GEOGRAPHY

OF THE

JAMMU AND KASHMIR STATE

By PANDIT ANAND KOUL

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TO

HIS HIGHNESS

GENERAL MAHARAJA

Sir Hari Singh Bahadur,

K.C.I.E., K.C.V.O., etc.,

THE MAHARAJA OF JAMMU AND KASHMIR,

THIS BOOK IS DEDICATED AS A TRIBUTE FROM

THE LOYAL HEART OF ONE OF HIS

HIGHNESS' SERVANTS AND

SUBJECTS.

PREFACE.

KASHMIR is one of the finest countries that the sun shines upon. It is truly called the Sub-Alpine region of Asia's Italy. It is a dream of loveliness! Its natural scenery is unsurpassed, nay, unrivalled, by any country in the world and its climate, most healthy and invigorating. The mountains around, with ever-snowy crown, crimsoned by the deep lustre of sunrise and sunset, stand guard over it. This happy region seems peculiarly sequestered by Nature for her abode. Mountains, woods and streams—all shouting eternal joy. Hoary mountains, shimmering with snow, fence it all round, the breezes wherefrom give peculiar luxuriance to the air; while the verdure of the fields, the transparency of the lakes and streams and the abundance of fruits and flowers combine to form an inviting picture for the eye.

A holiday in Kashmir is, indeed, a holy day. One is brought to close communion with Nature. Amidst the glorious masses of light, shade and colour one comes into touch with the deepest and most beautiful things of life. The thrills of holidaying lie amidst the hills with idyllic picturesqueness and in the fields with streams murmuring musically by the shady trees. The whole valley is stretched away into gardens, orchards, meadows and cultivated fields, divided by rustic lanes with mossy banks, flowering hedge groves and luminous vistas of bewildering beauty.

Says the Rájatarangini—

"In the three worlds the jewel-producing (earth) is to be extolled; still more on that the region of Kubera (the North); still more on that the mountain range, the father of Gauri (Himalaya); still more the country that is enclosed by that mountain range (Kashmir)."

The Moghul Emperors, with their fair queens of beauty, made it a health-resort and fed their love for Nature. The pleasure-loving Sháh-i-Jahán was charmed by it so much that he used to visit it frequently on holiday-making bent, and once, when he was ill and away from Kashmir, he recited the following couplet from which can be measured the extent of the love he had for his land of joy :—

Khurd gandum Adam az jannat kashidandash birún

Man ki khurdam ásh-i-jau Yárab ba Kashmiram rasán.

Adam ate the wheat and he was (therefore) driven out of Paradise;

I took only barley-water. O God, take me to Kashmir!

Sháh-i-Jahán's father, Jahángir, was no less enamoured of the natural beauties of the country. It is he who has said—

Agar firdús bar ríe zamin ast,
Hamin ast o hamin ast o hamin ast.

If there be a Paradise on earth,
It is this, it is this, it is this.

Asked at his death-bed what desire he had, Jahángir drew out a deep sigh, looking up wistfully, and murmured softly—"Kashmir and nothing else."

Az Sháh-i-Jahángir dame naz'a chu justand
Bá khwáhish-i-dil guft ki Kashmir digar hich.

When at the time of death Jahángir was asked (what he desired)
With the desire of heart he replied—"Kashmir and nothing else."

Many writers have, in describing this beautiful country, used all the ingenuity and sophistry at their command.

Sister Nivedita gives her impressions of seeing the sceneries of Kashmir in glowing terms—"We found ourselves in the midst of a beautiful valley, ringed round with snow mountains . . . The sky above was of the bluest of the blue, and the water-road, along which we travelled, was also, perforce, blue. Sometimes our way lay through great green tangle of lotus-leaves, with a rosy flower or two, and on each side stretched the fields, in some of which, as we came, they were reaping. The whole was a symphony in blue and green and white, so exquisitely pure and vivid that for a while the response of the soul to its beauty was almost pain!"

Miss Pirie has so finely described the country in her lovely book *Kashmir* that "it is a place where one might live and die content, having seen Nature in all her fairest moods, the stern grandeur

of the winter snows, the smiling changeful loveliness of spring, and the exceeding beauty of the clear late autumn; while, dividing the seasons, come the massed clouds and mist and pealing thunder of the rains."

The Happy Valley, once isolated, has been taking long strides towards civilization. It has been thrown open to the world by the construction of two fine cart roads, one connecting it with the railway at Rawalpindi and the other at Jammu (Tawi). One can travel in a tonga from Rawalpindi or Jammu to Srinagar in four days or in a motor car in one or two days. Aeroplanes also, for the first time, came here flying in April last and, when some day the aerial service is established, it will be a matter of only an hour to reach here from Jammu or Murree.

Travelling having become easier, the number of visitors is increasing every year, and the demand for books containing particulars in regard to the country is, therefore, growing. There are several very nice and ably written books describing the country and its people and also Guide Books giving useful information for travellers; but hitherto no book on the Modern Geography of Kashmir has appeared in English, and the want of such a publication is much felt not only by strangers to the country but also by its inhabitants.

I have made an attempt in the following pages to give a brief Geography of Kashmir with the object of meeting the want indicated above. I have also collected in it facts in regard to past

events and occurrences, viz., earthquakes, fires, famines, epidemics and floods, which important facts have thus been rescued from the great halls of oblivion, and have given lists of towns and ancient monuments together with the names of their founders and the dates when they were founded. I have also given a treatise on arts and industries for which Kashmir is so famous. These, I venture to believe, will prove a valuable feature of this little book. I have also given detailed lists of different routes, and have briefly described everything I thought might be found useful and interesting.

In conclusion, I beg to add that remembering the Arabic proverb—*Man sanafa qadis-tahdafa* (an author is a target of criticism)—it seems, I am afraid, presumptuousness on my part to venture on writing a book necessitating collection and elaboration of numerous facts from different sources. In doing this, errors might have crept in that might call for adverse criticism. But I crave the indulgence of the reader for all the shortcomings, assuring him that every possible care was taken in the verification of the facts from various authentic records.

SRINAGAR, KASHMIR,
1*st October*, 1925

ANAND KOUL.

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GEOGRAPHY

OF THE

JAMMU AND KASHMIR STATE.

KASHMIR is the name given to the territories of His Highness the Mahárája of Jammu and Kashmir. It is the largest State in India, larger than the Nizam's territory, thrice as large as Mysore, twice as much as Gwalior and Bikanir put together, five times the size of Jaipur, ten times the area of Baroda, and a dozen times as much as Travancore. It is again over $\frac{4}{5}$th of the Punjáb and about $\frac{3}{4}$th of the United Provinces. Excluding Ireland, the British Islands are only a little larger in extent than Kashmir. It contains the divisions called (1) Jammu; (2) Kashmir; (3) Little Tibet; and (4) Gilgit. It extends from 32° 17′ to 36° 58′ North latitude, and from 73° 26′ to 80° 30′ East longitude. It is bounded on the east by Chinese Tibet; on the north by Yárkand and the Pámir; on the west by Yágistán; and on the south by the Punjáb. The size of the country is 400 miles long and 300 miles broad. Its area is 84,258 square miles with a population of 3,320,518 souls of whom 1,757,122 are males and 1,563,396 females. The Hindus number 690,389, Muhammadans 2,398,320, Buddhists 36,512, Sikhs 31,553, and other religionists 1,354. Compared to other States the population of the Kashmir State comes to about $\frac{1}{4}$th of that of Hyderabad, a little above that of Gwalior, about half as much as that of Baroda and more than double of that of Patiala. It is slightly below that of the adjoining Rawalpindi Division and about $\frac{2}{3}$rd of the Lahore Division. It is a little less than $\frac{1}{14}$th of Bengal, a little more than $\frac{1}{6}$th of Bombay, $\frac{2}{11}$th of the Punjáb, and a little over $\frac{1}{14}$th of United Provinces. The total revenue is about $2\frac{1}{2}$ crores of rupees. The greater portion of the country is mountainous. The country is naturally divided into three divisions: the one part to the south of the Pir Punjál range, another between

the Pir Punjál and the range which divides Kashmir from Ladákh and Astor, and the third division is to the south of the Karákoram mountains.

The Pir Punjál mountains separate the plains of India from Kashmir. They begin on the south-east at the Chenáb river and end on the north-west at the Jhelum river. The length of the range from Kishtwár to Muzaffarábád is about 120 miles. There are three chief divisions of the range which run parallel to each other. On the south are the outer hills on which the Jammu city is built. They begin with a height of 100 to 200 feet above the plains. On the north the mountains are very high, most of the peaks being covered with snow most of the year. Their names are :—

Bánihál ..	9,200 feet	At the south-eastern extremity of the range above Vernág.
Kaunsarani Kuthar or Vishnupád.	15,523 feet	These are three snowy peaks towards the west of Bánihál and are conspicuous with their tall pyramidal summits. These are also called Brahma peaks.
Rái Nyur ..	....	In the Deosar Pargana to the west of the Ahrabal waterfall.
Rupri ..	13,000 feet	Between Shupyan and Rajouri.
Dárahál ..	13,000 ,,	
Pir Punjál ..	11,020 ,,	To the north of Dárahál above Hirapur.
Shupikur ..	....	The Northern slope of the Pir Punjál.
Káchagul ..		
Anawat ..		
Tatakuti ..	15,524 feet	The highest snowy peak in the whole range, visible even from Lahore on clear days.
Tosamaidán ..	15,000 ,,	Between Kashmir and Punch.
Afarwat ..	14,500 ,,	Above Gulmarg.
Káji Nág or Káli Nág ..	15,524 ,,	In Uttar Machhipura.

In these mountains the following rivers take their rise, flowing down into the Kashmir Valley :—

Name of river.	Name of mountain from which it rises.	Place of confluence with the Jhelum.
Vishau ..	Kaunsarani Kuthar ..	Sangam.
Rambi Ara ..	Shupikur, Pir Punjál, Rái Nyur and Rupari	Sangam and Kávni.
Romshi which divides itself into three streams at Dánzab which are called Mámshi, Khámshi and Romshi ...	Káchagul, Tatakuti and Anawat	Kákapur.
Dúdganga ..	Káchagul ..	Chhatabal.
Sukha Nág which is joined by Firozpur nullah at Adin..	Pálas and Tosamaidán	Trikulabal.
Ningal ..	Afarwat	Tárazu.

In these mountains are the following lakes which are at a great height :—

Kausar Nág	In Kaunsarani Kuthar or Vishnupád. The Vishau takes its source from here and falls into a deep and picturesque channel which it has worn for itself in the bare rock, forming the finest cataract in Kashmir, namely, Ahrabal.
Nandan Sar and Chandan Sar ..	Near Dárahál.
Anawat Nág and Rámasar ..	In Káchagul and Anawat.
Dudasar	In Káchagul.

Watasar	In Shupikur.
Tsuharsar or Indrasar ..	At Zajimarg.
Damámasar Ailapatar ..	In Afarwat.
Kasina Nág and Satagol Nág ..	In Bangas.
Káji Nág or Káli Nág, Ghurchan Nág, Nilapush Nág and Wánganwás	On Káji Nág.

The following rivers also take their rise in these mountains flowing towards the south :—

Rávi, Uj, Tawi, Chenáb, Tawi-Manáwar, Punch river.

On the south side these hills are barren, but on their north side fine forests abound. On the north side these mountains rise like a wall from the Valley of Kashmir, but on the south they decrease gradually, so that their spurs and ridges cover a large district, called the middle hills, in which Kishtwár, Bhadrwáh, Bsohli, Rámnagar, Udhampur, Riási, Rajouri, Kotli and Punch are situated.

Between the Kashmir Valley and Little Tibet there is a lofty range of mountains and their names are :—

	Feet.	
Nanga Parbat or Deomar ..	26,629	In Astor, the 8th highest mountain in the world.
Nasta Chhenu ..	9,300	On the way to Karnáh.
Trágbal or Rázdániangan ..	11,950	Between Bandipur and Gures.
Burzila or Burzabál	13,500	Between Gures and Astor.
Dorikun ..	13,500	
Harmukh ..	16,890	In the Lár Pargana.
Zojila or Zojibál ..	11,300	Between Sonamarg and Drás.
Mahádev ..	11,500	Above Dáchhigám.
Nankun ..	23,410	In Suru.
Lidarwat ..	10,000	Between Pahalgám and Dáchhigám, 12 miles to the north of Pahalgám.
Kolahoi ..	17,827	To the west of Lidarwat.
Amar Náth ..	17,890	Four marches to the east of Pahalgám.
Kohenhár ..	17,000	To the south of Amar Náth.
Gáshabrár ...	17,836	To the west of Amar Náth.

		Feet.	
Harbhagwán	..	16,055	To the north of Sásakat mountain.
Margan	..	11,600	To the south of the Kohenhár peak on the way to Mariv-Wárwan.
Marbal	..	11,570	To the south of Margan on the way to Kishtwár.
Hukhasar	..	15,060	Between Brang and Mariv-Wárwan.
Brári Bál	..	14,300	Between Sháhábád and Doda.

These are a continuation of the main range of the Himalayas. They separate the valleys of the Chenáb and the Jhelum from the valley of the Indus. In this range are very few passes. The lowest in them is the Zojila. On the east there is the Bhotakot pass and on the west there are passes between Gures and Astor called the Burzil and the Dorikun.

The following rivers take their rise in these mountains, flowing towards the Kashmir Valley :—

Name of river.	Name of mountain from which it flows.	Place of confluence with the Jhelum.
Sándren ..	Brári Bál ..	Khanabal.
Bringi ..	Hukhasar ..	
Arapati ..	Margan ..	
Liddar or Lambúdari ..	Kohenhár ..	Below Khanabal, Guravir and Kitrteng.
Arpal ..	....	Tsráligund above Charsu.
Tsunti Kul ..	Mahádev ..	Dubji opposite the Shergadhi Palace.
Sind ..	Zojila, Amar Náth and Harmukh ..	Shádipur.
Arin ..	Harmukh ..	Near Bandipur.
Madamati ..	Do. ..	Bandipur and Kulsu.

Name of river.	Name of mountain from which it flows.	Place of confluence with the Jhelum.
Pohru constituting Kahmil, Tálar Máwar and Hamal joining it at Bamaháma, Chogul, Dukulabal and Hib Dángarpura, respectively ..	Káji Nág	.. Duábgáh.

In these mountains are the following lakes which are usually at a great height :—

Shishram Nág ..	On the north of Kohenhár near Mahágunas hill.
Zámatari Nág ..	
Hatiár Taláv (14,800 ft.) ..	Above the Sásakat mountain (14,950 ft.)
Kemsar ..	Just below the Yember pass on the left side, 21 miles to the north of Pahalgám.
Társar ..	These two lakes are divided by a high hill. The water of Társar runs towards Lidarwat and falls into the Liddar river while that of Mársar runs towards the Dáchhigám valley and is the source of the water works of Srinagar.
Mársar ..	
Chandrasar ..	In the Mahádev mountain range.
Brahmasar ..	In the Harmukh mountain range.
Nund Kol ..	
Ganga Bal ..	
Kolasar ..	
Khirasar ..	
Dudasar ..	
Gagasar ..	
Kánasar ..	
Dothasar ..	
Satasar ..	
Nilasar ..	
Nilabhawan ..	
Talávbal ..	
Sálansar ..	
Yamalsar ..	

Further west are the sources of the Kishen Ganga river which joins the Jhelum at Domel, namely :—

Krishnasar.	Gádhasar.	Sáransar.
Vishnasar.	Yamasar.	Kodurisar.
Prangasar.	Satanisar.	Satgul Nág.

The sources of the Wárwan river in the further east are :—

Sarbal.	Khelan Nág.	Tsuhar Nág.
Hukhasar.	Kalusar.	Sonasar.

On the north side are the Zanskár, Suru, Drás, Shingo, and Astor rivers. These are all tributaries of the Indus river.

Karákoram is a very high range of mountains which forms the frontier of the Mahárája's territories on the north. They are continuous with the mountains on the north of Tibet and on the west they join with the Hindukush mountains which divide Badakhshán from Afghánistán. Of the mountains on the north of Tibet very little is known, but there are several passes between Ladákh and Yárkand. These are all very high. They are the highest *karavan* roads in the world. The passes are between 18,000 and 20,000 feet above the sea, and the peaks rise from 25,000 to 28,000 feet high, out of which K^2 (28,278 ft.) is the second highest peak in the world. There are two chief routes, that by the Changchenmo and that by the Shiyok valley. These lead from Leh to Khotan or Yárkand. On the west between Skardu and Yárkand there was a pass which, owing to a difficult glacier, has for the last 50 years been disused. In the mountains further west there are several paths between Hunza and Gilgit on the south and the Pámir and Badakhshán on the north. In these mountains are the Harmukh (24,285 ft.), in Gilgit and Rakipushi (25,550 ft.) in Hunza. The Indus with its branches, the Shiyok and the Naubera, the Shigar and the Gilgit river take their rise in these mountains.

Water-Shed Ranges.

The Kiunlun and Karákoram separate the rivers of Kurákásh and Yárkand which flow in Turkistán, from those flowing in the Frontier Districts.

The mountains of Swát and Yásin separate the Indus from the Kábul river.

The Nunkun extending on to Spiti, Láhoul, Zánskár, Amar Náth and Burzila separates the rivers of Jammu and Kashmir from those of Ladákh.

The Harmukh, Trágbal and Káji Nág separate the Jhelum from the Kishengunga.

The Kaplás and Shivaji mountains, connecting with the mountains of Chamba, separate the Chenáb from the Rávi.

The Bánihál and Pir Punjál ranges separate the Jhelum from the Chenáb.

Passes.

The following is the list of passes over the mountains in the State :—

Name of Pass.	*Between which places situated.*
Bánihál ..	Jammu and Kashmir.
Muhu Guláb-garh	
Konsarnág Budal	
Pir Punjál ..	Kashmir, Punch and Bhimber.
Firozpur ..	
Dárahál ..	
Tosamaidán ..	
Háji Pir ..	
Zojila ..	Kashmir, Ladákh and Skardu.
Mastagh or Karákoram ..	Ladákh and Turkistán.
Rajdániángan ..	Kashmir and Gures.
Burzil ..	Kashmir and Gilgit.
Marbal ..	Kashmir and Kishtwár.
Hoksar ..	
Margan ..	
Bhotakot ..	Kishtwár and Kargil.
Panila ..	
Nira ..	Ladákh and Zánskár.
Sangi ..	
Rangla ..	
Amásibardár ..	
Barálacha ..	Ladákh and the Punjáb.
Lachulang ..	
Sankola ..	

Altitude.

The plains on the south of the Pir Punjál vary from 1,000 to 2,000 feet above the sea. Many portions of these districts adjoining the outer hills are very fertile. We may mention the districts of Kathua, Jammu and Udhampur on the east of the Chenáb; and Riási and Mirpur between that river and the Jhelum.

The elevations above the sea-level of different places in the State have been given under "Routes" in pages 89—98.

There are valleys among the mountains, such as Punch and Rajouri, and in the valley of the Upper Chenáb, Rámban and Bhadrwáh. They are rough and rugged in character, sparsely inhabited, and poorly cultivated—small patches of land only being fit for tillage.

The produce of these districts varies according to their altitude. Thus below 2,000 feet the crops of those of the Punjáb, such as sugarcane and plantain, as well as such grains, as are met with in higher altitudes, grow. Probably tea plant might be advantageously grown. In this district cotton plant thrives. On the sides of the hills maize, wheat and barley are extensively cultivated and the forests of pine and deodár are a source of wealth to the State. A large variety of forest trees are met with, such as oak, horse-chestnut and spruce, especially on the northern slopes and afford shelter to various species of birds and animals, most of which are found in Kashmir. In ascending these mountains one passes successively through different stages of mountain vegetation, and, on nearing the summit, the pines, the firs and shrubs vanish, it being above the limit of forest growth, and there is nothing but stunted grass, rocks, fallen stones and, on the highest parts, unmelted snow.

Game.

Ibex are numerous in Little Tibet; Markhor in the Gilgit district, and stags, leopards, bears, wolves, beech marten, musk shrew, water shrew, flying fox, flying squirrel and *serow ramu* in Kashmir. Brown bears are less numerous than black. Tibetan antelope and gazelle and ovis ammon are to be found in the great plateaus between Ladákh and

Chinese Tibet. Chikor, ducks, cranes and other game birds are numerous in Kashmir. Fish are plentiful. Trout-culture has been started in the Harwan and Achhabal streams in Kashmir.

Mines.

There is much mineral wealth in the country. Coal, though of an inferior quality, and iron ore are to be found in the Riási Tehsil. There is a mine of sapphires at Pádar. Salt in a crude form, which can however be purified, is dug up in Ladákh and is also obtained from salt lakes there. There is a mine of sulphur at Pinga in Ladákh. Gold is obtained from sand washings at Gilgit, Kargil and Skardu. There is also a mine of iron ore at Shár in Vihi, at Harwan in Zainagir, at Tshuhan in Sháhábád, and at Yashar and Sof in Brang. Crystal is to be found in several places in the Kashmir mountains and copper near Aishmuqám. There are limestones in many places, principally near Rámpur and the Mánasbal lake, and also China clay at several places in the Jammu Province.

Irrigation.

The valley of Kashmir abounds in natural watercourses and therefore artificial means of irrigation are not generally employed. Only four canals, viz., the Matan canal from the Liddar river, the Sharáb Kul from the Hárwan river, the Sháh Kul from the Sindh, and the Lál Kul from the Pohru have been excavated for irrigating high lands.

In Jammu Province there is much need of canals. Several have already been constructed, which have converted large tracts of arid and barren land into flourishing fields of corn. A canal on a grand scale has been excavated from the Jhelum near Mangla (Mirpur Tehsil) by the British Government, which cost about three crores of rupees. It waters a very large area in British territory, but so far as it passes within the State limits, it supplies as much water as is required therein for irrigation. The State has excavated two canals from the Chenáb near Akhnur : one, called Pratáp canal, waters a large area from Akhnur to Hamirpur and Sidhar, and the other, called Ranbir canal, from Akhnur to Jammu and thence penetrating the Tawi river by a subterraneous passage—a marvellous piece of engineering skill—

waters the whole Tehsil of Ranbir-Singhpura. Another, called Kashmir canal, has been excavated from the Rávi near Basantpur, which irrigates a part of Kathua Tehsil.

In the Frontier Districts, the rainfall being a negligible quantity, the crops are entirely dependent on artificial water-courses which have been constructed wherever practicable.

Towns.

