villages, and, having received their submission, returned to Nukus on the ^{1st}_{13th} February. The rest of the year 1874 passed quietly, the only event of importance being the death of Amir-Umra, uncle of the Khán of Khíva, who had arranged the surrender of the city of Khíva on the 27th November.

In the beginning of 1875 a Russian caravan going from Khíva to Kázalinsk was attacked and robbed by Turkumáns on the right bank of the Amu, and in revenge Colonel Ivánoff crossed at Nukus on the 27th and 28th of January with 7 companies, $2\frac{1}{2}$ *sotnias*, 4 guns, and 4 rocket troughs and moved on Kuhna-Urganj, and thence north-west to the territory of the Kul-Yamúds, who were peculiarly turbulent, and encamped at Boyandur. The villages and farms were burned within a radius of 5 *versts*, and a gathering of Turkumáns 15 *versts* (10 miles) off was dispersed and their property seized. The column then moved on Ak-Kala, to which the Turkumán elders were summoned. Those of Ili-Ali did not come, and their villages were promptly burned. Thence the column marched by Zmukshir to Khíva, where it arrived on the 11th February, and crossed to Petro-Alexandrovsk on the 13th. As a consequence 26,000 *roubles* of the war indemnity were paid by the Turkumáns, and

10,000 more by the Khán, as part of the indemnity for the current year. The payment of 18,000 *roubles* in January had completed that for 1874.

In May 1 *sotnia* with rockets moved against Turkumáns who were plundering about Hazár-Asp and Pitnák, but the latter retired without fighting. The rest of the year passed peaceably. In the spring the Khán visited his Turkumán subjects, and was well received by them; but is stated to have requested the Russian Government to annex the country and govern it, as he confessed his inability to rule the Turkumán tribes. His request was, however, not acceded to by the Emperor. In March Muhammad-Niáz had been sent as an envoy to St. Petersburg, where he died in April. In consequence of these representations Colonel Ivánoff, Commanding at Petro-Alexandrovsk, was authorised to take what measures might seem to him necessary for ensuring the tranquillity of the frontier. In 1876, to protect the trade route between Krásnovodsk and Khíva, a small force was moved from Krásnovodsk to Kuhna-Urganj, 12 miles from which, on the left bank of the Oxus in Khívan territory, a site for a fort was selected by General Lomakin. He was sent here on the 19th September by the Khán of Khíva and General (the former Colonel) Ivánoff, and again the former expressed his wish for the annexation of Khíva to Russia, which was again refused. The fort, however, does not appear to have been constructed, and soon afterwards General Lomakin returned to Krásnovodsk.

1877 and 1878 passed quietly, and in 1879 the Khán gave every assistance to the Russian parties surveying the old bed of the Oxus. No further military operations have taken place within the limit of the Khánate, although in 1880 the detachment of the Turkistán army destined to join the forces sent against Gok-Tapa traversed its territory. The detachment was under the command of Colonel Kuropátkin, and consisted of 3 companies, $3\frac{1}{2}$ *sotnias*, 2 guns, and a rocket detachment with 900 camels. It left Petro-Alexandrovsk on the $\frac{12}{24}$ -th November, crossed the Amu at Gurlenya and Bai-Bázár, and, marching by Tásh-Hauz, Chágil, Gyaúr-Kala, Dundir, and Igdi, reached Bámi on the $\frac{3rd}{15th}$ December—a total of 673 *versts*. After the campaign closed the detachments returned by the same route.

M. Marinich,* the Dragoman of the British Embassy at Constantinople, furnished an interesting report on the affairs of Khíva in 1880. The Khán, whom other reports mention as a confirmed debauchee, was early in this year called upon to furnish a contingent to assist in the campaign against the Tekke-Turkumáns, which it was proposed to place under Prince Ata-Ján. This the Khán declared his inability to do, owing to his loss of influence over his subjects. This circumstance, together with his having failed in the previous year to pay the instalment of the war indemnity, and to his being suspected of having connived at the attack made about this time by the Akhál Tekke on the Russian Kazzák subjects, has made the relations between him and the Russian Government extremely unfriendly; and the latter are said to have contemplated annexing the Khánate either to the dominions of the Khán of Bukhára or to the Empire, and conferring it upon Ata-Ján, who in 1880 caused great excitement at Khíva by leaving for St. Petersburg without the permission of the Khán, his brother. The latter was also suspected by the Russians of having sent to the Tekke at Askábad a certain Khívan subject named Ismail-Khán,† who had learnt the work of an armourer in Yákub

* From Major Trotter's Gazetteer.

† This view is taken by Kuropátkin in his "Turkenniya-i-Turkmentsi."

Beg's service in Káshgar, and who is said to have instructed the Tekke in the use of their guns and in the manufacture of copper caps, with which they appear to have been fairly supplied during the late campaign.

STRATEGIC POINTS AND RUSSIAN GARRISONS.

The possession by the Russians of the forts commanding the passages of the Amu at Nukus and Petro-Alexandrovsk (Shúra-Khána) gives them most complete command over the Khánate of Khíva, and those would most certainly be their bases in any future operations against that country. But these points have also a second object to fulfil, that of acting as stages on the highway from the heart of Russia across the Caspian, and thence by the Yaman-Airakti route to Kangrád, the Amu, Afghánistán, and Bukhára. With both these objects in view, Petro-Alexandrovsk contains large magazines. It may safely be considered, even in the present imperfect state of our knowledge of the Kára-Kum, an impossibility to move troops from Khíva across it in any considerable numbers, but Kuropátkin's force of two squadrons and three companies with two guns succeeded in traversing it in its western part in 1880. As far as at present known, there are no practicable routes for troops across it from Khíva in its eastern part; but when Bukhára has been swallowed up by the wave of the Russian advance, and the troops of the Turkistán army have their advanced guards on the Upper Oxus, there appears to be little to prevent them from crossing in small bodies to the Marv oasis. From Kára-Bíshlák, Chabárjui, Tíshlan, and Khwája-Kúduz routes lead to Marv,* which run by lines of wells, and could doubtless be made practicable for troops in small successive *échelons*, who could concentrate in the rich Marv oasis, ready for a move forward on Sarakhs, there to join hands with the troops from the Caucasus, or to move direct on Herát by the Murgháb valley.

The present garrison of the Russian Amu-Daria province consists of two battalions of Turkistán infantry, one regiment (five *sotnias*) of Orenburg Cossacks, and a battery of the Turkistán Field Artillery Brigade. The greater part of these troops are quartered at Petro-Alexandrovsk, with two companies detached to Nukus and a *sotnia* to Chimbai. The forts have also a certain number of garrison guns.

* See "Routes" in Appendix I.

SECTION II.

GAZETTEER

OF THE

KHÍVAN OASIS, KÁRA-KUM AND AMU-DARIÁ.

A

AFGHÁN-NAR (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

AIBUGIR—

A former gulf in the south-west corner of the sea of Aral, into which the Laudán branch of the Amu and numerous smaller canals once flowed, but which is now completely dried up, and cultivated by Yamúd-Turkumáns. It was about 80 miles long and 10 miles broad, and as lately as 1858 had in some places 3 feet of water in it, in others only 18 inches.—(*Venyukoff, Kuhn, Lerch.*)

AIR—

A small oasis and lake in the desert, 12 miles north of the town of Kosh-Kupir, which is distant 12 miles from the town of Khíva.—(*Lerch.*)

AJI (WELL)—

On the Kabakli-Marv route, 48 miles from the former. There is another well bearing the same name as this on the Tíshlan-Marv route, 16 miles from the former place.—(*Kostenko.*)

AK-BÁSHLI—

A large village in the Shúra-Khána sub-district of the Russian Amu-Daria province.—(*Kuhn.*)

AKHÚN-BÁBA—

The tomb of a saint, with a few scattered farmsteads near it, on the left bank of the Oxus, 18 miles from Khíva. Here travellers to Kangrád from Khíva in the summer season generally take boat.

AK-KALA—

A fort and village half an hour's sail ($2\frac{2}{3}$ miles) up the Ulkhún mouth of the Amu-Daria and on the right bank. The fort forms a square of about 100 yards side. Its walls are built of *pisé* on a rampart of large blocks of hardened mud, and are flanked by circular towers. The total command is 20 feet, and the whole is surrounded by a ditch. The fort was evacuated

by the Khívans in 1873 after receiving a few shots from the S.S. *Sámar-kand* of the Aral flotilla, and both it and the village were in ruins when passed by Major Wood in 1874.—(*Wood, Trotter.*)

AK-KÁMISH—

A village on the Amu, 20 miles from Shúra-Khána. The Russian force under General Kaufmann marched thither from Shúra-Khána, and halted in the cultivated country round the village before crossing the river. They found fine crops of wheat and lucerne and abundance of grass as well as fuel from the neighbouring woods. Vámbéry seems to imply that the name is applicable to a long reach of more or less cultivated country above the town of Shúra-Khána.—(*Schmidt, Trotter.*)

AK-MARZIK (WFL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

ALILÍ—

A town in Khíva, 18½ miles east of Kuhna-Urganj, on the road to Khíva.

AMBÁR—

A town in Khíva on the Sháhábád canal, 31½ miles north-west of Khíva, and peopled by Sárts and Persians.—(*Venyukoff.*)

AMU-DARIA—

The Amu-Daria receives no affluents in its course from Khwája-Sálih to the sea of Aral, but, on the contrary, the larger proportion of its volume of water is drawn off for irrigation or other purposes in the lower part of its course. Rising in the Pámir plateau, and flowing in general in a north-westerly direction, the Amu, after a course of 1,700 miles, falls into the sea of Aral; but of those 1,700 miles we have only to consider the river on the part of its course from Khwája-Sálih downwards, a distance of 743 miles. This may be divided into two sections for purposes of description, *viz.*, from Khwája-Sálih to Khwája-Ili, 663 miles, and the delta, which begins at the latter town, 80 miles from the sea of Aral.

A.—THE AMU-DARIA FROM KHWÁJA-SÁLIIH TO KHWÁJA-ILI.

(1) *General description.*

At Khwája-Sálih the river is 823 yards broad (waterway only) according to Burnes, divided by two sandy islands into three channels, 295, 113, and 415 yards broad, the former being that nearest the left bank. In the first channel the soundings were 19, 6, 12, 9, 6 feet—average 8 feet; in the second 6 feet throughout; in the third 6, 9, and 15 feet—average 11 feet. Burnes crossed on the 17th June, and the current then ran 3½ miles an hour. The banks are low here.

From Khwája-Salih to Kárki, 42 miles. The banks still continue low, and the left bank is cultivated for a short distance inland. There are many islands in the stream. At Kárki, which is built on a hill on the left bank, the river is described by Vámbéry as twice as broad as the Danube at Pesth, with occasional sand banks and a strong current.

From Kárki to Khwája-Kúndúz 66 miles, Tishlan 21 miles, and Chahárjui 48 miles, the river preserves about the same breadth, both banks being low, the left bank cultivated in a strip about 6 miles broad, on the extreme edge of which Chahárjui is situated. When Burnes crossed here in August the river was 650 yards wide, with a current of 3½ miles an hour, and an average

depth of $19\frac{3}{4}$ feet, the greatest depth being 29 feet. Venyukoff from Russian sources gives the breadth of the river here as 267 *sádjens* (623 yards), and the depth as 28 feet at low water. From Khwája-Sálih to Chahárjui the fall of the river is 600 feet.

From Chahárjui to Yast, where the river divides into several branches, which unite again shortly, is 48 miles, to Kíshlák 10 miles, to Nar-Kiz-Tugai* or Nar-Kiz-Kala, near Jidán,* $44\frac{3}{4}$ miles, to Kabakli $29\frac{1}{2}$ miles, to Kiz-Kala* or Kiz-Tusli $10\frac{3}{4}$ miles, to Gurli* or Gurli-Tugai 22 miles, to Dik-Suát $22\frac{3}{4}$ miles, to Meshekli 60 miles, and to Toyuboyun 26 miles. Throughout *all* this distance both banks are uncultivated. Sometimes they are of clay, sometimes of sand, and they are mostly covered with brushwood, with beds of rushes at the water's edge; in rare cases only are the banks open. The river is uniformly deep, with numerous islands, and appears to preserve about the same breadth as at Chahárjui. Opposite Meshekli the river is divided into several branches, and at about 20 miles below this place takes a sudden bend to the south, in which direction it flows for about 5 miles; it then flows west for about three miles, before resuming its north-westerly course, and it is this reach of three miles or so which is called the Toyuboyun or "canal's neck." Here the river forces its way through a ridge of limestone rock in a defile 1,100 feet broad. The right bank is 10 to 20 feet high, the left about 40 feet high, and at the floods the current here is about 7 miles an hour according to Major Wood.

From Toyuboyun to Tunuklu is 25 miles. At the point where the river turns to the north-west is the village of Sultán-Serai, on the Khívan bank, the place for breaking bulk in the trade between Khíva and the Upper Oxus. Opposite it is a pretty wooded island, covered with dwarf elms and willows, called Arálchi-Bába-Auliya. To Tunuklu the left bank continues high, and is accompanied by low sandhills, covered with brushwood, behind which, and near Sultán-Serai, is the town of Pitnák. At Tunuklu, 165 miles above Khwája-Ili, the Khívan oasis begins, and the river is here about 2,000 feet broad.

From Tunuklu to opposite New Urganj is 23 miles. The right bank is higher than the left, and both are luxuriantly cultivated. A little below Tunuklu the river is 1,050 yards broad with many low islands. Its minimum depth is 14 and maximum 28 feet. Opposite Khánka, a few miles above Urganj, the river is divided by islands into three large (one of them 700 yards broad) and eight smaller (fordable) branches, the distance from bank to bank being about $5\frac{1}{4}$ miles, a large portion of which is of course taken up by the islands. A short distance below Tunuklu canals begin to leave the river to the left; these will be described in the next chapter. Opposite Urganj are two sandbanks. To the right a few canals are also thrown off to water the fields about Shúra-Khána.

From New Urganj to Kipehák, which is the first and only town in the Khánate, situated actually on the river, is $88\frac{3}{4}$ miles. The river is from 15 to 30 feet deep, but its course is obstructed in many places by sandbanks and islands, some of them 10 miles long. Opposite Sháhbaz-Wali, a short distance below New Urganj, the stream runs in four branches, separated by islands. The current is very swift, sometimes reaching 6 miles an hour at the floods, but at low water is moderated and sandbanks are exposed. The navigable channel winds about a good deal, the deepest part being generally

* All on the right or Bukhárán bank.

nearest the right bank. The average breadth of the waterway is about 1,000 yards, and there is no obstacle to navigation, the rapids described by Vámbéry at the head of the reach along the Sheikh-Jaili mountains having disappeared according to Major Wood's account. The Sheikh-Jaili hills (*see* Chapter I) approach the river a little below Sháhláz-Wali, but do not close upon it till about opposite Gorlán. To this place, that is, to about half way, both banks are low and cultivated, the right being a little higher. From Gorlán to Kipchák the channel is still about 800 to 1,000 yards broad, but with many shallows and some rapids. The right bank is sandy, except where rocky spurs of the Sheikh-Jaili hills approach the water's edge, and the left bank rises to a clay plateau and is covered with woods. At Kipchák a reef of rocks on the left bank and a rocky promontory on the right narrow the channel considerably and make navigation difficult. A couple of miles above Kipchák the river forms a lake, named Khwája-Kul, on its right bank. On the hills bounding this lake is a large stumpy minaret.

From Kipchák to Band is 28 miles. The river maintains a breadth of about 800 yards of waterway, with numerous islands, but the average depth is only from 14 to 21 feet. Near Nazur-Khán, about half way, the channel is contracted a good deal. Both banks are covered with jungle, a few fields and a little timber being passed on the left bank. On the right bank the jungle is in places marshy, and is bounded by hills about a mile from the river, a spur of which, the Nogai-Kala hill, approaches the water opposite Band. The influence of the stream on the right bank in washing it away is very marked in this section. From Band to Khwája-Ili, $25\frac{1}{2}$ miles, the banks retain the same character as in the last section. Opposite Khwája-Ili there was, at the time of Vámbéry's visit, a waterfall about 3 feet high called Kazan-Kitken, but this, like the Sheikh-Jaili rapids, has since disappeared. Major Wood says that at Khwája-Ili the Amu is 1,500 feet broad, but other authors estimate it at from 840 to 1,050 feet, the difference probably being accounted for by islands. Nearly opposite it is the Russian fort of Nukus on the river bank. According to Major Wood, the maximum flood was attained at Khwája-Ili on 3rd August 1874, the discharge being then 143,000 cubic feet per second, and the subsequent lowest level was on 22nd March 1875, when the volume was only 35,000 cubic feet per second, this being considered an average season. He calculates that one half of the total volume of water is diverted into the canals of the Khívan oasis.

The water of the Amu is brownish from the earth held in suspension by it, but is wholesome and palatable. There are three floods; the highest, which is in the middle of October and lasts 8 or 10 days, during which the level rises 14 to 18 feet above the usual height; secondly, that from the middle of April to the beginning of May, which sometimes lasts 28 days; and thirdly, that caused by the breaking of the ice in the middle of February, which is unimportant. The velocity at the highest flood is sometimes 6 feet per second. In the lower part of its course the river is continually encroaching on the right bank and washing it away. First swamps are formed, and then the soil is carried down. The Amu frequently freezes in January, and Burnes says that in the winter previous to his visit caravans crossed at Chahárjui on the ice. In 1874 the Russian troops crossed on the ice at Nukus, and Burnaby did the same in 1875 higher up near Khíva. In 1875 the river was frozen from January 12th to March 4th.

(2) *Points of passage.*

Within the limits of this Section, the following ferries are shown on the Amu in the Official Russian map of Turkistán :—

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| (1) Khwája-Sálih. | (7) Khuradus (30 miles below Chahárjui). |
| (2) Khutab (half way to Kárki). | (8) Yast. |
| (3) Kárki. | (9) Boynk-Uzun (8 miles below Yast). |
| (4) Khwája-Jám (20 miles below Kárki). | (10) Kabakli. |
| (5) Chahárjui. | (11) Khanka-Petro-Alexandrovsk. |
| (6) Khar-lik (16 miles below Chahárjui). | (12) Sháh-báz-Wali. |
| | (13) Khwája-Ili. |

Of these Nos. 1, 3, 5, 11, 12, and 13 are the most frequented, and will be found described in the Gazetteer under the names of the places near which they are situated. Those ferries not thus described are unimportant, and have generally one or two boats each. There are neither fords nor bridges at any point on the river between Khwája-Sálih and Khwája-Ili. It would probably be a matter of some difficulty to bridge the river for the passage of an army, but boats sufficient to accomplish this were procured at Kílaf on the road to Báلكh by both Timúr and Nádir-Sháh, and the firm sandy border, which is everywhere presented by the river, is calculated to afford good anchorage. The use of skins on any large scale for rafts is unknown on the Oxus, at any rate in this Section. General Kaufmann's passage at Sheikh-Arik in 1873 was accomplished by means of three small pontoons and 11 small and 4 large native boats. The river was here 2,000 paces wide, and the passage of his troops (*see* History) took five days, and that at a flood time when the river had a velocity of 5 feet per second.

B.—THE DELTA OF THE AMU.

The delta of the Amu, according to Major Wood, has not been formed in the same manner as those of other great rivers by an accumulation of matter at the mouth brought down by the current, but by the constant tendency of the river to flow over its right bank and to cut new channels for itself through the old ground, which gradually becomes marshy. Omitting the Laudán channel, which, though probably formerly a bed of the river, is now almost dry, the apex of the delta may be said to be at Khwája-Ili, which is 60 feet above the level of the Sea of Aral, and about 80 miles from it. The delta covers about 190 square miles, and is virtually a huge marsh interspersed with patches of pasture land raised above the surrounding swamp, large shallow lakes, and a few hills, among which meander the various branches of the river, which not unfrequently change their course altogether. The principal of those arms are, enumerating from west to east, the Taldik, Ulkún-Daria, Kazák-Daria, Oguz, Chertambai, Kigaili, Kuván-Járma, and Yáni-Su. The mouths of all these branches are rapidly silting up, as will be hereafter noticed, from two causes—the north wind which drives up the waters of the Aral, and with them sand into the mouths of the river, and the sediment brought down by the current. At the floods the left bank between Kangrád and Khwája-Ili is frequently under water, and communication by land between these places is thus rendered impracticable. The south coast line of the sea of Aral is very low, and edged with high and thick rushes, inhabited by pelican and other waterfowl, behind which rise ridges of sand. At about 3 miles from the mouth of the Amu the water of Lake Aral is perfectly fresh and drinkable. The delta is inhabited by Kára-Kálpaks, who

formerly lived about Kuhna-Urganj, but who, after the closing of the Laudán branch, crossed the river into the delta, and are engaged in agriculture to a small extent, cattle-breeding, and fishing. Agriculture in the delta is much hindered by vast numbers of locusts who fly about in clouds, some of which have been estimated at 15 miles long, 2 broad, and half a mile deep, and devastate everything. There is a brisk trade in sturgeon, which are caught in nets in the central lakes, dried and salted.

Proceeding now to consider the various arms separately, we come first to the *Táldik*. This name is sometimes applied to the whole river from Khwája-Ili to the sea *viá* Kangrád, but, properly speaking, the *Táldik* only begins at Kangrád. From Khwája-Ili to Kangrád is about 100 miles by the river, during which course several arms flow off to the right into the delta, and this may be considered the main river. It is on an average 400 yards broad, and 21 feet deep, the deep channel crossing from bank to bank. In three places only are sandbanks passed. The current in flood time is 5 miles an hour. On the left bank the country is cultivated, and has many houses and trees; the right bank is covered with a low jungle of tamarisk, *jidula*, and accacia. The channels which ran from this portion of the river to the left into the former lake of Aibugir are now dried up.

The *Táldik* proper begins at Kangrád, and is formed by the most westerly of two arms of the river formed by a dam a little above the town constructed between 1863 and 1873. That on the east side is called the Samna, that on the west the Khán-Arik, and between these two lies the town of Kangrád. The Khán-Arik, a little below the town again, divides, the right (east) branch meandering into the delta, the left (west) branch forming the *Táldik* arm, which has a course of 40 miles to the sea of Aral, and has got its name, which means "straight," from its comparatively direct course. The average breadth of the *Táldik* is 120 yards, and near the beginning of its delta spreads out to 230 yards. Its depth is very variable, as may be seen by the following soundings taken at regular distances from Kangrád to its mouth:— $10\frac{1}{2}$, $17\frac{1}{2}$, 21, 14, 21, $10\frac{1}{2}$, 21, 35, 21, $21\frac{1}{2}$, 35, 49, 21, $17\frac{1}{2}$, $17\frac{1}{2}$, 14, 14, 14, $10\frac{1}{2}$, 5, 14, 5, 4, 3, 2, $1\frac{1}{2}$ feet. The gradual silting up of the mouth is well exemplified by these figures, which were taken in 1873. Its banks are about 6 feet high, scarped, and of clay and sand. For the last 15 miles of its course it receives the drainage of lakes from the right, and in this distance, during high floods, its right bank is scarcely distinguishable from the surrounding swamps. It enters the sea of Aral by eight mouths, the four largest of which are the Ken-Kirin, Muslin-Uzyák, and Talgu-Uzyák, and Sus, each from 60 to 70 yards broad, and varying in length to from $1\frac{1}{2}$ to 10 miles. According to Butakoff in 1848-49 the current at the mouth was so strong that people were swept off their legs, and there was 3 feet of water on the bar; but in 1858 there was only $1\frac{1}{2}$ to $1\frac{1}{2}$ feet. In the ten intermediate years the alluvial deposit has pushed forward about a mile, and the mouths are steadily closing up. The island of Tokmák-Ata, opposite the mouth, will soon be united to the main land, and even now an entry by boat is impossible.

The *Ulkán-Daria* leaves the *Táldik* just below Kangrád, and close to its head flows along the east side of the Tumulak-Tágh, a bare round clay hill, 150 feet high, of soft sandstone formation, with a little cultivation and a Kára-Kalpak *aul* at its base and a cemetery on its summit. It may be considered the main arm of the river, and has a course of about 60 miles. For the first 2 miles it has a breadth of about 100 yards, but it constantly receives streams from

the right, and at 25 miles from its head, where it receives a branch of the Kúk-Uzúk, it is 150 to 200 yards broad. About one-third of its length from the sea it throws off the Kazák-Daria to the right, and at 7 or 8 miles from the sea another branch to the left, which was formerly its main outlet, but is now almost silted up. The remaining part of the course of the Ulkún is called the Kichkin-Daria. In the latter part of its course it again narrows to from 20 to 35 yards, but opens out again in the Kichkin-Daria to 200 yards, contracts $\frac{1}{4}$ mile from its mouth to 100 yards, and at the bar is finally 200 yards broad. The following soundings were taken by Butakoff:—From Kangrád to the head of the Kúk-Uzúk 7, 5, 6, 4, 4, 8, 7, 8, 9, $10\frac{1}{2}$, 21, 12, $8\frac{1}{2}$, 19, 7, $9\frac{1}{2}$, 13, 7, 7, 8, 8, 7, 10, 9, 8, $17\frac{1}{2}$, $8\frac{1}{2}$, $22\frac{1}{2}$, $17\frac{1}{2}$, $8\frac{1}{2}$, $10\frac{1}{2}$, $18\frac{3}{4}$, 22, 5 feet; from the Kúk-Uzúk branch to the head of the Kazák-Daria 14, 14, 21, 21, 35, 28, $31\frac{1}{2}$, 28, 21, 18, 28, 35, 21, 28, $24\frac{1}{2}$, $24\frac{1}{2}$, 23, 23 feet; from the Kazák-Daria to the beginning of the Kichkin-Daria $24\frac{1}{2}$, 28, $24\frac{1}{2}$, 21, $17\frac{1}{2}$, $24\frac{1}{2}$, 28, $24\frac{1}{2}$, $24\frac{1}{2}$, 23, $24\frac{1}{2}$, 28, $38\frac{1}{2}$, 28, $31\frac{1}{2}$, 35, $24\frac{1}{2}$, 28, $26\frac{1}{2}$, $26\frac{1}{2}$, $24\frac{1}{2}$, 21, 21, $17\frac{1}{2}$ feet; from the beginning of the Kichkin-Daria to the Aral Sea $19\frac{1}{2}$, $17\frac{1}{2}$, 21, 14, 21, $17\frac{1}{2}$, 14, 10, 5, 5, 2, 3 feet, the latter being the depth on the bar. Major Wood, however (1875), says that the minimum depth on the bar is 7 feet, and that $1\frac{1}{4}$ miles up the river is 20 to 30 feet deep. On the banks of the Ulkún-Daria there is much cultivation, water for irrigation purposes being raised by Persian wheels worked by horses; melons, wheat, barley, oats, and lucerne are the chief produce. On the left bank there is also fine pasturage with patches of jungle, where hares, gazelles, and pheasants are found in large numbers. Both banks are lined with reeds 13 to 15 feet high. The banks of the Kichkin channel are low, little above the river level, and lined with rushes with scrubby jungle behind. The right bank is swampy in places. Half an hour's steam above the mouth on the right bank is the port of Ak-Kala, and at the mouth is a small pilot establishment, whose men buoy out the navigable channel on the approach of a steamer. The Ulkún-Daria was formerly navigable, but to oppose the Russians the Khívans broke down the dams; and though these were subsequently repaired, the mischief had been done, and the mouth is gradually silting up. Butakoff sailed up to Kangrád in the steamer *Peronski* at high flood in 1858, and in 1873 some of the troops returned from Khíva by this branch in flat-bottomed boats, and even then the arm was reported practicable for boats of even greater draught. There is no positive information as to its present state.

The *Kazák-Daria* flows out of the Ulkún-Daria at about one-third of the length of the latter from the sea, and enters the Aral Sea by several mouths, the most important of which is called Jálpak. Its banks are low and marshy, and this arm is quite unnavigable and is rapidly silting up.

The large central lake group in the delta is fed by three principal and numerous smaller streams. The principal ones are the *Oguz*, *Tulabai*, and *Chertambai*. The latter was formed by the closing of the Laudán branch in 1857, and leaves the main stream 12 miles below Khwája-Ili. Near its head on the right bank are the ruins of fort Tuk-Kala. Its total course to the lakes is 25 miles. The two other branches named are between this, and it is said to carry $\frac{1}{4}$ of the total volume of water passing Khwája-Ili and the main branch which runs to Kangrád, and all three are united by numerous smaller streams and marshes. *Kayuks* can be dragged through the rushes from the Oguz into the Ulkún-Daria near Tumulak-Tágh. It is said that Bekovitch's expedition was massacred on the banks of the Oguz, but how

the troops got there remains unexplained. The central lakes are sheets of water with an area of from 10 to 15 square miles. Their maximum depth is 30 feet, but the average depth is only 7. Their beds are masses of reeds, and there is little current in them, except at the inlets and outlets and in the deep water channels. Those latter are about 100 yards broad and 25 feet deep, and are generally walled in by rushes. The lakes are bounded on the east by the Kushkána-Tágh hills, which are about 300 feet high, and form a plateau 12 miles long and 2 miles broad. They are composed of clay and selenite, and are covered with thorny shrubs fit for camels' forage. To the north of the lakes are the low hills of Burli-Tágh and Bukhli-Tágh, which rise from the marshes. The lakes are drained by various branches, the most important of which is the *Kúk-Uzák*, into the *Ulkún-Daria* and *Kazák-Daria*.

Opposite Khwája-Ili, and near fort Nukus, the *Kurán-Járma*, which is said to carry now $\frac{1}{3}$ ths of the total volume of water, flows to the right from the main branch, and flows to lake Daukára. It is from 50 to 80 yards broad, and its minimum depth is 3 feet. At first its banks are low but steep, and of sand and clay. They are covered with tamarisk jungle, with a few poplars, elms, and willows where the ground rises. Fifteen miles below its head the *Kuván-Járma* cuts through several high ridges of sand at right angles. To the east extends a rolling sandy desert with lines of scrub in the hollows. Just above the sand ridges above mentioned the *Kigaili* branch flows out of the *Kuván-Járma* to the left and runs to the town of Chimbai, whence it falls by several channels into Lake Daukára. From Chimbai to this lake the ground falls gradually, and is very marshy during the floods. The banks of the *Kigaili* are well cultivated, and many irrigation canals flow out of it.

Lake Daukára is a vast extent of lakes and swamps, covering an area of 400 square miles, traversed by deep water channels, of which the only navigable one makes a circuit of 50 miles round by the east and north shores of the open space bounded by the *Beli-Tágh* hills. These are steep cliffs, 200 feet high, of soft argillaceous sandstone, and form as it were a bay. To the east they trend away into low ridges. On the summit of the west end of the ridge is a tall minaret built over the tomb of a saint. These lakes are drained by the *Yangi-Su* arm, which leaves the open part of Lake Daukára at the south-west corner of the above-mentioned bay, and falls into Lake Aral after a course of about 60 miles. Its banks are at first 40 to 60 feet high, and of clay, and are covered with scrubby jungle with a good deal of *sik-sál*. Further down they become low and marshy. Its breadth is from 50 to 100 yards, and its depth from 5 to 8 feet. In 1848 this arm discharged such a mass of water into Lake Aral that Butakoff's people could draw fresh water as far out as the island of Yermoloff. In 1859 he sailed 25 miles up it with the *Perovski* and the pinnace *Obrucheff*, and at that distance found his course barred by a sandstone ridge running across the channel, on which there was only $1\frac{1}{2}$, 2, and $2\frac{1}{2}$ feet of water. This stopped the *Perovski*, but the *Obrucheff* passed over and found 7, 8, and 9 feet of water; but 8 miles further up the branch shoaled again to 3, $2\frac{1}{2}$, and 2 feet. Below the first ridge the depth was from 5 to 8 feet, and above it the bottom was stony with sharp rocks. In 1874, however, the *Perovski* ascended again and found no traces of those ridges. It is probable that this branch will become navigable, or has already become so. Besides the above branches another, the *Kárubaili*, is mentioned by Venyukoff as leaving the Amu, 25 miles

below the Kúk-Uzák, and vanishing in marshes; and he adds that it is rapidly becoming desicated. It is marked on no map, and by Kúk-Uzák he probably means the Chertambai, of which the Kúk-Uzák is merely a continuation beyond the lakes.

C.—NAVIGATION AND BOATS.

The one great obstacle to the navigation of the Amu is the shallowness of all the arms of its delta. The Russians have lately been busily engaged, in spite of the project having at first (in 1873) been unfavorably reported upon, in trying to render the Ulkún-Daria navigable, but hitherto without success. In 1858 Butakoff sailed up the Ulkún-Daria to Kangrád at the floods in the *Perovski*, and in 1873 this branch was the scene of the operations of the Aral flotilla. It left Kazála on the 29th April, and had to take refuge from a gale off the mouth of the Táldík till the 8th May. On the 9th four armed boats sent to reconnoitre took off some native spies in Russian pay, who reported 1,000 men and 5 guns at fort Ak-Kala, and the flotilla anchored for the night in the Kichkin-Daria. On the 10th the *Sámarkand* moved up the river to attack. The fort fired the first shot, and in the engagement which followed a Khívan shell burst on board the *Sámarkand* and wounded the commander of the flotilla and seven men. The Russian fire soon caused the Khívans to desert the fort, and they left in masses, pursued by the Russian shells. The Russian commander did not think it prudent to land, and the *Sámarkand* continued her course up stream till stopped, 40 miles below Kangrád, by the shallowness of the stream, caused by dams constructed by the Khívans. This was the furthest point reached by the flotilla, and here the *Sámarkand* embarked the troops returning to Russia who had sailed down the river. In the latter part of the year such progress had been made in deepening the river that before the end of it small sailing transports from the Aral victualled the fort of Petro-Alexandrovsck. In 1874 the *Perovski* successfully passed into the main river through the Yangi-Su and Kuván-Járma, and ascended the river for 140 miles from Khwája-Ili. The descent of the river was the most difficult part of the voyage, as the engines had to go astern mostly to avoid running on to the numerous shoals which had been deposited in the channel since her passage ten days previously. In 1876 the *Sámarkand* passed into the Amu—it is not stated by what branch,—and on the 18th August left Petro-Alexandrovsck for Meshekli, which was reached on the next day, and at the end of the mouth a steamer sailed from Khánka to within 65 miles of Chahárjui. In 1877 the *Sámarkand* steamed from Petro-Alexandrovsck to Chahárjui in 16 days, and returned in 8, reaching the fort on the 30th April, and in the following year the same steamer reached Kárki. In 1879 it was reported that seven steamers, drawing 4 feet of water, were ordered in Finland by General Kaufmann to be despatched to the Oxus in the summer of 1880; also 20 iron barges capable of transporting 4,000 men and 20,000 *puds* (330 tons) of stores on each voyage between Petro-Alexandrovsck, Chahárjui, and Kílaf. In 1880 Colonel Mayeff surveyed the Amu to within a few miles of Báلكh.

There being no wood on the banks of the river navigation is very costly. In the ascent made by the *Perovski* in 1874 her fuel cost £2-5-0 a mile, but no previous arrangements had been made. Thus depôts of coal or *saksál* are required along the banks; and as by the treaties concluded with

Khíva and Bukhára stores and depôts can be established at any points on the river bank in their territories chosen by the Russians, there would be no difficulty in forming such magazines. *Saksál* is, however, very scarce on the lower Amu, and its value rises to 25s. or 30s. a ton.* Up to the present steamers on the Amu have towed after them barges laden with fuel, and at night bring up near the bank to perform repairs and replenish fuel bunkers. It was reported in 1882 that General Tchernaiyeff was endeavouring to form a company of private individuals for the navigation of the Amu and the supply of the Russian garrisons with provisions, ammunition, &c. The Aral flotilla has been broken up (*Krontstadt Gazette*, ^{18th February} 1883), and its *matériel* sold as its mission was ended, and the cost of its maintenance excessive. Its officers and men were to be incorporated in the Turkistán army.

The native boats or *kayuks* used on the Amu are rough flat-bottomed barges, in shape like a ship, with a prow at each end, and built of logs of a stunted tree, the *paki* or *shisham*, which grows along the banks of the river. Major Wood states that they are also made of 3" poplar or elm (*káragátch*) planks. These logs are rarely more than 6 feet long, and are fastened together by iron clumps. The boats vary in size from the small canoe to the large barge, 50 feet long, 18 feet broad, and 4 feet deep, accommodating 20 mounted men with their horses, or 150 foot passengers with 20 tons of baggage. Burnes says that these barges are well suited for the construction of a bridge, and that they do not draw more than a foot of water. The use of masts and sails is almost unknown on the Amu, the boats being generally towed up stream by the crew and floated down stream by the current, steered by one man with an occasional stroke of an oar, or shove with a pole. The ferry boats are occasionally rowed across with a pair of oars, but this method is slow and often difficult, or almost impossible, when the current is strong and the weather boisterous. In such cases the boatmen on the Amu resort to a system, adopted also on the Sir-Daria, of assisting their labours by attaching horses to the ferry boats. In effecting the passage in this way two horses are harnessed to the boat by halters passing through loops in their manes, and are driven into the river towing the boat between them, their bridles being lightly held by a man sitting on board. Occasionally four horses are employed, in which case the second pair are attached to the stern of the boat. Moorcroft, who crossed the river on a stormy day in February 1825, says that two horses were on this occasion harnessed to the boat, one behind the other, on the side nearest to the current, a second man being told off to each horse, whose duty it was to prevent the animal by an occasional shove with his foot from being worked under or against the side of the boat. The horses employed for this purpose are selected indiscriminately from the half-starved cattle of the passengers using the boat, and require no previous training.

D.—THE OLD BEDS OF THE OXUS.

Owing to the general slope of the Central Asian steppes to the north, the rivers have a constant tendency to flow to the north and to carve out new beds for themselves in that direction. In no river of Central Asia is this tendency more strongly marked than in the Amu. Without following M. Lerch into his disquisitions on the former bed of the river as given by

* There is, however, plenty of timber on the upper course, which is floated down the river.

the old Arab geographers, Istakhri and Ibn-Haukál, it appears tolerably certain that as late as the 13th century the Amu flowed by the Uzboi bed along the foot of the Chink or precipice bounding the Ust-Urt and by Igdi into the Caspian at Balkhán bay. Major Wood states that in 1559 the Amu still flowed as far west as Sellizure, three days' journey west of Kuhna-Urganj, and in 1575 changed its course to fall into the sea of Aral. What other causes, besides the natural tendency to flow to the north, produced this change we have no means of ascertaining, but volcanic agency may have been one. It is also stated that this Uzboi bed was not the original bed of the Amu, but that it turned to the west at Chahárjui, received the waters of the Murgháb and Hari-Rud from the left, and fell into the Caspian by Igdi and Balkhán bay. The Russians, since they began to interest themselves in the affairs of Khíva and the Turkumáns, have devoted a good deal of attention to the exploration of these ancient beds, in the hope that their surveys may demonstrate the practicability of a diversion of the river into one or other of them. The advantages of such a diversion of the river are obvious, as a navigable arm of the Amu flowing into the Caspian would form part of and complete a highway by water from the Baltic to the frontiers of Afghánistán, which would be completely under the control of Russia. We shall first describe the present state and position of those beds, and then consider what steps have been taken by Russia to divert the water.

The highest up-bed is that which leaves the Amu at Chahárjui. It is said to be traceable by the eye on its whole length, but is a good deal choked up by sand drifts. Lieutenant Kalitin reached this bed at the wells of Sheikh, at a point 146 $\frac{2}{3}$ miles from Kizil-Cha-Kuyúsi, on his journey from Gok-Tapa to that place. The old bed here runs to the north-west, forming an elbow to the south, and at this point are ten wells with a large supply of water. We have no account of recent surveys of this bed, and, though offering the greatest advantages, from a Russian point of view, as a direct line to Bukhára and Afghánistán, any such diversion of the river would of course ruin the oasis of Khíva, unless a corresponding diversion of the Sir-Daria were first effected. Besides, this bed being the oldest is likely to be most choked up with sand, and therefore most difficult and costly to excavate.

The next bed down stream is the *Daudán*, which left the Amu 93 miles above Khwája-Ili, and is now quite dry. It traverses the present Sháhábád canal, and has a mean depth of about 7 feet. Its banks are sandy and covered with reeds. Its course can be traced as far as Zmukshir and Chágil, near which is still a small lake called Kizil-Chagilda. From this place runs, in prolongation of the Daudán branch, the *Chermeniáb* canal, now dry, which passes by Sheikh-Senem and Gyaúr-Kala, and thence is called the Toun-Daria, which strikes the Uzboi at Charíshli.

The *Darídlík* and *Laudán* may be considered as part of the canal system of Khíva, and will be found as such in the Gazetteer, but were undoubtedly formerly branches of the river; and the continuation beyond Kuhna-Urganj of the *Laudán*, or rather of its branch, the *Sakrauk*, is known as the *Urún-Daria* or *Kuhna-Daria*, and runs to lake Sári-Kámish (*see* Gazetteer). This bed winds about a good deal, and has a length of 166 miles. Its average breadth is about 1,400 feet, but in places it reaches 2,800, and is in places 126 feet deep, but in others is blocked up by sand. Twenty-four miles below Kuhna-Urganj on this bed is the ruins of a dam called Kissen, and here the bed separates into two branches, one running along the foot of the Chink, on

which is the well of Bîsh-Deshlik, the left one joining the Toun-Daria, which, as above stated, joins the Uzboi at Charîshli, and runs through a flat plain. The river has twice forced its way up to lake Sári-Kámish—in 1849-50 and in 1878-79. The winter of 1877-78 was exceptionally severe in Central Asia, and a mass of snow accumulated which in the spring caused floods more extensive than any that have taken place during the present century. All the way along the lower course of the Oxus the surface of the river rose to the top of the bank, and at length the water broke through the barrier at three different points below Khíva, each about 40 miles apart, and the overflow spread between Kuhna-Urganj and Khíva, so as to stop all communication except by boat. The water flowed up the Urún-Daria and flooded the lakes of Sári-Kámish and Kok-Pulár. The current in the Urún-Daria in December 1878 was $2\frac{1}{2}$ feet per second, and the waterway was 140 feet broad, but the water did not extend beyond the Kok-Pulár lake. As soon as the floods subsided, the Khán of Khíva sent laborers to repair the dams, but pools, some of them 700 feet long and 5, 7, or 21 feet deep, of sweet water still remain in the bed. There are three dams on the bed—the Salak, Igentlich, and Ak-Bugut— $29\frac{1}{2}$, 46, and 62 miles respectively above Kuhna-Urganj. Beyond lake Sári-Kámish the old bed is known as the *Uzboi*. It runs along the foot of the Chink in a southerly direction to the well of Kártish, and thence turns to the west and runs with many sinuosities to Mikhailovsk or Balkhán bay. Its length from lake Sári-Kámish to the sea is 250 miles, and along its banks are many groups of wells (see *Igdi*, *Topiátan*, *Aidin*, *Tanderli*, *Bála-Ishem*, and *Charîshli* in the Gazetteer). From Kártish to the west the Chink recedes from the Uzboi, and at Igdi (166 miles from its mouth) the pools of fresh water in the old bed are numerous, while above that place the pools and small lakes in the bed are quite salt. The Uzboi varies from 700 feet to 2 miles broad, and its depth is in places 210 feet. At Topiátan, and thence to its mouth, it is 60 to 70 feet deep and 3,500 feet broad. Its banks are steep and of clay formation, and in the bed are frequent sand-drifts. At Topiátan there is a large freshwater lake in the bed, and thence downwards its bottom and banks form a succession of oases, which abound with hares, tigers, wild geese and duck. From Tanderli, near the Aidin station of the Trans-Caspian Railway, downwards, the Uzboi becomes sandy and barren till it merges into the large brine moor west of the Balkhán hills, called the Bába-Khodiár or Sinin-Dergassi lake. Through this the bed winds in two channels—the northern one, called Ak-Tám, falls into Balkhán bay, and is 1,050 feet broad, 14 feet deep, and so full of water (which is salt, for it flows in from the Caspian) that a ferry has recently been established at Mulla-Kári; the southern branch, the Adjár, turns towards the bay of Khíva, and is dry and almost obliterated by quicksands.