The most important towns are Srinagar and Jammu. The following is the list of all the towns in the State :—

Province.	Town.	Population.	Remarks.
Kashmir	Srinagar	1,41,735	Founded by Pravarasena II, who ruled in Kashmir from 79 to 139 A.D.
,,	Sopur ..	8,514	Founded by Suya during the reign of Avanti-Varman (855-883A.D.)
,,	Báramulla	6,599	Being the place where articles of merchandise to and from Kashmir mostly go by boat, it has become the chief forwarding station of trade.
,,	Bijbihára	4,424	Founded by King Vijaya (114-106 B.C.).
,,	Anantnág	9.019	This place was called Anantnág after the name of the spring here. In 1664 A.D. Islám Khan, a Moghul Governor, laid out a garden here for the Emperor Aurangzeb and the latter being pleased with it called the town Islámábád after the name of the Governor. Mahárája Guláb Singh changed its name again into Anantnág.
,,	Shupyan	2,114	....
,,	Pámpur	3,348	Founded in 812-849 A.D. by Padma, minister of King Ajatapida. Saffron is produced on the plateau above the town.

Province.	Town.	Population.	Remarks.
Kashmir	Muzaffarábád..	3,462	Founded by Muzaffar Khán, a local chieftain, in 1554 A.D.
Jammu	Jammu	31,506	Founded by Jambu Lochan (2700 B.C.).
,,	Kotli ..	1,584	....
,,	Mirpur..	6,640	It is a centre of trade and the head-quarters of the Revenue and Judicial Officials of the District.
,,	Rámpur Rajouri.	2,192	The ancient Rajpuri which has always played an important part in the political history of Kashmir.
,,	Bhimber	1,538	A centre of trade on the highway to Kashmir. Used to be head-quarters of Chib Rájás.
,,	Akhnur	3,033	Situated on the right bank of the Chenáb. Was once a market of timber borne down from the hills by the Chenáb, which market is now removed to Wazirábád. Mahárája Guláb Singh was installed as Rájá of Jammu by Mahárája Ranjit Singh here.
,,	Sámba ..	2,307	The old palace here was built by Rája Suchet Singh, brother of Mahárája Guláb Singh. The town is noted for floor print cloth called Sámba *Shâhi masnad.*
,,	Kathua	5,112	Head-quarters of the Revenue and Judicial Officers of the District.
,,	Basohli	1,954	Situate on the right bank of the Rávi. Was once the capital of Balávar chieftains.

Province.	Town.	Population.	Remarks.
Jammu	Udhampur	2,360	Was once the head-quarters of Phalwáls. Called after the name of Mahárája Guláb Singh's eldest son, Udham Singh. Is a centre of trade, chiefly of ghee, which is brought here from the surrounding hills, where buffaloes and cows find abundant grass to graze upon and is also head-quarters of Revenue and Judicial Officials of the District.
,,	Rámnagar	2,073	Was once the capital of Bandrála Miáns. In Rája Suchet Singh's time the place was in a prosperous condition. The late Rája Sir Rám Singh held it as Jágir and is now incorporated with the State. The fort and the palace here are worth seeing.
,,	Riási ..	1,905	There is a fort here in which the reserve treasury used to be kept. A fine garden is attached to the Mahárája's palace here. Before Kashmir came into Mahárája Guláb Singh's possession this place formed his summer head-quarters. It is the birth-place of the late Mahárája Pratáp Singh.
,,	Kishtwár	2,378	Saffron is produced here, but is of an inferior quality. The place is also noted for opium. The Illáqa of Kishtwár was annexed by Mahárája Guláb Singh after defeating the Rája of this place, Teg Singh, *alias* Saif Khan, in 1843 A.D.
,,	Punch ..	7,662	Founded by King Lalitáditya (697-734 A.D.). It is the Jágir of Rája Sukhdev Singh.
,,	Bhadrwáh	2,563	Noted for opium, and deodárs.

Climate.

The Jammu province, being for the most part continuous with the level of the Punjáb, has the tropical heat and shares with it the periodical rainfall. In Kashmir there is no periodical rainfall, but there is rainfall enough for all crops. The Frontier Districts are almost rainless and no crops can be raised without irrigation. For the past twenty years the average annual rainfall of Kashmir, Jammu and Frontier Districts is 27·24, 41·79, and 4·39 inches respectively. In Little Tibet, which is one of the loftiest inhabited places in the world, the summer is warm, but in winter the cold is of almost Arctic intensity.

Kashmir is situated actually in the sub-tropical area, but, owing to its high altitude, it is cold ; consequently the weather varies between two extremes of temperature and the changes are frequent and sudden. The proverb is " *Kashmir, pankha postin* " (in Kashmir one must have fan and fur together) ; and it is true enough. In winter snow falls immensely and the frost is severe, by which lakes and rivers are sometimes frozen over. The river Jhelum was frozen over in the winters of 1658, 1764, 1759, 1780, 1816, 1835, 9th December, 1879 and 1st February, 1895. The winter of 1759 A.D. got so much prolonged that the Jhelum was frozen over on as late as 31st March, which is given in the following couplet :—

Káh shat tah dusatat os sanai
Hutimi navime lajiye Veth

1172 (Hijra i.e., 1759 A.D.) was the year
On the 9th of Pisces (31st March) the Jhelum got frozen over.

The spring, though wet, is pleasant, the fresh green tints of the trees and the mountain-sides being refreshing to the eye ; the summer is hot though not oppressive, and the autumn is dry and healthy.

The Kashmiris divide the year into six seasons, viz., *Sont* spring, *Retakol* summer, *Waharát* rainy season, *Harud* autumn, *Wandah* winter, and *Shishur* frosty season. Thunderstorms occur at the end of *Shishur* which mark the transition of this season to *Sont*.

At the Jammu town wind blows at night and in the morning which is called *Dadú*, and in summer afternoons there is a periodic hot wind blowing which is called *Loh*.

The air in Kashmir is generally calm. Storms sometimes arise. The wind blowing from a particular direction has got its own name. The north-easter is called *Viji Wáw*, north-wester *Kámráz*, western wind *Nát*, eastern wind *Sindabat*, southern wind *Bánahál*, and northern wind *Nágakon*. Red twilight in the morning presages rain, and red sunset is a sure prelude to fine weather. White clouds are sure to bring heavy rain but dark clouds mean a thunderstorm and a little rain. A strong wind, called *Chang*, blows down the Jhelum Valley Road throughout the winter. The climate of the Kashmir Valley is, on the whole, salubrious and invigorating. Singsa poet—

Har sukhta jáne ki ba Kashmir daráyad
Gar murgha kabáb ast abá bálu-par áyad.
Any burnt creature entering Kashmir,
Even if a roasted fowl, it shall grow feathers.

The Valley is gay with greenery and flowers of diverse kinds in spring and summer, and in autumn the trees are resplendent in the gorgeous colouring and laden with delicious fruits.

People.

The Dogras are generally thick-set and short-statured. The Kashmiris, who come from the primitive Aryan stock, have a fair complexion, and are good-looking and well built. They are tall and strong, the features of the men are large and acquiline, with a wide straight-up and high forehead and a well shaped head. The beauty of the women is of ancient and world-wide reputation. Their hair is glossy, their brow bright and smooth and their eyelashes dark. Sir W. R. Lawrence observes that, despite the unbeautifying effects in many cases of poverty and misery, their title to beauty must justly be conceded and a Kashmiri woman may claim one of the first places among her sex as a fine example of Nature's loveliest handiwork—the female human form divine. In Ladákh are the races of Mongolian type blending down with the Dards and Galchas of Skardu and Gilgit.

There is a clan called Bambas living in the area to the right of the Jhelum between Báramulla and Muzaffarábád.

They belong to the tribe Bani Umia of Damascus, Bamba being the corruption of the word Bani Umia. They originally came in Kashmir with Dulchu in 1322 A.D., and settled here.

Khakhas and Hátmáls are the other clans living in the area to the left bank of the Jhelum between Báramulla and Kohala. They are the descendants of two Rajputs named Khakhu and Hátu who became converts to Islám and took service at the court of King Zainulabdin (1423—74 A.D.) who granted them a Jágir here.

All the three clans mentioned above often came into the Kashmir Valley and plundered the country. They were a terror to the people. Even now a Kashmiri mother would, in order to frighten her child, say *Khukh áv* (Khukha has come). These clans were independent, but Mahárája Guláb Singh brought them under subjugation soon after he got Kashmir from the British Government.

Character.

The Dogra is noted for self-respect, faithfulness and bravery.

The Kashmiri is kind to his family, hospitable, intelligent, industrious and free from crime against the person. And these qualities are in keeping with his poetic surroundings. He has, however, been much maligned, and abuses out of measure have been hurled upon his devoted head. Sir Walter Lawrence, than whom none has studied Kashmir and the Kashmiri more, writes in his *Valley of Kashmir* :—

"I think that many of the hard things said about the Kashmiris are due to the fact that the official interpreters of their character have been foreigners, often grasping and corrupt, always unsympathetic. Moghul Subadars, Pathan Sirdárs and Sikh and Dogra Governors dismissed all difficulties of administration and all humane suggestions emanating from their masters with the remark that the Kashmiris were dishonest, treacherous and *zulmparast*. It is the old tale of giving a dog a bad name ; and I must confess that during my first year's work in the Valley I shared these views. But I soon grew to understand that the Kashmiri, like other Orientals, has two sides to his character as distinct as light and darkness."

Dr. Ernest F. Neve, who has spent forty years in close touch with the people of Kashmir, says in his very interesting book *Beyond the Pir Punjál* :—

"On the whole the Kashmiris are grateful to benefits. Their moral sense is fairly developed. They readily distinguish from right and wrong."

Of Pandits he says: "Their intellectual superiority over the rest of the population must be admitted. They are quick of apprehension and have good memories. One of their besetting faults is conceit. But some of them are very superior, trustworthy, honest, clear-headed and industrious."

A German has said that "every Oriental people has a certain national aversion to every other." What has been said of the Kashmiri should not, therefore, be taken without making due allowances for extravagances. There may be certain foibles in his character but they are due to his poverty; misery and falsehood, poverty and cringing being not easily separable.

The character of the people, timid yet persistent, degraded yet intellectual, was the direct result of evil administration. Still with the persistency of their forefathers, who had survived the despotism of the Moghal and Pathan governors, and with trust for protection, during the dangers of the times, solely on their own inoffensive conduct, the Kashmiris clung to their land and their traditions, and they probably represent to this day a people historically older than any to be found in Northern India, still associated with the land of their ancestors. Remembering the beauty and the fertility of the Vale of Kashmir, this is perhaps not so surprising as it would otherwise seem.

Successive dynasties have left no impress on their national character. They are to-day what they were thousands of years ago.

Altruism is nowhere narrower than in Jammu where the people will not even take the names of certain towns and villages out of antipathy towards their inhabitants. For instance, Jammu is called "Wará Shahr;" Sámba "Chhintán Wála Shahr;" Akhnur "Daryá Wála Shahr;" Jasrota "Watán Wála Shahr;" Dhansál "Kachá Pind;" Pánsar "Tá Wála Pind;" Parol "Nagri" and Jhangánu "Qila Wála Pind."

The Tibetans are simple, truthful and laborious.

Commerce and Industries.

According to the latest official report the total value of imports into the whole State for the year 1919-20 was Rs. 2,85,05,100 and of exports Rs. 1,65,99,373. Salt, snuff, tea, piece-goods, petroleum, sugar, haberdashery, metals and spices are among the staples of import; and timber, silk, linseed, fruits, grains, ghee, woollen goods, hides and *kut* are the chief articles of export.

The arts, of course, deserve to be given a prominent place in education and life because of their power of calling forth the best qualities in human beings. Every facility is afforded by the State to encourage and improve the arts and industries, and to promote the industrial activity of the country which contains almost every raw material required for the supply of its needs and manufactured goods. The first and foremost industry throughout the State is agriculture. The most beneficial measure introduced by the administration was the land settlement and the inauguration of an equitable assessment of property and crops. The happy result is that the vast agricultural population is in a prosperous condition.

The industrial development of Kashmir has been very rapid in recent years. The arts have attained to a degree of excellence and their qualities are fast improving. These works of art are increasing in demand all over the world and there is, therefore, a great and prosperous future before this country. The way to prosperity for a country is the systematic development of its resources and the organization of a trained industrial population. An Urdu poet has truly said—

Hain wuh mustaghni jahán men jinko kuchh átá hai kám
Hain kalide ganj-i-zar ahle hunar ki ungliyán.

They are purse-proud in the world who can practise some handicraft

The fingers of a craftsman are the key of the treasury of gold

The Kashmir craftsman's and artisan's hand is no doubt supple and wonderfully trained, but it has not yet been brought into systematic and organic co-operation with their eye and brain. When that is effected it shall

react upon their own value in the labour market to an extent which can hardly be measured. Every intelligent workman, they say, is a potential inventor and requires opportunity and facilities for development of the faculty latent in him. The opportunities and facilities are offered by the Technical Institute, which has been established to perpetuate the memory of the late Rája Sir Amar Singh. Its aim is to revive the ancient and national methods of artistic expression and to revitalise and restore them by breathing a new life into the dead bones of the Kashmir Art. It trains the artistic and intelligent people of this country in modern methods of work and makes them proceed forward and get further and further, enlarging the principles and improving the practice of the arts. It is a source of general diffusion of opportunities for technical training and affords facilities for the training of the artisans and craftsmen. It also guides them to correct the defects in, and give finish and touch to, the works of art. Finish and touch are at present lacking in the Kashmir works of art, and if they are learnt by the Kashmiri craftsmen and artisans the economic future of Kashmir promises to be exceedingly bright.

They are really fortune-builders of the country who avail themselves of technical education offered to them—an education calculated to promote their power of thinking, observing and experimenting correctly. Having attained this power, they will work wonders in developing the industrial arts and crafts, so that this country, which is a focus of attraction for seekers of health and lovers of beauty, will also be a centre of real interest to art lovers all the world over.

There is a Museum in the Lalmandi at Srinagar where samples of best workmanship and art are to be seen. The State has started an Electrical Installation at Mahora at which 5,000 horse-power is generated and another Installation on the Ranbir Canal at Jammu, where 1,000 horse-power is generated. The silk factories and also several small but useful industrial concerns at Srinagar and Jammu are worked by this power. Along with the impetus thus given to local industries, the State has been devoting special attention to promote agriculture and horticulture.

The chief industries in Kashmir are, shawl, carpet, *papier mâché*, paper making, sericulture, embroidery and

wood work. There are also other minor industries. An account of them is given below :—

The Kashmir Shawl Trade.

Kashmir is not only one of the finest countries that the sun shines upon, but also a storehouse of exquisite works of art fostered by a people renowned for elegant taste and artistic faculty like the Japanese in the Far East. They, from primitive simplicity, began to aim at elegance, influenced, no doubt, by the natural beauties with which they were surrounded and by a climate eminently suited to their application to industrial pursuits, together with the wealth of raw materials with which Nature has profusely endowed this country. Their works of art excite the admiration of the artistic world. Shut up within the high walls of the Himalayas and guarded by its snowy giants, they were contented to live in a little world of their own from which they neither attempted nor desired to extricate themselves, and, being hardy and industrious by nature, applied themselves to industries, supporting their families with the produce of their labour. They lived and worked from day to day and year after year with unchanging uniformity. Turbulent times there were many. Adventurer after adventurer came and turned Kashmir into one endless battle-ground for the satisfaction of their ambition and avarice, spreading horror over the country. To recite the brutalities perpetrated by them would be to read a catalogue of black crime and deeds of cruelty fit to sicken a tiger. But the Kashmiri suffered it with passive resignation and did not distract himself from the craft of his forefathers bequeathed to him with all the secrets and mysteries of the art.

Kashmir was ever noted for, as the proverb says, *Shawl, Shâli, Shalgam,* and the Kashmiri brought the shawl to the highest pitch of excellence.

It is a square or oblong article of dress worn in various ways hanging from the shoulders. It is characterised by the great elaboration and minute detail of its design and by the glowing harmony, brilliance, depth, softness, warmth and other enduring qualities of its colours. These excellent qualities are the result of the raw material of the shawl manufacture which consists of the very fine, soft, short, flossy

underwool called *Keliphumb* or the *pashm* of Kel or shawl goat, a variety of *Capra-hircus* inhabiting the elevated regions of Tibet. These regions are, owing to their high altitude, intensely cold and Nature has clothed the goats with this warm wool. The higher the goats live, the finer and warmer is their wool. The Tibetans call the he-goat and the she-goat yielding the wool *Rabo* and *Rama* and the white and brown pashm, *Lena Karpo* and *Lena Nakpo* respectively and the Kel's pashm *tsokul.* There are several varieties of *pashm* according to the districts in which it is produced, but the finest comes from Changthong, the eastern district of Ladákh, and from Turfán. The *pashm* of Turfán is from goats in the Tian Shan mountains and the principal marts of collection are Turfán and Ush Turfán, and it comes by caravan by the Káshgar, Yárkand and Leh route. Those who trade in this commodity are called Tebet Baqàls. In 1817, the price was Rs. 15 per 6 seers or a *trak* when the import was 60,000 maunds. The *pashm* was imported by merchants who exchanged it for manufactured shawls and *pushmina* which they disposed of advantageously in Russia.

The shawl wool is sorted with patient care by hand and spun into fine thread by the Kashmiri women. The work is of much delicacy owing to the shortness of the fibre. The various colours are dyed in the yarn. The subsequent weaving or needle-work is a work of great labour, and a fine shawl will occupy the whole time labour of three men for not less than a year. There are two principal classes, one is *Kani* or loom-woven shawl, woven in small segments which are sewn together with such precision and neatness that the sewing is quite imperceptible ; and the other is *Amlikàr* in which over a ground of plain *pushmina* is worked by needle a minute and elaborate pattern. A peculiar method is employed by the weaver in converting his original design, which is prepared by a *Naqásh*, into a textile. Instead of working from a coloured drawing or diagram, the weaver has the pattern translated on paper into rows of symbols, each of which expresses the number of threads to be worked in and their colour. The man who translates the pattern into written " key " is called *Khahan Wol.* The weaver has a tray at his hand filled with bobbins of every required colour and with this written " key " or *t'alim*, as called by the Kashmiris, he

sits on the loom, works in the stated number of threads of each colour as in the ciphered scrip with marvellous dexterity, knowing nothing of the pattern he is preparing, but gradually building up in a mechanical way the shawl on the warp before him. What a puzzle it would be to ordinary workers! Shawl is also manufactured at Meshed, Kirmán and Andijan in Persia and at Amritsar, Lahore and Ludhiana in the Punjáb, but it is far deficient in quality as compared with that manufactured in Kashmir. Apart from the skill of the Kashmiri manufacturers, there is something peculiar in the atmosphere of Kashmir which renders the shawl soft.

The shawl formed a raiment of the votaries of fashion in Europe. Merchants made fortunes by trading in it and the industry once employed over 60,000 people and brought into the country 50 lakhs of rupees annually. *Pushmina* is the term used for all textile fabrics made from *pushm*-wool. It is woven plain or in various patterns of European tweed and serge. The earliest and indigenous pattern is in plain white or *Khudrang* (natural colour) or white and black stripes called *Resh Pombur*. The best white *pushmina* can now be had for Rs. 20 per yard.

When the Kashmiri took to this industry is not known, but it is certain that from ancient times Kashmir was famous for its shawls. The Mahábhárata says that when Krishna went to the Court of the Kurus as a delegate from the Pándavas, Dhritaráshtra proposed to present him, among other things, 18,000 *avikam*, or shawls, of the hilly country, obviously meaning Kashmir. We are also told that ere Tyne became a place for fishermen to dry their nets in, the Hindu-Phœnician commerce had an Asiatic renown; the spices of India were sought in the time of Solomon, and the gossamer muslin of Dacca and the shawls of Kashmir adorned the proudest beauties at the Court of the Cæsars. In *Judges V*, 30, we read of diverse patterns of needlework, on both sides, and in *Ezekiel* mention is made of embroidered works brought by merchants in chests bound with cords and made of cedar, apparently referring to Kashmir shawls.

It is said that Mir Sayid Ali of Hamadán (Persia) *alias* Sháh Hamadán, who visited Kashmir for the second time in 1378 A.D. and stayed here for over two years, revived the

shawl industry which had long died out, and Sultán Qutb-ud-din, who was then the ruler of Kashmir, patronized, nourished and stimulated it. One hundred and sixty-two years later, a man of Khoqand in Central Asia, named Nagz Beg, who was a cook of Mirza Haider of Káshghar who came to Kashmir in 1540 A.D. and became the Vazier of Sultán Názuk Sháh, the then ruler of Kashmir, got a piece of *pushmina*, 1½ yards wide, prepared, and presented it to his master. Mirza Haider enquired as to what it was. The cook replied "Shawl." He called it by this name because the people of Khoqand call a blanket a shawl in their own tongue. A kind of blanket is even now manufactured in Central Asia which is called "Shawlki." Mirza Haider enquired, "Is it *yak* (single) shawl or *du* (double) shawl?" The cook replied, "Du shawl." It is said that since then this cloth has come to be called by this name. Mirza Haider liked the shawl very much, gave a reward to the man and ordered him to prepare another piece. One day a workman who was weaving the *pushmina* was, for some negligence, given a slap on his face at which his nose bled and the *pushmina* got sprinkled with blood. Nagz Beg found that the *pushmina* looked prettier with the red spots and, intelligent as he was, he got *pushmina* thread dyed with red and green colours and wound on twigs and with them the cloth was woven so that red and green spots were alternately in regular rows produced on it. Nagz Beg was popularly called Naqd Beg and the tomb of this unique figure in the history of shawl industry is on the road at the Babribág near Zadibal, the northern suburb of Srinagar.

The art of *Amlikár* shawl was invented by a Kashmiri named Saida Bábá *alias* Ala Bábá in the time of Azád Khán, an Afghán Governor who ruled in Kashmir from 1783 to 1785 A.D. Ala Bábá was living at the Sokálipura mohalla in Srinagar. It is said he was led to his invention by observing a fowl walking on a white sheet of cloth which left prints of his dirty feet on it and suggested to him that if he covered these stains with coloured thread with the help of the needle the cloth would look prettier. He did so and finding his attempt successful, marvellously improved upon it. This remarkable man's tomb is at Rájwer Kadal. His lineal descendant now living is his great-grandson named Asad

Alá who is residing at Nawa Kadal in Srinagar and pursuing his great-grandfather's calling, namely, darning.

Gradually, the improvement in the manufacture of shawl was developed with development in the refinement of taste, and *háshia* or borders were added to it. In 1864 A.D. in the time of Mahárája Ránbir Singh, *Du Rukha* shawls or shawls with face on both sides were first made. The inventors were Mustafa Pandit and Aziz Pandit. These ingenious men also invented the *Zamin past gul bálá* shawls or shawls with raised floral work.

The *háshia* is the border and may be single, double or triple. The *palla* is the embroidery at the two ends. The *dhour* or running ornament covers all the four sides. The *kunj* is the cluster of flowers or cone in the corners. The *mattan* is the decorated or plain part of the central ground. When the row of cones is double, it is called *dokunj*. A special design was used for shawls sent to Armenia, with which country a large trade existed. The design is credited to Khwája Yusaf, an Armenian, who was in Kashmir in 1803.

The shawl designs are various, chiefly conventional and some realistic. The well-known cone pattern, with flowing curves and minute diaper of flowers, is elaborated in the most artistic manner and combined with floral decorations and a maze of scrolls. It has been called the Persian Cone or flame pattern. The cone, I think, is a purely Kashmiri idea. Some say the design was conceived from the windings of the Jhelum river and the scrolls were in imitation of the ripples of water caused by the back flow near the bridges on the Jhelum. It may, therefore, be called the "Jhelum pattern." The Jigha pattern was a favourite one with the Moghals, and it is said that many Andijani weavers were brought to Kashmir by the Moghals, and they settled in Srinagar. Some believe that the cone is really an elaboration of an Egyptian Cocus of ancient origin.

The process of shawl manufacture is briefly as follows :—

(1) The wool is cleaned and treated with rice paste. Soap is never used.

(2) Spinning into yarn by the spinning wheel.

(3) Dyeing. In olden days 64 different tints could be given. Lac is used as a mordant.

(4) The yarn is then adjusted for the warp and for the weft. Both the warp and weft are double.

(5) Weaving. The warp is fixed in the loom. The coloured yarn is wound round small sticks which may be about 1,500 in number in richly embroidered shawls. The weaver has no idea what he has to produce, but only manipulates the sticks according to the *t'alim*.

(6) Washing in the water of the Dal lake, this water being peculiarly suited to render the *pushmina* soft and the colours fast and bright.

(7) Cleaning of discoloured hairs by *Purzagars*. The colour of white *pushmina* is confirmed by application of sulphur fumes.

The actual cost of a Rumál was as follows :—

	Rs.
Asalkar (wages of shawl weavers)	300
Commission 25 per cent.	75
Pushm, dyeing	75
Tax	75
Bukhshish Ustad (Master's wages)	75
Miscellaneous expenses, designing, etc. ..	25

Total cost was rupees 625. The shawl was sold in Paris for Rs. 2,000, including insurance, freight, auctioneer's commission and other agency charges.

During the Moghal period, the art of shawl weaving attained to such excellence that a shawl, 1½ square yard in dimensions, could be produced which could pass twisted through a finger ring. The Moghals had a great liking for it. "His Majesty Akbar," Abul Fazal says in the *Ayeeni Akbari*, "is very fond of shawls. By the solicitude of His Majesty the manufacture of shawls in Kashmir is in a very flourishing state." Bernier, who visited Kashmir in 1665 A.D. with Aurangzeb, says, "What may be considered peculiar to Kashmir, and the staple commodity which particularly promotes the trade of the country and fills it with wealth, is the prodigious quantity of shawls, which they manufacture and which gives occupation even to little children." In

the year 1739, Nádir Sháh sent an Ambassador to Constantinople with fifteen elephant loads of presents to the Sultán, amongst which there were a number of Kashmir shawls which the Sultán presented to the wives of the ambassadors in his Court. The Moghal Emperor, Muhammad Sháh, who ruled from 1720 to 1742 A.D., was presented with a shawl of a floral design which he liked very much and he ordered that Rs. 40,000 worth of shawls of the same design be manufactured and supplied to him annually. The design came to be called after the name of the Emperor, *Butá Muhammad Shahi.*

In 1752 A.D. Kashmir fell into the hands of the Afgháns and they too, like the Moghals, had a special liking for shawls. The demand gave a great impetus to the improvement of the industry. Jámawár, Dordar and Qasába or Rumál of diverse and beautiful designs were manufactured. The trade became extensive and there was great demand for shawls in Persia, Afghánistán and Turkistán and latterly in Russia.

In 1796 A.D. in the time of Abdullah Khán, an Afghán Governor of Kashmir, a blind man, named Sayid Yahaya, had come from Baghdád as a visitor to Kashmir, and when he took leave from Abdullah Khán to return, the latter gave him a present of an orange-coloured shawl. The Sayid, having gone to Egypt gave it as a present to the Khedive there. Soon after, Napoleon Bonaparte came to Egypt with his famous fleet with the object of harassing the English in India, but it was smashed up by Nelson on the Nile. The Khedive gave him this shawl as a present. Napoleon sent it to France and it attracted the fashionable people there. French traders soon came to Kashmir and exported shawls of various designs to France.

Under the Sikh rule also, the trade was in a flourishing condition. Moorcroft, who visited Kashmir in 1822, says :— " The whole value of shawl-goods manufactured in Kashmir may be estimated at about thirty-five lakhs of rupees per annum." Diwán Kripá Rám was Governor in 1827 A.D. and then the trade was in a most prosperous condition, but a terrible famine visited the land in Col. Mián Singh's time in 1834, which gave a crushing blow to the manufacture.

When Mahárája Guláb Singh became the ruler in 1846 A.D., the shawl trade began to revive and commenced

one of its most glorious epochs. The income to the State from 1846 to 1869 was, on an average, seven lakhs of rupees per annum. In Mahárája Ránbir Singh's time the export of shawls valued, on an average, 28 lakhs of rupees per annum. There was again great demand for shawls in France and other European countries.

The French Agents who came to Kashmir for the purchase of shawls were :

Year.	Name.	No. of years on duty.	Name of Firms Purchasing.
1856–57	Petit	1	Chevieuse Aubertot.
1856–57	Oujouanet	1	Frainy Gramaniac.
1860–63	Lebreton	3	Do. do.
1863–70	Olive	7	Do. do.
1866–71	Lefebvre	5	Do. do.
1865–68	Gosselin	3	Cie. des Indes.
1867–70	Brochard	3	Oshedé Blemont.
1865–82	Dauvergne	17	Cie. des Indes.

Messrs. Uhlan & Co. were the agents of the State in France who sold shawls for the State. Wallace Brothers of London and Hoschede, Poute, Tissier & Co., of Paris were the agents of Khwája Amir Ju Gangu, then one of the chief shawl traders of Kashmir. Larousse says—" In spite of heavy duty levied by the French Government, 110 Francs on a piece, whatever its value, the trade flourished." Those were palmy days for this industry. All Kashmir and its wife were busy amassing handsome fortunes in the shawl trade. Night was joint labourer with the day in the busy pastime of making gold out of the industry, and the shawl merchants became so rich and luxurious as to put milk in place of water in their *huqās*. A shawl was then manufactured by Mirza Ali Kárkhándár which fetched as much as Rs. 12,500.

Having thus touched the apex of its prosperity, the shawl trade now began to dwindle. The Franco-German war of 1870 and its disastrous consequences inflicted an almost mortal injury on it. The fashion of using shawls changed. The little flickering life in the trade that remained, was practically extinguished by the famine of 1878 and 1879.

Mahárája Ránbir Singh nobly coped with the famine and advanced ten lakhs of rupees to the shawl manufacturers, but the shawl trade never recovered from the shock. A large number of shawl weavers left Kashmir and settled in Amritsar and Lahore where, up to this date, their descendants weave shawls. The art also lost all its charms, as imitative attempts to reproduce designs dictated by the West, which had no affinity with the real art, had been made, and the old artistic designs, the result of the earnest thinking of thousands of minds spread over hundreds of years, had been given up. Sir George Birdwood says :—" The Kashmir trade in shawl has been ruined through the quickness with which the caste weavers have adopted ' the improved shawl patterns ' which the French agents of the Paris import-houses have set before them."

The last blow on shawl industry was dealt by a manufacturer of the name of Kerr. He began making colourable imitations of Kashmir shawls in his Scotch town of Paisley. These were sold at about $\frac{1}{20}$th of the price of the real article and came within the reach of domestic servants in large households in England. When the cook and the housemaid both appeared on Sundays in cheap imitations, ladies found it impossible to go on wearing the matchless products of Kashmir. M. Dauvergne and M. Bijex, who were then engaged in this trade in Kashmir, found that it was gone and then they turned their attention to the carpet industry.

The shawl trade was controlled by a Department called Dágshawl or Shawl Marking Department. The Dágshawl office was located in a large house at Saraf Kadal in Srinagar which still exists there. It originally belonged to a man named Majlis Rái who had come from the Punjáb in 1685 A.D. and possessed property worth one crore of rupees which he lost in a plunder of the city in the time of Ibrahim Khán, a Governor of Kashmir appointed by Aurangzeb. The Dágshawl came into existence in this way. During the Afghán period saffron and grains, which the State got as its own share, were sold by the State at higher than the market rates to the inhabitants, of course against their wishes. The selling was called *Niliv* or *Tarah*. The loss that this system entailed on the people was ruinous. It told very severely on the shawl weavers who then numbered 12,000. In the time

of the Afghán Governor, Háji Karim Dád (1776-83 A.D.), this practice was abolished and in lieu of it the shawl weavers were made to pay a small tax which was called *Qasúr-i-sháli*. Subsequently, Háji Karim Dád, at the suggestion of his Peshkar, Pandit Dayá Rám Quli, abolished the *Qasúr-i-sháli*, but levied a tax on each piece of *pushmina* manufactured. The *pushmina* was caused to be brought before a State Official called Dárogah Dágshawl and its price was assessed by appraisers called Muqim or Wáfarosh and 1½ pie per rupee was recovered as duty. It is said that the income of the Dágshawl on the first day of its establishment was 1 anna 4½ pies only. Then, in order to see that no smuggling might occur and that every piece manufactured did not go without payment of duty, guards, called *Shaqdárs*, were appointed by the State. Small pieces, sometimes only a few inches in dimensions which had been woven by a shawl weaver, were cut away and taken to Dágshawl. When several such pieces were made, they were patched up into a piece of the required dimensions and it was stamped and made over to the Khurdies (the agents of shawl manufacturers) after recovering the duty from them. Nobody could sell a piece which did not bear the stamp of Dágshawl in token of payment of duty thereon. The evasion of the payment made one liable to condign punishment. In 1806 A.D., in the time of the Afghán Governor, Sher Muhammad Khán Mukhtár-ud-daula, the duty was enhanced to 3 pies per rupee *ad valorem*. In the time of his son, Atá Muhammad Khán (1806-13 A.D.), there were 18,000 looms working, which increased to 24,000 when Sardar Azim Khán became the Governor of Kashmir in 1813. Azim Khán revived the old *Niliv* system and gave ten *kharwars* of *sháli* per loom. The shawl produced on the loom was taken by the State and the price of *sháli*, together with the amount of duty leviable on the shawl, was recovered from the price of the shawl. When Kashmir passed into the hands of the Sikhs, there had remained only six thousand looms and yet the duty was further raised to three annas per rupee *ad valorem*, and twelve *kharwars* of *sháli* at three rupees per *kharwar*, of which the actual market price was only one rupee, were issued for each loom. The industry would have been extinguished had not a far-sighted man, named Jawáhir Mal, been then the Dárogah of the Dágshawl. He, in order to save the industry from

being killed, increased the price of shawls by one quarter over the market rate. The result was that the owner of the shawl would accept four annas less per rupee from the Dárogah and sell the shawl to him. The latter would give him, after deducting the price of the *sháli* advanced, a cheque for the balance on another shawl weaver who was State debtor, to pay him from the amount of arrears outstanding against him. Thus all shawls were sold to the Dárogah and the traders purchased them from him. In this way the shawl weavers enjoyed some relief in spite of the enhancement of duty and the *Niliv*, and in a short time the number of looms increased to 16,000. In the time of the Sikh Governor, Diwán Kripá Rám, his priest, Misr Bhola Náth, was appointed as Dárogah of the Dágshawl and he levied a tax of Rs. 75 on each loom at which three weavers worked, and the forcible selling of grains to them was continued. He thus realized twelve lakhs of rupees per year as income of the Dágshawl, but it meant sucking out all blood from the weavers. To the tyrannies of Bhola Náth were added the wrath of Nature in the shape of flood and famine and the result was the number of looms shrank to 1,200. Colonel Mián Singh was now the Governor of Kashmir. He was a good statesman and he reintroduced the old system of Jawáhir Mal with the result that, in the course of four years, the number of looms increased to 6,000. Bhola Náth was succeeded by Rám Dyál as Dárogah of the Dágshawl. It was represented to him by the Kárkhándárs that no sooner had a man learnt his work and probably some of employer's trade secrets than he rose in value in labour market and every effort was made by his master's rivals to secure his service. The practice of enticing away an operative was therefore made penal. The shawl weavers were thus in absolute charge of the Kárkhándárs or proprietors of factories. They became their slaves and were forced to work very hard. In the first year of his appointment Rám Dyál fixed Rs. 98 as tax per loom and besides gave per loom 20 *kharwars* of *sháli* at two rupees per *kharwar* and five *kharwars* at the actual market rate which was Re. 1-4. In the second year Rám Dyál added 2½ *kharwars* to the *Niliv*, making the total quantity of the *Niliv* 27½ *kharwars*, the price of which was Rs. 52, and this, together with the duty, amounted to Rs. 150 per loom. The weaver might or might not work, but he had to pay.

In the time of Shekh Ghulám Mohidin (1841-46 A.D.), Dalpat was appointed as Dárogah and he further enhanced the duty by 19 rupees and continued the *Niliv* as in the time of Mián Singh. Each loom was to have 2½ men, that is, two adults and one boy, and Rs. 170 were to be recovered per loom. In those days there were only five thousand looms and 22 shawl weavers are said to have cut off their thumbs in order to be disabled to pursue the profession of shawl weaving and thus be saved from the tyrannies of their Kárkhándárs.

The tyrannies had at last an end. In 1846, Shekh Imám Din came as the Sikh Governor and he set the shawl weavers free from the bondage of the Kárkhándárs and remitted two annas per *kharwar* in the rate of *sháli* advanced as *Niliv*. He also made the Kárkhándárs give three rupees as reward to each weaver and increase their wages by one quarter and pay one-third of the *Niliv* themselves. This revived the industry.

During the reign of Mahárája Guláb Singh (1846-57 A.D.) there were 27,000 weavers working at 11,000 looms. Pandit Ráj Kák Dar was appointed as Dárogah and he was to recover and pay to the State twelve lakhs of *chilki* rupees. The weavers had to pay 49 *chilkies* each and they were again kept in charge of Kárkhándárs and none could go from one Kárkhándár to another. The consequence was that the weavers were forced to work hard from morning to evening and 4½ *dumries* were paid to them as wages for weaving the thread wound on 1,000 twigs. A weaver could thus earn seven or eight *chilki* rupees per month, out of which he had to pay five *chilkies* as tax and had to live on only two or three *chilkies*. Some lazy and sickly weavers could earn only two or three rupees per month and could not pay the tax and thus became Government debtors.

In 1868 A.D., Mahárája Ránbir Singh remitted the tax of 48 *chilkies* by 11 *chilkies*, and three years after remitted four annas from the *tarah* of 15 *kharwars* of *sháli* which each weaver had to pay at 2-4-0 *chilkies* a *kharwar*, and ordered to receive *pushmina* in lieu of cash. For ten years this system continued but as the demand for shawls in Europe declined, the State suffered much loss. The Kárkhándárs too became poor and in 1876 A.D. the Mahárája reduced the tax from

27 *chilkies* to 10 *chilkies*. Next year the tax was 11 *chilkies* per man and the *Niliv* was totally abolished. Owing to the famine of 1877 and the declining demand of shawls, the shawl weavers were reduced to poverty and the Mahárája then abolished the tax altogether and in its place a permit duty of 20 *chilkies* and customs duty of 11 *chilkies*, i.e., 31 *chilkies* per cent. on the value of the shawls sold or exported were recovered. This too was remitted in 1886 by Mahárája Pratap Singh when he ascended the *Gaddi*.

There remained customs and octroi duties on the shawl wool and shawls, which was Rs. 6-10-3 per cent., and these were also remitted in 1901 A.D.

The account given above shows that the shawl trade policy from the very beginning carried with it the germs of its decay. It overlooked the fundamental community of interest of both the employer and the employed in the success of their joint enterprise. By attempting to wrest all profits from the labourer, the employer over-reached himself and killed the industry. The shawl weaver was considered an inferior order of creation as the proverb would indicate :—

" *Sini muhima sotsal, rani muhima Khandaváv.*"

" If any kind of meat cannot be had, one can still get a mallow, and if a husband cannot be had, one can still get a shawl weaver."

The shawl weaver was ruled with a rod of iron and held in check with a relentless persistency against which he was powerless. He picked up a precarious livelihood. None cared to give support to him, hence the proverb—*Khandváv himáyat* or support to a shawl weaver—a phrase synonymous with feeble and nominal support. How could the industry live under such an economically unsound condition ?

The art of shawl weaving is not happily dead yet, nor will it die so long as this State and the British Raj endure, even if there remains absolutely no market for this commodity. Under the treaty of 1846 with the British Government, the State sends a yearly tribute of one shawl and three Rumáls to the King-Emperor. The State gets these manufactured by contract for Rs. 8,000, but the quality is far from what it used to be.

The present position of shawl manufacturers may be compared to miserable jerry-built cottages rising over the ruins of a city of grand edifices of architectural beauty. The quality of *pushm* is not like what it used to be, the dyeing is imperfect, the old designs are abandoned and cheap showy goods have taken the place of real works of art, in the same manner as chrome prints have replaced master paintings in oil. Many shawl weavers have, as has been stated before, left Kashmir and settled elsewhere ; others have taken to carpet-making or embroidery. Still the number of shawl weavers is large. The Census of 1921 registered five shawl and one *háshia* shawl factories in Srinagar.

The following articles are now produced :—

1. Plain *pushmina.*

2. Long shawl with border, *palla* and *kunj*, Ekrukha and Durukha.

3. Jámawár, Ekrukha and Durukha of various patterns or designs.

4. Sáries.

5. Ladies' embroidered shawls—half shawls, with embroideries so arranged as to show both the exposed surfaces when folded across the middle.

6. Capes, blouses, *chogas* and dress pieces, with needle work called Dávkár and Katunkár.

Ekrukha Jámawárs still find market in Persia, Afghánistán and Hyderábád. Durukha Jámawárs and long shawls are in demand in Bengal.

The use of imported European wool threatens the extinction of what remains of the shawl industry. Cheap German and Australian yarn is imported in large quantities and is used for various purposes for which *pushm* was formerly used. *Raffle* is made from this wool and sometimes sold as *pushmina.* The *raffle* is rough and not durable and altogether a flimsy article, but, in the hands of the expert weavers of Kashmir, it is a clever imitation. Real *pushmina*

will last a lifetime, but the life of the *raffle* is not more than three or four years.

It is, of course, impossible for the shawl industry to regain its lost position. It is difficult to imagine that fashion will again turn in favour of the Kashmir shawl. It will never be again the necessary complement of a wedding trousseau in Europe. Fashion is a great tyrant. But there are signs in the whole civilized world of an awakening of true artistic instinct and it is being acknowledged that the traditional handicraft work of the East represents the highest perfection of art. "It provides," as a recent writer says, "examples of absolute perfection for the inspiration of that general elevation of thought and feeling which all true students receive from the contemplation of masterpieces of art and invention, without which it is impossible to excel in any human undertaking."

There is, therefore, every hope of this masterpiece of the weaver's art again receiving the appreciation it deserves. It may not reappear in the same form as before, but may re-assert itself in another form more adapted to modern taste, which is distinctly changing into the artistic. In the history of the Kashmir shawl there have been many periods of ruin and revival, and the present, I think, is the time when an earnest effort is needed and, if done in the right manner, the creation of the Kashmiri weaver's loom may again become the most fashionable garment in Europe.

But shawl is not the be-all and end-all of the industries. The Kashmiri finds scope for his artistic faculties in many other directions. The industrial development of Srinagar has been very rapid in recent years, thanks to the peace and contentment enjoyed under the benign rule of His Highness the Mahárája. The present leading industries are wood-carving, silver and copper work, embroidery, *papier mâché* and carpets. They have attained to a degree of excellence and their qualities are fast improving. These works of art are in increasing demand all over the world and there is, therefore, a great and prosperous future before this country.

The Kashmir Carpet Industry.

Kashmir is celebrated in both prose and poetry for its natural beauty and its people for their intelligence and artistic faculty. Favoured by a temperate climate, and

possessed of natural gifts of brain and muscle, the Kashmiri from ancient times showed a capacity for steady and unflinching application to industries. Nature provided him with abundance of raw materials which his genius manufactured into articles of luxury, displaying a highly refined artistic taste most delicately in harmony with the beautiful sceneries with which he was surrounded. The thick green woods, the wealth of flowers, the meandering river, the calm lakes with blue mountains crested with snow looking on, showed wonderful patterns of Nature's finest arts, and they did not go unobserved by the intelligent eye of the Kashmiri whose imitative instinct was developed to a marvellous degree. Shown a pattern, no matter how intricate and elaborate, he tried and tried again until he succeeded in copying it truly and faithfully. The dignity of labour was thoroughly understood by him and he ever applied himself to arts and crafts. Assured of his position and also assured of his purpose and value and, therefore, not needing to accumulate wealth, and observing, too, the desperate struggle for existence of others not lucky enough to know skilful labour like himself, he gave to his work that contentment of mind and pleasure for its own sake which are essential to all artistic excellence.

One of the principal industries in which the Kashmiri attained mastery and the products of which are even to-day esteemed in Europe and America is carpet-weaving. The art was introduced into this country by Zain-ul-ábdin who ruled in Kashmir from 1423 to 1474 A.D. He was one of the best Muhammadan kings—good, merciful, generous and kind, a patron of learning and arts, and, above all, of tolerant principles. He was surnamed, and deservedly, Bad Sháh or the Great King. This is not the place, nor mine the hand, to describe his eventful and benevolent rule which healed the lacerating wounds and lulled the wail of the people which his predecessors, specially Dulchu, Renchan Sháh, Sikander the Iconoclast and Ali Sháh had, during the previous one hundred years, caused, the accounts of which have sullied the pages of the history of Kashmir.

It will be interesting to know how Zain-ul-ábdin was led to the introduction of carpet-weaving into Kashmir. In 1397 A.D. Timùr Lang or Tamerlane, after his conquest of Persia

and Turkistán, came to India. Sikander But-shikan was then the ruler of Kashmir and when Tamerlane reached Attock, Sikander wrote to him acknowledging him as his liege lord. Tamerlane was pleased at this and sent him one elephant and other gifts in token of his accepting Sikander's allegiance. On receipt of these, Sikander sent several precious articles as presents to Tamerlane and wrote to him praying for the honour of being permitted to come in his audience to pay homage to him. Tamerlane replied that he should come to meet him at Attock when he would be returning after the conquest of Hindustán. When Tamerlane was returning to Samarqand after his sanguinary and plundering career in Hindustán, Sikander started from Srinagar with various rare articles which he wanted to present to him at Attock. But he had not gone farther than Báramulla when news was received that Tamerlane had already proceeded from Attock towards Samarqand. Sikander then returned to Srinagar and sent his second son, Sháhi Khán, then a young boy, with the presents to Tamerlane at Samarqand. Sháhi Khán carried out his father's mission successfully. Tamerlane bestowed much favour upon Sháhi Khán, but the latter could not obtain permission to return to Kashmir for seven years. During this long period Sháhi Khán took the opportunity of interesting himself in the arts and crafts of Samarqand which, being the capital of the great conqueror, was in the height of its wealth and glory. When Tamerlane died in 1405 A.D. while conducting a vast expedition against China over the mountains of Tartary, Sháhi Khán returned to Kashmir.