In 1873 the Russians undertook surveys of the desert to the south-west of Khíva, Colonel Skobelev in particular penetrating by Zmukshir and Dandir to Ortakui, on the line by which Markozoff was to have advanced to complete the surveys made by the latter. The result of all these explorations was that in 1874 the Commission reported unfavorably both on the chances of rendering the Amu delta navigable and of turning its waters into the Caspian. The floods of 1878-79, however, had the effect of again turning attention to the possibility of diverting the Amu-Daria into the Caspian, and in 1879 Prince Guedrovitch, a distinguished geologist, spent the summer of 1879 in exploring the Lower Oxus and the Uzboi, and made a

minute and detailed study of the delta and the Sári-Kámish basin. But surveys were not the only work undertaken in this year. By order of the Khán of Khíva water was let into the Laudán, and 700 workmen in one week so deepened this branch as to make it navigable for 8 miles. At the same time he addressed a letter to the chief of the Russian surveying expedition, stating that, though willing in every way to assist the Russians in turning the Amu into the Caspian, he hoped that the frontier would remain, as at present, the line of the Oxus, and that Lake Sári-Kámish would still remain Khívan territory, and that Kangrád and Khwája-Ili would be supplied with water. He also sent an ancient book stating that 300 years before the Oxus, passing below the walls of Kuhna-Urganj, had flowed into the Caspian at Balkhán bay.

In 1880-81 the work of surveying was pressed on with diligence and under circumstances of great hardship at times to the various survey parties. Levels were taken in three directions—(1) along the Daudan and Toun-Daria to Charíshli, 167 miles; (2) along the Uzboi from Charíshli to Sári-Kámish and to the Daudan, 133 miles; and (3) from Charíshli across the steppe to Gyaúr-Kala, and thence to Chágil, 133 miles. An instrumental survey was made on a scale of $\frac{1}{20,000}$ of the lines of level, and a second survey on a scale of $\cdot 01$ *sajen* to 1 *verst* of the country for 10 to 12 miles on each side. In the beginning of 1882 it was reported that the result of the expedition had been to prove conclusively that, from the western borders of Khíva towards Charíshli, the country slopes gradually to the west. Accordingly this portion of the steppe will admit of being irrigated, and the Amu-Daria will be capable of being diverted from the Aral to the Caspian. The surveying parties came on ruins of ancient forts and cities, as well as on traces of ancient canals and irrigating ditches, showing that these regions were formerly in a highly flourishing and civilised condition.

It would appear, therefore, to be conclusively proved that there are no insuperable natural obstacles to a diversion of the Amu into the Caspian, and that the creation of a waterway from the Caspian to Afghánistán is only a question of money. To conclude we may mention a few opinions of writers of mark on the question.

Prince Guedrovitch's opinion is that there are no indications to support the assertion that the Amu-Daria ever flowed through Lake Sári-Kámish, and he thinks that the line of union between the Aral and the Caspian seas will be found to the south of Sári-Kámish.

Kuropátkin states that the level of Sári-Kámish is 6 *sajens* (42 feet) below that of the Caspian, and that this depression might be avoided by taking the water through the Daudan. Venyukoff says:—"From Kuhna-Urganj to Balkhán bay the approximate fall is 216 feet. This fall exceeds the difference between the levels of Sámarkand and Astrakhán, and we may therefore reasonably presume that even at present the Amu-Daria could just as well flow into the Caspian as into the Aral, without fear of its dwindling away into the steppes before reaching the coast."

Finally, M. Lessar, in a letter to the *Gólos* in February 1883, says that, as a result of scientific investigation, it would appear that the project of joining the Aral and Caspian seas by diverting the waters of the Amu-Daria into the Uzboi (or reputed ancient bed of the Oxus) is impracticable. On the other hand, there is every reason to believe that an ordinary canal for navigation and irrigation could be made, but at a cost of from 15 to 20 millions of *roubles* (£1,500,000 to £2,000,000). On this point M. Lessar

is of opinion that the cost of the above undertaking would be far beyond the realisable profits. For the present, the chief care of the Government should be to develop the trade of Central Asia by guaranteeing the security of the trade routes. Many more pressing undertakings are necessary in Russia in Europe, but it is evident that in the future the increased commerce of Central Asia will necessitate the construction of new waterways. No matter at what cost, the projected canal should not be lost sight of.—(*Mayeff, Kuhn, Wood, Burnes, Fámbery, MacGahan, Venyukoff, &c., &c.*)

ARIK-KUYUK—

A halting place on the road from Kuhna-Urganj to Sári-Kámish, 13½ miles from the former.—(*Kostenko.*)

ARNA CANAL—

A canal of the Kháuate of Khíva, also called Boz-Su, which leaves the Amu 16 miles below the head of the Káragiz canal, and, flowing by Mangit (where it is bridged) and Por-Su, falls into lake Por-Su after a course of 40 miles, or, if its extreme length be counted, to the end of its branch called Yangi-Yáb, 56½ miles. Its breadth is 56 feet.—(*Venyukoff.*)

ATA-MURÁD-KHÁN—

A village of Khíva, 10 miles west of Kuhna-Urganj, inhabited by Yamúd-Turkumáns, where the chief of that name resided in 1874.—(*Wood.*)

B

BAI-BÁZÁR—

One of the three Aksákálships into which the Shúra-Khána sub-district of the Russian Amu-Daria province is divided. Before the Russian annexation this Aksákálship was under the jurisdiction of the chief landed proprietor of those parts, the cousin of the Khán of Khíva, named Irtazar-Inák. The district is well cultivated. The town of the same name, called also Rahmán-Berdi-Bi-Bázár, stands in an oasis surrounded by hills on two sides. There is a small ruined fort in the centre, and round it are 50 shops and 100 houses. There are 12 farmsteads in the immediate vicinity. Markets are held on Mondays and Thursdays, and are well attended by the people of the environs and the nomads of the Kizil-Kum. The town is 3 miles from the Amu.—(*Kuhn, Trotter.*)

BÁLA-ISHEM—

A group of ten wells on the Uzboi, 16½ miles south of Ortakui. Eight were found filled up by Kuropátkin's troops in 1880, and little water in the other two. This was the farthest point reached by Markozoff's column in 1873.

BALKUI—

A halting place on one of the routes from Chahárjui to Marv, 35 miles from the former. It has a well of good water, 4 feet in diameter and 30 feet deep, but soon emptied.—(*Burnes.*)

BAND—

A small half-ruined fort, almost hidden in jungle, in Khíva, on the left bank of the Amu, 20 miles above Khwája-Ili and 17 below Kipchák. It was built by the Khán to protect the dam across the head of the Laudán branch of the river (now half-ruined). It is quadrangular, 70 feet long on each side, with a high round barbette in the centre. The name, which means "dam," is frequently written and generally pronounced "Bend."—(*Lerch, Wood, Schmidt, Vámbéry, Trotter.*)

BÁSH-KÚDŪK (WELL)—

On the Khwája-Kúndúz-Marv route. Distance not stated.—(*Kostenko.*)

BAS-PULÁT—

Three wells, each 70 feet deep, with very salt water, near Nazar-Kuli, on the road to that place from Izgán in the Akhál oasis.—(*Murávtseff.*)

BATANDAL-KUL—

A Lake formed by the old bed of the Oxus or Uzboi, about 30 miles south of Lake-Sári-Kámish. Ordinarily it contains a small quantity of water, but during the floods of 1871 it was about 15 miles long and 5 miles broad. Dandeville states that in 1849-50 it attained a similar size. The northern edge of this lake is salt soil, and its water is very salt, but digging on the banks gives drinkable water.—(*Venyukoff, Kostenko.*)

BEDERKESH—

A village in Khíva, 30 $\frac{2}{3}$ miles from the capital, on the road to Il-Ali by Zmukshir, and situated in a highly cultivated country.—(*Kostenko.*)

BELI-TÁGH—

A range of steep cliffs, 200 feet high, of soft argillaceous sandstone, bounding lake Daukára, in the Amu delta, on the east and north. They trend away to the east in low ridges. On the summit of the west end of the ridge is a tall minaret built over the tomb of a saint.—(*Wood, Kuhn.*)

BERDIJIK (WELL)—

On the Kára-Kíshlák-Marv route, 74 $\frac{2}{3}$ miles from the former place.—(*Kostenko.*)

BÍSH-ARIK—

A village on the edge of the oasis of Khíva, not far from Khíva itself, whence runs a route to Marv.—(*Kostenko.*)

BOGAT—

A town in the Khánate of Khíva between the Pitnák and Palwán-Ata canals, and to the north-west of Pitnák. Hence a road runs westward through Ishán and Hazár-Asp to Khíva.—(*Schmidt.*)

BOYUK-UZŪN—

A ferry on the Amu, 56 miles below Chahárjui.

BOZ-SU—

See "Arna canal."

BUGUR-DESHIK-KHILKA (WELL)—

On the road from Chahárjui to Marv, 144 miles from the former.—(*Kostenko.*)

BULDUMSÁZ—

A ruined fort, 24 miles from Tásh-Hauz, on the road to Kuhna-Urganj.

C

CHÁGIL—

A halting place on the route from Petro-Alexandrovsk to Bámi, $13\frac{1}{2}$ miles from the ruins of Zmukshir, with a few wells. Close by (4 miles) is the lake of Kizil-Chágilda with excellent fresh water.—(*Murávtseff.*)

CHAHÁRJUI (LAT. $39^{\circ}5'$, LONG. $63^{\circ}40'$)—

An important town on the left bank of and 6 miles distant from the Amu-Daria, 73 miles south by west of Bukhára by the Kára-Kul road. It is enumerated by Khanikoff among the 19 principal towns of the Khánate of Bukhára. There are in the town 400 houses, of which half are empty, and about 100 shops in the bazar, with 10 horse-mills. During the summer months it contains 4,000 or 5,000 inhabitants, which number is much increased in winter by nomads. The town is overlooked by a small fort built upon an eminence and traditionally reported to have been of sufficient strength to resist the arms of the conqueror Timúr. Between Chahárjui and Batik (also known as Kára-Khoja) on the opposite bank, the Amu is crossed by one of the most important ferries in Turkistán, which is protected by fort Yázti on the right bank. The banks of the river here are low and overgrown with a species of rank weed which often fills the aqueducts. When crossed by Burnes in the middle of August, the river was 650 yards wide with a current of $3\frac{1}{2}$ miles, the average depth, taken from several soundings, being $19\frac{3}{4}$ feet, and the greatest depth 29 feet. The boats used in crossing the river at this place are of the same description as those employed at other ferries on the Amu, and are reported by Burnes to be numerous, presenting every facility for crossing (*see rivers Amu-Daria*).

A periodical market is held at Chahárjui, which is well attended by the Turkumáns of the Oxus, who for the most part dispose of their wares and make their purchases without dismounting from their horses. Schuyler mentions that the carpets made by the Turkumáns of this district and of Kárshi are remarkably fine, and are the best found for sale in the Bukháran bazaar. The principal articles of native manufacture sold in the Chahárjui markets are knives, copper-pots, cloth, saddles, and horse clothing, besides fruit and grain of various descriptions. Kostenko gives the following list of prices in 1880 :—

1 <i>batmán</i> * of rice = 8 to 11 <i>roubles</i> .†	1 <i>batmán</i> silk = 40 <i>roubles</i> .
1 <i>batmán</i> wheat = $3\frac{1}{5}$ to $3\frac{3}{5}$ <i>roubles</i> .	1 <i>batmán</i> meat = 8 to 10 <i>roubles</i> .
1 <i>batmán</i> millet (<i>jugára</i>) = 3 <i>roubles</i> .	1 <i>puđ</i> (36 lbs.) of butter = up to 5 <i>roubles</i> .
1 <i>batmán</i> flour = 4 to $4\frac{1}{2}$ <i>roubles</i> .	A horse = 20 to 200 <i>roubles</i> .
No barley.	A bullock = 10 to 30 <i>roubles</i> .
For grinding 1 <i>batmán</i> of wheat, 80 <i>kopecks</i> .	A cow = 8 to 20 <i>roubles</i> .
1 <i>batmán</i> cotton in the pod = $7\frac{1}{2}$ <i>roubles</i> .	A sheep = 5 <i>roubles</i> .
	A camel = 30 to 80 <i>roubles</i> .

Saksál wood is brought from a distance of 25 miles, and sold for 60 *kopecks* the camel load. There is no other firewood, and *saksál* is only brought in

* 1 *batmán* = 289 lbs.

† 1 *rouble* = about Rs. 2 (nominal value Rs. 3) = 100 *kopecks*.

in winter. The market is held immediately outside the town, as the streets are too narrow for the traffic.

In addition to the local trade, the inhabitants maintain commercial intercourse with Khíva by the Amu. The vessels used carry 80 cwt., or 8 camels, 15 passengers, and 10 camel-loads. They are floated down stream and towed up by lines, the freight from Urganj to Chahárjui being Rs. 2-4 per cwt. The Khívians are said to have a larger description of craft, carrying 160 cwt., engaged in this trade. In the cold season caravans of fish go from Chahárjui to the capital of Bukhára, the fish being generally the *sangan* (*barbus calybiatus* or *ciprinus calybiatus* according to Lehmann). This fish as well as the *lakka* (*silurus glanis*) attain a great size on the Amu.

The district of Chahárjui consists of a belt of cultivation irrigated by the waters of the Amu, and extending as much as 5 or 6 miles in places back from the bank. Meyendorff says that a portion of the district is occupied by woods which yield a small revenue to Government. Of late years Chahárjui has been frequently made use of by the Amir of Bukhára as a place of exile for refractory Begg and political offenders.—(*Burnes, Meyendorff, Khanikoff, Vánbéry, Lumley, Schuyler, Trotter, Kostenko.*)

CHARÍSHLI—

A number of wells on the road from Igdi to Sári-Kámish, 97½ miles from the former.—(*Kostenko.*)

CHARSHALI-KUL—

A small lake in the Russian Amu-Daria province, 16 miles east of Nukus.—(*Kostenko.*)

CHÁSHKIN (WELLS)—

The eighteenth stage on the road to Marv from the Suju wells as given by Amin-Bai. Probably identical with "Chashma" (*q.v.*).

CHASHMA—

A halting place on the road from Khíva to Marv, 120 miles from the latter. To this place the river Murgháb used to flow till 1871, but the bed is now dry, having been dammed by the Marv-Turkumáns. Water can be obtained by digging at a depth of 2 feet. Forage and fuel in abundance from growing reeds.—(*Kostenko, Amin-Bai.*)

CHÁT—

A half ruined fort, with two or three wretched huts near it, in Khíva, a few miles south-west of New Urganj, and about 2 miles from the left bank of the Sháhábád canal, which is here crossed by the bridge of Chát-Kupri.—(*Kuhn.*)

CHERMENIAB CANAL—

See "Amu-Daria," D.—Old beds.

CHERTAMBAI—

See "Amu-Daria," B.—Delta.

CHIMBAI—

A town of the Russian Amu-Daria province, situated on the Kigaili canal (which traverses the town), amongst fields and gardens. The population is about 1,200, and the town contains 300 houses and 150 shops. Markets are held on Mondays and Wednesdays outside the town, and are attended by about 400 people from the environs. It is the chief commercial centre of the Kára-Kálpaks, and in the bazar Central Asian silks, Russian calicoes,

embroidered skull caps, sheep-skin coats, and painted wooden saddles meet with a ready sale. Each vendor in the market pays a small percentage on the articles sold to the Russian Government agent. Trade in fish, cotton, and red goods is also carried on by boat with Khwája-Ili and Urganj. The walls of the town are in ruins, and it contains three mosques and a school. Chimbai is the chief town of a sub-district of the province, and in 1874 a *sotnia* of Cossacks was encamped here in a former garden of the Khán outside the town.—(*Wood, Kuhn, Stumm.*)

CHUMTUK (WELL)—

On the Kabakli-Marv route, 96 miles from the former.—(*Kostenko.*)

CHUNTUK (WELL)—

On the Kabakli-Marv route, 69½ miles from the former place.—(*Kostenko.*)

D

DAGJIK (WELL)—

On the Kára-Kíshlák and Marv road, 48 miles from the former place.—(*Kostenko.*)

DALI (WELL)—

On the Khwája-Kunduz-Marv road. Distance not stated.—(*Kostenko.*)

DARBAND—

A halting place and well on the route from Petro-Alexandrovsk to Gok-Tapa with a little brackish water, 386½ miles from the former.—(*Lieutenant Kalitin.*)

DARIÁLÍK CANAL—

A canal, or rather an old branch of the Amu, which leaves that river between the Yármish and Klich-Niáz-Bai canals, and unites with the Laudán branch above Kuhna-Urganj. There are three dams upon it, the upper one being at Maila-Jangal, where the water is led into *ariks*. This dam is called the Amir-ul-Amra. A little below it, at Kok-Chik, is a bridge, whence roads lead to Kangrád, Khwája-Ali, and Khíva; above and below this bridge the branch forms lakelets full of reeds, and near it the Klich-Niáz-Bai canal cuts through the old branch. From Kok-Chik a road leads to the south by the villages of Uirot, Kenegez, and Kalyank to Tásh-Hauz. Four miles below Kok-Chik is the second dam called Rahmán-Bai. It throws all the water into the Tepri-Argán canal, which supplies the Imráli and Chádar-Turkumáns. The third dam is 20 miles further down, and is called Tásh-Bukat. It is an old one, and water no longer flows to it.

DASHLI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

DAUDAN—

See "Amu-Daria," D.—Old beds.