Sikander died in 1416 A.D. and was succeeded by his eldest son, Sultán Ali Sháh. The latter ruled for about seven years and then Sháhi Khán ascended the throne, assuming the title of Zain-ul-ábdin. Imbued with high ideals of kingship, he set himself to improve the material prosperity of the country by energetically sustaining and developing its manufactures. He brought carpet-weavers from Samarqand and started the industry of carpet-weaving in this country. He also brought saddlers, book-binders, gunsmiths, *papier mâché* makers, paper manufacturers, lapidaries, stone cutters, midwives, musicians, and firework makers from Samarqand and made them settle here permanently.

Mirza Haider of Káshgar, who came to Kashmir in 1504 A.D. and became the Minister of Sultán Názuk Sháh, the then ruler of Kashmir, writes in his book *Tarikh-i-Rashidi* :—

" In Kashmir one meets with all those arts and crafts which are in most cities uncommon, such as stone-polishing, stone-cutting, bottle-making, window-cutting, gold-beating, etc. In the whole Máver-ul-Nahar (the country beyond the river Oxus, i.e., Khurásán) except in Samarqand and Bukhára, these are nowhere to be met with, while in Kashmir they are even abundant. This is all due to Sultán Zain-ul-ábdin."

Zain-ul-ábdin turned Kashmir into a smiling garden of industries, inculcating in the hearts of the people sane conceptions of labour and life, and also implanting in their minds the germs of real progress. He introduced correct measures and weights and made artisans and traders take solemn oath (which in those halcyon days one could not easily break) not to kill their golden goose by cheating and swindling. He thus promoted commercial morality and integrity and industrial righteousness—qualities which constitute the backbone of a people's credit and reputation. The motto of the Kashmiri trader was—*Bázigaras chheh bázi garas*, " A swindler swindles his own house." It was through these virtues that the Kashmiris successfully carried on their shawl trade of half a crore of rupees annually with distant corners of the globe at a period when Kashmir was an isolated country and communication with the outer world was very difficult. How regrettable it is that the people now have been slowly drifting from their old moorings. It, however, proves, beyond all doubt, that industrialism has greatly declined at the present day. With its growth, craftiness and chicanery give way to an increasing straightforwardness of dealing between man and man, the people being lifted up to a higher standard of commercial morality.

Zain-ul-ábdin died after a glorious reign, extending over more than 51 years. Long was his death lamented and even up to this day the people take his name with reverence and gratitude as a word of good omen. No tribute can repay the debt Kashmir owes to him for ever. The poet chronicled

the year of his demise in this feelingly rendered Persian stanza—

Sultán Zain-ul-ábdin zad khima dar Khulde-barin
Be nûr shud táj o nagin be hûr shud arzo samá
Az bahri tárikhash 'ayán be sar shudah ander jahán
'Adlo karam 'ilm o 'alam jáh o hasham sulh o safá.

"Sultán Zain-ul-ábdin went to dwell in heaven.
The crown and the seal became lustreless, the earth and the sky became gloomy,
From that date evidently headless became in the world
Justice and generosity, learning and power, glory and pomp, peace and tolerance."

The carpet-weaving industry flourished ever afterwards, but once it declined entirely, so much so that there was no one in Kashmir who knew the art. Three hundred years ago in the time of Ahmed Beg Khán, one of the Emperor Jahángir's Governors of Kashmir from 1614 to 1618, a Kashmiri, named Akhun Rahnumá, went to perform the Haj pilgrimage *via* Central Asia. On his way back he visited Andiján in Persia where carpets were manufactured. He learnt the art and brought the carpet-weaving tools with him from there. He taught some people and made them re-start the industry in Kashmir with the result that they made a fortune out of it. Once, it is said, he went to them but, proud with their wealth, they would not recognise him. Akhun Rahnumá thereupon cursed them, *Zindus dung-dawál marit nirnak nah kafan tih*, meaning that "during lifetime they may live in plenty and when dead even cloth for their shroud may not be forthcoming." The carpet-weavers, though on the whole well-fed and well-housed, work for the minimum sustenance and cannot afford to lay by any money, and they ascribe it to Akhun Rahnumá's curse. Akhun Rahnumá's tomb is at the Gojwára Mohalla in Srinagar, and is held in great reverence by carpet-weavers.

The carpet is woven in the loom of a very simple construction ; the warp threads, which are of cotton, are arranged in parallel order upright and the fabric and pattern are produced by coloured woollen threads upon the warp. The same method as in weaving the shawl is employed by the

carpet-weaver in converting his original design, which is prepared by a *Naqásh*, into a textile. Instead of working from a coloured drawing or diagram, he has the pattern translated on paper into rows of symbols, each of which expresses the number of threads to be tied in and the colour. The man who translates the pattern into written "key" is called *Khahan Wol.* The weaver has threads of every required colour in double or treble folds wound up into balls hanging down from a string with its two ends tied horizontally with the upper ends of the sidepillars of the loom, and, with this written key, or *t'alim* as called by the Kashmiris, he ties in the stated number of threads of each colour as in the ciphered scrip, over each row of which a double woof shot of thick cotton twine is passed, the fingers being here employed instead of shuttle needles as the fabric is of a coarser description. The woof is pressed down by an iron comb. The weaver cuts each thread, after its being knotted into the warp, with a curved knife and then the whole row is made even with the surface of the carpet by clipping with a shears. He does all this with marvellous deftness, knowing nothing of the patterns he is preparing, but gradually building up in a mechanical way the carpet on the warp before him. Formerly, the weavers used to tie in the threads of different colours by looking into the design itself, but His Highness the late Mahárája Ranbir Singh ordered a large carpet for the Ajáb Ghar Hall in which His Majesty the late King Edward VII, then Prince of Wales, was to stay during his visit to Jammu in 1875, and as the time for manufacturing it was short and the number of skilful weavers was then, it is said, only 13, Khwája Amir Ju Gangu, who had the order to prepare it, introduced *t'alim,* as in shawl-weaving, at the suggestion of a *Khahan Wol,* named Abli Mir, in weaving the carpet, with the result that even unskilful workers were employed and the carpet was prepared speedily. Since then this method, which is not only easy but also precludes mistakes, has come into vogue.

Persia is, and has been from the most remote times, the recognised source of what is most truly artistic, durable and valuable in the manufacture of carpets.

The pile carpets were made in Kashmir and attained great perfection. The oldest Kashmir carpets were of floral design

with mosques, gardens, wild animals, gliding fish, etc. At the Delhi Exhibition a magnificent carpet, made in Kashmir 250 years ago, was sent from Bijapore. How much proficiency the Kashmir carpet-weavers had attained in reproducing Nature's lovely sights on their looms, will be apparent from the following anecdote :—

Mahárája Ranjit Singh could never visit Kashmir, though he longed to do so and even started from Lahore in 1832 to fulfil his desire, but had to return from Punch owing to the occurrence of famine in Kashmir then. Once he wrote in a letter to Col. Mián Singh, one of his governors of Kashmir from 1834 to 1841—

" Would that I could only once in my life enjoy the delight of wandering through the gardens of Kashmir fragrant with almond blossoms, and sitting on the fresh green turf !" The governor, in order to gratify, nay, to intensify his master's desire, got prepared one fine green-coloured carpet, dotted with little pink spots and interspersed with tiny little pearl-like dots, which looked like green turf with pink petals of almond-tree blossoms fallen on it and dew glistening thereon as in the spring time. This was a masterpiece of the Kashmir carpet-weaver's art. It was presented to the Mahárája at Lahore, and as soon as he saw it, he was so struck with its beauty of design executed in such artistic excellence that he rolled himself thereon in ecstasy, feigning to be rolling on the real Kashmir turf ! The chief weavers of this exquisite carpet were named Fazl Ján, Jabbár Khán and Kamál Ju, who were given a reward of a pair of golden bracelets each by the Mahárája.

The carpets of Kashmir, however, soon deteriorated. The modern craze for cheapness spoiled this as well as other works of art. The quality of the material was not equal to that of the past. The workmen lost the large conception of their ancestors. They would not teach one another, and trade secrets were jealously guarded. The patterns lacked repose and there was not the time nor the inclination to produce the bold and highly conventional designs on a ground of extreme closeness of stitch. But the greatest evil was wrought by the importation of aniline and alizarine dyes. In place of the cool harmony of colour, bright magenta appeared. The old Persian test of dropping a piece of live charcoal on to the

pile to see if any traces of the injury remained after brushing away the singed top, is one we should hesitate to apply to a modern carpet.

An endeavour was made in the time of Mahárája Ranbir Singh to improve the industry. A European trader, named Mr. Chapman, came here about 1876 A.D. to manufacture carpets and export them to Europe and Mián Lál Din, the officer in charge of the State Workshops, was directed by the Mahárája to assist him. Mián Lál Din deputed Kh. Muhammad Sháh Paizár (whose house, by the way, is now occupied by the Mission High School at Fateh Kadal) as his agent with Mr. Chapman for rendering him all assistance he required. For two years Mr. Chapman worked and introduced new designs and made carpets of improved qualities. But they failed to satisfy a critical test in Europe. He then gave up the business and went away. After him M. Bigex, a Frenchman, came and commenced manufacturing carpets for the firm of Bon-Marche in France. He introduced fresh designs and brought also his own dyes from Europe. Bon-Marche sent their agent, named M. Agard, to Kashmir, to advise M. Bigex what designs would be liked in Europe. M. Agard was a connoisseur in selecting carpets of right designs but not in prescribing the designs themselves ; that is to say, he could not say so long as a carpet was being woven whether it would suit the taste of the customer or not, but would make his declaration that it would suit or would not suit after the carpet was completed. M. Bigex manufactured a large number of carpets which were rejected by M. Agard and the consequence was that he suffered great loss in the business and then he abandoned it.

The attempts made by these two European gentlemen for improving the industry did more harm than good to the art. Instead of conserving the true Kashmir style, they corrupted it by modernising and hybridising it under the influence of foreign ideas, and the dyes they used were not quite fast.

After M. Bigex, the industry was taken up by Mon. H. Dauvergne. Being himself a clever designist and expert in dyeing and having had the experience of shawl trade in Kashmir and having also studied the European markets,

he achieved much success in the business. His factory was subsequently purchased by Messrs. W. Mitchel & Co. Another factory was started by Messrs. C. M. Hadow & Co. Both the factories which, according to the census of 1911, employ 2,203 weavers, are now in a most flourishing condition, producing excellent carpets of old designs. The former gained the Grand Prix both at the Paris Exhibition of 1900 and the London Exhibition of 1906 with gold medal and wreath of gold; and the latter secured a bronze medal with a certificate of merit at the Chicago Exhibition of 1893 and a first class certificate with gold medal at the Delhi Durbar (1902-03) awarded by the late Rája Sir Baldev Singh of Punch. Messrs. Mitchell & Co. supplied carpets to Her Majesty the Queen both for Buckingham Palace and for Windsor, measuring 50′×30′ at a cost of £ 250 a piece. The carpets of both the above firms are in great demand in Europe and America. Carpets with as many as 400 knots to the square inch are now made and silk and *pushmina* wool are sometimes used to bring out the more delicate shadings in the designs, and the stitch, which the Persian weavers used in order to give their carpets density combined with pliancy, has been adopted. Herati and Kerman carpets have been produced. The Yárkandi patterns were imitated, also the Tree of Life, Swastica and the Trisula, all according to the prevailing taste of the period. The Ardabil mosque carpet was reproduced in exquisite finish of workmanship at Messrs. C. M. Hadow & Co.'s factory in 1902. It will be interesting to know the description of this famous carpet which is admirable alike for its fineness of texture, its beauty of colour and symmetry of design. It is in the Victoria and Albert Museum for which it was purchased for £ 2,000. It measures 34 ft. by 17 ft. 6 inches and contains 380 hand-tied knots to the square inch which gives over 32,500,000 knots to the whole carpet. It is so-called from a Persian town in the Province of Aderbaidján where it is said to have been obtained from a mosque. The main design comprises a large central medallion in pale yellow, surrounded by cartouches of various colours, disposed on a dark blue ground diapered with floral tracery. Each of the corners is filled with a section of a large medallion surrounded by cartouches. The border is composed of long and circular panels alternating with lobed outlines on a brown ground covered with floral embellishments, while at the

summit of the carpet is a panel bearing the following devout inscription :

Juz ástáni tuam dar jahán panáhe nist
Sare mará bajuz in dar hawálgáhe nist
Amali bandah dargáh Maqsúdi Káshání Sana 946.

tending to the inference that the carpet was originally used as a veil or curtain for a porch, and that it was the work of the "slave of the portal, Maqsúd of Káshán, in the year of Hijra 946," corresponding to A.D. 1540. Káshán is on the high road between Tehrán and Isphahán where numerous manufactories of carpets, shawls, brocades and silk fabrics are still carried on. The pattern of the Ardabil carpet seems to be one perfectly distinct and regular, and, even did it present some slight obscurities, the puzzle could be easily cleared up by a careful and minute analysis and dissection of the whole work by the aid of practical geometry and conventional botany.

Messrs. C. M. Hadow & Co.'s copy of this celebrated carpet was purchased by the late Lord Curzon for £100.

The patterns now chiefly used in Kashmir are copies from the illustrations of Oriental carpets published by the Imperial and Royal Austrian Commercial Museum, and special attention is paid to make the colours fast.

Sir George Birdwood writing in 1880 said :—

"As a striking illustration of the corruption of native designs under European influence it is only necessary to compare the two old Kashmir carpets lent to the India Museum by Mr. Vincent Robinson with the large Kashmir Durbar carpet exhibited by him at Paris in 1878. The two former carpets were probably made early in the last century. The ground in one is pale yellow and in the other rose of varying shades, and the floral pattern decorating it is in half tones of variety of colours. The borders are weak, as in all Kashmir carpets, not being sufficiently distinguished from the centre, but the colouring and general effect are so serene and pleasing that this does not appear as a defect. The Kashmir Durbar carpet exhibited by Mr. Vincent Robinson at Paris

was a typical illustration of the modern manufacture of Srinagar. The large scroll laid about its borders in such agonized contortions had evidently been copied from the shawl patterns introduced by the French houses into Kashmir about ten years ago. The wool of these modern Srinagar carpets is good, and the texture of the carpets themselves is not bad but it is hardly possible that they can ever again be made to satisfy a critical taste. The colours introduced are not suited for the floor of a room, particularly the green, even if they were harmoniously blended. The floor of a furnished room, in which the great need is to see the furniture distinctly, can scarcely be too grave in tone, and it is evident that the Kashmir dyes are fitted only for shawls and *portiéres* and tapestries for walls where it is a pleasure to the eye to be attracted by lively colouring."

But the industry has been revived and the carpets now produced under European supervision do not fail to satisfy a critical taste.

The manufacture of carpets is capable of wide extension and has a great future before it, if only somehow aniline dyes could be kept out of the country, and the vegetable dyes, which are available in abundance on the surrounding hills and whose soft and permanent colouring of the shawls is still the admiration of the world, were used again. These dyes are no doubt more expensive. At the time they were used, dyeing of one seer of wool would cost 6 *khám* rupees which valued as much as 12 British rupees of the present day, while now dyeing with the aniline dyes costs only 8 annas per seer. This vast difference between the two rates tempts everyone generally to use aniline dyes, but a wise man, who wants to build up his industry on a sure foundation, will prefer the vegetable dyes. Besides, their cost under improved methods could be much reduced. If this was done, the Kashmir carpets would command world-wide sale and the carpet-weavers, together with their employers, would derive immense profits therefrom. The carpet-weavers were always in demand in the past, hence the proverb *Qálbáfas kálas tih báv*, " A carpet-weaver is in demand even in famine times." They will be much more so in the future. Their hand, as of all Kashmiri craftsmen and artisans, is no doubt supple and wonderfully trained, but it has not yet been brought into

systematic and organic co-operation with their eye and brain. When that is effected, it shall react upon the industrial arts and, again, shall react upon their own value in the labour market to an extent which can hardly be measured.

KASHMIR *Papier Mâché* INDUSTRY.

Kashmir is a land where Nature is entirely gracious. Its fertile lands through which the broad-bosomed Jhelum and its numerous tributaries meander; its mirror-like lakes reflecting the mountains clothed in various hues and shades and crested with snow; its lovely sceneries of green woods and meadows; and its ideally healthy climate—these form subjects of songs rapturously sung by poets like Moore and Tollemache.

Beautiful environments have the effect of making man beautiful and of polished taste, and this explains the fact that the inhabitants of the Happy Valley are intelligent and quick in appreciating Nature's finest sceneries which they reproduce with marvellous fidelity in their works of art.

Speaking of olden times, the simple life the Kashmiri lived left him in peace and plenty and enabled him to concentrate his whole soul on his work and kept his mind free and receptive to the voices of Nature and his own inspiration—the soul of Nature speaking to the soul of man. This cannot unfortunately be said of the Kashmiri of the present day whose artistic intellect, under the influence of modern craze for cheapness, and by the stress of living in these hard times, is somewhat dulled. His art-works show marked degeneration in respect of technique, colour, and lighting, and are lacking in balance. The artisan, bewildered in a forest of half-understood beauty, has lost the large conception of his ancestors, though he still retains the artistic skill and cunning inherited by him from his forefathers.

Papier mâché is an art which Kashmir can claim as peculiarly its own. It was introduced, among many other arts, into Kashmir from Samarqand by King Zain-ul-ábdin who reigned from 1323 to 1374 A.D. Possessed of broad and tolerant outlook and dominated with a desire to benefit mankind, he ruled with such equity and justice and did so

much to improve the material prosperity of the people that one cannot fail to admire him. He taught the people that art and artifice were not even related by marriage and that art and honesty were born in the same house,—an advice unfortunately forgotten too often by the present generation. His benevolent rule demands special homage, inasmuch as he lived at a period when he had no worthy and enlightened contemporary to emulate. In the world around him he could have found little to help him. He was a potentate encouraged to be tyrannical and selfish by tradition and especially by the examples of his father, Sikander the Iconoclast, the account of whose horrible deeds blacken many a page of the *Rajatarangini*. Zain-ul-ábdin was deservedly surnamed Bad Sháh or Great King. In spite of six centuries having rolled by since he lived, his name is still remembered with genuine reverence and gratitude. Take the name of Bad Sháh before a Kashmiri and at once he will, with a happy countenance, rhyme it with " Pád Sháh."

The process of making *papier mâché* is very elaborate. It is a matter of days or even weeks. First, several layers of Kashmiri paper are pasted on the mould of a required article, or *vasal* as is called by the workmen, and then pulp made of Kashmiri scrap paper pounded and mixed with rice paste is laid to requisite thickness, and over it again is pasted Kashmiri paper, layer upon layer, by the repeated slow process of drying and adding. After obtaining the correct shape, the mould is removed. Then the surface is made even by rubbing it with a file. All inequalities are made good and the knots, etc., removed. After that, it is wrapped round with thin cloth and covered with *gutch*. The *gutch* used must be from an old plastered wall of a room, which is ground fine and mixed with glue and water. The surface is then smoothed by rubbing it gently with a piece of hard burnt brick, called *kurkut* in Kashmiri. Over this is applied a stain, called *astar* by the workmen, which is prepared by rubbing together with water a kind of stone called *basvatar* which is found in a quarry at Mánasbal. On this stain is applied *safeda Kashgari* (white powder) mixed with glue and water, and over it the *zamin* or ground colour is applied. This colour may be gold, cochineal, ultra-marine, white lead, verdigris, etc. When dry, the outlines are

generally drawn with *zarda* or yellow colour, and the spaces delineated for floral work are stained with *astar* and white paint. Then the floral work in different colours is traced. The art lies here. It is an interesting sight to see an old artist elaborating from memory, without the aid of any geometrical instruments, patterns of difficult artistic designs in rich and subdued colours. The opening work, called *rakha* or *partáz* by the workmen, is done with crimson or any other appropriate colour. If the floral work is to be done in gold or silver, then over the spaces left for such work is applied the *dor*, a preparation made of *zarda* mixed with glue and sugar, and over it are applied gold or silver leaves. The leaves stick to only those parts where the *dor* has been applied. The opening work on gold or silver is done with soot dissolved in water with glue, or with purple or crimson colours. When thoroughly set, the whole is varnished with *kahruba* (amber) or *sandirus* (copal) dissolved in linseed oil. It is then kept in the sun to dry. After it dries, the surface is rubbed with a wet grass rope and washed clean. After this, gold or silver leaves are dissolved in water with salt and glue, and with it further opening work is done. Then the surface is polished by rubbing it with a piece of *yasham* stone (jade) which is imported from Khutan. Last of all, another coating of varnish is applied and it is dried in the sun.

The art of *papier mâché* which involves a wonderful technical skill, is pursued by only the Kashmiri Muhammadans of the Shia sect, there being only one Suni family pursuing this profession. There was only one man in the whole of Kashmir who could draw sketches of crests on *papier mâché* work, which were so correctly drawn as to come up to the accuracy of photographs. This man was a Pandit, named Nárán Murtsagar. He is now dead and, having no son or a near relative, has not taught the mysteries of his art to anyone, with the selfish object of keeping the monopoly to himself. With his death, therefore, this branch of the art of *papier mâché* has sustained a heavy blow. There were many master-artists in the past who carried the *papier mâché* art to the highest pitch of excellence and the last one was Sayid Turáb who died about 50 years ago.

The number of *papier mâché* workmen is about 150. They earn decent sums of money, but assured of their readily

paying labour, they at once spend all they get, not caring for the morrow. The consequence is that sometimes a workman finds no fuel in his house to cook his meal with, but, assured of his firm position in the labour market, he dismantles light-heartedly the timber wall of his house and uses it for the fuel, re-erecting it next day by selling the products of his skill. So his timber wall is like the model of his art, viz., Nature, undergoing alternate destruction and construction. At present *papier mâché* articles, valued at Rs. 15,000, are made annually. At one time goods valued at Rs. 10,000 were sold at Kabul, and Rs. 20,000 in France and other European countries. . The articles in demand in Kabul were snuff boxes, pen cases (*qalamdáns*), and trays. The *qalamdáns* were of two kinds, *masnadi* (small) and *farshi* (large). Shields, bows and arrows with case, and combs were also made. Every Pandit in former times had a *qalamdán* of his own which he carried in the girdle bound over his *phiran* or garment round his loin or under his armpit wherever he went. These *qalamdáns* were exquisite works of art.

The Lamas of Lhassa at one time indented for a kind of table called *Saksha* on which were placed two books (*Fekru*) and nine pieces of wood. The table was beautifully worked in Chinese pattern in gold and red and green medallions.

Under the influence of the French shawl agents, other articles were made, such as boxes, vases and *surâhis*. Shawls were sent to France in *papier mâché* boxes which were separately sold there at high prices. Lacquered work was also used for the decoration of ceilings, and various other purposes such as palanquins, howdas, etc.

Rs. 500 were formerly collected as tax by the State from *papier mâché* workmen in Srinagar, which tax was remitted by His Highness the late Mahárája Ránbir Singh in 1876. No workman of one firm could be employed by another without permission, lest he should divulge the art secrets of one to the other. Mahárája Ránbir Singh greatly patronised this industry and usually presented *papier mâché* coffee sets to his European friends.

The articles usually made now are picture frames, screens, bedstead-legs, tables, teapoys, trays, vases and glove, handkerchief, card and stamp boxes, candlesticks, writing

sets and various other articles. The work is extended to floral decorations and illuminations of books, memorials, etc.

Papier mâché work has greatly deteriorated of late. The Kashmiri artist does not adjust the size of his objects to their relative position in space. He abhors a vacuum. The articles formerly made were marked for colourings —subdued, subtle and full of gradations of tone and shade. The preparation of a pigment required many days' hard labour of rubbing it in a pestle with mortar and then it became so permanent as to last an age unfaded, but now cheap aniline dyes and German gold dust mixed with glue and sugar and dissolved in water, and copal varnish with turpentine or spirit of wine are usually used which have no permanency. The best *qalamdáns* are now seldom made, for there is no demand for them; the times have changed, inkstands, pens, penknives and scissors, which the *qalamdáns* were meant to contain, being provided free by the State to all clerks on their office tables which often jumble up like kitchen pots and spoons, soiling both the kitchen and the cook. The present-day *qalamdán* is the black and ugly stylographic pen with an unreliable nib to boot.

In place of paper, soft-grained wood is now used. *Papier mâché* on imported cards or straw millboards passes for real work made on pulp and Kashmiri paper. Silver or white lead on yellow paint, and over it a coating of the varnish made of *pyur* dissolved in linseed oil, passes for gold work. No pains are taken to prepare a proper *zamin*, and the designs and workmanship are very inferior and often hideous. The quaint shaped *surâhis* or vases, the moulding of which is very difficult, are now seldom made. The old designs have given place to modern ill-conceived patterns. The new designs are iris, chenar, cherry blossom, tulip and hyacinth with a great display of colours but destitute of art. The intricate free-hand scrolls are no more seen. The colours are bad and the varnish is not properly applied. An old *papier mâché* article would retain its colour for 50 years or more and was none the worse even if dipped in water for days. It is a great pity that this beautiful art should be sacrificed for the sake of cheapness.

What, then, is to be done to stem the tide of this deterioration ? The root cause of the deterioration of this and other works of true art is misunderstood utilitarianism and sordid avarice.

One of the propulsive forces of the time lies in the region of æsthetics. The growing desire for beauty is one of the most hopeful symptoms of a period when destructive appetites and passions make such a confused pattern of the page of history. But some people fill their houses with shoddy and showy abominations which serve simply to debase and degrade their art sense. If you want a picture frame, have one of the best workmanship which must possess both technical and decorative qualities, or else have none. It is better to keep the room empty than have cheap showy goods which, instead of decorating, disfigure it. It is necessary to arouse among the people a true appreciation of art and beauty which is as much an essential factor of the mind as is the capacity to recognise that two and two make four. They must realise that man does not live by bread alone, and that art is no luxury but the common property of both the poorest and richest ; it tends to elevate the mind and to create a dislike for all that is mean, dirty and sordid. The very presence of graceful things at home is an education for all, and life, even in poverty, becomes pleasant when clad in beauty. When this taste is fostered and this sense of appreciation of beauty is aroused and the dislike for tawdry and vulgar rubbish is engendered in the minds of the people, then and then alone there will be demand for the supply of works of real beauty and art, with the result that the artisan will receive the encouragement he deserves, and the beautiful past will expand and grow into a still more beautiful future. This will come about when education on æsthetic lines is imparted both in school and college and the interest of our boys is awakened to their country's treasures of art and to all that is beautiful and true. There can be no doubt that the æsthetic faculty is a part of divine nature which lifts mankind above the brute creation. If the laws of rhythm were applied to our arts a little more, there would be a great gain in the inherent value of the thought expressed, or the inspiration materialised. In the endeavour to delineate, not the thing, but the impression that the thing creates, the great idea has been lost in a maze of

technical insurrection that has followed the main issue. Behind the present understanding of the word art, there lies a beautiful, unexplored country in which it will not only be a joy to wander, but also we will become better and stronger beings because of our sojourn therein. Education on such lines would also react in immensely relieving and brightening the often dry and uninteresting routine of school and college work. "Art is a moral and intellectual educative force," says Mr. E. B. Havell, a great authority on Oriental Arts. It would enable the boys to appreciate what culture really means.

Side by side with the education of the type recommended, there should be technical education imparted to those boys who cannot go higher than a secondary school, so that the arts and the accumulated skill and cunning of centuries in the manufacture of materials and wares, which have commanded the admiration of the world, may be preserved and improved. The Kashmiri has a great natural aptitude for ornamental designs which can be easily developed. The power to draw really good designs is one of the fundamental factors in artistic expression, just as the ability to speak fluent English is essential to the expression of a beautiful thought in English. He has the power and acumen enough within himself to carry on the great traditions of the past in the beauty and skill of his workmanship. What he now requires is the bringing of his eye, mind and brain into systematic and organic co-operation with his hand which can be accomplished by technical education. Such an education will vitalise and breathe a new life into the industrial arts which will be the source of immense material prosperity to the country.

His Highness the Mahárája, whose benevolent and glorious reign is distinguished for advancing the welfare of the country, has established a Technical Institute which is presided over by an expert. They are really fortune-builders of the country who avail themselves of technical education offered to them—an education calculated to promote their power of thinking, observing and experimenting correctly. Having attained this power, they will work wonders in developing the industrial arts and crafts, so that this country, which is a focus of attraction for seekers

of health and lovers of natural beauty, will also be a centre of real interest to art lovers all the world over.

Paper-making.

Prior to the introduction of the art of paper-making, birch-bark was used for writing purposes in Kashmir. Numerous birch-bark manuscripts were taken by European, specially German, scholars to their own countries where they are preserved with utmost care and are being copied and printed on paper. There are still manuscripts on birch-bark in Kashmir but their number is very small.

The art of paper-making is known to have originated in China in the first or second century of the Christian era. It was brought to Samarqand about 1,300 years ago and there the crude Chinese methods underwent considerable improvement, notably the invention of the transfer mould. From Samarqand it was introduced into Kashmir during the reign of Zain-ul-ábdin (A.D. 1420-70) who imported paper-makers to establish the industry near Gándarbal, where water power was developed to pulp the rags, and at Nowshera to the north of Srinagar, where vats were erected to turn the pulp into paper. In these two localities the industry has remained ever since and without any improvement or advance on the Persian methods which have been retained in their entirety. In Kashmir we have something which is rare and unique in the world to-day, an art still being practised which, in all essential respects, has remained unchanged in method, appliances and product for 1,300 years, and which has been preserved thus unaltered because of the excellence and ingenuity of the original inventions on which it is founded.

This industry is now in a state of indigence. Up to 20 years ago the competition of imported machine-made paper was not serious, but since then it has been rapid and destructive.

The following are the materials used in the manufacture of paper :—

1. *Rags.*—These are old clothing, chiefly cotton, with some linen.

2. *Hemp.*—A small quantity of hemp fibre prepared by villagers from the wild hemp plant, is sometimes beaten in, and

mixed with, the rag pulp. It is intended to increase the strength of the paper, but the quality used is so small that it does not call for much attention.

3. *Saz or Sazi.*—A crude carbonate of soda imported from the Punjáb at a cost of 4 annas per lb., a small quantity of it (about 1½ seers per maund of rags) is mixed with the rags during the beating operation, as is also about ¾ seer of slaked lime, with the object of assisting to soften the rags and saponify the grease they contain so that it may be more easily washed out. Used as they are in the cold, these chemicals can have no effect on colour. If the rags were *boiled* with them, the effect would be considerable, as they then would combine to form caustic soda (NaoH) which is a powerful decolouring agent.

4. *Fatkari.*—A crude alum produced at Kálá Bágh in the Punjáb.

5. *Starch.*—Made by the paper-makers themselves from rice. About seven seers of starch is obtained from four seers of rice. Used as a sizing agent to enable the paper to carry ink.

Preliminary Treatment of Raw Materials.—Rags are sorted over and selected. They are also torn into narrow strips. During these processes the loose dirt gets shaken out.

Washing.—This is done during the progress of the beating operation.

Beating.—This is the process of reducing the raw materials to a state of separation in which the ultimate filaments composing the natural fibre are free from each other and can be caused to float individually and separately in water. This is done by pounding in a stone mortar with an iron shod pestle actuated by a pivoted beam which is raised by a spurred shaft driven by a primitive form of water-wheel. The strips of rags are fed into the mortar by hand. The pestle has a square head shod with iron and thus presents four straight-edged cutting planes to the sides of the mortar. These chop the rag strips into short pieces which drop under the pestle and are there pounded between its flat surface and the bottom of the mortar. The rags are worked slightly damped with water and small pinches of Saz and lime are

thrown into the mortar at intervals. The process is repeated four times. With each successive stage the material reaches a finer condition of subdivision and the fourth and final beating brings it into the required state. Between each stage the pulp is washed in a trough formed by binding the ends of a piece of cloth, about six feet long, round the waists of two men who then stand in a stream of running water in such position that the trough and pulp is immersed in the stream, the top edges of the cloth trough being above it. They agitate the pulp rigorously with their hand and the dirt passes through the mesh of the cloth and is carried away by the stream. The pulp is then drained and pressed into cakes about a foot square by 1½ inches thick. These are exposed to the sun to bleach. The bleaching effect is only on the surface and for about an eighth of an inch under it. But as the process is repeated four times, fresh surfaces are in turn exposed and the final result is a fairly good cream white.

Considered solely with regard to its effect upon the materials, the result must be described as excellent. The natural length of the ultimate fibres is well preserved and the fibration or splitting of the fibre ends into fibrils, which, in the process of moulding into a sheet, help the fibres to lay hold of, and interweave with, each other and thus increase the strength of the paper.

Moulding.—The cakes of washed, bleached and beaten pulp are sent to the vats at Nowshera to be made into paper. The pulp cakes are kneaded in an earthenware pot with water under men's feet to bring them into a 'free' condition in which they float in water. The pulp is then transferred to the vat with a large volume of water, the fibrous consistency of the mixture being under 0·5 per cent. of the whole. The vat has no agitator to prevent pulp settling down at the bottom. There is also no preliminary straining of the pulp to arrest 'knots' or unbeaten particles before reaching the vat. These simply go into the sheet and cause irregularities and blotches, some of which are picked off the sheet before it has consolidated on the mould. The thickness and the weight of the sheet are regulated (*a*) by the amount of pulp the vatman brings up from the bottom of the vat by the gentle waving agitation he produces with the

lower part of his mould when he judges the mixture of pulp and water has reached the right consistency, and (*b*) by the number of 'dips' which he superimposes on the top of each other on his mould. Two thicknesses are in general use: one consisting of two dips and the other of three. The regularity of weight and thickness is remarkably good and this practice of superimposing successive 'dips' adds largely to the strength of the sheet.

The Mould.—This is merely a square of cloth stretched over a wooden frame, the pulp being plastered over it. It embodies the principle of floating the pulp on to it, and, as the wet sheet can be transferred from it, one mould can be used by the vatman continuously, alternately moulding and transferring sheets. Its advantage is that it moulds a sheet from one dip, and, being rigid instead of flexible, the wet sheet can be transferred to the transfer felt by one single and rapid motion. Further, in withdrawing it from the vat it creates a vacuum under it, which sucks a considerable amount of water out of the moulded sheet lying on its surface.

Couching.—As it is the mould which is flexible, the 'couch' has to be flat and rigid. A sloping board, somewhat larger than the size of paper being made, forms its foundation. On it is first laid an old worn out mould and on this a square of damped cloth. These together form an underlying drainage system for the pile of wet paper about to be raised on it, but the cloth is also required to give the necessary fibrous surface to which the first wet sheet will adhere in preference to sticking to the mould. Subsequent sheets are transferred on top of one another, the roughened surface of the wet paper being sufficient to cause the required amount of adhesion. A block of paper is thus formed, which preserves the flattened and sufficiently rigid form required to take the transfer from a flexible mould. When the block consists of about 72 sheets, another board is placed on top and this is loaded with stones and left all night to drain. In the morning a final additional squeeze is given by several men adding their weight to that of the stones.

Drying.—The sheets are carefully detached from each other and spread carefully on a specially prepared smooth mud wall exposed to the sun. Six to eight sheets are thus pasted or pressed on one another; they adhere merely by

damp cohesion. When the 'wad' is dry, they are easily detached from each other.

Sizing.—This is done with the rice starch. It is rubbed on both sides of the sheet by the aid of a woollen mitt on the hand. The sheet is then hung up on ropes to dry. It is again dressed with starch and dried. For enabling the paper to carry native ink laid on with the reed pen, this method of sizing is fairly effective. Such ink is not a true solution, but consists of carbon (lamp-black produced from burnt rice) in a state of fine suspension. The water may spread into the surrounding fibres, but the colouring matter is filtered back and remains where it is laid by the pen. But for modern inks, which are true solutions, such sizing is wholly ineffective and constitutes one of the most serious drawbacks to the usefulness of the paper. It is remarkable also for the enormous proportion of starch which the paper absorbs. Hence its great liability to insect and fungus attack. It is the starch which attracts them and there are few substances which are more attractive. The paper itself, unsized, is practically indestructible by any agencies less drastic than fire and acids. The only thing that is to be said in favour of starch sizing is that it is the most profitable part of the whole manufacture.

Glazing.—The sized paper is surfaced or polished by friction with a piece of polished agate fixed in a wooden handle. The result is somewhat irregular, but, on the whole, fairly efficient.

Yield of Paper from Materials.—The materials composing the paper are rags and starch, of which the former produces 70 per cent. and the latter 30 per cent. of the whole product. The starch yields practically its own weight without loss, although there is evidently a considerable loss in its transformation from rice. From one Khirwar of 96 seers of rags received at the pulp mills 56 seers of paper are eventually produced, of which slightly under 40 seers come from rags, the remainder being due to starch. The nett ultimate yield of paper from the raw rags, excluding starch, is therefore 37 per cent.

Production Costs.—It is stated that the total cost of producing one maund of paper is Rs. 28-9-0, exclusive of any

profit or wages to factory proprietors. The present figures may, therefore, be tabulated as follows :—

	Present cost per maund of paper.
	Rs. A. P.
Rags	3 14 0
Sizing	3 8 0
Labour, etc.	21 3 0
TOTAL	28 9 0

Quality of Paper Produced.—Considered solely from the point of view of the methods and appliances in use, the quality must be pronounced remarkably good. Its strength is excellent even when judged by modern standards but, in all the other requirements of present-day demands, it fails badly.

In 1917, Mr. William Raitt, F.S.C., Consulting Cellulose Expert attached to the Forest Research Institute, Dhera Dun, U. P., came in Srinagar at the request of the Kashmir Durbar, to give advice in regard to the improvement of the paper industry. He made most valuable suggestions for improving the industry and prepared samples of paper which were of great strength and durability.

Mr. Raitt sized samples with gelatine which he made from goat skin and used no starch. The gelatine was 'fortified' by adding pure alum re-crystalled from the local *Fatkari*. This size was of excellent quality, but in practice it would probably be preferable to import dry leaf gelatine from rabbit pelts. The waterleaf sheets were dipped in the hot size solution slightly pressed and dried over ropes. Cost would be about 12 annas per seer of dry gelatine and 5 annas per cent. in the paper is sufficient. Its cost per maund of paper would be Re. 1-8-0 against the starch sizing which now costs Rs. 3-8-0.

It is hoped that in near future some private enterprise will take up this ancient industry and derive profit from it.

It may be stated here that paper-making from wood pulp is also practicable in Kashmir. Suitable wood is found in abundance, such as the Silver Fir and *Daphne Papyracia*.

Sericulture.

Sericulture is an ancient industry in Kashmir. The silk of this country found its way to Damascus and Bokhara; and the Issidones, the inhabitants of modern Khotan, were the chief agents in the transmission of silk into Western Asia and Europe by the Oxus over the Hyrcanian Sea and the Black Sea. Mirza Haider, who ruled in Kashmir in 1540 A.D., writes in the *Tarikhi Rashidi*—"Among the wonders of Kashmir are the numbers of mulberry trees cultivated for their leaves for the production of silk." Silk flaunted itself far beyond the widest area that can possibly be described as "fashion." Even a poor woman put it in the front rank of "necessaries" and cherished it as a mystic kind of franchise. She thus asserted a claim to the right of living gracefully no less than the most favoured of fortune.

During the Pathán rule, this industry was dead and continued to be so during the Sikh rule.

Mahárája Gulab Singh wanted to revive the industry and he succeeded to some extent. It was then placed in charge of Hakim Abdul Rahim. The modern industry, however, dates from the time of Mahárája Ranbir Singh, who in the year 1871 made an attempt to organise sericulture on a very large and extensive scale placing the industry under the supervision of the late Mr. Nilamber Mukerji, C.I.E., who made great efforts and succeeded in improving it. The industry lingered on until 1882, and from that time to 1890 the State left it to the silk-rearers. In 1881, the industry was under Pandit Prakash Ju Zitshu. He arranged through Mr. Johnson, who had gone to visit Yarkand, to get some seed on paper-sheets, and they yielded a fairly good crop. But again in 1882 the worms died. The industry, however, survived total destruction. It was latterly placed under the supervision of Mr. R. Mukerji and the direction of Mr. (now Sir) Walter Lawrence. The silk produced was placed on the English market with satisfactory results.

In 1889, on the advice of Sir Edward Buck, Secretary to the Government of India, it was decided to adopt the Pasteur system of microscopical examination. Good seed was imported from Italy and France and an excellent crop of cocoons was obtained. Sericulture was now placed under the supervision of Mr. C. B. Walton who greatly improved it. Ten new filatures on the European principles with Italian reeling machinery were erected at Ram Bagh where the present Factory is situated. Seed was imported from Europe.

In the same year the attention of Sir Thomas Wardle, a silk-dyer and manufacturer of Leeds and President of the Silk Association of Great Britain and Ireland, who took great interest in the silk industry, was drawn to the decline of sericulture in Kashmir, and in 1890 he advised the Kashmir State through the Resident to revive the industry on a commercial scale and in a more scientific and extensive manner. On his advice the State appointed an expert who insisted that it should directly engage itself in the industry and not leave it to private enterprise. As the indigenous seed was mostly destroyed, seed brought from Italy and France was distributed among the ryots. The desirability of continual import of foreign seed was once seriously questioned, but at a conference on sericulture at Srinagar it was decided to continue the practice in order to avoid the danger of impure eggs. Only univoltine worms, from which is chiefly obtained the usual silk of commerce, are grown in Kashmir. The climatic conditions are eminently suitable for the cultivation of this kind as also for the growth of the mulberry trees upon which the worms are fed.

Mr. Walton died in 1904 and he was succeeded by Mr. H. D. Douglas, then Assistant Director of Sericulture. In the year 1907, a fire broke out at the Factory, destroying three filatures with their contents. These being insured, the loss was made good by the Insurance Company. They were soon replaced by two large filatures, each containing over 300 basins and were installed with electricity both for reeling cocoons and turning the reels. But again, in 1913, another fire destroyed the whole Factory together with the whole year's cocoon crop. As the buildings and stock were insured, the loss was, to a certain extent, made good by the

Insurance Company. Mr. Douglas retired at the end of 1913 and was succeeded by Mr. M. L. McNamara, the present popular Director. The Factory was reconstructed. For the storage of cocoons, godowns have been built which are almost fire-proof. These buildings, along with others, have been installed with sprinkler installation to reduce the risk of fire.

Money was spent unstintingly by the State and the results justified the expenditure, for from the year 1913 the State was able to make a clear profit of seven to nine lakhs of rupees a year. The State makes a net profit of some 25 lakhs of rupees on this monopoly every year. As regards the quality, a French firm gave their opinion as follows a few years back :—" We find that the standard is more regular than in previous bales, there is a sensible improvement in the regularity and this gives more value to the goods." Kashmir also serves as a training ground for sericulture and the silk industry, as will be seen from the following extract from an agricultural bulletin from Mesopotamia—" The Kashmir Government have kindly consented to train on behalf of the National Government of Mesopotamia, Saiyed Ebrahim Effendi of Maladhim. His departure to Kashmir has been definitely arranged for a period of six months. On his return he will bring with him specimens of the modern, simple and cheap apparatus used in sericulture in Kashmir where the industry is flourishing."

In the Sambat year 1980, there were 46,431 rearers of silkworms and 34,948 maunds of cocoons were brought in, from which 2,05,376 lbs. of silk and 1,01,588 lbs. of waste were produced. Another factory has been opened at Jammu and it yields a handsome income and provides employment to a large number of people.

At one time was seriously discussed the question of the industry being transferred to private enterprise, and in the following words which Lord Curzon used at Jaipore in April 1902 he is believed to have referred to the undesirability of the project. At a Durbar in 1903, His Highness the Mahárája spoke strongly against the transfer of the industry to private enterprise.

Though Kashmir now possesses the biggest silk filature in the world, dyeing and weaving of silk are neglected. The

silk is exported to France and comes back as finished product and the railway rates help this process, because through transit from Kashmir to the port of transhipment is less costly than to other parts of the country.

Even though silk and rearing of the silk worms are referred to in Chinese records as far back as 2,000 years B.C., though there are references in ancient Indian literature to sericulture, and even though Kashmir history records silk specifically, no mention of the silkworm diseases is to be found in any of these. The earliest and the first records of the diseases are to be found in a treatise published in Europe in 1599, and in this and in several other books symptoms of some diseases are mentioned, but it was not until 1865-70, when M. Pasteur commenced his research work, that order began to appear in the diagnosis of silkworm diseases. The above hypothesis must not at all lead us to think that the silkworm diseases were non-existent before.

The seed examination, on scientific lines, is of recent introduction here. In 1906, an experiment is said to have been made on the Pasteur system when about ten ounces of eggs were produced from about two maunds of cocoons. Every year the quantity was increased till 1909, when an up-to-date grainage was established at Srinagar. The results proving satisfactory, two more seed-houses were later on established with the result that about 19,000 ounces of seed are annually produced from these three reproduction houses. The diseases also have more or less been got under control, and in fact the quantity of seed produced by these three houses is nearly half of the quantity required for distribution every year to the silkworm rearers in Kashmir. How the eggs are produced and what difficulties beset this operation will be dealt with later on, but suffice it to say here that the reproduction work has proved highly satisfactory. The local eggs, as these are called here, have always given better results than those purchased from Europe. Cellular seed is produced in the seed houses and supplied to the farmers. Besides producing more healthy and good seed, these houses give work to many unemployed sons of the soil and save the State a large sum of money every year. Recently, there has been a great demand for Kashmir selected seed from India and other parts of

Asia and the sales in this way also tend to the extra income of the State. Kashmir climate, it is believed, is decidedly suited for producing seed from Bombyx-Mori.