DAUDIR—

A halting place on the route from Petro-Alexandrovsk to Bámi, 243½ miles from the former, with two wells. The water in one is brackish but drinkable, but that in the other is salt, although horses drink it.—(*Murávtseff.*)

DAUKÁRA—

A small place, near the lake of the same name on its east bank, in the Russian Amu-Daria province. It is inhabited by Kirghiz and Kára-Kálpaks.—(*Kuhn.*)

DAUKÁRA LAKE—

A vast extent of lakes and swamps, covering 400 square miles, in the delta of the Amu. They are traversed by deep water channels, of which the only navigable one makes a circuit of 50 miles round by the east and north shores of the open space bounded by the Beli-Tágh hills. (*See also "Amu-Daria," B.—Delta.*)

DAULAT-TAPIR—

A halting place without water on the road from Petro-Alexandrovsk to Bámi, 34 miles from the latter.—(*Murávtseff.*)

DEKCHA—

A point on the Urún-Daria, 85½ miles from Kuhna-Urganj, on the road to Sári-Kámish. The wells are brackish and almost undrinkable, water one foot below the surface. The banks of the old bed are covered with reeds and bushes, and in the old bed are several pools in which are fish.—(*Kostenko, Markozoff.*)

DORT-KUL—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—(*Kuhn.*)

DURT-KUI—

A halting place on the route from Kabakli on the Amu to Marv, two stages from the edge of the oasis of the latter. It has four wells 105 feet deep, with fresh water and sufficient grazing and fuel.—(*Kostenko.*)

G

GIUK-TAPA (WELL)—

On the Kabakli-Marv route, 176 miles from the former place.—(*Kostenko.*)

GORLÁN—

A town of the Khánate of Khíva, 29 miles north by east of the capital, and 6¾ miles from the bank of the Amu. The town was formerly surrounded by walls, but only traces of them and the old gates now remain. It is situated on two canals, both branches to the right of the Klich-Niáz-Bai canal—the Gorlán-Yáb or Tort-Toksán-Yáb, and the Yangi-Yáb. Inside the limits of the old wall are 300 houses, 200 shops, 6 mosques, and 2 schools; outside those limits 3,500 houses. The houses of Gorlán are joined together, and do not stand separate as in other Khívan towns, and the place is completely surrounded by gardens and heavily cultivated fields of rice, cotton, and corn. The inhabitants are Uzbaks and Sárts, and ten villages are under the town Government. Gorlán is an important trading centre; large numbers of silkworms are bred in the vicinity, and many *khaláts* are manufactured. Its port is the village of Ishimji on the Amu.—(*Schmitt, Venyukoff, Kuhn.*)

GYAŪR-KALA—

A halting place on the route from Petro-Alexandrovsk to Bámi, 193 miles from the former, with two wells, 50 or 55 feet deep, yielding together 400 to 550 gallons of brackish water, but the supply can be increased by digging. There is no forage or firewood. The name is derived from the ruins of a fort on a range of hills west of the wells.—(*Murávtseff.*)

H

HÁJI-SÁLIH—

A village on the left bank of the river Amu, about 94 miles south of Kárshi, on one of the roads leading from Bákh to Bukhára. The latitude of the Oxus at the ferry belonging to this village is, as observed by Burnes, 37° 27' 45". The village, most of the houses of which are scattered about among their own fields, is situated in a strip of irrigated land, 2 miles broad, bordering on the river. It is generally a place of considerable population, but is exposed to the attacks of the predatory Turkumáns in its neighbourhood to such an extent that, when visited by Moorcroft shortly after one of these raids, it was absolutely destitute of inhabitants. The road which passes through this village is not the usual high road from Bukhára to Bákh; the latter crosses the river higher up at Kílaf. The banks of the river at the Háji-Sálih ferry are low and composed of loose soil, like those of the Ganges, and the stream, when crossed by Burnes on the 17th June, was divided by sandbanks into three channels, respectively 295, 113, and 415 yards in width. The depth of the water was irregular, the soundings being as follows:—In the first channel (that nearest the left bank) 19, 6, 9, 12, 6 feet—average 8 feet; in the second 6 feet throughout; and in the third channel 6, 9, 15 feet—average 11 feet. The current of this river is about 3½ miles an hour, its water being heavily loaded with clay. The ferry possesses three boats, each of which can contain 20 horses, the usual charge for the transport of a horse or camel being one tanga. The passage of Burnes' party on the 17th June occupied 15 minutes, the boats, as is usual on the Amu, being drawn across by horses.—(*Trotter.*)

HAZÁR-ASP—

The strongest town in the Khánate of Khíva, and generally governed by a near relation of the Khán. It lies 10 miles from the Amu and between the Pitnák and Palwán-Ata canals, on a branch of the latter called the Juwár-Kháss. The citadel was built 120 years ago by Muhammad-Niáz Inák, and the houses which were built later around it were in the time of Muhammad-Amin-Khán surrounded by a new wall, in the shape of a rectangle, enclosing about three acres, with a hornwork on one side. The walls are battlemented and provided with buttresses, and are 30 feet high and 21 feet thick from the base to half their height. The fortress is nearly surrounded by a wide but shallow lake, the approach to the town from the east across it being by a covered causeway lined with shops leading to the main entrance, a heavy arched gateway with flanking towers built of brick with mud coating. Inside the citadel, whose south wall is one with that of the

town, is the palace. The town within the outer wall contains about 4,000 inhabitants, three-fifths of whom are Sárts, one-fifth Uzbaks, and one-fifth Persians. There are 8 mosques, 8 colleges, 8 schools, and 400 shops. Markets are held on Mondays and Fridays, and there is some trade in tobacco. The town is ruled by a *hákim*, assisted by *yuz-báshi* (centurions) and *kiátkhudai* (elders), and there are 15 villages in its jurisdiction. In 1873 the place was held by a considerable Khívan garrison and armed with five guns of a tolerably modern character, but surrendered to General Kaufmann without resistance. Large quantities of ammunition and provisions were found in it.—(*Schmidt, MacGahan, Kuhn.*)

HÚZÚRAT-MADURI-BÁBÁ-ADÁM—

“The tomb of Adam’s mother.” A mausoleum and landmark on the left bank of the Oxus, 78 miles above Pitnák.—(*Shakespeare.*)

I

IGDI—

A halting place on the Uzboi on the road from Petro-Alexandrovsrk to Bámi, 108 miles from the latter. There are two sets of wells—Great and Little Igdi. In the former are 11 wells, all in the old river bed, with brackish but drinkable water, one being much better than the others. Close by is a lake of salt water. The Little Igdi wells are 2 miles north of the others, and are 6 in number; five were found filled up by Kuropátkin’s column in 1880, but in the sixth excellent water was found. There are also a few wells on the banks of the Uzboi. In March 1873 those wells ran dry, after being used by Markozoff’s 20 companies, two batteries, and 2,500 camels, in 2½ days.—(*Murávtsseff, Schmidt.*)

IL-ALI—

A small town in the Khánate of Khíva, 56 miles, as the crow flies, north-west of the capital, situated on the Sháhábád canal close to the edge of the Khívan oasis. It was built in 1865 as a refuge against the Turkumáns, but the walls are now in a ruinous condition, as is the citadel, which is in the centre of the town, and was built by Muhammad-Rahím-Kuli-Khán. There are about 2,000 inhabitants, mostly Uzbaks, with a few Sárts, Persians, and Yamúds. Inside the citadel are about 100 houses, and about 160 more inside the outer wall, which forms a rectangle 300 yards long and 200 broad. The district is fertile and rich, and the town is surrounded by walled gardens, one of which belongs to the Khán. Markets are held on Mondays and Thursdays, the staple article of commerce being corn. Il-Ali is also spelt “Iliali” and is the town of the patron saint of the Turkumáns, Hazrat Biliali. On the steppe to the south of Il-Ali General Golovátcheff’s force was surprised by the Turkumáns in 1873, but the attack was repulsed.—(*Kuhn, MacGahan, Schmidt.*)

ILEK-SALESH—

A halting place on the route from Petro-Alexandrovsrk to Gok-Tapa, about 47 miles from the latter, with four wells, about 35 feet deep, with fresh water, but good for drinking in two only.—(*Murávtsseff.*)

IR-SASIK (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

ISHÁK-RABÁT—

A halting place on the route from Chahárjui to Marv, 26 $\frac{3}{4}$ miles from the former.—(*Kostenko.*)

ISHÁN—

A town of the Khánate of Khíva, north-west of and about 11 miles from Hazár-Asp, between the Palwán-Ata and Pitnák cauals.—(*Schmidt, Kostenko.*)

ISHIMJI—

A village on the left bank of the Amu, a few miles east of Gorkán, of which it is the port.

ITI-KULÁCH—

A halting place on the road from Khíva to Marv, about 266 miles from the former, with two wells about 7 fathoms deep. Water plentiful.—(*Kostenko.*)

IVANEK—

A waterless halting place on the Uzboi, 40 miles from Igdi, on the route from that place to Sári-Kámish.—(*Kostenko.*)

J

JAGATAI—

A small Uzbek town, 23 miles north-west of Khíva, on the Sháhábád canal.—(*Venyukoff.*)

JALACHACH-CHIGANÁK—

A hamlet in the Khánate of Khíva, on the left bank of the Amu, 20 $\frac{1}{2}$ miles from Mángit, on the Khwája-Ili road.—(*Kostenko.*)

JÁNGÁZI-KHÁN—

A village in the Shúra-Khána district of the Russian Amu-Daria province, on a canal flowing from the Oxus, and 66 miles from Nukus.—(*Kuhn.*)

JÁNI-KALA—

A fort 4 miles from Cape Urga, on the dry bottom of the Aibugir lake, near the end of the Jáni-Ján canal. It is a square structure of clay, each side 700 feet long; the walls are 17 $\frac{1}{2}$ feet high, 10 $\frac{1}{2}$ feet thick at the bottom and 1 foot at the top, and provided with loopholes. There is a small ditch of irregular shape. The fort was abandoned by the Khívans in 1873 without fighting.

JITI-KUI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

JIZIK (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.

K

KABAKLI—

A Bukhárán fortress on the right bank of the Oxus, whence runs a route to Marv.

KABIL-BEG-HAVLI—

A farmstead in the Khánate of Khíva, the second stage from Kangrád on the road to Kuhna-Urganj.—(*Vámbéry.*)

KADJAN—

A well on the Kára-Kum desert, 80 feet deep, with very salt water, on the route from Izgán in the Akhál oasis to Nazar-Kuli.—(*Murávtseff.*)

KALCHA—

A halting place on the route from Chahárjui to Marv, 53 miles from the latter, with many wells, 6 fathoms deep, with good water. Pasture and fuel are abundant.

KALICH-KALA—

A fort in the Russian Amu-Daria province with well preserved crenelated *isé* walls, near the village of Daukára, to the south-east of the lake of the same name in the Amu delta. It forms a conspicuous object from the navigable channel through the lake. Inside the fort are a few houses and two or three shops. The surrounding ground is marshy and but little above the lake level. The neighbourhood is cultivated by Kirghiz-Kazáks, whose *auls* are the head-quarters of an unimportant chief named Nasr-Khán, who contracts for the supply of carriage for officers or others travelling to Perovski or elsewhere.—(*Wood, Kuhn.*)

KANGRÁD—

A walled town of the Khánate of Khíva, on the left bank of the Táldik branch of the Amu and on the Khán's canal, 3½ miles from its head. It is 40 miles from the mouth of the Táldik in the sea of Aral. All along the canal from its head are the ruins of Old Kangrád. The new town has a broad mud wall, forming a rectangle 2½ miles long and double in parts, built by Syud Muhammad-Khán, but now in a semi-ruinous condition. At the beginning of the century Kangrád was independent, and since its annexation has been in a constant state of revolt. To these wars, and especially to a siege sustained in 1867, its present ruined state is to be traced. The population is variously estimated at from 4,000 to 8,000 souls, mostly Kára-Kálpaks and Kirghiz, with a few Uzbaks, Sárts, Tájiks, and Persians. The town contains 300 houses, 120 shops, 2 mosques, 2 schools, and a palace. The trade of the town has much diminished of late, rice, barley, and fish being the staple articles; cattle, butter, felt, carpets, camel's hair, and wool are also brought in by the nomads for sale.* Sturgeon here sells at 20 to 40 *kopecks* for from 1 to 2 *puds*. Kangrád is the administrative centre of the nomad tribes on the lower Amu, four villages are under its authority, and its Governor was in 1875 a Kirghiz. The inhabitants of the environs used to be Kára-Kálpaks, but in the wars of Syud-Muhammad-Khán, the father of the present Khán,

* Markets are held on Wednesdays and Sundays.

they crossed to the other bank of the river, and the population is now composed of semi-nomad Kazáks engaged in cattle rearing and agriculture. The district is fertile and well irrigated by canals from the Táldik, and is cultivated down to the water's edge. It could support 1,000 to 1,500 men. The nearest pasturage is 10 miles off. In 1873 Kangrád was taken by General Verevkin without fighting.—(*Kuhn, Venyukoff, Vámbéry, Wood, Schmidt.*)

KAPILYARÁN-KŪL—

A former lake on the Uzboi, with wet salt soil, $12\frac{1}{6}$ miles south of Batandal-Kul.

KAPKAKLI—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—(*Kuhn.*)

KÁRA-BAILI—

A hamlet in the Khánate of Khíva, situated on a canal, $20\frac{1}{3}$ miles from Khwája-Ili, on the Kangrád road.—(*Kostenko.*)

KÁRAGOZ CANAL—

A canal of the Khánate of Khíva, which leaves the Amu 20 miles below the head of the Klich-Niáz-Bai canal, and has a course of $53\frac{1}{3}$ miles and a breadth of 42 feet. It runs by Kitai and Buldumsáz.—(*Venyukoff.*)

KÁRA-KŪDŪK (WELL)—

A halting place on the Khwája-Kúndúz and Marv road, 16 miles from the former.—(*Kostenko.*)

KÁRATAGÁN (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

KÁRATÁSH—

A halting place on the Uzboi, $118\frac{2}{3}$ miles from Igdi, on the road from that place to Sári-Kámish.—(*Kostenko.*)

KÁRA-UI—

A small lake on the left bank of the Kuván-Járma arm of the Amu delta, $22\frac{1}{3}$ miles from Nukus.—(*Kostenko.*)

KARAUL—

A halting place on the road from Chahárjui to Marv, $10\frac{2}{3}$ miles from the former, with a well of brackish water 30 feet from the surface.

KÁRA-YÁB (WELL)—

On the Kabakli-Marv route, $202\frac{2}{3}$ miles from the former place.—(*Kostenko.*)

KÁRKI—

A town in the Khánate of Bukhára and the capital of the district of the same name, distant 147 miles south-east of Bukhára, $82\frac{1}{4}$ miles south-west of Kárshi, and 163 miles south-west of Sárnarkand. It is situated on the left bank of the Oxus, on the main road connecting the great towns of the Khánate with Andkhui and Herát, and is one of the chief fortresses of Bukhára on its southern frontier. The town, which is spread round an eminence on which the fortress is built, was, at the time it was visited by Vámbéry, a less populous place than it had been in former days, having suffered from the inroads of the neighbouring Turkumáns, and contained only 150 houses, in addition to a small bazar, three mosques, and a caravanserai. It seems likely, however, from Bykoff's notice of the trading importance of the place that it has, like Kárshi, increased in size and

population during the reign of the present Amir; but according to a recent paper by Mayeff, who traversed the caravan route leading thither from Kárshi in 1881, the ferry is much less used than in former times, trade having been diverted thence to the Kílaf ferry and other crossing places, such as the Shor-Tapa ferry, further up the Oxus. The inhabitants are for the most part Uzbaks and Turkumáns, the former probably of the Kangrád and Naimán tribes, whom Vámbéry met with in its neighbourhood, and the latter Arsári. Many of them are agriculturists, but a large number also engage in the local trade of the place and district, or in operations connected with the transit trade to which the place owes its importance. The defences of the place are said to be formidable; but, in the absence of any professional opinion about them, we must content ourselves with Vámbéry's account, according to which they consist of a small citadel on the right bank, held by a small detachment, with four guns on the ramparts, and of a more important fortress on the left bank. This is built upon a steep hill, and consists of a castle or keep surrounded, like most of the important fortresses in Bukhára, with three concentric lines of wall, each 5 feet broad and 12 feet high. Vámbéry was informed that the guns mounted on these works were 18 in number, 12 being of iron and 6 of brass. The principal military officer, as at Bukhára, was styled the Topchi-Báshi, but both the forts and the settlement were under the orders of the Governor of Kárki. The river is here crossed by an important ferry on the above-mentioned road, and Admiral Bykoff, who stayed there for some days on the occasion of his visiting the place in a steamer in the summer of 1878, and speaks of it as a very important crossing place, says that the transit of the ferry boats to and fro was almost continuous. Vámbéry, who seems to have been here after the flood season was at an end, describes the river as being nearly twice as broad as the Danube between Pesth and Ofen, with occasional sandbanks and a strong current, which sometimes carried the boats down for some distance. The boat in which he crossed took three hours in effecting the passage, but this was chiefly owing to the sandbanks; for in early summer, when the river is at its fullest, the boats go across in little more than half an hour, though even at the latter season there are sometimes troublesome sandbanks. The official in charge of the arrangements for the ferry is styled the *Daria-Bégi*, the same title as is given to the several commanders on the Aral and Caspian, and is one of the chief subordinates of the Governor. The district of Kárki extends along the banks of the Amu, from near Chahárjui on the west to Háji-Sálih on the east, and includes the whole strip of land which can be irrigated by canals or smaller irrigation channels from the river. The definition of the boundary, which is that given by Vámbéry, is of importance, as the line so marked forms the southern boundary of Bukhára. This district is inhabited by Arsári-Turkumáns, who are said to have migrated thither 200 years ago from the ancient home of their people in Mangíshlák. They first acknowledged the suzerainty of Bukhára, somewhat less than 50 years ago, on condition of protection against the more warlike sections of their tribe, and have of late years become peaceable subjects of the Amir. They are to a great extent agriculturists, but also engage in sericulture and in the carrying trade between Afghánistán and Bukhára. (*Vámbéry, Michell's Abstracts, Trotter.*)

KARKUI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko*)

KÁSHKÁNA-TÁGH—

A range of low hills in the Amu delta, bounding the central lakes on the east. They are about 300 feet high, and form a plateau 12 miles long and 2 miles broad, and are composed of clay and selenite, covered with thorny shrubs fit for camel forage.—(*Wood.*)

KAT—

A town of the Khánate of Khíva, $22\frac{2}{3}$ miles from the capital, on the road to Mángit. It is situated on one of the left branches of the Yármish canal. Its walls are $\frac{2}{3}$ mile in circumference, but almost in ruins, and contain about 50 houses and 30 shops. The population is said to be about 1,500, composed principally of Uzbaks with a few Sárts. There is a ditch round the town which can be filled with water. Its name and possible site are identical with those of the capital of one of the Begships into which the present Khánate of Khíva was divided in mediæval times. Lerch says it is on the meridian of Khíva. Markets are held on Tuesdays and Saturdays.—(*Kuhn, Lerch, Schmidt.*)

KAZÁK-DARIA—

See "Amu-Daria," B.—Delta.

KECH-GELDI (WELLS)—

Wells on the Uzboi or old bed of the Amu-Daria, with drinkable water, $66\frac{2}{3}$ miles from Igdi, on the road to Sári-Kámish.—(*Kostenko.*)

KHAIRÁBÁD—

Two wells on the route from Izgán in the Akhál oasis to Nazar-Kuli in the Kára-Kum. They are about 80 feet deep, and the water is very salt.

KHANDAK—

A ferry on the Amu, 16 miles below Chahárjui.

KHANKA—

A small town and market place in the Khánate of Khíva, 20 miles from the capital, on the road to Petro-Alexandrovska, and $2\frac{2}{3}$ from the Amu, over which there is a ferry. The town wall forms a square of 700 feet side.—(*Kuhn, Schuyler Venjukoff.*)

KHÁN-KUI—

The fourteenth stage, as given by Amin-Bai, on the road to Marv from the Suju wells. The wells here were dug in 1855 by Madanim-Khán on his expedition to Khíva, and are surrounded by *saksál* copses.

KHÁN'S CANAL—

A large canal in the Khánate of Khíva, which leaves the Amu on its left bank, *5 versts* ($3\frac{1}{3}$ miles) above Kangrád. It is $13\frac{2}{3}$ miles long, and throws off many small irrigation branches. Its banks are particularly low, and the water is almost on a level with the top of them. From the head of the canal to the town of Kangrád the banks of the canal are covered with the ruins of the old city of that name.—(*Venjukoff, Kuhn.*)

KHAZAWAT—(GÁZAVAT).

A town in the Khánate of Khíva, $13\frac{2}{3}$ miles north-west of Khíva, on the Kházawat canal, which is here 30 feet wide and 10 feet deep, with a current of 5 miles an hour. It is situated a mile from the edge of the cultivated oasis, and consists of a half-ruined fort and a small bazar built in a circle, the whole having a wretched appearance, and most of the houses being half ruinous. There are about 300 houses, 3 mosques, one of which,

the *Kambar-Bábá*, is in the fort, and 29 shops. Markets are held on Mondays and Thursdays, there being some trade with the *Turkumáns* in corn and cattle. The inhabitants are *Uzbaks*. The surrounding country is highly cultivated.—(*Kuhn, MacGahan.*)

KHÁZAVAT CANAL—

A canal of the *Khánate* of *Khíva* drawn from the *Amu*, 7 or 8 miles below the head of the *Palwán-Ata*. Its course is westward, and midway it approaches the *Palwán-Ata* to within a mile at the town of *Khánka*. It waters the lands of that town, and also of *Kosh-Kupir* and *Kházavat*. At first it is 70 feet broad, but at the town of *Kházavat* it is only 30 feet broad and 10 feet deep, with a current of 5 miles an hour. It is bridged at this town, and empties itself into the desert a mile to the south of it after a course of 60 miles. From its left bank flow five large branch canals, which again divide into numerous *ariks*. The lake at the edge of the desert formed by it is called *Zakh-Kesh*.—(*Vengukoff, Lerch.*)

KHESHAIGUR (WELL)—

On the *Kara-Kíshlák-Marv* route, 112 miles from the former place.-- (*Kostenko.*)

KHÍVA (LAT. LONG.)—

The capital of the *Khánate*, situated close to the south bank of the *Palwán-Ata* canal, about 40 miles from its head in the *Oxus*, and on the *Ingrik* and *Chardjili* canals, flowing from the former. The town is surrounded by a wall, in the shape of a pear in plan, with the head to the west, built by *Allah-Kuli-Khán* in 1842 of mud. It is 24½ feet high in some parts, 30 in others. It is 28 feet thick at the bottom, 1 foot at the top. The longer diameter of the enclosure is 1½ miles, the shorter 1 mile, and the wall is 21,700 feet long and flanked by circular bastions. It has a ditch about 25 feet broad, which can be filled from the *Palwán-Ata*. In the wall are nine gates, the principal of which are *Hazár-Asp* or eastern and *Kházavat*, which are closed by high wooden doors strongly clamped with iron. The citadel is within the outer wall, and is built in the shape of a rectangle on an elevation. Its east and west sides are each 2,100 feet long, the north and south sides 1,400. Its walls are 28 feet high, and are pierced by three gates, defended by round towers, on the west, north, and east sides; there is no ditch. At the time of its capture by the Russians the citadel was armed with 28 guns. In the citadel is the palace of the *Khán*, the mosque of *Palwán-Ata* with a green dome, the patron saint of the *Khánate*, the houses of the ministers, the mosque of *Syud-Niáz-Bai*, with a light blue minaret opposite the east gate, and the *Madrassa* of *Muhammad-Amin*, which educates 200 students. The most striking object in the citadel is a tower or *Minár*, 125 feet high and 30 feet in diameter at the base, covered with colored tiles, at the south-east angle of the palace. In the citadel and the eastern part of the outer town the houses are closely packed, and the streets are narrow and tortuous; but on the other sides of the town the houses are much scattered and are interspersed with fields, gardens, and cemeteries; and in the western part is a large pond. Branches of the *Ingrik* and *Chardjili* canals irrigate the fields and gardens, and run along the streets. The population was once 20,000, but the authorities now put it down at from 4,000 to 6,000. The inner town is divided into five, the outer into ten, quarters or *mohullas*. There are about 1,200 houses, 260 shops, 17 mosques, and 22 schools.

Khíva is of some commercial importance, but does not equal New Urganj in this respect. The centre of the wholesale trade is the caravanserai, a square two-storied building with a side of 50 or 60 paces, adjoining the east wall of the citadel. The retail trade is conducted in the "Tim," an arcaded building of stone, and in a bazar running from it to the west gate of the citadel. Market days are Mondays and Thursdays, and on others the shops are usually shut. Another bazar near the Hazár-Ásp gate is much frequented by country people, and there are five smaller ones.

The environs are a network of fields, canals, houses, gardens, and enclosures. The Khán has several gardens, each 4 to 5 acres in extent, near the town. The principal ones are—Chardjili to the west, Gildingán and Ingrik to the east, and Yusuf-Bika to the north of the town. These are all surrounded by high walls with buttresses, and are very well kept, apple, pear, cherry trees and vines being cultivated.—(*Venyukoff, Schmidt, Vámbéry, MacGahan, Burnaby.*)

KHOILI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

KHULUZLI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

KHURADUS—

A ferry on the Amu, 30 miles below Chahárjui.

KHUSH-KUI—

A well on the Kabakli-Marv route, $1\frac{1}{2}$ miles from the former place. There is another well bearing the same name as this on the Tishlan-Marv route, 80 miles from Tishlan.—(*Kostenko.*)

KHUTAB—

A ferry on the Amu, half-way between Khwája-Sálíh and Kárki.—(*Mayeff.*)

KHIWÁJA-ILI—

A town of the Khánate of Khíva on the Suyunli canal, near where it leaves the Amu, and two *vershs* ($1\frac{1}{2}$ miles) from that river. It has no walls, and is situated in a thickly populated and well wooded district, about 80 miles south of Lake Aral. The town has a prosperous appearance, and the houses are interspersed with gardens, the best and largest houses being along the bank of the Suyunli canal, which divides the town into two parts—the eastern and western. These are connected by a bridge, from which on both sides a covered bazaar runs. There are altogether 300 shops, 5 mosques, 5 schools, a college, and a caravanserai. The population is mostly Uzbek. The principal trade is in dried fish, from 50 to 200 boats being yearly engaged in the trade with Bukhára alone (*vide* Chahárjui). In cheap seasons six Khívan *batmáns* of fish sell in Khwája-Ili for 30 *tangas*, and in Bukhára for 60; in dear seasons the prices are 54 and from 70 to 90 respectively. In 1873 Khwája-Ili was occupied without fighting by General Verevkin. The name is also spelt "Khodjali" and "Khodjeili"—(*Kuhn, Venyukoff, Schmidt.*)

KHWÁJA-JÁM—

A ferry on the Amu, 20 miles below Kárki.

KHWÁJA-KUL—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—(*Kuhn.*)

KHWÁJA-KUL—

A lake formed by the Amu on its right bank, a little above the town of KipeháK. It is of no great extent.

KHWÁJA-KUMBAT—

A village of Khíva, $5\frac{1}{2}$ miles from the ruins of Zmukshir, on the road to Gorlán.—(*Murávtseff*.)

KHWÁJA-KÚNDÚZ—

A settlement on the left bank of the Amu, 22 miles above Táshlan, in the Lab-i-Āb province of Bukhára. There is a caravan route from this place to Marv, distance 212 miles.—(*Mayeff*, *Kostenko*, *Trotter*.)

KHWÁJA-NIÁZ-BAI—

A village in the district of Shúra-Khána of the Russian Amu-Daria province.—(*Kuhn*.)

KHYAK-TAU—

A halting place in the Russian Amu-Daria province, $5\frac{1}{2}$ miles from Petro-Alexandrovsk, on the road to Nukus.—(*Kostenko*.)

KIGAILI—

See "Amu-Daria," B.—Delta.

KIPCHÁK—

A town in the Khánate of Khíva, situated on a peninsula stretching into the Amu, 10 miles north of Mángit, 10 miles above Band, and 64 miles north-north-west of Khíva. The town consists of an old citadel and a new fortified town with a natural quay on the river, on which, at the time of Vámbery's visit, there were piles of wood and stacks of agricultural produce. There are very few inhabitants in the old citadel, and in the new town are about 120 houses, 10 shops, a mosque, and a school. Markets are held on Fridays and Saturdays, but the principal occupation of the inhabitants is cattle rearing, the animals being pastured on both banks of the river in spring and summer, and on the left bank only in autumn and winter. The inhabitants are Uzbaks. Opposite the town, shoals in the river narrow the navigable channel by half and render navigation extremely dangerous. On a hill on the right bank, opposite the town, is the ruin Chilpik, and on the plain at its foot a college erected by Háji-Niáz-Bai.—(*Kuhn*, *Vámbery*, *Venyukoff*.)

KÍSHLÁK or KÁRA-KÍSHLÁK—

A village on the left bank of the Amu, 64 miles up the river from Kabakli, whence there is a route, 272 miles long, to Marv.—(*Kostenko*.)

KISHMÁN TOWER—

A halting place, with no water, on the Kabakli-Marv route, $245\frac{1}{2}$ miles from the former place and the last stage before reaching the Marv oasis.—(*Kostenko*.)

KITAI—

A market town of the Khánate of Khíva on the Káragoz canal, 14 miles from the bank of the Amu and 44 miles from Khíva. It has no walls, and gives its name to a forest and district, called Khita-Beghi and Khita by Vámbery, which here runs parallel to the course of the river. There is a palace of the Khán here. The inhabitants are Uzbaks.—(*Venyukoff*, *Vámbery*, *Lerch*.)

KIZIL-CHÁGILDA—

A lake of most excellent fresh water, 4 miles from Chágil, on the route from Petro-Alexandrovsk to Bámi. Here cavavans fill up with water for the long march to Ortakui.—(*Murávtseff.*)

KIZIL-CHÁ-KÚYÚSI—

A halting place, with one good well, on the route from Petro-Alexandrovsk to Bámi, 44 miles from Chagil.—(*Murávtseff.*)

KIZIL-CHALAGÁN—

A walled town of the Khánate of Khíva, situated in a thick forest in which are lions, panthers, and wild boars, three hours' ride from Kuhna-Urganj, on the Kangrád road.—(*Vámbéry.*)

KIZIL-TAKIR—

A waterless halting place on the Uzboi, 56 $\frac{3}{4}$ miles from Igdi, on the road from that place to Sári-Kámish.—(*Kostenko.*)

KIZIL-TAKIR—

A village occupied by Gokláns at the junction of the Kizil-Takir and Tásh-Yaba canals, 13 $\frac{3}{4}$ miles from Il-Ali, on the Kuhna-Urganj road. The Khán has a garden here. Markets are held on Mondays and Thursdays, but there is little trade, except in the common necessities of life, with the Turkumáns who nomadise in the steppe to the south.—(*Kuhn.*)

KLICH-NIÁZ-BAI—

A town of the Khanate of Khíva, on the canal of the same name, 48 miles from Khíva. The canal is here very broad, and General Verevkin's troops had some difficulty in crossing it in 1873, a bridge, 189 feet long, having had to be constructed. The population are Sárts and Uzbaks.—(*Venyukoff, Schmidt.*)

KLICH-NIÁZ-BAI CANAL—

The Klich-Niáz-Bai canal leaves the river Amu, 5 $\frac{1}{4}$ miles below the Yamish, and in its course of 64 miles passes by Klich-Niáz-Bai. Its breadth is almost everywhere 70 feet, but in 1873 General Verevkin's column found the bridge at the above town destroyed, and had to build another 189 feet long. It gives off one large canal to the left and four to the right, Górlán being situated on one of the latter.—(*Venyukoff, Schmidt.*)

KOK-KALA OR MIHTAR-KALA—

A small fort near the mouth of the Yangi-Su arm of the Amu in Lake Aral, in the Russian Amu-Daria province.—(*Kostenko.*)

KOP-SHEID—

A well in the Khánate of Khíva, 14 $\frac{1}{2}$ miles from Kuhna-Urganj, on the Kangrád road.—(*Kostenko.*)

KOSH-KUPIR—

A town, 11 $\frac{1}{2}$ miles from Khíva, in the Khánate, on the road from the capital to Mángit. It is situated on the Kházavat canal in a well cultivated country and is surrounded by walls in the form of a square with sides 1,050 feet long.—(*Venyukoff.*)

KOTEN-KALA—

A hamlet of the Khánate of Khíva, 28 miles south of Kangrád, on the road to Kuhna-Urganj.—(*Kostenko.*)

KUHNA-URGANJ—

See "Urganj, New."

KURGÁNCHA—

A fort mentioned by Butakoff as lying amidst the pastures of the nomad Kára-Kalpaks in the Amu delta, but not marked on any map.—(*Wood.*)

KURRUK (WELL)—

On the Kára-Kíshlák-Marv route, 32 miles from the former place.—(*Kostenko.*)

KUSHEK-TUSHTI (WELL)—

A halting place, 39 $\frac{2}{3}$ miles from Khwája-Kúndúz, on the road from that place to Marv.—(*Kostenko.*)

KUTÁNI-KUBATAT—

A waterless halting place on the Uzboi, 76 $\frac{2}{3}$ miles from Igdi, on the road from that place to Sári-Kámish.

KUWÁN-JÁRMA—

See "Amu-Daria," B.—Delta.

L

LAILA—

A group of ten wells on the road from Petro-Alexandrovsk to Gok-Tapa, 231 miles from the former. Forty horses can be watered at them.—(*Kalitin, Murávtseff.*)

LAUDÁN CANAL—

A branch of the river Amu in the Khánate of Khíva, which may be considered as a canal, as it is used for irrigation purposes. It formerly flowed into Aibugir and left the Amu, where fort Band now is. Its course is 66 $\frac{2}{3}$ miles. Between 1840 and 1850 the Laudán was 350 to 420 feet broad, and flowed due west. Its banks were low and its current very swift. At that time the gulf of Aibugir was only separated from the sea of Aral by a sandy bar. In 1848 Butakoff found only 1 $\frac{1}{2}$ feet of water at the mouth of Laudán, with a very weak current in Aibugir, and subsequently from the inclination of the main stream to flow into the more eastern branches the stream became very much desiccated. In 1857, for the double object of punishing the Turkumáns and to throw more water down the arms in the delta, the dam at Band was constructed, and its lower course is now completely dried up. At 40 miles from Band the Sakrauk branch flows out to the left (south-west), which before reaching Kuhna-Urganj turns to the west, and thence to the south, at the ruins of that town. Besides the dam at Band, the Sakrauk has been dammed at Kuhna-Urganj, and also about 25 miles below it; but in the floods of 1849-50, and again in 1871, the floods of the Amu burst the dam and flowed up the Sakrauk as far as lake Sári-Kámish, into which it used to flow. Several irrigation canals still flow from the Sakrauk and Laudán. Three other branches of the Amu, the Ala-Bai, Kuda-Bai, and Kavyzuk, used to flow into the Laudán, about 10 miles below its head, but have lately dried up. The Dariálik canal also flows into the Sakrauk at Kuhna-Urganj. It is reported that in 1879 the dam at Band was removed, and the Laudán deepened so as to be navigable for eight miles.—(*Venyukoff, Lerch, Kuhn, Kuropátkin, Wood.*)

M

MÁILI-KUL—

A small lake in the Russian Amu-Daria province, 30 miles east of Nukus.—
(*Kostenko.*)

MÁLIA-KHAIRÁN (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

MÁLIA-KHAIRÁN-KUDŪCHI (WELL)—

On the Kára-Kíshlák-Marv route, 128 miles from the former place.—
(*Kostenko.*)

MÁNGIT—

A town of the Khánate of Khíva, 54 miles from the capital and 3 from the Amu, on the Boz-Su canal. The inhabitants are Uzbaks and Sárts. The town commands the only bridge over the canal, and was the scene of an engagement between the Russians and Khívans in 1873, after which, according to MacGahan, the Russians “burnt the town and slaughtered every man, woman, and child they could lay hands on”—a statement not borne out by other writers.—(*MacGahan, Vengukoff, Schmidt, Vámbéry.*)

MERGEN—

A halting place on the route between Petro-Alexandrovska and Gok-Tapa, 24½ miles from the latter. There are four wells with very brackish water.—
(*Murávtseff.*)

MIRZA-CHILLA—

Also called Mirza-Chirla. A halting place in the Kára-Kum desert, the seventh stage from the Suju wells on the road to Marv according to Amin-Bai, with three or four wells with brackish but drinkable water, and a little *saksál*.—(*Murávtseff.*)

MUHAMMAD-DIÁR—

A halting place on the route between Petro-Alexandrovska and Gok-Tapa, 72½ miles from the latter, with four wells, each about 70 feet deep, with brackish water.—(*Kalitin.*)

MUHAMMAD-KALA—

A ruined fort on the right bank of the Kuwán-Járma arm of the Amu delta, 7 miles from Nukus.—(*Kostenko.*)

N

NAGIM—

A small Tékke settlement on the edge of the Marv oasis, on the Kabakli road, watered by canals from the Murgháb, which is 13 miles off.—(*Kostenko.*)

NAIMÁN—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—
(*Kuhn.*)

NAZAR-KULI—

A halting place in the Kára-Kum desert, 40 miles north-east of Izgán. There are two wells here, each 60 to 70 feet deep, with much water, but it is very brackish. About 100 camels can be watered at a time. There is a *kala* with a tower built round the wells, where 300 Tekkes were found by a reconnaissance made after the capture of Gok-Tapa.—(*Murávtseff.*)

NIÁZ—

A halting place on the route between Petro-Alexandrovsk and Bámi, 20 miles from the latter. There are here seven wells, 35 feet deep, with brackish and hardly drinkable water.—(*Murávtseff.*)

NIGAR-ALI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

NUKUS—

A village and Russian fort on the right bank of the Amu-Daria, nearly opposite to the town of Khwája-Ili. The village is peopled by Uzbaks, and contains 200 houses. It is surrounded by mud walls, giving it the appearance of a fortress, and is situated on the right bank of the river, just above the point where it is left by the Kuwán-Járma branch, and where the main stream is crossed by a ferry much used by a people of the surrounding districts on their road to Khwája-Ili. There is considerable discrepancy between the accounts given of the site of the fort, owing to the Russians having constructed two forts—one now called Old Nukus and in ruins, near the village of Nukus, and the other further up the Karabaili and known as New Nukus. Major Wood speaks of a fort about a mile above the village as a small square enclosure flanked by round bastions at two corners. This must be Old Nukus, which was formerly a Khívan fort. Stumm talks of Nukus as formerly a Khívan Fort, but goes on to describe what must evidently be New Nukus as an already flourishing settlement in 1874, with a fort containing a guard-house, hospital, engineer depôt, officers' quarters, and barracks for a garrison variously estimated at two companies, or from three to four hundred men, with four field guns. Lerch describes New Nukus as a fortress on the left bank of the Karabaili, $14\frac{1}{2}$ *versts* below its commencement, and 5 *versts* above the ruins of Old Nukus, on the right bank of the same channel of the Amu. He describes its front as a wall of about 200 fathoms long and about 20 feet high, and, like Schmidt, speaks of a flourishing and busy settlement round it. The first fort erected by the Russians after the annexation of the new Amu-Daria district in 1873 was Petro-Alexandrovsk (*q. v.*). This proved at first to be unhealthy, and it was resolved to remove the whole of the force thence to the fort which was hastily constructed at Nukus (probably Old Nukus). The site for the latter had, however, been selected in winter time, and as summer came on it was found that it was not much more healthy than Petro-Alexandrovsk, and that in addition it had the disadvantage of being liable to be flooded. A small garrison only was therefore allotted to Nukus, and the main body was retained in their old quarters. Among other points in favor of Nukus were its commanding the important passage over the Amu, noticed above, as well as its being the terminus of a good road from Kazála and the Sir. *Saksál* for fuel is also found in abundance in the neighbourhood, and the

proximity of the important town of Chimbai facilitates the provisioning of the garrison. These circumstances render Nukus a convenient intermediate link between the base on the Aral and Petro-Alexandrovsk, 200 miles further up the stream, and it now gives its name to one of the two sections (Nukus and Shúra-Khána) into which the Amu-Daria district has been divided for administrative purposes. The country round Nukus is flat, and, though cultivated in places, is generally covered with tamarisk and *elagnus* jungle. It is, however, less well wooded than the opposite bank, where the town of Khwája-Ili is almost hidden by timber trees. An observatory was established at Nukus in 1874, and a brief notice of the thermometric observation taken there from July to November of that year will be found in Schuyler. From this it appears that the summer temperature is about the same as at Táshkand, the maximum heat recorded being 104° F.—(*Trotter, Kuhn.*)

O

OGUZ—

See "Amu-Darya," B.—Delta.

ORSHUK-KUI—

The sixteenth stage on the road from the Suju wells to Marv as given by Amin-Bai. There are two wells, 42 feet deep, with brackish water.

ORTAKUI—

A halting place on the route from Petro-Alexandrovsk to Bámi, 291 miles from the former, near the edge of the Kára-Kum desert, with two wells of slightly brackish water. Ten more, each 12 or 15 feet deep, were dug by Kuropátkin's column in 1880, giving an ample supply of slightly brackish water.—(*Murávtseff.*)

P

PADAMAN (WELL)—

On the Kabakli-Marv route, 110 miles from the former place.—(*Kostenko.*)

PALWÁN-ATA CANAL—

The Palwán-Ata canal, also called the Khán's canal, is the largest in the Khánate of Khíva, and leaves the Amu 8 miles below Pitnák. It runs at first in a westerly, and then in a south-westerly direction, and, flowing close by the capital, falls, after a course of 56½ miles, into the lake of Kurántázi. It is at first 175 feet broad and 21 deep, but soon branches into a number of small *ariks*. At Khíva, where it is bridged 700 feet from the town wall, it is only 20 or 30 feet broad, and runs with a strong current. Twenty-one small canals (*ariks*) run from its left, and four from its right bank. On

some of the former are situated the towns of Hazár-Asp, Ishán, and Bogat, and the total area irrigated by it is about 30 square miles. The *Kairábád* canal is one of the largest flowing from the left bank of the Palwán-Ata.—(*Venyukoff*.)

PERVO-NACHÁLNI—

A settlement of banished Ural Cossacks in the Russian Amu-Daria province, 12 $\frac{3}{4}$ miles from Petro-Alexandrovsk.—(*Kostenko*.)

PITNÁK CANAL—

The Pitnák canal leaves the Amu 2 miles above the town of that name, waters its fields and gardens, and falls into lake Ayak-Kul, 17 $\frac{1}{2}$ miles from its mouth. It runs first south, then west, then north-west, and is joined about midway in its course by three other small canals from the town of Pitnák. It is 17 $\frac{1}{2}$ feet broad.—(*Kuhn, Venyukoff*.)

PETRO-ALEXANDROVSK—

A Russian fort and settlement, about 2 miles from the right bank of the Amu-Daria, in the same latitude, and about 30 miles east of Khíva, and 4 miles from Shúra-Khána. It lies between the Bus-Yáb and Durt-Kul canals, which its shorter fronts face, and is the terminus of a caravan road over the Baránta mountains to the Sir-Daria. It is the chief military station in the Amu-Daria province, and the capital of a district. The fort was built shortly after the fall of Khíva on the site of a large walled garden belonging to the Khívan magnate residing in the town of Shúra-Khána and was then armed with two "unicorns," two 40-pounder mortars, and four Khívan guns. The garrison now consists of the 5th and 13th Turkistán Line Battalions, 4 *sotnias* of Orenburg Cossacks, two field and two mountain guns. The fort is built on ground of considerable natural strength, and is pleasantly situated in cultivated ground on the edge of the desert. It did not, however, turn out a very healthy place, and a portion of the garrison was transferred to Fort Nukus, which was built a few months later. The settlement which has sprung up round the fort is described by Stumm as a flourishing little town, inhabited by officers, married soldiers, and merchants, and containing a club, school, and other institutions.—(*Stumm, Wood, Burnaby, MacGahan*.)

PITNÁK—

A town on the south-east boundary of the settled portion of the Khánate of Khíva, on the canal of the same name, and two miles from the Amu, from which it is separated by a low clay ridge. Its neighbourhood was overrun by the Tekke-Turkumáns of Marv in 1874.—(*Venyukoff, Wood, Lerch, Schuyler*.)

POR-SU—

A small town near the left bank of the Amu, distant about 33 miles north-west from Kipchák. It is said by Lerch to be named after a small lake into which the Bor-Su canal flows. There is also an old town of Por-Su near the same lake, which is the site of the murder of Prince Bekovitch Tcherkásski and his suite in 1717. Old Pár-Su is now a mass of ruins, having been deserted some 30 years ago on account of its water-supply having failed. The neighbourhood is said by Kuropátkin to be occupied by the Yamúd-Turkumáns.—(*Trotter*.)

R

RAFATAK—

A halting place mentioned by Vámbéry as giving its name to one of the roads from Chahárjui to Marv. It is evidently the same place as the Rafatak wells mentioned by recent Russian authorities as a settlement of the Arsári-Turkumáns, 90 miles from Chahárjui, which was destroyed by the Tekke-Turkumáns in a raid made in 1875. Rafatak (written Rapadak) is also mentioned as being $53\frac{1}{2}$ miles from Chahárjui in Kostenko's route.—(*Trotter.*)

RAHMÁN-BERDI-BI-BAZÁR—

See "Bai-Bazar."

RAPADAK—

A halting place on the road from Chahárjui to Marv, $53\frac{1}{2}$ miles from the former.—(*Kostenko.*) See also "Rafatak."

RAPPAI—

A village of the Khánate of Khíva, $35\frac{1}{2}$ miles from Khíva, on the road to Il-Ali, in a rich and fertile country peopled by Yamúd-Turkumáns.