The silkworm diseases may conveniently be divided into those caused by parasites and those caused by bacteria. Pebrine and Muscardine go under the first heading and Flaucherie and Grasserie under the second. The former are the worst of all the silkworm diseases. Mention has already been made of the havoc played by Pebrine in Europe in 1865, when M. Pasteur undertook the study of this formidable disease. The name Pebrine was given to it because of the prevalence of black spots on the skins of the diseased silkworms. Recent experiments, however, have proved that this is by no means the only characteristic feature of the disease. In the vast majority of cases, it has been observed that the infection is acquired by eating food spoiled with the excretions of the silkworms or contaminated by Pebrine spores. It has also been demonstrated that disease-free seed could very easily be produced if only pains to carefully look after the worms during the rearing period are taken. The disease is hereditary and the germs are transferred by the female moths to their eggs. These germs, of course, lie dormant till the eggs hatch. The microbes develop in the body of the worms, which do not show any signs of decay till the disease is far advanced.

The most characteristic feature of Pebrine is the presence in the different parts of the worm's body of minute oval bodies, which are believed to be really the spores of the parasite which cause the disease. The worms affected by the disease begin to grow, but when the germs gain their full power, say in 30 days' time or more, they kill the worms. There is no possible cure for this disease, but the system called the "control system." Besides good and careful rearing it is very important to take recourse to disinfectants, such as a solution of formalin and choloride fumigation from time to time. It has further been recognised by experts that the long intervals between the rearing periods of the univoltine breeds make Pebrine more or less impossible, and Kashmir, of course, rears only the univoltine breeds, and this is a great factor in favour of Kashmir seed reproduction. In any case, Kashmir is not immune from Pebrine yet.

In 1835, Bassi, a learned Italian scientist, after whom the disease is also known as Bassianite disease, discovered its cause. It usually appears between the third and the fourth moult, and sometimes in the chrysalis stage as well. The initial cause is an excess of warm humid weather ; minute mushrooms spread on the silkworms, and also on the mulberry leaves in white stains. When the parasite gets sufficiently developed, the blood circulation of the silkworm is at once stopped. The onset of the disease is, as a rule, very rapid, and little warning, so to say, is given until one finds dead worms in the litter. The worm ceases to move and rapidly dies. The symptoms of the disease are, therefore, very difficult to mark. When the worm dies of Muscardine, its body becomes stiff and covered with a white crust as it were, so that it looks like a piece of chalk. The appearance of the dead insects is so patent to the naked eye that no microscopic examination is necessary. The only remedy is to remove and burn the dead worms instantaneously, and to spray the whole rearing apparatus and so forth with formalin, and, in its absence, to use a strong sulphuric fumigation. The disease is believed to be transmitted by the spores which are formed on the body of the dead worm in the caterpillar stage. The spores are said to remain alive for long periods, and, in order that these may cause germination, it is not always necessary for them to be eaten by the silkworms. Muscardine is a disease which depends more or less on weather conditions. So far there have not been serious results of Muscardine in Kashmir. The Muscardine germs can be carried by the wind, and even by the hands and clothes of the rearers. The spores look globular under the microscope like those of Pebrine. The latter, however, are brighter and larger in size.

Grasserie has long been known to sericulturists and accounts of it are to be found in the writings of early sericulturists. It is not an infectious disease nor a hereditary one, nor it is caused by any special microbes. It can certainly be prevented by scientific rearing. It is usually caused by careless rearing and, its corollaries, uneven feeding and so forth. Defective ventilation, dampness in the room, wet leaves are also responsible for the outbreak of this disease. The worms afflicted by this disease are " restless, bloated and yellow in colour," and their body becomes fat. The skin is shiny

and can easily be torn. The disease is of very little importance in Kashmir. It is probably due to some "metabolic disturbance" of the worm, and hence it is classified with Flaucherie.

Reeling of cocoons at the Silk Factory is done in five filatures containing 1,520 reeling and 760 cooking basins, the former being heated by electricity and the latter by steam. The turning of the reels is done by electric power. After silk has been reeled, the skeins are twisted into hanks and packed in bales. Half the quantity of seed (20,000 oz.) is imported from Europe. For local production, selected cocoons are kept for seed. They are strung up till the moth emerges, when it is caught and placed in a muslin bag to lay its eggs. The dead moths are examined under microscope to see that they are free from disease. When the examining of the bags has been finished, they are washed in a solution of sulphate of copper, after which the seed is detached from the muslin bags, packed into $1\frac{1}{2}$ oz. boxes and placed in the hybernating houses to await the following distribution season.

The State has made proper arrangements for the preservation and expansion of the plantation of mulberry trees. Considerable attention is paid to their pruning in order to save them from disease.

Silkworm eggs are issued to the zamindars shortly before they are likely to hatch. The quantity issued at present is over 40,000 oz. The number of worm-rearers registered is about half a lakh but probably one and half lakh men, women and children are directly engaged in this work. The time from hatching to spinning of the cocoons is 30 to 35 days. The cocoons are brought to the Silk Factory at Srinagar and the rearers are paid their dues after weighment. They receive, on an average, Rs. 10 each. They incur no expense, as the seed as well as the mulberry leaves are obtained free by them.

Sericulture has undoubtedly proved a boon to Kashmir, inasmuch as it is a source of livelihood to about 5,000 labourers daily at the Factory and employs an immense number of persons as silkworm rearers during the rearing season, for which they get a remuneration of over $2\frac{1}{2}$ and 5 lakhs of rupees per annum, respectively.

It may not be out of interest to know that in Italy artificial silk is manufactured out of timber imported from Norway and Sweden. Wood is sliced, converted into pulp of the desired consistency and then chemically treated and silk is produced of any colour.

TANNERIES.

The imports of leather into the Jammu and Kashmir Provinces for the year 1923 were—

	Quantities Maunds.	Value Rs.
Jammu	2,383	1,31,023
Kashmir	1,278	1,63,431
	3,661	2,94,454

The exports of hides and skins from the Jammu and Kashmir Provinces for 1923 were—

	Quantities Maunds.	Value Rs.
Jammu	2,962	82,619
Kashmir	7,515	3,09,027
	10,477	3,91,646

It is under contemplation of the Durbar to start a tannery at Jammu under the State management. It will most surely be a paying concern, taking into consideration the immense quantities of leather imported annually.

In Kashmir, hides are prepared in the villages by the *vátals* and are then brought to Srinagar where they undergo a refining process. Skins are brought in raw. There are several tanneries at Srinagar where hides and skins are tanned by keeping them immersed in lime-water for eight to fifteen days. By doing this the hair gets removed and the hides and skins become soft. Then alum and salt pounded together are rubbed on them. The roots of *roil* tree and the

shell of pomegranates are ground into powder and then boiled. The juice extracted is kept in a pot and when it cools down the hides and skins are kept in it for two or three days. When they absorb the dye, they are taken out and dried. Then they are scraped and stretched and are ready as leather for being manufactured into different articles. A variety of leather goods in fairly large quantities are manufactured in Kashmir. They are saddlery, harness, portmanteaux, valises, *yakdans*, sandals, socks, boots, shoes, cushions for chairs and bags.

Fur skins are cured on a large scale. They are first kept immersed in water for one or two days until they become soft. They are scraped of fatty matter and scarf-skin with a scudding knife, and washed clean on both sides with soap. Then alum and Ladákh salt pounded together are rubbed on skin-side. After this, the furs are rubbed by pressing them under feet, and are beaten with a stick, so that the hairs open out. They are again scraped on the skin-side until that side becomes white and soft. Then a plaster of barley flour, mixed with curd, is applied on the skin-side and the furs are dried in shade. Again they are rubbed by pressing with feet. After that they are well shaken up so that the plastering matter is thrown out. Then the hair is combed and dressed. The furs are then ready for sale.

These pelts are remarkable for lightness in weight, softness of texture, delicacy of shade and smoothness of over-hair. The fur is pliable, silky, curly, downy and barbed together.

The heads of game animals, with or without horns, and also birds with plumage are artistically stuffed and mounted by the furriers of Srinagar. The art of taxidermy is skilfully practised by them. The specimens can be seen properly arranged in the natural history section of the Srinagar Museum.

Embroidery.

Embroidery in Kashmir is done in four styles (1) Amli, (2) Chikan (minute satin stitch), (3) Doori (knot stitch) and (4) Yarma.

The darn stitch used by Kashmiri embroiderers is perfect, with threads so completely blended that it is difficult to insert a pin between the stitches and the field texture. Drapings were formerly made in *pushmina* or silk most elaborately embroidered in artistic style.

The talent of Kashmiri embroiderers has now been turned into the direction of producing embroidered articles on drill, linen and cossi-silk in darn stitch embroidery with coloured washing silk, *pushmina* or wool. They are very effective and cheap and are now in great demand. Draping, tea cloth, counterpane, table-centre, doyley, tie, handkerchief, blouse, dresspiece, cape, etc., are made and are sold very readily. About 3,000 people are now engaged in this business. This modern adaptation is to be highly commended and there is a great future for this branch of industry, provided it does not overstep the bounds of artistic forms and the patterns do not run riot, to which unfortunately there is now a tendency. The modern patterns are (1) Shawl, (2) Chenar leaf, (3) Iris, (4) Dragon, and (5) Lhassa, in place of old conventional designs.

Applique embroideries, sometimes outlined artistically in vivid thread wool worked in chain stitch, are used in making decorative floor coverings and curtains by patching up pieces of variously coloured *puttoo* or linen cloth. The whole blends beautifully. This article is known as *gubba* and is manufactured best at Islamabad.

Doori work or braiding embroidery is done on Shawls and Chogas in various designs, giving a beautiful knotted appearance.

Namdas or felt rugs are embroidered in various patterns of bold floral design in different colours. The embroidery is of the chain stitch kind. Imported Yarkand Namdas are embroidered in Kashmir. These fetch more price as the material is more durable.

Woollen and Cotton Textile Fabrics.

1. *Puttoo.*—This homespun cloth, chiefly woven by villagers, is well known. It is made from sheep's wool. The

best *puttoo* is made at Zaingir, a place called after Zain-ul-ábdin. It may be plain or in different patterns, striped and checked, in imitation of Scotch tweeds. This latter kind is now made chiefly at Pattan. The *puttoo* sold to European visitors is usually old and worn blanket or *looi*, rubbed and washed. Such *puttoos* are softer and of thinner texture.

2. *Soot puttoo.*—These are of woollen warp and cotton woof and are made in various patterns. They are suitable for wear in the plains of India and are now in great demand. Similar mixed materials are also made with cotton and *pushm* or silk and *pushm.*

3. "*Raffle.*"—A name given to the fabric woven from the German imported wool on the Kashmiri loom. Owing to its cheapness it is displacing *pushmina*, and, being of firmer structure, is preferred to *soot puttoo.*

4. The *looi* or blanket made from Kashmiri wool is a very serviceable article. It is either *ekbari* (one width) or *dobari* (two breadths sewn together). The *khudrang* (natural colour) is considered to be the best. The value of *loois*, *puttoo*, etc., exported annually from Kashmir is estimated at about three lakhs of rupees.

5. The cotton cloth, used by villagers, is made on looms of a primitive pattern from Kashmiri cotton, wool or imported cotton, wool or yarn. It is printed or dyed in Srinagar. The value of imported cotton, twist and yarn is about one and a half lakh of rupees annually.

Wood Work.

All ancient Hindu buildings of Kashmir are of stone, but the mosques are of wood, and some of them, such as the Shah Hamdan and Makhdum Sahib of Srinagar, show great dexterity in the carpenter's craft. Some good carving is seen in some houses and boats. The Kashmiri carpenter is a bad joiner but as a designer he excels. The following kinds of work are now done :—

(1) *Pinjra* or lattice work. Various patterns are made on a geometric basis or floral design, and are very bold and effective. *Budlu* or *Káir* wood is used. The work is made

of small laths so arranged as to form a pattern and held in position by well fitted pressure exerting one against another. Glue is seldom used. The best kind of *Pinjra* work is known by the Kashmiri names of *Posh Kandúr, Chahár Khána, Sádah Kandúr, Shash-tez, Shash Sitára, Shash-pahlu, Dwázdah-sar, Shekh-sar, Jáffari, Jahán Shirin,* and *Tota Shash-tez.*

(2) *Khatamband* or panelling in various geometric designs applied to ceilings. Thin panels of pine wood are made into various geometrical forms and fitted together in grooves. These cheap and effective ceilings are sometimes sent to India and England. The best kinds of ceiling work are known as *Hazár Gardán, Band-i-Rúm, Hashtpahul, Chahárbakhsh, Moj, Hasht-Hazár, Bádám-Hazár, Sehbakhsh,* and *Dawázdah-Gird.*

(3) *Carving.*—This commenced with deep carving in floral designs, but the modern patterns are realistic carving in bold relief of Chenar, Iris, water-lilies or radiate bull-rushes, with a great deal of undercutting. One of the dominating ideas in this art is that life and change are continuous, like flow and ebb, growth and decay. This has its expression in rhythmic sequence of crests and hollows. The walnut is stained and carved in lotus flowers cut in section botanically or in the form of Iris, Chenar leaves and branches or bunches of grapes or pears standing half an inch over the surface, showing great skill though little art. The latest is the Lhassa pattern. Some people regret this change from conventional to realistic art. But of these Sir George Watt says, " Perhaps one of the most surprising features of the exhibition may be said to have been the avidity with which every bit of this modern Kashmir work was purchased."

At one time carved wood table, with copper or copper enamelled tray centre, was a great favourite. But now wooden screens, tables, picture frames, trays, cigar boxes, fire-screens and music-stools are in demand. Large orders are received from Mess Courts, Clubs and others for chairs with carved crests and monograms, also for large hall chairs.

Wood work was an ancient art among the Hindus, for we see mention of it in some of the Puranas which give detailed directions for felling trees at particular seasons when the sap

is down, and for seasoning the wood afterwards, so as to prevent unequal contraction and cracks in drying.

The Kashmir wood work is falling into disrepute owing to the use of unseasoned wood. The manufacturers are not capitalists and cannot invest their money in wood and wait till it is well seasoned. There is one way out of this difficulty and that is to artificially season wood by steam. The carpenters are very lazy. If you order a screen, it takes months to finish it. This also is checking the progress of this important art industry in Kashmir, and lastly fancy prices are charged. Another draw-back is that articles are not well finished. On the back of a well worked table, perhaps a deal board from an old wine case will be found.

In the Museum at Srinagar there are samples of the best carved wood work with their prices per square foot, calculated by employing the best workmen to make them. To this, of course, should be added a commission for supervision, if orders are sent through agencies.

The gate and the frontage of the Kashmir Camp at the Delhi Durbar were made of carved work from Kashmir. It excited great admiration. These were offered by His Highness the late Mahárája Pratáp Singh as a present to His Imperial Majesty the King-Emperor who graciously accepted them. It is a great compliment on the Kashmir Carving work and will, no doubt, give a great stimulus to the industry.

Dealing with the present-day Kashmiris one notices how, with the arts and the trade, which Kashmir had in olden days, the business-like and commercial qualities of the people have deteriorated. A shawl trade of 30 lakhs of rupees could not have been carried on with foreign countries, if the men were not industrious, honest and business-like, but now in every department of art industry the workmen, as well as the employers, are not quite straight in their dealings both as regards the prices and the nature of articles produced. In spite of poverty there is laziness. An article which could be easily made in a fortnight will not be finished for months. Instructions, carefully given, will be ignored. The Kashmiri handicraftsmen are remarkable for their primitive methods and the smallness of the outfit. They are also singular in

the conservative ideas and wish to do all things according to the fashion of the trade. Labour-saving devices are only looked upon as means of reducing employment. Individual ambition is very rare. The Kashmiri workmen will not teach each other, and trade secrets are jealously guarded. There is no enterprise and there is a great natural distrust among trades people. An exhibition of arts in Kashmir is almost an impossibility for the traders jealously guard their designs and patterns and would not expose them to the view of other traders lest they may be copied. It is amusing to see how a trader will suddenly drop a sheet of cloth over his wares if another trader happens to come when he is showing them to a customer. Even most respectable dealers will run down their brethren of the same trade and apprise another man's goods at lower rates. For these reasons the agents, who buy for other people, find it very difficult to deal with Kashmiri traders and the trade suffers immensely. An Act for the registration of patents and designs is now a great necessity. The old Dagshawl exercised great control over designs. It is, indeed, hard if the result of a man's fruitful brain is robbed by another without his permission. A Design and Patents Act, and granting of certificate after assay will protect the trade and encourage art industries.

Metal Work.

Kashmir has ever maintained a high reputation for the excellence of its metal work. Speaking of the parcel gilt silver work of Kashmir, Sir George Birdwood says: "Their elegant shapes and delicate tracery, graven through the gilding to the dead white silver below, which softens the lustre of the gold to a pearly radiance, gives a most charming effect to this refined and graceful work. It is an art said to have been imported by the Moghuls, but is influenced by the natural superiority of the people of the Kashmir Valley over all other Orientals in elaborating decorative details of good design, whether in metal work, hammered and cut, or enamelling or weaving."

The metal work in Kashmir may be classed as below :—

(1) *Tinned Metal.*—It is a Turkoman art introduced into Kashmir and it has attained great perfection. Tin is soldered

on copper previously graven with floral design, the sunken ground of which is then filled with a blackened composition of *lac*. The best patterns are rosette on a black ground and the Arabesque style. The raised patterns shine like frosted silver out of a ground work of blackened foliated snow delicately traced. It partly resembles Murádábád work, but is infinitely superior in art and design.

(2) *Lac Work on Brass and Copper.*—This work is not very effective and only a few specimens can be seen.

(3) *Enamelling.*—This is done on brass, copper and silver by fusing over it various mineral substances. The metal is repoussed and the colours are imbedded in the depressions, or the surface is painted with the fusible paint and then heat is applied. The enamels are imported from India. The colours are silicates or borates, yellow through chromate of potash, violet through carbonate of manganese, blue through cobalt oxide, green through copper oxide and brown through red iron oxide. Beautiful pale blue is produced by mixture. Enamelling is done in various patterns—shawl, Arabesque, Rosette, Chinar, Mosaic, *Bandiroom*, and *Islim*. Silver and black enamel called *Saunt Kár* is a very pretty work, not generally known, but deserves much appreciation.

There is evidence that Niello enamelling is known to Kashmir craftsmen as some excellent articles with Niello ornamentation can sometimes be obtained.

(4) *Copper and Silver Work.*—Copper was once a great favourite, but is now going down partly because the patterns are not so good and the metal tarnishes quickly. Copper articles sent to England reach there quite black and when cleaned by mineral acids the polish is lost. In Kashmir they are cleaned by vegetable and apricot juices.

The best silver work is copied from shawl patterns. This requires much time and labour. All the various designs are copied such as Arabesque, Rosette, Chinar, Mosaic, *Bandiroom*, *Islim*, etc. The great designer in silver work was a man named Rahat Sut, who lived in the middle of the last century.

Silver and copper with gold gilt are also made in various designs.

During recent years the old style of engraving has been replaced by repoussee work in Chinar, Iris, Thistle, Bullrush and Rose patterns. The old Kashmiri patterns are—Lhassa bowls, Yarkand vase, Bokhara vase, Kashgar, Lotus, Aftaba, and Kangri, all very unique and truly oriental. It is a great pity that some visitors, ignoring true art, give a catalogue of a European jeweller's firm to the Kashmir silversmith and ask him to copy the Queen Anne, the Windsor or the Georgian pattern tea-set. This mixture of the oriental art and the occidental pattern is most unhappy. If you want a tea-set, why not have the Yarkandi teapot or a Lhassa bowl for a sugar basin worked in a delicate shawl pattern instead of an English pattern teapot.

(5) The work known as *Bidri* from Bidar in Deccan, is also done in Kashmir. The designs are worked in wire imbedded below the surface.

Most of the vases and jugs made in Kashmir bear the impress of Muhammadan patterns, being provided with a spout, because the Koran ordains that a man shall perform his ablutions in running water which is imitated by water running from the spout. From the time of Sikhs, however, Hindu forms such as the *Lotus*, the beggar bowl, the *Tashi*, etc., were introduced. It is a mistake to connect the word "*Lota*" with "*Lotus*," however much the shape of an Indian *Lota* may resemble a water-lily.

A large trade is done in old brass and copper in imitation of Ladákh, Thibetan and Yarkand patterns and sold as such. These articles are made in the bazars of Srinagar and are buried in the earth or otherwise dealt with to give them an appearance of antiquity, which the unwary purchaser buys as old Ladákh and Yarkand goods. Very unique and quaint patterns of candlesticks, lamps, vases, teapots, etc., are, however, seen.

The carved wood table, with a copper or enamelled tray centre, is a fine combination of the carpenter's and silversmith's arts. But the carved wood work having recently much improved, tables made entirely of wood are now in favour.

(6) Swords with damascened hilts or blades were formerly manufactured largely. Mahárája Ranjit Singh's army, as

well as that of Jammu Raj, used swords manufactured in Kashmir. Gold on steel is called *Mumbut Kár.*

The gunsmiths of Srinagar are exceptionally skilful workmen. They can replace parts of any machinery, equal to the original, and can make excellent spears, daggers, matchlocks, guns and rifles. Sterilizers, antiseptic furniture and many of the surgical instruments in use in the hospitals are made by them. One man has made a Japanese loom, as good as, if not better than, the original. If supplied with better machinery and good steel, these clever blacksmiths would produce articles of the highest perfection.

Mahárája Ranbir Singh maintained a Mistri Khána or workshop, which manufactured all Military accoutrements.

The demand for silver work is, however, fast going down, due chiefly to the alloy which the silversmiths of Srinagar use in their work, as much as half silver and half copper being sometimes used. The shiny and well chased article becomes, therefore, black and dull after a year or so. White metal is now imported largely and is used in place of silver. Kashmiris formerly had no idea of electroplating or electrogilding, but now every silversmith possesses an electroplating apparatus which he uses largely on white metal. A State 'hall-mark' is much needed.

Stone Work.