RUPPA-KALA—

A ruined fort on the left bank of the Amu, 111 miles above Pitnák, whence there is a route to Marv.—(*Shakespeare.*)

S

SAJA—

A halting place on the route from Khíva to Marv, 100 miles from the oasis of Khíva, with a well, 16 fathoms deep, with quantities of fresh water, which is rapidly replenished.—(*Kostenko.*)

SAKAR-KÚDÚK (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

SAKRAUK CANAL—

See "Laudán Canal."

SANSIZ—

A halting place on the route from Petro-Alexandrovsk to Bámi, about 65 miles from the latter, with 20 wells, but only six of them with drinkable though brackish water, the rest being bitter. They are 70 feet deep.—(*Murávtseff.*)

SARDÁBA (WELL)—

On the route from Kabakli to Marv, $138\frac{1}{2}$ miles from the former place.—(*Kostenko.*)

SÁRI-KÁMISH—

An extensive depression in the old bed of the oasis in which there are two lakes, the one known as the Sári-Kámish passed on the caravan track from the Khívan oasis to Krásnovodsk at about 118 miles from Khwája-Ili, and the other, the Kapilár or Koh-Pulár, connected with the former by a broad channel 6 or 7 miles in length. The lakes at present occupy only a small part (about half according to Lupandin's survey) of the Sári-Kámish depression, the edges of which are at from 15 to 20 miles from their margin; and, notwithstanding the presence of a few springs, it seems probable that they would disappear entirely if they were not at rare intervals replenished by floods from the oasis. This is known to have occurred in 1849-50, and again in 1879, when the river burst its banks in the July floods, the surplus water reaching the Sári-Kámish by several ordinarily dry channels (see *Amu-Laudán*), through which it continued to flow till late in the autumn, raising the level of the lake by 21 feet, and causing it to overflow into the Koh-Pulár. The salt water with which the former is generally filled was entirely replaced by fresh water from the river, but, according to the most authentic accounts, no water found its way down the Uzboi from the Koh-Pulár lake. Petrúsevitch's surveys of 1876 are said to have proved that the surface of these lakes was then lower than that of the Caspian, and it is held to be probable that the whole of the Sári-Kámish depression would have to be filled before any water could reach the Uzboi from the western end of the lakes. The amount of water that would be lost by evaporation from the surface of this extensive basin is one among the many other similar arguments against the possibility of obtaining a navigable channel to the Caspian by the diversion of the Oxus into the Uzboi.—(*Trotter*.)

SÁRI-KÚDÚK (WELL)—

On the Tíshlan-Marv route, 90 $\frac{3}{4}$ miles from the former place.—(*Kostenko*.)

SÁRI-KUSU (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko*.)

SAZAKLI-TAPA—

The second stage on the route from the Suju wells to Marv as given by Amin-Bai. It is situated in deep shifting sands.

SHÁHÁBÁD—

A town of the Khánate of Khíva, 22 miles from the capital, on the canal of the same name, surrounded by a wall built in a square of 1,400 feet side. It has two gates—one on the north, the other on the south. There are 100 houses, 4 mosques, and a college within the walls, and 30 houses and 19 shops outside them; but many houses are unoccupied, as their owners live on their farms. The inhabitants are Uzbaks and Sárts. Markets are held on Tuesdays and Fridays, at which a good deal of trade is done in corn and maize.—(*Kuhn, Venyukoff*.)

SHÁHÁBÁD CANAL—

The Sháhábád canal leaves the Amu 4 geographical miles (according to Lerch) below the Kházavat, and flows at first west-south-west for a mile to the town of New Urganj. Continuing in the same course with a few bends, it takes a north-westerly course, 8 miles from the latter town, and then runs in a general westerly direction by Sháhábád (which it leaves about a mile to the south), Ambár, Tásh-Hauz, and Il-Ali. Its total course is 90 miles, and it throws off five branches to the right and four to the left, besides numerous

irrigation channels. Its breadth is about 84 feet, and its average depth 5 to 6 feet. The current is very swift. Large boats can navigate it as far as Tásh-Hauz, and below that smaller ones run to Il-Ali. Its banks are even, but the side canals flowing out of it are not bridged. In its lower course there are two good bridges of piles—one opposite Sháhábád (the Sháhábád-Kuprin), the other an hour's ride above it called the Kiát-Kuprin. These bridges have small watch-towers at their northern ends, formerly used when Turkumán raids were common. There is also a bridge opposite Chát.—(*Kuhn, Venjukoff.*)

SHÁHBÁZ-WALI—

A town of the Russian Amu-Daria province, an hour's ride from the right bank of the Amu, in a well cultivated and thickly peopled oasis. It lies opposite New Urganj, and occupies the site of the ancient Kat, a few ruins of which remain, including the mausoleum of Sháh-Abbás-Wali. The town is surrounded by walls, and contains 200 houses, 15 shops, 2 mosques (one of which has a tall minaret), and 2 schools. Markets are held here on Sundays and Thursdays, to which people come from Khánka, Urganj, Shúra-Khána, and Bai-Bazár, but local needs only are supplied. Hence caravan roads run to Russia *viá* Kazála, and caravans from Urganj cross the river here. The passage from Urganj takes three hours. First the main stream has to be crossed, then the island Orta-Atan, the arm Uráz-Ali-Kitkán, the island Arka-Tugán, the arm Miltik-Kitkan, the island Chalásh, and finally the stream Ters-Sakar. There are no inhabitants on these islands, but cattle are pastured on them from spring to autumn.—(*Kuhn.*)

SHÁH-MURÁD—

A village of Gokláns in the Khánate of Khíva between Il-Ali and Kuhna-Urganj.—(*Kuhn.*)

SHAIKH—

A halting place on the route from Petro-Alexandrovsk to Gok-Tapa, 215 miles from the latter, on the brink of the old Chahárjui bed of the Amu. There are ten wells which together yield 60,000 buckets. The nomads say that 10,000 sheep can be watered at them.—(*Kalitin, Murávtseff.*)

SHAIKH-ARIK—

A small fort on the Amu, on the high earthworks of the canal, which here leaves the Amu, and which in themselves constitute a strong defensive position; but on the 17th May 1873 General Golovátcheff drove the Khívans from it by his artillery fire alone, and here the whole Turkistán column crossed afterwards. The cultivation of the Khánate begins about a mile from Shaikh-Arik.—(*Schmidt, MacGahan.*)

SHAIKH-JAILI HILLS—

A range of hills bounding the oasis on the right bank of the lower Amu, now forming part of the Russian Amu-Daria province. They begin about the level of Nukus, and opposite Band approach to within 4 miles of the Amu, forming the five-peaked hill of Bish-Tapa (Tiube). Above this they are about two miles from the bank, throwing out a spur to it opposite Kipchák, on which are the ruins of Chilpik. Opposite the lake of Khwájá-Kul they descend to a neck, beyond which the range is known as the Sultán-Oveis (*q. v.*). They are about 200 feet high, and are composed of metamorphic schist of a greenish-blue color. Their slopes are bare and very steep on the south side, but on the north they descend gently to the sandy Kizil-Kum desert.—(*Kuhn.*)

SHAIKH-KALA—

A village in the Khánate of Khíva on the Yármish canal, 30 miles from Górlán, on the route to Bámi.—(*Murávtseff.*)

SHAIKH-SENEM—

A halting place on the route from Petro-Alexandrovsk to Bámi, 173 miles from the former, with two wells—one bad, though drinkable; the other quite salt.—(*Murávtseff.*)

SHALÁBA (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

SHARKHI (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

SHAR-KÚDÚK (WELL)—

On the Tíshlan-Marv route, 6½ miles from the former place (*Kostenko.*)

SHAROLI-BÁBÁ (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

SHISHMIA (WELL)—

A well on the Tíshlan-Marv route, 37½ miles from the former place.—(*Kostenko.*)

SHÚRA-KHĀNA—

An important Russian town in the Amu-Daria province, which gives its name to a district of the province, and is about 25 miles from Khíva. Major Collett, quoting from Vámbéry and others, says that it is a walled place, where a market is held twice a week, which is well attended by the nomads and other inhabitants of the neighbourhood. Major Wood describes it as an uninteresting place, much like Kangrád and Chimbai, only distinguished for the extreme beauty of its fields and gardens, irrigated by the Amu, on the extreme verge of the Kizil-Kum desert. Schmidt, who calls it the most important on the right bank, says that its trade is increasing fast, one of its chief local industries being the preparation of sesame (*kunjut*) oil. It is separated by about 4 miles of cultivated country, intersected by several narrow strips of the above-mentioned encroaching desert from Fort Petro-Alexandrovsk.—(*Trotter.*)

The passage of the Amu here is 5½ miles long. The river flows in several branches, one of which is 700 yards wide. Besides this branch, two others have to be crossed in boats, and eight small branches and canals by fording. The whole of this extent is inundated with water when the river is in flood, and the passage then becomes still more complicated. The chief difficulty of all in this passage is with baggage and harness animals, camels and horses, and great exertions are required to get them into and out of boats. The taking off and putting on of their loads also takes much time. As the distance between some of the branches at the crossing is 2 miles, it is necessary to have carts to transport baggage between them.—(*Kostenko.*)

SHUR-KÚDÚK (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

SIRÁB—

A halting place on Burnes' route from Chahárjui to Marv, 59 miles from the former, with a well of "fetid" water.—(*Burnes.*)

SULTÁN-OVEIS HILLS—

The continuation of the Shaikh-Jaili range to the east of the neck near lake Khwája-Kul. They are of the same height and formation as the latter,

and run parallel to the river as far as Sháhábáz-Wali, whence they trend away eastwards into the desert.—(*Kuhn.*)

SULTÁN-SERAI—

A village on a bend of the Amu, on the left bank between Tunuklu and Toyuboyun, and near Pitnák. Native boats take in and discharge cargoes at this place, which is the breaking bulk station between the Khívan Khánate and the towns on the Upper Oxus. Opposite it is a pretty wooded island called Arálchi-Bábá-Auliya. The river is here 2,000 feet broad.—(*Wood.*)

SUVÁLI—

A canal in the Khánate of Khíva, which leaves the Amu below the town of Khwájá-Ili, and flows to the left.—(*Venyukoff.*)

T

TAKHT—

A halting place in the desert between Marv and the Oxus at Kabakli. According to Thomson and Shakespeare, and a Russian route by Kostenko, it is about 26 miles from the Oxus, but by the other routes collected by the latter officer it is 104 *versts* or 4 marches (69 or about 92 miles respectively). The place is also called Takht-i-Sulaimán, and is marked by a broad belt of bare loose sandhills, the hollows between which serve as reservoirs for the snow and water that falls upon them. Conolly and Thomson found excellent water here, a foot below the surface, in holes dug or scraped below the most sheltered of these sandhills, which agrees with the account in Kostenko's routes of springs or wells 1 to 2 yards deep in the sand.—(*Trotter.*)

TÁLDIK—

See "Amu-Daria," B.—Delta.

TÁSH-HAUZ—

A town in the Khánate of Khíva, 41 miles from the capital, situated in a rich and well-cultivated country, and on the right bank of the Sháhábád canal. The town consists of a citadel, in which is a palace of the Khán and a wall in the form of a square, each side being 2,100 feet long. There are three gates—on the south, on the west, and in the citadel. The town contains 400 houses, 300 shops, 1 caravanserai, 6 mosques, 6 schools, and a college, and is, after Hazár-Ásp, the strongest fortress in the Khánate. On the approach of the Russians in 1873 it was put in a state of defence, but surrendered without fighting. The population of Tásh-Hauz is composed of Persians and Uzbaks. There is little trade, and what there is is mostly in grain, markets being held on Wednesdays and Saturdays. There are no houses in the immediate front of the walls, but many farms at a short distance cultivated by Persians.—(*Kuhn.*)

TÁSH-KALA—

A village of the Khánate of Khíva, situated on a high mound on the left bank of the Oxus, between New Urganj and Górlán, and inhabited by Uzbaks.—(*Vámbergy.*)

TÍSHLAN—

A settlement on the Oxus, 48 miles above Chahárjui, from which there is a caravan route to Marv, distance 191½ miles.—(*Kostenko.*) Some authorities spell the name Táshlan.—(*Trotter.*)

TORPÁNI—

A halting place on the Uzboi, close to the wells of Kech-Gildi (*q.v.*).—(*Kostenko.*)

TUGAI-CHÁTLI—

A village in the Shúra-Khána district of the Russian Amu-Daria province, opposite the head of the Laudán branch of the river. From this place the cultivation of the right bank begins, extending eastward.—(*Kuhn.*)

TUGAI-MULLA-ISHÁN-KILDI—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—(*Kuhn.*)

TULABAI—

See "Amu-Daria," B.—Delta.

TUMULÁK-TÁGH—

A bare round clay hill, 150 feet high, of soft sandstone formation, in the angle between the Taldik and Ulkún branches of the Amu delta. There is a little cultivation and a Kára-Kálpak *aul* at its base and a cemetery on its summit.—(*Wood.*)

TUNUKLU—

A halting place on the road from Khíva to Bukhára, on the right bank of the river Amu, about 165 miles above Khwája-Ili, where the road leaves the river and leads across the intervening desert. Near this spot, at which the cultivation of the oasis of Khíva begins, are the ruins of an ancient fortress on a small eminence, which is described by Vámbéry as being most beautifully covered with verdure and close to the river's bank. The main column of the Russian army advancing on Khíva in 1873 was opposed in crossing the river at Tunuklu by a battery situated at the end of a ridge of argillaceous schist, which is here cut away by the stream, and forms a precipitous bank 40 feet in height.—(*Trotter.*)

U

UCH-KHWÁJA (WELL)—

On the road from Chahárjui to Marv, 106½ miles from the former.—(*Kostenko.*)

UCH-MISIR (WELL)—

On the Khwája-Kúndúz-Marv road. Distance not stated.—(*Kostenko.*)

ULKÚN-DARIA—

See "Amu-Daria," B.—Delta.

URGANJ, NEW, OR YANGI-URGANJ—

A most important trading town of the Khánate of Khíva, 20 miles from Khíva, and situated on the Sháhábád canal on its right bank and 3 miles from the Amu. It is surrounded by a mud wall, in the form of a rectangle

1,575 feet long, 1,400 feet broad, with a ditch. The bazaar, which contains 300 shops and traverses the fortress from north to south, shows no traces of the great trade of the place, as the merchants keep their goods in their own houses. Urganj is the great depôt of the foreign trade of Khíva, that with Russia consisting chiefly of cotton, *khaláts*, silk, and dried fruits. As many as a thousand large boats laden with grain are despatched weekly to Kangrád and other places, and it is also the depôt of the Khívan cotton trade and of the river-borne trade from Bukhára, and one of the few places from which English manufactures still penetrate into the Khánate. Both country produce and foreign goods reach the bazaar of Urganj by the Sháh-ábád canal, and by means of carts with which all the avenues leading to the town are crowded, especially on market days, of which there are two in the week. Under the town jurisdiction are 160 parishes, peopled by Sárts and a few Uzbaks, who cultivate most fruitful fields of rice, corn, and cotton, watered by a canal from the Oxus, which flows into lake Tepelik-Kul, 13 miles west of Urganj.—(*Kuhn, Vámbéry, Lerch, Schmidt, Trotter.*)

URGANJ, OLD, OR KUHNA-URGANJ—

Formerly the capital of the Khánate of Khíva, but now merely a small town at the north-east side of the ruins of the old town, 43 miles from Khíva, upon the Sakrauk canal, which diverges from the Laudán branch of the Amu. Authorities differ as to the number of houses, Venyukoff giving 35 houses and 75 shops; Kuhn, 350 houses, 100 shops, 6 mosques, and 2 schools. It is surrounded by a clay wall with three gates. The town was once quite depopulated by reason of the desiccation of the canals, but when the Yákub-Bai-Yargán canal was brought to it from the Suyali canal it filled up again. For 13 or 14 miles around, on both banks of the old Amu (Laudán) bed, the ground is covered with small sandhills, on which are cemeteries and ruins. Of the ruins of the old city, only two minarets, about 150 yards apart, two mausoleums, and five other buildings have been preserved. Near the new town is the mausoleum of Shaikh-Najmat-Din-Kubár. The rest of the old city is a heap of ruins.—(*Kuhn, Venyukoff.*)

URUN-DARIA—

See "Amu-Daria," D.—Old beds.

UYUN-MAKANU—

The third stage on the route from the Suju wells to Marv as given by Amin-Bai, situated in a hollow between sandhills without water.

UZBOI—

See "Amu Daria," D.—Old beds.

W

WAZIR—

A village on the left bank of the Amu, in the Khánate of Khíva, near the entrance to the Klich-Niáz-Bai canal.

Y

YAMAN-CHÁGIR—

A village in the Shúra-Khána district of the Russian Amu-Daria province.—(*Kuhn.*)

YANGI-ARIK—

A village, $19\frac{1}{2}$ miles from Khíva, on the road to Hazár-Asp.—(*Kostenko.*)

YANGI-BAZÁR—

A village, $37\frac{3}{4}$ miles from Khíva, on the road to Mángit.—(*Kostenko.*)

YANGI-SU—

See "Amu-Daria," B.—Delta.

YANGI-URGANJ—

See "Urganj, New."

YANGI-YÁP—

An insignificant hamlet of the Khánate of Khíva, 4 hours by boat from Górlán, and $1\frac{1}{2}$ hours from the bank of the Amu, surrounded by mud walls.—(*Vámbéry.*)

YÁR-ADJI—

A halting place in the desert on the route from Kabakli to Marv, distant $106\frac{2}{3}$ miles (according to one authority) and 10 stages, or $202\frac{2}{3}$ miles from Kabakli according to another. There are many wells, about 14 feet deep, with tolerable good water and sufficient grazing and fuel. There are Turkumán settlements here.—(*Kostenko.*)

YÁRMISH CANAL—

The Yármish canal leaves the Amu-Daria 10 miles below the Sháhábád canal, at a place where (in 1842) the Amu divided into three branches forming two large islands. It flows parallel to the Sháhábád canal, and the zone irrigated by it is separated from that of the latter by a tongue of desert $1\frac{1}{2}$ to $2\frac{1}{2}$ miles broad. Its banks are very steep and its breadth 56 feet. Its side canals are unimportant, but on one of them lies the small town of Kat.—(*Venyukoff, Lerch.*)

YAST—

A village on the right bank of the Amu, 48 miles below Chahárjui, with a ferry over the river.—(*Májeff.*)

YOL-AIRUTI—

Also called Khivalik-Komur. The first stage on the road from the Suju wells to Marv given by Amin-Bai. Here the road forks, one branch going to Akhál, the other to Marv.

Z

ZAIKESH—

A lake on the border of the oasis of Khíva, 18 miles from the capital, on the road to Zmukshir.—(*Kostenko.*)

ZENDA (WELL)—

A halting place on the road from Kárki to Andkhui, 28 miles from the former.—(*Kostenko.*)

ZMUKSHIR—

A ruined fort on the verge of the Khívan oasis, 56 miles by road from Khíva. It is 4 acres in extent and the walls are 30 feet high and in a tolerable state of preservation. Routes run from this place to Gok-Tapa and to Bámi *viá* Igdi.—(*MacGahan, Murávtseff.*)

SECTION III.

ROUTES

IN THE

KHÍVAN OASIS, KÁRA-KUM AND ALONG THE AMU-DARIA.

—◆—
Route No. 1.

From—PETRO-ALEXANDROVSK

To—BÁMI.

Territory.—KHÍVA AND KÁRA-KUM
DESERT.

Authority.—MURÁVTSEFF.

Date.—1880-81.

Names of stages, &c.	DISTANCE.		Description of Route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Sháhbáz-Wali	20	20	This route was traversed in 1880-81 by Colonel Kuroptákin's detachment, consisting of 849 soldiers (all ranks), about 320 horses, 900 camels, and 172 followers. Infantry rode on camels.
Gorlán	20 $\frac{1}{3}$	40 $\frac{1}{3}$	In Russian territory on the right bank of the Amu-Daria.
Shaikh-Kala	30	70 $\frac{1}{3}$	Through Russian territory by the right bank of the Amu-Daria to the ferry opposite Gorlán at the village of Ishimji. Water at Gorlán from a branch of the Klutch Niáz-Bai canal. The Amu at Gorlán is 800 to 1,000 yards broad (see Amu-Daria).
Khwája-Kumbat	23 $\frac{1}{3}$	93 $\frac{2}{3}$	Through cultivated country (Khánate of Khiva). Shaikh-Kala is on the Yármish canal.
			At 6 $\frac{2}{3}$ miles pass the walled town of Tásh-Hauz and at 12 miles cross the river Dariálik (unbridged) by <i>Arabas</i> . Thence to Khwája-Kumbat the road is very sandy.