The ruins of Martand testify to the ancient stone carving of Kashmir. Even in Moghul times the art was not lost as shown by the carvings in the pavilion and waterfalls of the Shalamar gardens. One of these carvings has given the *Bandiroom* pattern worked on wood and metals. The modern stone work in Kashmir is lapidary work, such as engraving seals. Jade is imported from Yarkand and is cut for seals and pendants. A Jade sceptre, obtained as a trophy of the subjection of Leh, now in the Srinagar Museum, is a masterpiece of the lapidary's art and is priceless in value. Cornelian, Blood stone, Onyx, Liver stone, Moss stone, Lapis-lazuli, Rock-Crystal, etc., are also imported in small quantities through Ladákh and are made into buttons, beads,

brooches, etc. But the articles now usually sold in Srinagar are either made at Delhi or made with stones and coloured glasses and imported from Europe. Snuff boxes and stamp boxes are made with coloured glasses and the shining buckles, often sold as rock-crystal buckles, are made with "paste diamonds" sold at Delhi at 6 pies each. A large quantity of Delhi jewellery such as rings, brooches, etc., made with four-carat gold and artificial coloured stones, is imported and they are sold as genuine Kashmir made articles and greedily bought by visitors.

True turquoise can be had at Ladákh, but false turquoise is largely used in Srinagar for making articles in brass, copper and silver with small chips of false turquoise compacted by a cement. These articles were until recently a great favourite, but are now rejected as they deserve to be. False turquoise is glass coloured, or sometimes a poorly coloured stone is coloured to give it a deeper shade. The artificial colour becomes lighter if the stone is rubbed between the fingers with a little oil or butter.

The lapidaries of Srinagar are, however, very skilful, and the *Tográi* monograms, which they engrave on various kinds of stone, are excellently executed.

Religion.

The majority of the population are Muhammadans, being 2,548,492 ; Hindus come next and they number 6,92,324. The number of Buddhists is 37,685, of Sikhs 39,507, and of other religionists 2,510.

In the beginning the people in Kashmir were Brâhmans. When Buddhism prevailed in India, it spread in Kashmir also, but with its decline in India it disappeared from Kashmir and by 638 A.D. the old faith prevailed again. In 1314 A.D. Zulqadr Khán *alias* Dulchu who with 60,000 troops invaded Kashmir, converted the people forcibly to Islám. Renchan Sháh and later on Sikandar, the Iconoclast, and after him some other rulers, specially Azád Khán and Madad Khán, excelled Dulchu in the zeal to make converts to

Muhammadanism, so much so that the cry "*Nabatuham*" went forth.

Renchan Sháh was a Tibetan prince who came to Kashmir in the time of Saha Deva, 1323 A.D., and assumed the rule of the country. He did not know anything of his own religion and wanted to become a Hindu. But the Brahmans of Kashmir, headed by one Devaswámi, did not admit him to their caste and then one night he determined to embrace the religion of that person whom he should happen to see first the following morning. In the morning he chanced to see first of all Bulbul Sháh, a Muhammadan Faqir (whose *Ziarat* is situated at the 5th Bridge in Srinagar), and he at once became a convert to Islám and then forcibly converted the Brahmans, who had refused him admission into their caste, to Muhammadanism, with a vengeance.

There is a small community of local Kshatriyas in Kashmir called Bhoras who are almost all druggists by profession.

The Shia sect came into existence in Kashmir from 1486 A.D. when Mir Shams Aráqi, a Shia missionary, came from Khurásán and converted many Sunnies to his cult.

The Sikhs in Kashmir are the Punjáb Brahmans. During the years 1751 to 1762 A.D., in the reign of the Emperor Ahmad Sháh Durani, Rája Sukhjiwan, Subah of the Emperor, brought them from Pothowár and the adjoining hills to assist him in asserting his independence against his master. As these mercenaries were paid in kind, and had, in the time of Mahárája Ranjit Singh, embraced Sikhism, they began to be called Jinsi-Sikhs, or Sikhs in receipt of rations.

Language.

Kashmiri, which is an admixture of Persian and Sanskrit, is spoken in the Kashmir Valley. Dogri and Punjábi is spoken in Jammu; Punjábi and Pahári in Muzaffarábád; Balti in Baltistán; Bhutti in Ladákh, and Pahári and Kashmiri in Kishtwár, Bhadrawáh, Rámban and other hilly tracts.

Education.

Primary education is freely given throughout the State. English education is making much progress, chiefly at Srinagar. There are high schools and middle schools at all the large towns. One college has been established at Jammu and another at Srinagar. There are also girls' schools at both Srinagar and Jammu.

Administration.

His Highness General Mahárája Sir Hari Singh Bahadur, K.C.I.E., K.C.V.O., etc., is the ruler of the Jammu and Kashmir State. He is also the Commander-in-Chief of the Army, numbering 10,000 soldiers. The Council comprises Revenue Member, Finance and Police Member, P. W. Member, Home and Law Member, and Member for Commerce and Industries. The Heads of different Departments are under the control of different Members of the State Council.

For the purposes of revenue administration the State is divided into four parts, namely, (1) Jammu Province; (2) Kashmir Province; (3) Ladákh; (4) Gilgit. The two Provinces are under two Governors, and Ladákh and Gilgit under two Wazir Wazárats who are under the direct control of the Revenue Member. Under Governors are Wazir Wazárats and under the latter, Tehsildárs and Náib Tehsildárs.

The Jammu Province is divided into five Wazárats, namely, (1) Jammu Khás; (2) Udhampur; (3) Kathua; (4) Riási; (5) Mirpur. These comprise the following Tehsils :—

(1) Jammu, Ranbirsinghpura, Sámba.

(2) Udhampur, Rámban, Kishtwár, Rámnagar.

(3) Kathua, Basohli, Jasmergadh.

(4) Riási, Akhnur, Rámpur-Rajouri.

(5) Mirpur, Kotli, Bhimber.

The Kashmir Province is divided into three Wazárats, namely, (1) Southern Division; (2) Northern Division;

(3) Muzaffarábád. These Wazárats are divided into the following Tehsils :—

(1) Srinagar Khás, Anantnág, Kulagám, Avantipura.

(2) Pratápsinghpura, Báramulla, Uttar Machhipura.

(3) Muzaffarábád, Karnáh, Uri.

The Wazárat of Ladákh consists of three Tehsils, viz., Leh, Kargil and Skardu, and the Gilgit Wazárat, of one Tehsil, Gilgit only.

The Judicial Department is presided over by High Court Judge and under him are two Chief Judges (one for Kashmir and the other for Jammu), Wazir Wazárats of Frontier Districts as Session Judges, and Judges of Small Cause Court at Jammu and Kashmir. Under the Chief Judges are Additional District Magistrates, Sub-Judges, City Magistrates, Wazir Wazárats of Jammu and Kashmir Provinces as Sub-Divisional Magistrates, and Munsifs. The Police is in charge of the Inspector-General of Police and under him are two Superintendents, one for each province. In the Education Department the two colleges at Jammu and Srinagar are managed by the Principals and the Schools by two Provincial Inspectors. The Medical Department is controlled by the Director of Medical Service under whom are Chief Medical Officers, one for Kashmir and the other for Jammu. Reception, Research, Archæology, Dharamarth, Mines, Museum, Meteorology, Rakhs, Game Laws and Jails are each under one Superintendent.

The Public Works Department is controlled by a Chief Engineer and under him are Divisional Engineers, one at each of the following places :—Kashmir Valley, Jhelum Valley Road, Gilgit Road, Jammu Province and Banihal Road. The Irrigation Department is controlled by another Chief Engineer and under him are two Divisional Engineers, one at Jammu and the other in Kashmir. The Electrical Department is under a third Chief Engineer and the Dredging Department is under Chief Mechanical Engineer.

Settlement is under the Settlement Commissioner, and Sericulture, Mulberry-culture, Viniculture, Agriculture and Horticulture are under the Member for Commerce and Industries, Forests under Chief Conservator who is

assisted by four Conservators, Accounts under Accountant-General, Survey of mines under Mining Engineer, Municipalities under Presidents and Committees, Customs and Excise under Superintendent assisted by two Inspectors, one in charge of Jammu Province and the other in charge of Kashmir Province, and Co-operative Societies under a Director.

Valley of Kashmir.

There is a tradition that the Kashmir Valley was, æons untold ago, a vast mountain lake called Satisar and geologists attest to this. That volcanic action had some share either in the formation of the original lake or its subsequent desiccation, is most probable and is to be traced in the mountains around the vale. The soil contains remains of fresh water fishes and fossil oysters—the black shells of the water-chestnut may be found in layers embedded in the earth at a height of 1,500 feet above the level of the Valley. These indicate a fluvial origin. Traces of beaches may also be seen on the sides of the mountains. The flat and uniformly even surface of the plateaus can only be attributed to their having been submerged for ages beneath the still calm water of a deep vast lake.

The following saying among the Kashmiris alludes to the same fact : —

Társarah Mársarah Kaunsarah sumb sarah
Sati phirih Satisar sat sarah.

I remember Társar and Mársar to Kaunsar in one level,
I remember Satisar seven by seven times.

According to the tradition the drainer of this lake was an ascetic named Kashyapa ; hence the reclaimed land was called Kashyap-pur or Kashyap-mar and latterly Káshmir or Kashmir. To Kashyapa may fitly be applied the term "Rock of Ages" and naught should go seriously wrong with the land over which his shadow broods.

The name Kashmir also implies "land desiccated from water," from Sanskrit *Ka* water, *Shimira* to desiccate.

In Sanskrit Puránas, Kashmir is called Gerek (hill) nestled as it is in hills. In Chapter VIII of Avanádikosha, the meaning of the word Kashmir is given " land, ruling in which is difficult."

The ancient Greeks called it Kashpeiria, and in the classical literature Herodotus mentions it as Kaspatyros, and Hekataios calls it by the name of Kaspalyros or Kaspapyros. It is called Shie-mi in the narrative of To Yeng and Sung Yan (578 A.D.). Huien Tsiang, a Chinese traveller, who visited Kashmir in 631 A.D., calls it Kia-shi-mi-lo.

Kashmir has further been shortened into Kashir by the Kashmiris in their own tongue. The Tibetans call it Khachal (snowy mountain), and the Dards (the inhabitants of Gures, etc.) Kashrat.

The Valley of Kashmir is situated to the north of the Pir Punjál range and is of an irregular oval shape lying north-west and south-east. It is surrounded by lofty mountains, is about 84 miles long and 30 miles broad, and its area is about 4,500 square miles and its average height is 5,200 feet above the sea level. An irregular oval ring of mountains entirely surrounds and encloses this secluded region. Their ridges vary in height and also in appearance. On the southern side we find that portion of the range, known as the Pir Punjál, with peaks varying in height from 8,000 to 15,000 feet, the sides of which are covered with dense forests and their summits crowned in winter with pure and glistening snow. On the northern side the mountains are still higher, approaching in some cases even 18,000 feet, bare and rugged in appearance, their loftiest being covered with a perpetual snow-cap. To all appearance, when surveyed from an eminence, the rocky walls of this prisoned valley appear to be unbroken and undivided. But such is not the case. There is one gap, and one only, in the rocky barrier. This is at the north-west end, where the river Jhelum, after collecting the drainage waters of the hills that surround the Valley, flows out by a narrow opening near Baramulla and proceed on its troubled course to become finally a deep and placid stream as one of the five great tributaries of the Indus in the Punjáb.

In latitude it corresponds with Pesháwar, Baghdád and Damascus in Asia ; with Fez in Morocco in Africa ; and with South Carolina in America.

The population of the Valley, including the Muzaffarábád district, is as below :—

Muhammadans	..	1,324,403	
Hindus ..	..	64,460	
Buddhists ..	..	3	
Sikhs ..	..	17,742	
Other Religionists	..	478	
TOTAL ..		1,407,086	Males .. 757,824 Females 649,262

The Valley is situated nearly in the centre of the Mahárája's territory. Its general direction is from north-west to south-east and is traversed by the river Jhelum which rises near Verinág at the south-east end of the Valley. From Verinág to Báramulla the river is 132 miles long, while by road the distance is only 85 miles. So sinuous is the river that some of its loops, three or four miles long, have necks which are less than a quarter of a mile across. This river is navigable from Khanabal to Báramulla, and is one of the principal beauties of the Valley, and no less important a factor in the prosperity of the country which it so materially adorns. This sluggish river, on whose breast is borne the traffic of the land, gives the Valley the piquant beauty of a variant landscape.

The following is the list of bridges on the Jhelum river in Kashmir with the names of their builders :—

No.	Name of Bridge.	Date of Erection.	Name of Builder.	REMARKS.
1	Khanabal ..	....	....	Original builder's name unknown. The existing bridge was built by Mahárája Pratáp Singh in 1894 A.D.
2	Bijbihára ..	1631 A.D.	Dárá Shikuh	It was originally a little higher up.

No.	Name of Bridge.	Date of Erection.	Name of Builder.	Remarks.
3	Sangam ..	1910 A.D.	Mahárája Pratáp Singh.	....
4	Pudgámpura	....	Sultán Haider	Was destroyed by fire during the time of Chaks and was rebuilt by Mahárája Pratáp Singh in 1912 A.D.
5	Pámpur ..	1635 A.D.	Sháh Jhehán	....
6	Pánda Chhuk	1588 A.D.	Habba Khotan, wife of Yusuf Chak.	Was swept away by flood a long time ago and was never rebuilt.
7	Amira Kadal	1773 A.D.	Amir Khán Jawánsher.	Became insecure by flood in 1893 A.D., was therefore pulled down in 1895 and rebuilt and opened for traffic on 14th May, 1896.
8	Haba Kadal	1550 A.D.	Habib Sháh	....
9	Fateh Kadal	1499 A.D.	Fateh Sháh	....
10	Zaina Kadal	1426 A.D.	Zain-ul-ábdin	....
11	Ali Kadal ..	1417 A.D.	Ali Sháh, brother of Zain-ul-ábdin.	....
12	Nau Kadal ..	1666 A.D.	Núrdin Khán	....
13	Safá Kadal	1670 A.D.	Saifdin Khán	....
14	Sumbal ..	....	....	Original builder's name unknown.

No.	Name of Bridge.	Date of Erection.	Name of Builder.	Remarks.
15	Hajin ..	....	....	Original builder's name unknown. Was swept away by flood long ago and was never rebuilt.
16	Sopur ..	1460 A.D.	Zain-ul-ábdin	....
17	Naurozpur	1479 A.D.	Sultán Hasan	Destroyed by Mukhtár-ud-Daula when at war with Abdullah Khán in 1807 A.D.
18	Báramulla ..	....	Atá Muhammad Khán.	Was originally at some distance below the present site of the bridge and was removed to the present site by Atá Muhammad Khán. Original builder's name unknown.
19	Domel ..	1888 A.D.	H. H. Mahárája Pratáp Singh.	Was swept away in the flood of 1893 A.D. and was rebuilt in 1903.
20	Kohála ..	1895 A.D.	Do.	Was originally built in 1871 at some distance below the present site of the bridge and was swept away by the flood of 1893.

There are beautiful lakes in the Valley which yield plentiful fish, *singhara* (water-nuts), lotus-roots (*nadur*), etc., and on which are floating gardens producing water melons, musk melons, pumpkins, cucumbers and other vegetables. Geese, duck, teal and other game birds are also to be found in thousands in them. It is a sight never to be forgotten to see these lakes in the autumn when bright lotus flowers are waving over the surface of the lakes in the resplendent beauty of their full bloom. These lakes are :—Dal, Vular, Anchár, Mánasbal near Sumbal, Tánsar, Hákursar (six miles from Srinagar on the Báramulla road), Khushálsar (near Zadibal) and Pambasar (near Naidkhai below Shadipur).

In normal years the Wular lake is 12·90 miles in length and 6·07 miles in breadth ; the Mánasbal lake 2·40 miles long and 0·47 mile broad ; and the Dal lake 3·87 miles in length and 2·15 miles in breadth.

Floating gardens are formed in the following manner :—

The roots of acquatic plants growing in the shallow water are cut about two feet under the water, so that they completely lose all connection with the bottom of the lake, but retain their former situation in respect to one another. When thus detached from the soil, they are pressed into somewhat closer contact, and formed into beds of about two yards in width and of an indefinite length. The heads of the sedges, reeds and other plants of the flow are now cut off and laid upon its surface and covered with a thin coat of mud, which, at first intercepted in its decent, gradually sinks into the mass of matted roots. The bed floats, but is kept in its place by a stake of willow driven through it at each end which admits of its rising and falling in accommodation to the rise and fall of water.

These floating gardens are sometimes stolen by taking out their stakes and floating them away. Hence it is said, among the curiosities of Kashmir, that land here is liable to be stolen.

The lotus is very common on all the lakes ; in fact the leaves are so numerous that in some places they form a veritable green carpet, over which innumerable acquatic birds, as ducks and moor-hens, run securely to and fro. When in bloom, such places present a beautiful sight which

Sir W. R. Lawrence describes in his book as follows :— "Lilies of various colours peep from amidst the verdant covering, the leaves forming which rest lightly and gracefully on the water, while the queen of all these species, the magnificent lotus, with its large leaf and tall and quivering stem, drooping under the weight of the exquisite and noble tulip-shaped pink and white flower, appears in the midst of this floating garden like a reigning beauty, bowing with modest, yet dignified grace, at the homage and admiration of her gaily-bedecked, but less favoured, rivals." Numerous other plants are to be found on the lakes as well as several varieties of reeds and rushes of which matting is made. The willows that lean over the lakes peer at the flashing boat in mute surprise. May be, a squall may spring up and make the waters dance. But brief will be that hour and repose cometh again. And when the moon shines like a frozen flame in speckless sky, the waters seem to be decked in robes of stars, streaked with the rays of the sun.

The land on both sides of the Jhelum is flat. It is alluvial and very fertile. Rice is extensively grown. Oil seeds, Indian-corn, wheat and barley are also cultivated. Vegetables are plentiful. All English vegetables can be well grown. The chief trees are cedars, pines, and spruces in the forests and planes, poplars and willows in the Valley ; while fruit trees, apple, pear, peach, cherry, mulberry, walnut, almond, etc., abound. French apple and pear trees have been introduced and they yield delicious fruits. The fruits are mostly exported and they send back sinews of prosperity to the country.

In the eastern hills there are small valleys, namely, Noubuk, Trál, Dachhigám, Wángat, Arin and Lolab. They are beautiful verdant glens, idylls, dells and dales, abounding with bears and other wild animals. The scenery in them is charming, the ground being park-like carpeted with rich grass and sufficiently interspersed with streams and patches of forest—exceedingly picturesque and delightful spots for the lovers of Nature.

Between the flat land and mountains are sloping hills, in which are situated delightful meadows called *Margs* which Nature has provided with numerous flowers in endless variety of form, colour and species. They are also rich in insect

life, more particularly in butterflies. The names of these Margs are :—

Gulmarg .. Used to be called Gaurimarg or the meadow of Gauri, wife of Shiva. From 1581 A.D. Yusuf Sháh, a king of Kashmir of the Chak dynasty, who used to visit the place during the hot season, changed its name into Gulmarg (flowery meadow). The Moghul Emperor, Jehángir, is said to have once collected as many as 21 different kinds of flowers here. Gulmarg is incomparably superior to any other hill station, with the possible exception of Ootacamund. Indeed, the scenery of Gulmarg compares favourably with that of the loveliest regions of Switzerland and the Tyrol. Towering above is the mountain of Apharvat, whilst the panorama of the mountains towards Nanga Parbat is magnificent. A moonlit Gulmarg is a glorious sight, the mist rising in the early hours of the morning giving the Marg the appearance of a mystic lake, and filling the soul with poetical ideas and inspirations, especially when seen after a pleasant evening spent among hospitable friends when the wanderer wends his way home at peace with the whole world.

Tangamarg below Gulmarg.
,, near Ahrabal water-fall in the Kulagám Tehsil.
Khelanmarg above Gulmarg.
Tilwánmarg near Gulmarg.
Sonamarg in Lár.
Vishnasarmarg in the mountains of Lár.
Kánamarg near Zojila.
Nágamarg on a hill to the north of the Wular lake.

Mohandmarg in Lár.	
Mahálishmarg ..	On the top of the Bharut mountain in Lár.
Gungabalmarg ..	
Sálanmarg ..	
Minimarg ..	Between Gures and Burzil.
Vijimarg ..	On the Vijbál mountain in Khuiháma.
Bangasmarg ..	On the way to Karnáh.
Tosamarg or Tosamaidán.	On the way to Punch.
Nunamarg ..	In the mountains above Khulnárawáw.
Kashunamarg, Zajamarg, Musamarg.	In the mountains of Devasar.
Ráinyúr ..	In the Hápatkhud mountain above Shupyan.
Nandamarg ..	Near Bánihal.
Fámarmarg ..	Near Wárwan.
Marganmarg ..	
Badmarg ..	In the Dachhinpura mountains called Aru and Mandlin.
Zabamarg ..	Near Badmarg.
Astánmarg (12,100 ft.) ..	Between the Sásakat mountain and Pahalgám.

Visitors spend the hottest part of the summer at these Margs, specially at Gulmarg.

Lower down are extensive tablelands or plateaus which are called *Karewahs* or *Wudars*. They are of alluvial or lacustrine material, often separated from one another by deep ravines, formed by the different water-courses in their passage from the mountains beyond to their destination, the river. The soil of these plateaus is rich, the richest being of Pámpur of which advantage has been taken through ages past for the cultivation of saffron. The plants, which are arranged in parterres, flower in October and the sight of these beautifully and delicately tinted purple flowers on moon-lit nights is most delightful.

The plateaus are :—

Mattan ..	Anantnág Tehsil.
Kanilwan ..	
Zainapur ..	Kulagám ,,
Bijbihára ..	
Bábápur ..	

Naunagar ..	Avantipura Tehsil.
Khámpur ..	
Dadiwudar ..	
Gosiwudar ..	
Pámpur ..	
Devapur ..	
Dámodar ..	Pratápsinghpura Tehsil.
Khushipura ..	
Hánjak ..	
Badgám ..	
Tsundapur ..	
Makahom ..	
Tserawudar ..	
Skandarpura ..	
Kriri ..	Báramulla Tehsil.
Ushkur ..	
Wágub ..	
Pattan ..	
Bandipur ..	Uttar Machhipura Tehsil.
Safápur ..	Srinagar Tehsil.
Krahámа ..	
Wájwudar ..	
Pándachh ..	

SPRINGS.

Kashmir abounds in springs of clear transparent water. The following is the list of important and well-known springs :—

Vernág ..	Anantnág Tehsil.
Vithavatur ..	
Vásaknág ..	
Pánzath-nág ..	
Lokabhavan ..	
Kokarnág in Brang	
Kother ..	
Achhabal ..	
Kárkotnág at Sálih	
Anantnág ..	
Khir Bhawáni ..	
Malaknág ..	
Mattan ..	
Gotamnág ..	