ROUTE No. 1—*contd.**From Petro-Alexandrovsk to Bâmi.*

Names of Stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Châgil	18 $\frac{2}{3}$	112 $\frac{1}{3}$	At 5 $\frac{1}{2}$ miles pass the old fortress of Zmukshir. Water found in wells, insufficient for troops.
Lake of Kizil-Châgilda	4	116 $\frac{1}{3}$	Off the direct road, but an admirable place for filling up water-supply. Water very good.
Kizilâ Cha-Kuyusi	40	156 $\frac{1}{3}$	Road partly sandy; partly hard under foot. In consequence of recent rain (21st November) pools had formed. Only one good well at halting place.
Shaikh-Senem	16 $\frac{2}{3}$	173	Road over sandy clay soil, favorable for guns. At 9 $\frac{1}{2}$ miles pass through a group of sandhills. Shaikh-Senem is $\frac{2}{3}$ mile from the ruins of the fortress of that name. There are two wells—one bad though drinkable; the other quite salt.
Giaur-Kala	20	193	Ground sandy and covered with <i>saksaul</i> . At 5 $\frac{1}{2}$ and 11 $\frac{1}{2}$ miles hard open clayey spaces in which water lies in the rains (<i>takirs</i>). At 14 miles to the west of the road a large isolated sandhill. At 16 $\frac{2}{3}$ miles, 2 miles west of the road, a range of heights begins running north to south on the south extremity of which is the ruined fort of Giaur-Kala. The bed of the Chermeniâb canal runs from those ruins. Of wells there are two, 50 or 55 feet deep, yielding together 400—550 gallons of brackish water. Supply increased by digging a pit. No forage or firewood.
Daudir	50 $\frac{2}{3}$	243 $\frac{2}{3}$	No water on this stage till Daudir is reached. At 20 miles some camel forage. Country open. Ground hard and stony up to 18 $\frac{2}{3}$ miles; then sandy to 24th mile; and again hard and stony to Daudir. At 5 $\frac{1}{2}$ miles cross a dry river bed and continue along it to Chirishtâm. At 12 $\frac{2}{3}$ miles cross the Zyângi Hills; their slopes are fit for baggage animals of all kinds. 1 $\frac{1}{2}$ miles to the west of the road on these hills is Mullushka. At 14 $\frac{2}{3}$ miles pass two hills to the west, the higher 8, the lower 3 $\frac{1}{2}$ miles from the road. At 28 miles pass an old ruined well whose water is said to be more than 700 feet from the surface. At Daudir are two wells. The water in one is brackish but drinkable; in the other salt, although horses drink it.
Ortakui	47 $\frac{1}{3}$	291	At 12 miles cross a large patch of sand. At 29 $\frac{1}{2}$ miles pass the well of Nafas-Kui which can yield about 400 gallons at a time. At 38 $\frac{2}{3}$ miles a road

N.B.—From this the column moved in two *échelons* on account of the small quantity of water at Shaikh-Senem, Giaur-Kala, and Kizil-Châ-Kuyusi.

ROUTE No. 1—*contd.*
From Petro-Alexandrovsk to Bámi.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Igdi	168	359	<p>branches off to the well of Ikodji, on the same ridge as that of Daudir and 30 miles distant. At Ortakui are two wells of slightly brackish water, and ten more each 12 or 15 feet deep were dug giving an ample supply of slightly brackish water. Here the water-supply was filled up for the waterless stretch to Igdi. 16$\frac{2}{3}$ miles from Ortakui to the south, and east of the road, are the wells of Bála-Ishem, ten in number, of which eight were found filled up and little water in the other two. This was the furthest point reached by the Chikishliár column in 1873.</p> <p>For first 27 miles ground all sand with a few hard places. At 13$\frac{1}{3}$ and 23$\frac{1}{3}$ miles roads to the west to Bála-Ishem (two wells about 5 feet deep, slightly brackish but fit for drinking), and at 20 miles road to Krásnovodsk, the first well on which is Hálim-Ajik. At 17$\frac{1}{3}$, 18, and 20$\frac{2}{3}$ miles pass hollows of the Uzboi, and at 21$\frac{1}{3}$ miles a hollow like a lake on the edge of which is the hill of Ananak-Tapa. From 27$\frac{1}{3}$ to 33$\frac{1}{3}$ miles the soil is argillaceous, and thence to the 40th mile the low hills of Kaplán-Kri run alongside the road. At 40$\frac{2}{3}$ miles road to Bála-Ishem and at 45$\frac{1}{3}$ miles the road crosses the Uzboi bed at a native cemetery with two choked-up wells. Half a mile from the road there is a little bitterly salt water in the bed. From the 56th to the 68th mile the road is on drift sand and crosses the Uzboi bed at the 62nd and 66th miles. At the 68th mile descend into the bed to the wells of Great Igdi. There are 11 wells (nine of which had to be cleared out) all in the old river bed. the water is more brackish than at Ortakui, but one well is much better than the others. Close by is a lake of salt water. The Little Idgi wells are 2 miles north of those of Great Idgi and are six in number; five were filled up, but excellent water was found in the sixth. There are also some wells on the banks of the old bed. In March 1873 these wells ran dry after being used by Markozoff's 20 companies, 16 guns and 2,500 camels in 2$\frac{1}{2}$ days.</p>
Sansiz	43 $\frac{1}{3}$	402 $\frac{1}{3}$	<p>First three miles in bed of Uzboi, then on drift sand with high hillocks. At 3$\frac{1}{3}$ mile road to Kizil-Arvát first well on which is Parrock, 67 miles distant. At Sansiz are 20 wells, but only six with water, slightly salt but drinkable at a pinch; rest bitter. Depth 70 feet. 5 miles off is the well of Chádir, with a small quantity of very bitter water, and 33 miles to the east the wells of Temir-Ojan.</p>

ROUTE No. 1—*concl'd.**From Petro-Alexandrovsk to Bámi.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Daulat-Tapiz	30 $\frac{2}{3}$	433	Drift sand all the way. At 4 miles sand hollow of Kuchin and after it a <i>takir</i> . At 16 $\frac{2}{3}$ miles sand hollow of Kurt-Kuzlán and to the north of it a high and difficult passage over a range of sandhills. At 21 $\frac{1}{3}$ and 22 $\frac{2}{3}$ miles cross sand hollows of Yun-Kitchkán and Bek-Atir, latter with a dug out well. No water at Daulat-Tapiz. Well of Tchupin-Kaki 20 miles distant with salt water.
Niáz	14	447	Ground drift sand with large hillocks. At Niáz seven wells, 35 feet deep with brackish (hardly drinkable) water.
Bámi	20	467	Ground hard and level after first 3 miles. Kuropátkin's column left Chágil on the 21st November, and on the 8th December reached Bámi, having halted on the 28th and 29th November at Ortakui and on the 3rd December at Igdi. Of the 887 camels which had left Giaur-Kala, 52 had perished on the road, and of the 835 remaining, 17 were useless. Between Giaur-Kala and Bámi, there were only two days on which the camels received no water.

Route No. 2.

From—PETRO-ALEXANDROVSK
Territory.—KHIVA AND KÁRA-
KUM DESERT.

To—GOK-TAPA.

Authority.—LIEUTS. KALITIN AND
MURÁVTSEFF.

Date.—February 1881.

Names of stages, &c.	DISTANCE.		Description of the route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kizil-Chá-kuyusi	156 $\frac{1}{3}$	156 $\frac{1}{3}$	See Route No. 1.
Wells of Laila	74 $\frac{2}{3}$	231	General direction of road is south; soil generally hard and argillaceous. At 27 miles pass 5 heaps of stones on as many hillocks and at 50 miles a large <i>takir</i> . The wells of Laila can water 40 horses.

ROUTE No. 2—*contd.**From Petro-Alexandrovsk to Gok-Tapa.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Wells of Shaikh	72	303	At 28 miles and at 35 miles pass <i>takirs</i> , and at 45 miles descend into a hollow running in the same direction as the road with a range of low sand hills on the east. At 58 miles descend into a hollow (which hence trends away to the north-west), supposed to be the old Chahárjui-Igdi bed of the Amu-Daira, and following this to the 72nd mile, ascend the bank to the wells of Shaikh. Towards Chahárjui the bed runs to the north-east forming here an acute angle. Here are 10 wells which could together yield 60,000 buckets. The nomads say that 10,000 sheep can be watered at them. 40 miles to the east are the wells of Kizil Takir.
Darband	83 $\frac{1}{3}$	386 $\frac{1}{3}$	The road now runs on a general bearing of about 160°. At 21 $\frac{1}{3}$ miles pass the dried up well of Ust-Turda; at 43 miles the dried up well of Tanderli; at 47 miles six butts, and at 78 miles the dried up well of Kára-Asha. The water at Darband is brackish and small in quantity. Hence tracks lead on a bearing of about 10° to the wells of Kizil-Takir and thence to Takhta-Bazár, and on a bearing of about 40° to Khiva, on which are the wells of Kuz and Damdi at 16 and 83 $\frac{1}{3}$ miles respectively from Darband. Near Darband are the ruins of Kur-gandi.
Muhammad-Diár	53 $\frac{1}{3}$	439 $\frac{2}{5}$	Road continues on bearing of 160°. At 37 miles pass bitterly salt well of Suyunli and at 43 miles the brackish wells of Karádja. At Muhammad-Diár are 4 wells each about 70 feet deep; water brackish. 10 miles from Muhammad-Diár and 4 from Karádja are the two wells of Burdja with brackish water. From Muhammad-Diár a route runs to Marv, the first wells on which are those of Kudur and Kizil-Sakal* at 20 and 28 miles respectively.
Ilek-Salesh	26	465 $\frac{2}{3}$	The road runs on a bearing of about 205°. At about 5 miles pass salt well of Utik. At Ilek-Salesh are 4 wells, about 35 feet deep with fresh water, but good for drinking in two only.
Mergen	22	487 $\frac{2}{3}$	At 10 <i>versts</i> (6 $\frac{2}{3}$ rd miles) pass the two wells of Kattigát, both brackish. Near the wells of Mergen (4 in number and very brackish) are the hill and tomb of Mamachik.

* With excellent fresh water.

ROUTE No. 2—*concl'd.**From Petro-Alexandrovska to Gok-Tapa.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Gok-Tapa	24 $\frac{2}{3}$	512 $\frac{1}{3}$	<p>Road continues on bearing of 205°, running over difficult ground with sand hills 7 to 70 feet high, for the first 22 miles, then changes to 225° and runs for 2$\frac{2}{3}$ miles through field and gardens intersected with canals to Gok-Tapa.</p> <p>This route would be an impossible one, on account of the want of water, for a body of troops, unless provided with very large water-transport. The only good watering places are Laila and Shaikh, and Lieutenant Kalitin with his three companions very nearly perished between Laila and Zmukshir. He marched from Gok-Tapa to Laila in 7 days. <i>Saksaul</i> is found in abundance all along the route, which is marked by heaps of the same growth to indicate the track. The ground is generally hard and good going.</p>

Route No. 3.

From—BISH-ARIK (Khivan Oasis) *To*—MARV.*Territory.*—KÁRA-KUM DESERT. *Authority.*—KOSTENKO AND AMIN-BAI.*Date.*—1871 and 1876.

Names of stages, &c.	DISTANCE.		Description of the route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Bish-Arik			From Bish-Arik there are sands but not deep.
Saju well	100	100	The Saju well is 16 fathoms deep, and the water is fresh and plentiful. Well fills rapidly. From the Saju well, the road also runs over not very deep sands.
Iti Kulách wells	166	266	Two wells about 7 fathoms deep; water plentiful. From Iti-Kulách the sands are no deep.

ROUTE No. 3—*concl'd.*From—*Bish-Arik* (Khivan Oasis) to *Marv*.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Chashma	100	366	Chashma is a spot which the river Murgháb used to flow through about 1871, but there is now only the dry bed, as the Turkumáns dammed up the river at Marv. In this bed it is easy to dig wells, in which water will show at a depth of 2½ feet. Forage and fuel are here supplied in abundance by the growing reeds. The Turkumáns feed their flocks along this bed especially in winter. To Marv the road is firm and not sandy; it runs throughout along the old channel in which many wells are dug.
Marv	120	486	Amin-Bai (The Khivan envoy to India), who travelled by this route in 1871, gives the following stages from the Suju well :—

1. *Yul-Airuti* or *Khivalik-Komur*, where the road forks, one track to Marv, the other to Akhál.
2. *Sazákli-Tapa*. Deep shifting sands.
3. *Uyun-Makán*. In a hollow between sandhills.
- 4, 5 & 6. No names given. No water after Suju.
7. *Mirza-Chilla* or *Chirla*. 3 or 4 wells with brackish but drinkable water; sand desert around; hillocks with scanty growth of *saksaul*.
- 8 to 13 Marches. No names given.
14. *Khán-Kui wells*. Dug in 1855 by Madamin-Khán during his expedition to Khiva. Surrounded by *saksaul* copses.
15. No Name.
16. *Orshuk-Kui*. 2 wells, 42 feet deep; water brackish. Country belongs to Tekkes, but unfrequented on account of raids of Arsári-Turkumáns.
17. No name.
18. *Chashkin wells*. 200 tents of the Aman-Sháh-Tekkes of the Saidli-Bai branch.
19. Along bank of Murgháb, here a large stream.
20. Marv. (Kaushid-Khán Kala).

This route appears to lie to the west of the other. Amin-Bai had 15 camels, 32 horses, 2 mules and 25 servants. The longest waterless stretches are from Suju to Chirla, and from Chirla to Khán-Kui.

Route No. 4.

From—HÁZAR-ASP

To—MARV.

Territory.—KÁRA-KUM DESERT.

Authority—SHAKESPEAR.

Date—1840.

Names of stages, &c.	DISTANCE.		Description of route.
	Inter- mediate.	Total.	
	Miles.	Miles.	
Hazár-Asp			See Gazetteer.
Pitnák	13	13	Four miles through cultivation, then eight miles of high-barren ground, and one mile through Pitnák, a large village.
Huzurat-Madar-i- Baba-i - A d a m (Tomb of Adam's mother).	78	91	At seven miles pass a village and at eight miles another in a hollow, with precipitous descent. At 24 miles reach the Oxus and continue for the remainder of this stage up the left bank through heavy jungle.
Ruppa-Kala	33	124	Up the left bank of the Oxus, passing at four miles a high mound, and at 29 miles a fort called Kush-Kala. Ruppa-Kala is in ruins.
Takht	40 $\frac{3}{4}$	164 $\frac{3}{4}$	Leave the Oxus at Ruppa-Kala and turn south inland. The soil is hard for the first 20 miles. The Oxus is said to have formerly flowed near Takht which is only a large sandbill.
A well	18	182 $\frac{3}{4}$	Delicious water.
A reservoir	85	267 $\frac{3}{4}$	A very difficult march over very uneven and soft desert covered with dwarf bushes. At 30 miles is a well of very brackish water, but drinkable by animals. The "reservoir" at the end of the stage was merely a pool dug in the bed of a ravine with good water and worse grass at the edge.
Marv	99 $\frac{1}{2}$	367 $\frac{1}{4}$	Route traverses 15 $\frac{1}{4}$ miles of desert, then through the Oasis to Marv. This journey was performed by Captain Shakespear in 17 days.

Route No. 5.

From—KABAKLI (near the Amu)

To—MARV.

Territory.—KÁRA-KUM DESERT.

Authority—KOSTENKO.

Date—1876.

Names of stages, &c.	DISTANCE.		Description of route.
	Inter- mediate.	Total.	
	Miles.	Miles.	
Kabakli			From inquiries made by Gospodin Ibrahimoff from the Tekkes. The distances as far as can be judged by the maps are 60 or 70 miles (100 <i>versts</i>) in excess of what they should be. The passage of the Murgháb 10 miles above Marv is called Khán-Kichken.
Takht well	26 $\frac{2}{3}$	26 $\frac{2}{3}$	
Aji "	21 $\frac{1}{3}$	48	
Chuntuk "	21 $\frac{1}{3}$	69 $\frac{1}{3}$	
Chuntuk "	26 $\frac{2}{3}$	96	
Yár-Aji "	10 $\frac{2}{3}$	106 $\frac{2}{3}$	
Khush-Kui,,	16	122 $\frac{2}{3}$	
Sardába "	16	138 $\frac{2}{3}$	
Padaman "	21 $\frac{1}{3}$	160	
Gok-Tapa "	26	176	
Kára-Yáb "	26 $\frac{2}{3}$	202 $\frac{2}{3}$	
Kishmán Tower	42 $\frac{2}{3}$	245 $\frac{1}{3}$	
Marv (Khán-Kich- ken)	32	277 $\frac{1}{3}$	

Gospodin Khokhryánoff gives the following route from enquiries from Sayad-Muham-mad-Urázoff, a Turkumán of Marv, and others:—

Kabakli			From Kabakli to the Takht a camel with a load can travel in 2 days and 2 nights halting 3 times for 3 or 4 hours. Road sandy but sands not deep.
Takht well	69 $\frac{1}{3}$	69 $\frac{1}{3}$	Four "manzils" (stages). The wells are 4 $\frac{1}{2}$ to 6 feet deep with fresh water. <i>Selyán</i> (feather) grass serves for grazing and <i>saksaul</i> for fuel.
Yár-Aji	133 $\frac{1}{3}$	202 $\frac{2}{3}$	Six "manzils." Road sandy but lighter than before. At Yár-Aji many wells about 14 feet deep with satisfactory water and sufficient grazing and fuel. There are Turkumán settlements here.
Durt-Kui	4 stages		Road sandy and further on firm. Four wells 105 feet deep with fresh water. Sufficient grazing and fuel.
Tower of Kishmán	1 stage		No water.
Ruins of Fort Ná-zim	1 stage		A small Tekke settlement with fields irrigated by water brought from the Murgháb about 13 miles from here. Hence to Marv the road runs through a continuously populated country.

N. B.—A "manzil" is a camel stage of from 35 to 40 *versts* (23 $\frac{1}{3}$ to 26 $\frac{2}{3}$ miles).
From Yár-Aji to the Bairamali canal is 160 *versts* = 106 $\frac{2}{3}$ miles.

Route No. 6.

From—KÁRA-KISHLÁK
Territory.—KÁRA-KUM DESERT.

To—MARV.
Authority.—ABRAHIMOFF IN KOSTENKO'S ROUTES.

Date.—

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kíra- ishlá k			On the Oxus 64 miles up the river from Kabakli. (See Route No. 7.)
Bál-kui well .	21 $\frac{1}{3}$	21 $\frac{1}{3}$	
Kurruk „	10 $\frac{2}{3}$	32	
Dágjik „	16	48	
Berdjik „	26 $\frac{2}{3}$	74 $\frac{2}{3}$	
Yár-Adji „	16	90 $\frac{2}{3}$	
Kheshaigur „	21 $\frac{1}{3}$	112	
Malia-Khairán-Ku- duchi well	16	128	
Padaman well	26 $\frac{2}{3}$	154 $\frac{2}{3}$	
Marv	117 $\frac{1}{3}$	272	See Route 5.

Route No. 7.

From—CHAHÁRJUI
Territory.—KÁRA-KUM DESERT.

To—MARV.
Authority.— $\left\{ \begin{array}{l} \text{KOSTENKO.} \\ \text{BURNES.} \end{array} \right.$

Date.—1832 and 1876.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Chahárjui			On the left bank of the Oxus, 5 $\frac{1}{3}$ miles from the river and 58 $\frac{1}{3}$ miles up the river from Kára-Kishlák.
Karaul	10 $\frac{2}{3}$	10 $\frac{2}{3}$	Rolling desert with bushes like tamarisk in the ridges and in the hollows. Burnes gives the distance at 22 miles. At Karaul is a well of brackish water, 30 feet from the surface. No water between it and Chahárjui.

ROUTE NO. 7—*contd.*
From *Chahárjui* to *Marv*.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Ishak-Rabát	16	26 $\frac{2}{3}$	
Rapadak	26 $\frac{2}{3}$	53 $\frac{1}{3}$	
Uch-Khwája well	53 $\frac{1}{3}$	106 $\frac{2}{3}$	
Naiza-Shakar well	5 $\frac{1}{3}$	112	
Bugur-Deshik-Khilka well.	32	144	
Marv	64	208	

From Bugur-Deshik-Khilka the following route is given by Gospodin Khokhryákoff from enquiries:—

Bugur-Deshik			Road even and though sandy not difficult. At Kulcha many wells, 6 fathoms deep with good water; pasture and fuel abundant. Thence road even and firm. The Irsári-Yáb is the beginning of the Marv oasis and runs from the Murgháb. Thence the road is good and the country thickly populated.
Kulcha wells	26 $\frac{2}{3}$	26 $\frac{2}{3}$	
Irsári-Yáb canal	26 $\frac{2}{3}$	53 $\frac{1}{3}$	
Marv	26 $\frac{2}{3}$	80	

Lieutenant Burnes left the main road at Karaul and marched by the following little frequented road:—

Karaul			
Bál-Kui	24	24	A well of good water, 4 feet in diameter and 30 feet deep, but soon emptied. Desert from Karaul overgrown with brushwood but waterless. Some of the sandhills rise to 60 feet high.
Siráb	35	59	No water on the road. Country undulating and partly covered with shrubs. Well at Siráb "fetid."
Uch-kui	1 march. 26 (?)	85 (?)	Three wells, 30 feet deep with bitter water. Country running in ridges and hollows.
Khwája-Abdulla (Marv Oasis).	2 marches		Over a perfectly flat and hard plain everywhere interspersed with forts and ruins. Khwája-Abdulla was a Turkumán camp of 150 huts on rising ground near the Murgháb.

Burnes says:—"The scarcity of water is a great obstacle. In some places the wells were 36 miles apart and generally the water was both bitter and scanty. It is doubtful if an army could cross the desert at this point. The heavy sandy pathways, for there are no roads, might certainly be rendered passable by placing brushwood on the sand, but there is great scarcity of grass for cattle. Our caravan of 80 camels emptied the wells."

ROUTE No. 7—*concl'd.*
From Chahárjui to Marv.

Malleeson says :—From Marv to Chahárjui the distance is 142 miles.

Speaking of this route, we read in the *Pioneer* of 6th March 1882 :—

“ Chahárjui is only 150 miles to the north-east of Marv itself, but the road across the desert is ill-supplied with water, and troops in any considerable numbers could not hope to make good their passage in face of any strong opposition, as they would have to pass from well to well, 15 or 20 miles apart, in small parties of 100 to 150. But with the Marv-Tekkes giving friendly countenance to an army massed at Chahárjui, the difficulties of the road would not prove insuperable. Thus a well equipped force of all arms, numbering say 10,000 men, would be quietly placed in the Marv Oasis and could join hands with the Atrak army on the Askábád-Sarakhs road. The moral effect of this junction can scarcely be exaggerated. The semi-independent tribes of Afghán-Turkistán from Bákh to Herát would see the wave of Russian power sweeping down upon them from the north as well as from the west, and they might well, indeed, ask what fate was in store for them with Chahárjui and Askábád linked by military posts, the *coup* being made of tenfold strength by the presence of an army entrenched at Marv.”

Route No. 8.

From—TISHLÁN (on the Amu)

To—MARV.

Territory.—KÁRA-KUM DESERT.

Authority.—KOSTENKO.

Date.—1880.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Tishlán			48 miles up the Amu from Chahárjui. } See Route No. 7.
Aji well	16	16	
Shishmia ,	21 $\frac{1}{3}$	37 $\frac{1}{3}$	
Shár-Kuduk ,,	26 $\frac{2}{3}$	64	
Khusb-Kui ,,	16	80	
Sari-Kuduk ,,	10 $\frac{2}{3}$	90 $\frac{2}{3}$	
Bugur-Deshik well	26 $\frac{2}{3}$	117 $\frac{1}{3}$	
Marv	64	181 $\frac{1}{3}$	

These distances are exaggerated and agree with no map.

Route No. 9.

From—KHWÁJA-KUNDUZ

To—MARV.

Territory.—KÁRA-KUM DESERT.

Authority.—KOSTENKO.

Date.—1880.

Names of stages, &c.	DISTANCE.		Description of route.
	Inter- mediate.	Total.	
	Miles.	Miles.	
Khwája-Kunduz.			<p>The road along this route is comparatively good; from Kushek-Tushti the wells are from 1 to 2 <i>tásh</i> ($5\frac{1}{3}$ to $10\frac{2}{3}$ miles) apart.</p>
Kára-Kuduk well.	16	16	
Kushek-Tushti „	$26\frac{2}{3}$	$39\frac{2}{3}$	
Básh-Kuduk „			
Sakar-Kuduk „			
Khoili „			
Uch-Misir „			
Shárkhi „			
Shur-Kuduk „			
Káarkui „			
Sharoli-Bába „			
Khuluzli „			
Nigaráli „			
Ir-Susik „			
Ak-Márzik „			
Dáshli „			
Shalaba „			
Fiti-Kui „			
Afghán-Nar „			
Fizik „			
Káratagán „			
Dáli „			
Nigaráli „			
Sári-Kusu „			
Malia-Khairán „			
Bugur-Deshik ...	$149\frac{1}{3}$	189	
Marv ...	64	253	

These distances are from native report and are considerably exaggerated. The best roads to Marv are those from the Amu-Daria (Routes Nos. 5, 6, 7, 8, 9).

Route No. 10.

From—KÁRKI*To*—ANDKHUI.*Territory*.—KÁRA-KUM DESERT.*Authority*—KOSTENKO.*Date*.—1863.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kárki			A small town and fort on the left bank of the Amu.
Zenda well	28	28	Road over firm and even country.
Andkhui	about 33	about 61	Over a dry bare plain with bushes fit for camel pasture only in a few places. Roads from Andkhui to Shibir-Khán to the east and to Maimene and Herát to the west.

Route No. 11.

From—KHIVA*To*—SHAIKH-ARIK.*Territory*—KHIVA*Authority*—KOSTENKO, MACGAHAN.*Date*.—1873.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Khíva			Leave the town by the Hazár-Asp gate.
Yangi-Arik village	19½	19½	The road runs from Khíva to half a mile from Shaikh-Arik through a most intricate country, well adapted for defence. Every few yards there is a bridge, and the houses and gardens are separated by canals, walls, hedges, and ditches. The road is crooked and tortuous; sometimes bounded by mud walls, sometimes by canals, sometimes by rows of trees and fields.
Ishn	13½	32½	
Hazár-Asp	11½	44	

ROUTE No. 11.—*cont'd.*
From Khíva to Shaikh-Arik.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Shaikh-Arik	13 $\frac{1}{3}$	57 $\frac{1}{3}$	At 5 $\frac{1}{3}$ miles traverse an open space half a mile wide across which the road runs on a causeway. Here the Khívan cavalry had a skirmish with Kauffmann's advanced party before his march on Khíva. The fort at Shaikh-Arik is 30 feet in diameter. The banks of an old (now dry) canal 20 to 30 feet high run for a short distance here parallel to the river.

Route No. 12.

From—KHÍVA

To—PETRO-ALEXANDROVSK.

Territory.—KHÍVA.

Authority.—BURNABY, GLADISHEFF, KOSTENKO AND MURÁVIN.

Date.—1875.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Khíva Khánka (village)	20	20	Leave Khíva by the east gate. The road runs through a continuously cultivated country over numerous canals and through gardens. Khánka is a town of 5,000 inhabitants with a bazaar and market.
Left bank of the Amu.	2 $\frac{2}{3}$	22 $\frac{2}{3}$	Between Shurakhán and Khánka the Amu flows in several branches, the main one of which is about 700 yards wide; besides this branch two others have to be crossed in boats and eight small branches and canals by fording. The distance between the extreme points of passage is 5 $\frac{1}{3}$ miles. The whole of this extent is inundated with water when the river is in flood and the passage then becomes still more complicated. The chief difficulty of all in this passage is with baggage and harness animals, camels and horses. Great exertions are required to take them (especially camels) into boats, and then

ROUTE No. 12—*contd.**From Khíva to Petro-Alexandrovsk.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Right bank of the Amu.	5 $\frac{1}{3}$	28	to get them out again. The taking off and putting on loads also takes up much time. As the distance between some of the branches at the Shurakhán crossing comes to 2 miles, it is necessary to have <i>Arabas</i> to transport the loads between those branches. Here is a camp of 3 <i>sotnias</i> of Cossacks.
Petro-Alexandrovsk.	7 $\frac{1}{3}$	35 $\frac{1}{3}$	See Gazetteer.

Route No. 13.

*From—KHÍVA**To—YANGI-URGANJ.**Territory.—KHÍVA.**Authority.—VÁMBÉRY.**Date.—1873.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Khíva Yangi-Urganj	18	1	Road through a closely cultivated and tolerably populous district; Yangi-Urganj is on the Sháhábád canal near its head in the Oxus; near it is the tomb of Aklún-Bába on the Oxus with a few homesteads near it.

Transverse roads.

A road leads from Yangi-Urganj to Khanka (Route No. 12), and thence to Ishán (Route No. 11) by Bogat crossing the Pitnák and Palwán-Ata canals.

Route No. 14.

From—KHÍVA by Mángit and Khwája-Ili

To—KANGRÁD.

Territory.—KHÍVA.

Authority.—KOSTENKO AND SCHMIDT.

Date.—1873.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter-mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Khíva			Leave the town by the north gate crossing at 250 yards from the gate, the Palwán-Ata canal (20-30 feet broad) by a bridge.
Kosh-Kupir (town)	11 $\frac{1}{3}$	11 $\frac{1}{3}$	Road through closely cultivated country. At 6 miles pass a garden of the Khán on the Khatir-Tut canal.
Kát (town)	11 $\frac{1}{3}$	22 $\frac{2}{3}$	At Kosh-Kupir cross the Sháhábád canal (bridged). Kát lies on the Yárnish canal (bridged). Country as before.
Yangi-Bazár (village).	15	37 $\frac{2}{3}$	At 4 miles cross the Aldach canal (small and bridged). Further on cross Kildji-Bai canal 180 feet broad. The country is a perfect network of canals, ditches, gardens, and thickets, with innumerable bridges. Houses and gardens are surrounded by high mud walls.
Mángit (town)	21	58 $\frac{2}{3}$	Country as before. Near Mángit cross Atálik canal. Mángit is two hours distant from the Amu and separated from it by a wood.
Julaigách-Chiganák (hamlet)	20 $\frac{1}{3}$	79	Road strikes the Amu at Kipchák, 3 $\frac{1}{2}$ miles, and thence runs down the left bank to Julaigách-Chiganák, which lies on the bank of the river. To the south of this place extends inland an open plain covered with high reeds and dotted with sandhills.
Khwája-Ili (town)	19 $\frac{1}{6}$	98 $\frac{1}{6}$	At 5 $\frac{1}{3}$ miles cross the Laudán canal and at 9 $\frac{1}{6}$ the Sujundi canal. Road runs through a dwarfish jungle extending along the banks. Khwája-Ili is on the Amu (Vámbéry says 2 hours distant).
Kára-Baili	20 $\frac{1}{3}$	118 $\frac{1}{2}$	On leaving Khwája-Ili the road runs between a broad canal on the left (crossed by a bridge within the town), and a marshy lake on the right extending to the Amu. Then cross a marshy and reedy plain for ten miles, and for the last ten through jungle and forest. At Kára-Baili a canal is crossed.
Klad-Jargun canal	18 $\frac{2}{3}$	137 $\frac{1}{6}$	} A good broad road through a dense thicket of tamarisk along the Amu.
Oguz (point opposite head of).	12 $\frac{1}{3}$	149 $\frac{1}{2}$	
Kangál	16 $\frac{1}{3}$	165 $\frac{5}{6}$	

This was the route traversed by the combined Orenburg and Mangishlák columns in 1873

Route No. 15.

From—KHÍVA by Il-Ali and Kuhna-Urganj
Territory.—KHÍVA.

To—KANGRÁD.

Authority.—KOSTENKO, BURNA-
by, VÁMBÉRY.

Date.—1875.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Khíva			
Kosh-Kupir	$11\frac{1}{3}$	$11\frac{1}{3}$	See Route No. 14.
Sháhábád	$9\frac{2}{3}$	21	
Rappai	$14\frac{1}{3}$	$35\frac{1}{3}$	Through a rich and fertile country; the land of the settled ground Turkumáns cut up by canals bordered by poplars.
Il-Ali	$29\frac{1}{3}$	$64\frac{2}{3}$	A small walled town, two miles from the edge of the desert, surrounded by gardens.
Kizil-Tákir	$13\frac{1}{3}$	78	A Yamút hamlet.
Alili (town)	$7\frac{1}{6}$	$85\frac{1}{6}$	Six miles after Alili cross the Sháhábád canal (wooden bridge). Thence to Urganj road enclosed by mud walls 4' high.
Kuhna-Urganj	$18\frac{2}{3}$	$101\frac{5}{6}$	On the Sarkrauk branch of the Laudán canal.
Kop-Shid well	$14\frac{1}{3}$	$116\frac{5}{6}$	} Open country for the most part.
Koten-Kala hamlet	$20\frac{2}{3}$	$136\frac{5}{6}$	
Kangrád	28	$164\frac{5}{6}$	

This was the route taken by the Mangishlák column on its return march from Khíva 1873. A road runs from Kuhna-Urganj to Khwája-Ili, crossing at 5 miles the Yesaul-Ab canal. Thence the country is very marshy and covered with reeds.

Vámbéry gives the following route from Kangrád to Kuhna-Urganj:—

Kangrád			
Atyolu	7 <i>farsákhs</i>		A stagnant canal with a bridge over it. Thence road runs by the Ust-Urt to Orenburg.
Kábil-Beg-Hávli	5 hours' ride.		Pass ruins of Kára-Gumbaz in a patch of salt desert and of Bársa-Kilmas. Kábil-Beg-Hávli is an isolated farmstead.
Kizil-Chalagán	8 hours' ride.		Road all the way through a thick forest with lions, panthers and wild boars. Kizil-Chalagán is a fortified place.
Kuhna-Urganj	3 hours' ride.		

Vámbéry says that the route by Kuhna-Urganj as above to Khíva is 56 *farsákhs* (miles) long, and is used at the flood season to avoid the lakes and arms of the Oxus. The route by Khwája-Ili (Route 14) is the usual winter route and is only 40 *farsákhs* (miles) long.

Route No. 16.

From—KHÍVA
Territory.—KHÍVA.

To—KUHNA-URGANJ.
Authority.—KOSTENKO, MACGAHAN.
Date.—1873.

Names of stages, &c.	DISTANCE.		Description of route.
	Inter- mediate.	Total.	
	Miles.	Miles.	
Khíva Kházavat	13 $\frac{1}{3}$	13 $\frac{1}{3}$	Road for 5 miles through cultivation and gardens, then skirt the desert, strips of which run in places into the oasis. Road keeps in the cultivated tract. Kházavat is situated on the Kházavat canal, which is here bridged. It is 30 feet wide and 10 feet deep, with a current of 5 miles an hour. A mile to the south it empties into the desert.
Old bed of the Amu (Daudán).	14	27 $\frac{1}{3}$	} Through a rich and fertile country, much cut up by canals fringed with poplars, and inhabited by Yamút and Goklán-Turkumáns. This country was devastated by the Russians in 1873 to punish the Turkumáns.
Tásh-Hauz	17 $\frac{1}{3}$	44 $\frac{2}{3}$	
Il-Ah	20	64 $\frac{2}{3}$	
Kizil-Tákir	13 $\frac{1}{3}$	78	
Shamrát canal	13 $\frac{1}{3}$	91 $\frac{1}{3}$	
Kush-band canal	21 $\frac{1}{3}$	112 $\frac{2}{3}$	From Shamrát canal the steppe commences. The road is generally good. There is plenty of water at the camping ground; fuel and brushwood are found. Forage is deficient from the Shamrát canal to Kuhna-Urganj.
Kuhna-Urganj	2	114 $\frac{2}{3}$	See Gazetteer.

Route No. 17.

From—KHÍVA BY ZMUKSHIR
Territory.—KHÍVA.

To—IL-ALI.
Authority.—KOSTENKO, MACGAHAN.
Date.—1873.

Names of stages, &c.	DISTANCE.		Description of route.
	Inter- mediate.	Total.	
	Miles.	Miles.	
Khíva			} The road runs through a highly cultivated country intersected by canals lined with poplars. The ruins of Zmukshir are 4 acres in extent; walls 30 feet high in a tolerable state of preservation. The road runs over a wild desert steppe; in places crumbling sands.
Lake Zaikesh	18	18	
Bederkesh (village)	12 $\frac{2}{3}$	30 $\frac{2}{3}$	
Ruins of Zmuk- shir.	25 $\frac{1}{3}$	56	
Il-Ali	14	70	

Route No. 18.

From—TÁSH-HAUZ BY BULDUMSÁZ *To*—KUHNA-URGANJ.

Territory.—KHÍVA.

Authority.—SHAKESPEAR.

Date.—1840.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Tásh-Hauz			44 miles from Khíva (see Route No. 16).
Buldumsáz	24	24	Road winds a good deal through cultivated country running north for about 6 miles; then generally west. Buldumsáz is a old ruined fort.
"A branch of the river"	35	59	Good ford; 40 yards wide and 4 feet deep.
Kuhna-Urganj	7	66	

Route No. 19.

From—IGDI

To—SÁRI-KÁMISH.

Territory.—KÁRA-KUM DESERT.

Authority.—KOSTENKO.

Date.—1875.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Igdi			See Route No. 1.
Bála-Ishem well	32	32	Water fair.
Ivanek (point)	8	40	} Waterless points on the Uzboi.
Kizil-Tákir (point)	16 $\frac{2}{3}$	56 $\frac{2}{3}$	
Torpáni (point)			
Wells of Kich-Gildi	10	66 $\frac{2}{3}$	Water fit to drink.

ROUTE No. 19—*contd.*
From Igdi to Sari-Kámish.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kutáni-Kubatát	10	76 $\frac{2}{3}$	Waterless point on the Uzboi.
Chárishli well	20 $\frac{2}{3}$	97 $\frac{1}{3}$	A road from the Dakhli wells, on the stony bank of the Uzboi, leads to these wells.
Nomad cemetery	13 $\frac{1}{3}$	110 $\frac{2}{3}$	
Kára-Tásh (point)	8	118 $\frac{2}{3}$	
Rain pit	20	138 $\frac{2}{3}$	After rain there is plenty of water in the bed of the river, but it soon dries up. $\frac{2}{3}$ mile before reaching this pit, the Uzboi intersects the Sári-Kámish road from Krásnovodsk to Khiva.
Kapilyarán-Kul	13 $\frac{1}{3}$	152	Wet salt soil.
Batandal-Kul (Lake)	12 $\frac{1}{6}$	164 $\frac{1}{6}$	The northern edge of this is salt soil. Water of lake very salt, but digging gives drinkable water.
Sári-Kámish	13 $\frac{1}{3}$	177 $\frac{1}{3}$	Water fit for use (see Gazetteer).

The above from a reconnaissance made in 1875.

Route No. 20.

From—KUHNA-URGANJ

To—SÁRI-KÁMISH.

Territory.—KÁRA-KUM DESERT

Authority.—KOSTENKO.

Date.—1873.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kuhna-Urganj Arik-Kujuk Salak-Band (dam on Urun Darya).	13 $\frac{1}{3}$ 16	13 $\frac{1}{3}$ 29 $\frac{1}{3}$	From Kuhna-Urganj throughout the whole route there is fuel, brushwood (<i>saksaul</i> and tamarisk) everywhere. No forage except at Dekeha wells, where there are plenty of reeds fit for horses. There

ROUTE No. 20—*conid.**From Kuhna-Urganj to Sári-Kámish.*

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Igenklich (dam on Urun Darya).	16 $\frac{2}{3}$	46	is water at the camping grounds in sufficient quantity and of good quality except at Dekcha, where it is brackish and almost undrinkable (wells 1 foot deep). The water of lake Sári-Kámish is totally unfit to drink. The wells at Sári-Kámish are 12 feet deep. Water drinkable.
Ak-Bugut (dam on Urun Darya).	16	62	
Dekcha wells	23 $\frac{1}{3}$	85 $\frac{1}{3}$	
Sári-Kámish wells	10 $\frac{2}{3}$	96	
Lake Sári-Kámish	5 $\frac{1}{3}$	101 $\frac{1}{3}$	

Route No. 21.

From—PETRO-ALEXANDROVSK*To*—NUKUS.*Territory.*—AMU-DARIA PROVINCE.*Authority.*—KOSTENKO.*Date.*—1873.

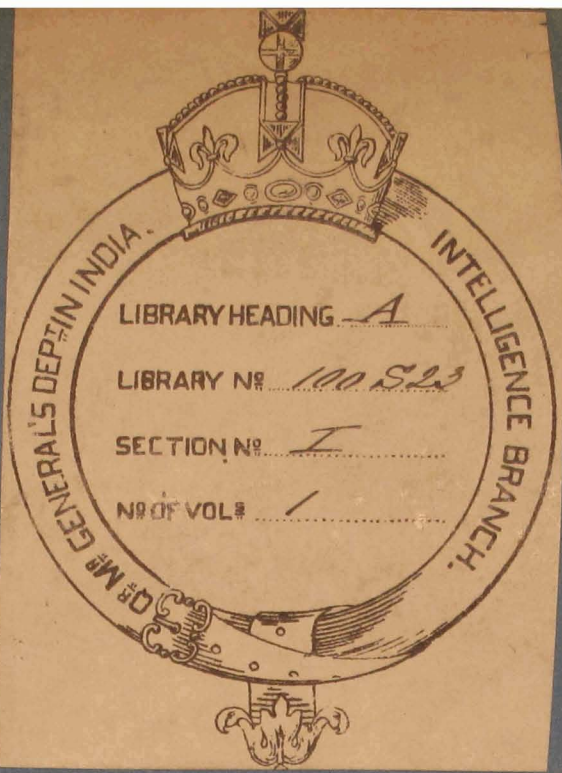
Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Petro-Alexandro- vsk.			Water, fuel, and forage everywhere. In the last 60 miles many streams and canals are crossed, the passage of some of which is difficult as there are no bridges.
Sháhbáz-Wali	20 $\frac{2}{3}$	20 $\frac{2}{3}$	
Bi-Bazár	18	38 $\frac{2}{3}$	
Khyak-Tau	15 $\frac{1}{3}$	54	
Khwája-Kul	16	70	
Lake Maili-Kul	14 $\frac{2}{3}$	84 $\frac{2}{3}$	
Lake Charsháli- Kul.	15 $\frac{1}{3}$	100	
Nukus	16 $\frac{2}{3}$	116 $\frac{2}{3}$	

N.B.—From Petro-Alexandrovsk to the steamboat quay on the Amu runs a road for carriages 5 $\frac{1}{3}$ miles long, and from the same fort to the Pervo-Nachálni settlement of banished Ural Cossacks, there is a carriage road 12 $\frac{2}{3}$ miles long.

Route No. 22.

From—FORT KOK-KALA*To*—NUKUS.*Territory*.—AMU-DARIA PROVINCE.*Authority*.—KOSTENKO.*Date*.—1880.

Names of stages, &c.	DISTANCE.		Description of route.
	<i>Inter- mediate.</i>	<i>Total.</i>	
	Miles.	Miles.	
Kok-Kala (Mihtar-Kala).			On the river Yangi-Su. The whole road is generally good; there is little sandy tract; there is water at the camping grounds and also forage and fuel.
Naupir-Arik canal	18	18	
Chimbai	$14\frac{2}{3}$	$32\frac{2}{3}$	
Lake Kára-Ki	$16\frac{5}{8}$	$49\frac{1}{2}$	
Ruins of Muham-mad-i-Kala.	$15\frac{1}{3}$	$64\frac{5}{8}$	
Nukus	7	$81\frac{5}{8}$	



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