Khir Bhawáni at Manzgám ..	Kulagám Tehsil.
Kapála-Muchan or Digom near Shupyan	Avantipura Tehsil.
Moran	
Arpal	
Hári	
Wuyan	
Závur	
Zewan	
Náganik at Khrew ..	Shahr Khás Tehsil.
Guft Ganga	
Chishma Sháhi	
Chishma Sáhibi	
Vichárnág at Naushahar ..	
Khirbhaváni at Tulamul ..	
Nárán-nág at Wángat ..	
Utashan-nág at Mahgám ..	
Said Ganga, Haranág, Anantnág in Zainagir ..	Uttar Machhipura Tehsil.
Sheládevi at Báramulla ..	Báramulla Tehsil.
Sukhanág	Sri Pratápsinghpura Tehsil.
Devapurnág	
Sangi Safed	
Nilanág near Nágám ..	

Routes.

There are three main routes to Kashmir from India, namely, Jhelum Valley Road, Shupyan Road and Bánihál Road. The Jhelum Valley Road being a cart-road, 196 miles long, on which one can travel in one day from Ráwalpindi to Srinagar by motor car, and in two days by tonga, is most commonly used by travellers. Its construction was completed in 1890. It is spoken of by competent judges as being one of the finest mountain roads in the world. The volume of trade also passes by this road in bullock carts and ekkas. There is one serai at Gojra village near Muzaffarábád and another above Uri at the Paranpila village on the right bank of the river, which were built by the Moghul Emperor Jehángir. The Shupyan Road was once the highway along which the Moghul Emperors used to migrate to Kashmir, but now is a

mere skeleton of a road, being very rough and even dangerous in many places. Ladies must travel in *dandies* and the sterner sex might go on ponies except in certain parts of the passes where the wayfarer's own lower limbs are the safest and most reliable means of progression. The serais for travellers, built by Ali Márdán Khán, a Moghul Governor of Kashmir, for Sháh Jehán at different stages in 1651-58 A.D., are in as dilapidated a condition as the road itself. The Bánihál Cart Road is in a fairly good condition. The scenery all along the route is very grand and magnificent.

The following is the list of stages with distances of main routes to Kashmir and the Frontier Districts :—

(1) RAWALPINDI TO SRINAGAR *viâ* MURREE

Báráko		..	13½ miles.
Tret		..	12 ,,
Murree	(7,457 ft.)	..	13¾ ,,
Phagwári		..	14 ,,
Kohála	(2,000 ,,)	..	13½ ,,
Dulái	(2,180 ,,)	..	11¾ ,,
Domel	(2,320 ,,)	..	9½ ,,
Garhi	(2,750 ,,)	..	12¾ ,,
Hatián		..	11 ,,
Chakothi	(3,780 ,,)	..	11 ,,
Uri	(4,425 ,,)	..	13¼ ,,
Rámpor	(4,825 ,,)	..	14 ,,
Báramulla	(5,170 ,,)	..	15 ,,
Pattan	(5,200 ,,)	..	17 ,,
Srinagar	(5,250 ,,)	..	17 ,,

(2) HASAN ABDAL TO SRINAGAR *viâ* ABBOTABAD.

Abbotábád	(2,200 ft.) to Mánsera	..	16 miles.
Garhi Habibullah	..	..	18 ,,
Domel	.. ..	..	14 ,,

From Domel *vide* Route No. 1.

(3) GUJRAT TO SRINAGAR *viâ* BHIMBER.

Bhimber		..	28 miles.
Saidábád Serái		..	11 ,, A sandstone hill, called Aditak, to be crossed.

Nowshera	..	10 miles.	Another sandstone hill, called Kamán Gosha, to be crossed.
Chingas Serái	..	11 ,,	
Rajouri	..	13 ,,	
Thana Mandi	..	13 ,,	
Bahrám Gala	..	10 ,,	Rattan Pir (8,300 ft.) to be crossed.
Pushiána	..	10 ,,	
Aliábád Serái	..	11 ,,	Pir Punjal to be crossed.
Hirpor	..	11⅓ ,,	
Shupyan (6,715 ft.)	..	7 ,,	
Rámuh	..	10 ,,	
Srinagar	..	16 ,,	

From Saidábád there branches off a road leading to Kotli, the stages of which are as follows :—

Dharamsál	..	18 miles.
Khuiratta	..	7½ ,,
Dhana	..	7½ ,,
Kotli (*see* route No. 4)		6 ,,

From Thana Mandi another road leads to Punch by the following stages :—

Suran	..	14 miles.
Punch (*see* route No. 4)		14 ,,

(4) Jhelum to Srinagar *viâ* Punch.

Gutálián	..	10 miles.
Tangrot	..	14 ,,
Chomakh	..	10 ,,
Biari	..	8 ,,
Sainsa	..	14 ,,
Kotli	..	16½ ,,
Sehda	..	12 ,,
Punch (3,300 ft.)	..	10 ,,
Kahuta	..	10 ,,
Aliábád	..	7 ,,

Haiderábád	..	7	miles.
Uri	..	10	,,

From Uri *vide* Route No. 1.

(5) JAMMU TO SRINAGAR *viâ* BANIHAL.

Jhajar	..	19	miles.
Udhampur (2,500 ft.)	..	21	,,
Dharmthal	..	13	,,
Batot (5,200 ,,)	..	22	,,
Rámban (3,535 ,,)	..	17	,,
Rámsu (4,070 ,,)	..	16	,,
Bánihal (5,580 ,,)	..	10	,,
Vernág (6,000 ,,)	..	13	,,
Anantnág	..	17	,,
Avantipura	..	15½	,,
Srinagar	..	18½	,,

(6) JAMMU TO SRINAGAR *viâ* AKHNUR.

Akhnur (1,142 ft.)	..	18	miles.
Chowki Chora (2,150 ,,)	..	14	,,
Thanda Páni	..	10	,,
Dharmsála	..	10	,,
Siálsui	..	10	,,
Rajouri (3,094 ,,)	..	12	,,

From Rajouri *vide* Route No. 3.

(7) SRINAGAR TO LADAKH *viâ* ZOJILA.

Gándarbal (5,230 ft.)	..	14¼	miles.
Kangan	..	11¼	,,
Gond	..	13¾	,,
Sonamarg (8,650 ,,)	..	15¼	,,
Báltal	..	9	,,
Matáyan	..	15	,,
Drás (10,000 ,,)	..	13	,,
Thasgám (9,296 ,,)	..	15	,,
Chuni Gund (8,675 ,,)	..	15	,,
Kargil (8,787 ,,)	..	8	,,
Shargol (10,290 ,,)	..	16¾	,,
Kharbu (11,890 ,,)	..	19	,,
Lámayuru (11,520 ,,)	..	15¼	,,

Khalsi		..	10 miles.
Nurullah		..	8¼ ,,
Saspola		..	14¾ ,,
Nimu		..	11½ ,,
Pituk		..	14 ,,
Leh	(11,500 ft.)	..	4¼ ,,

(8) SRINAGAR TO SKARDU *viâ* ZOJILA.

Srinagar to Thasgám (*see* route No. 7).

Har Drás		..	18 miles.
Ulding Thang		..	19 ,,
Tarkati		..	14 ,,
Kharmang		..	17 ,,
Tulti		..	12 ,,
Parkota		..	14 ,,
Gol		..	12½ ,,
Thurgu		..	14 ,,
Skardu	(7,440 ft.)	..	7 ,,

(9) SRINAGAR TO GILGIT *viâ* BURZIL.

Shálateng		..	5 miles.
Sumbal		..	10¾ ,,
Bandipur	(5,300 ft.)		19 ,,
Trágbal	(9,160 ,,)		12 ,,
Gurai		..	13 ,,
Gures	(7,800 ,,)		15 ,,
Pushwári		..	14 ,,
Burzil Chowki	(10,740 ,,)		11 ,,
Chillam		..	17 ,,
Gudhai		..	16 ,,
Astor	(7,853 ,,)		17 ,,
Daskin		..	14 ,,
Doián	(8,720 ,,)		11 ,,
Bunji	(4,631 ,,)		18 ,,
Pari ..		..	18 ,,
Gilgit	(4,890 ,,)		19 ,,

From above Gures as far as Gurikot of Astor there is another road leading over the Kamri pass, the stages of which are as follows :—

Kamri ..		..	15 miles.
Kálápáni ..		..	14 ,,

Shankargarh	..	10 miles.
Rattu ..	..	15 „
Gurikot ..	..	15 „
Astor ..	..	6 „

There are other routes also, but they are very difficult and used only by the Zamindárs living in adjacent villages on either side of the passes. They are :—

(1) Srinagar to Punch *viâ* Firozpur.

Nárabal ..	..	10 miles.
Mágám ..	..	6 „
Firozpur ..	..	12 „
Banabalinág	..	11 „
Gagri ..	..	14 „
Punch ..	..	8 „

(2) Srinagar to Punch *viâ* Tosamaidan.

Vater Shel ..	..	14 miles.
Zánigám ..	..	6 „
Tosamaidán	..	7 „
Sultán Patri	..	16 „
Biárah ..	..	5 „
Mandi or Rájpur	..	7 „
Punch ..	..	13 „

(3) Srinagar to Punch *viâ* Dubjan.

Shupyan ..	..	26 miles.

Dubjan and across the Shupikur pass to Punch 60 miles.

(4) Srinagar to Rajouri *viâ* Darahal.

Shupyan across the Dárahál pass through Nandansar meadow and Hastivanj. Total distance 104 miles.

(5) Srinagar to Jammu *viâ* Budal.

Shupyan ..	..	26 miles
Názimgadhi	..	11 „
Dili ..	..	14 „

Budal	..	..	..	16 miles
Bhagoli	..	..	..	5 ,,
Náru	..	..	..	8 ,,
Chil	..	..	..	12 ,,
Bowli	..	..	..	8 ,,
Akhnur	..	..	..	8 ,,
Jammu	..	..	..	18 ,,

(6) SRINAGAR TO BUDAL *viâ* FATUN PANJÁL.

Shupyan	..	..	..	26 miles.
Watu across the Fatun Panjál			..	12 ,,
Kungwatan		..	..	3 ,,
Hamsán	..	..	..	10 ,,
Budal	..	..	..	10 ,,

(7) SRINAGAR TO JAMMU *viâ* KHURI.

Shupyan	..	..	..	26 miles.
Khuri	..	..	..	12 ,,
Gogalmarg	..	..	..	11 ,,
Gulábgadh	..	..	..	11 ,,
Angril	..	..	..	9 ,,
Táru	..	..	..	14 ,,
Arnás	..	..	..	10 ,,
Riási	..	..	..	16 ,,
Dhera	..	..	..	8 ,,
Nagrota	..	..	..	21 ,,
Jammu	..	..	..	9 ,,

(8) SRINAGAR TO JAMMU *viâ* DANAU.

Shupyan	..	..	..	26 miles.
Khuri	..	..	..	12 ,,
Danau across the Didmi pass			..	15 ,,
Marbal	..	..	..	14 ,,
Báranhál	..	..	..	24 ,,
Joining the route No. 7 at Angril			..	10 ,,

(9) SRINAGAR TO JAMMU *viâ* KHULNARVAV.

Shupyan 26, Khulnárváv 14, Danau, across the Mahu hill and Káwan 14, joining the Bánihal route at Rámsu 10 miles.

(10) SRINAGAR TO DODA *viâ* BRARIBAL.

Vernág	50 miles.
Across the Bráribál pass Boharkhan	60 ,,

(11) SRINAGAR TO KISHTWAR *viâ* MARBAL.

Anantnág	34 miles.
Ságám	14 ,,
Across the Marbal pass.	
Singhpur	24 ,,

(12) SRINAGAR TO MARIV *viâ* FAMAR.

Anantnág	34 miles.
Disu	15 ,,
Across the Hukhasar pass ..	15 ,,
Fámar meadow	15 ,,
Mariv	15 ,,

(13) SRINAGAR TO WARWAN *viâ* HIRABAL.

Anantnág	34 miles.
Thimran Dardapur	20 ,,
Suknáz across the Hirabál pass ..	20 ,,

(14) SRINAGAR TO KISHTWAR, BHADRWAH, BASOHLI AND PATHANKOT.

Anantnág	34 miles.
Achhabal Garden	$5\frac{3}{4}$,,
Khárapura	$8\frac{1}{4}$,,
Láran	4 ,,
Disu	3 ,,
Bona Khodin	4 ,,
Top of Simthan pass	4 ,,
Chanangám	10 ,,
Chhátru	7 ,,
Moghal Maidán	10 ,,
Kishtwár	4 ,,

From Kishtwár this route branches off to Páder (49 miles).

Kándni	9 miles.
Jangalwár	9 ,,

From Jangalwár this route branches off to Batot (43 miles) *vide* route (5).

Jura	8 miles.
Bhadrwáh	15 ,,
Sarthal	13 ,,
Bani	14 ,,
Bhond	13 ,,
Basohli	14 ,,
Dunera	8 ,,
Pathánkot	29 ,,

(15) SRINAGAR TO WARWAN *viâ* AMAR NATH.

Pahalgám		46 miles.
Chandanwári	(10,500 ft.) ..	7 ,,
Shishramnág or Wávjan	(12,850 ,,) ..	7 ,,
Panchatarni	(12,900 ,,) ..	7 ,,
Amar Náth ..	(13,900 ,,) ..	3 ,,
Sukhanág		24 ,,
Wárwan		4 ,,

From Wárwan this route branches off to Ladákh.

(16) SRINAGAR TO TILEL *viâ* MAHALISH.

Gándarbal	12¼ miles
Chhatrgul	8¾ ,,
Mahalish meadow	8 ,,
Gangabal	7 ,,
Rásabal	16 ,,
Badgám (Tilel)	30 ,,

From Tilel this route leads to Skardu on one side and Gures, Gilgit and Astor on the other.

(17) SRINAGAR TO CHILAS *viâ* KACHADUNA.

Sopur	30 miles.
Chágul	13 ,,
Kaláruch and across the Kachaduna pass	16 ,,
Shárda	40 ,,
Siri	10 ,,

Siral	..	..	.. 25 miles.
Chilás	..	..	.. 25 ,,

(18) SRINAGAR TO KARNAH *viâ* NASTACHHANU.

Sopur	..	..	.. 30 miles.
Handawára		..	.. 15½ ,,
Shivlura	..	..	.. 14 ,,
Drangayár across the Nastachhenu pass			8 ,,
Nalchan	..	..	.. 9½ ,,
Titwál (Karnáh)		..	.. 10 ,,

(19) SRINAGAR TO DRAWAH *viâ* ASHAI.

Sopur	..	..	.. 30 miles.
Farikin	..	..	.. 33 ,,
Across the Ashái and Treldabru passes	..	..	.. 30 ,,

EARTHQUAKES.

Earthquakes are frequent. There is a dormant volcano in Uttar Machhipura. The following is the list of severe earthquakes that are known to have occurred in Kashmir :—

Year.	In whose time.	Extent of damages caused.
2082-2041 B.C.	Sundar Sena ..	One night a destructive earthquake occurred by which the earth in the middle of the city of Sandimatnagar was rift and water gushed out in a flood and submerged the whole city. This submerged city forms the bed of the Vular lake.
1500 A.D.	Sultán Fateh Sháh ..	An earthquake occurred at night which destroyed many houses and many people perished. The shocks continued for three months.

Year.	In whose time.	Extent of damages caused.
1552 A.D.	Ismáil Sháh ..	This visitation of the earthquake was very severe. Many fissures occurred. Several springs became dry and new springs flowing with water were produced. In the Advin Parganah near Nandamarg there are two villages called Hasanpura and Husainpura and here the stream between the two villages changed its course and hence the land of the one changed place with the other, that is to say, a portion of the land of Hasanpura went into that of Husainpura and *vice versa*. At Máwar in Uttar Machhipura a mass of rocks rolled down the adjoining hill burying 600 people to death. The shocks continued for two months.
1662 A.D.	Ibráhim Khán ..	The earthquake on this occasion was severe. Many houses were destroyed and many people perished. The shocks continued for a long period.
1668 A.D.	Saif Khán ..	Constant shocks of earthquake occurred one day from evening to next morning but no loss of life was caused.
1735 A.D.	Dildiler Khán ..	A severe shock of earthquake occurred which threw down thousands of houses and its shocks continued for three months.
1778 A.D.	Karimdád Khán ..	Countless houses were razed to the ground. The shocks continued for one year during which the people were living out of their houses.
1784 A.D.	Azád Khán ..	Loss of life was immense. The shocks continued for about three months.

Year.	In whose time.	Extent of damages caused.
1803 A.D.	Abdullah Khán ..	Many houses were destroyed amongst which was the spire of the Sháh Hamdán Mosque.
26th June 1827 A.D.	Diwán Kripá Rám ..	The earthquake destroyed countless houses and many people were buried to death underneath them. The spire of the Sháh Hamdán Mosque, which had been re-erected, tumbled down again. The shocks continued for nine months.
1863 A.D.	Mahárája Ranbir Singh.	The earthquake occurred in the close hours of the morning. Fissures were produced in different places in Kruhen and Bángil, but no loss of life occurred. The shocks continued for three months.
1878 A.D.	Do.	16 houses together with their inmates were buried down into a chasm caused by the earthquake at Kundabal village near Mánasbal.
30th May 1884 A.D. at 3 A.M.	Do.	A fissure, 700 feet long, 300 feet broad and 70 feet deep, occurred at Laridur in Kruhen in which six houses with all their inmates disappeared. Over 10,000 houses were destroyed, 3,390 human lives and 40,000 cattle were lost. The shocks continued for 2½ months. The Mahárája distributed Rs. 30,000 among the sufferers for rebuilding their houses and remitted two lakhs of rupees in the land revenue of the Zemindárs who had suffered from the catastrophe.

Floods.

Though one is charmed to view from a point of vantage the beautiful glittering circle of lofty snow-capped mountains in Kashmir and to watch the glorious sunset transmute their snowy crests to a golden rose, he, if acquainted with the country, turns with a shudder remembering what catastrophe this snow causes to the country after a heavy rainfall in summer, when the warm rain water brings down with itself enormous quantities of melted snow and floods the valley, doing injury to life and limb and destroying crops and other property. The State has, however, started protective works against floods. In 1904 a spill channel was excavated which takes a large portion of flood water from the Jhelum above Srinagar through a swamp rejoining the river at some distance below the city, and this has proved of much benefit in protecting Srinagar from floods. Dredging works have since 1907 been started from Báramulla up to the Vular lake which are worked by electric power and they have minimized the chances of floods in the Valley and besides have reclaimed many swamps for agriculture. Appended is a list of great floods that occurred from time to time in Kashmir :—

Year.	In whose time.	Extent of damages caused.
2082-2041 B.C.	Sundar Sena ..	A destructive earthquake occurred by which the earth in the middle of the city of Sandimatnagar was rift and water gushed out in a flood and soon submerged the whole city. By the same earthquake a knoll of the hill at Báramulla near Khádanyár tumbled down which choked the outlet of the river Jhelum and consequently the water rose high at once and drowned the whole city together with its king and the inhabitants. This submerged city is now the site occupied by the Vular Lake.

Year.	In whose time.	Extent of damages caused.
855-883 A.D.	Avantivarman ..	Famine was caused by flood and then steps were taken to deepen the Jhelum near Khádanyár in order to accelerate the flow of the river. This measure had the effect of minimising the chances of flood.
917-8 A.D.	Pártha	Rice crop was destroyed by flood, the result being a great famine.
1122 A.D.	Harsha	Crops were swept away.
1379 A.D.	Sultán Shahábud-Din	10,000 houses were destroyed.
1573 A.D.	Ali Khán Chak ..	Many houses and crops were swept away.
1662 A.D.	Ibráhim Khán ..	Many houses were destroyed.
1730 A.D.	Nawázish Khán ..	Many houses and crops were destroyed.
1735 A.D.	Dildiler Khán ..	Thousands of houses were destroyed.
1746 A.D.	Afrásiáb Khán ..	10,000 houses and all the bridges on the Jhelum and also the crops were swept away.
1770 A.D.	Amir Khán Jawánsher.	All the bridges and many houses were destroyed.
1787 A.D.	Juma Khán ..	Fearful loss of property occurred. The Dal Gate gave way and all the eastern portion of the city of Srinagar was submerged.
1787 A.D.	Abdullah Khán ..	Crops were destroyed.
1836 A.D.	Col. Mián Singh ..	The bridges at Khanabal, Bijbihára, Pámpor and Amira Kadal were swept away.

Year.	In whose time.	Extent of damages caused.
1841 A.D.	Shekh Gulám Mohiuddin.	Rain fell for seven days continually, and as a consequence the Jhelum overflowed the Dal Bund and submerged the whole of Khányár and Rainá-wári. Six bridges from Fateh Kadal to Sumbal were swept away.
21st July 1893 A.D.	Mahárája Pratáp Singh	It rained incessantly for 59 hours and the river became so swollen that miles of land on both banks were flooded. The water rose to the height of R. L. 5197·0. All the bridges, except Amira Kadal, and many houses were destroyed. Loss of cattle and crops was immense and many people were drowned.
24th July 1903 A.D.	Do.	Five inches of rain fell between 11th and 17th July and eight inches from 21st to 23rd idem and the river rose to the maximum of R. L. 5200·37 on the 24th July at 2 P.M. The whole Valley became one vast expanse of water and fearful loss of life and property and crops occurred. The damages caused to roads and other Public Works alone rose to over three lakhs of rupees.

FAMINES.

Kashmir has suffered terribly from famines. Owing to its isolated position it is very difficult to obtain grains from other countries and a failure of crops results in a famine often prolonged. The whole Valley is practically independent of rain. A fairly hard winter, storing a sufficiency of snow on the mountain tops so that the gradual thaw through the summer keeps the irrigation canals constantly brimming, is all that is

wanted to ensure an abundant harvest. Every great famine that occurred in Kashmir was caused, not by summer drought, but by a too mild winter or by heavy rains in harvest season which destroyed the crops. The following is a list of famines which visited the country from time to time :—

Year.	In whose time.	Extent of damages caused.
150-114 B.C.	Tunjina I. ..	Once snow fell in the month of August which destroyed all rice crops, causing a wide-spread famine. The king gave all the money he had in his treasury for the relief of the distressed. It is said that a couple of roasted pigeons fell down from the sky to each individual every morning and thus the people were able to make war with the hunger-wolf, continuing so until the famine was over.
955-883 A.D.	Awantivarma ..	There was a great famine due to destruction of crops by floods. A *kharwár* of unhusked rice used to sell at 1,050 *Dinárs*.
917-8 A.D.	Pártha.. ..	Famine occurred owing to the crops having been destroyed by flood. A *kharwár* of grains sold at so much as 1,000 *Dinárs*. People perished of starvation by thousands.
1122 A.D.	Harsha, ..	The crops were swept away by flood and in consequence famine occurred. A *kharwár* of rice sold at 500 *Dinárs*.
1355 A.D.	Aláud Din ..	Untimely rains spoiled the crops which caused famine in which many people perished.
1469 A.D.	Zain-ul-ábdin ..	The crops were spoiled by excessive rains resulting in famine. The king took active measures for the relief of the famine-stricken.

Year.	In whose time.	Extent of damages caused.
1531 A.D.	Muhammad Sháh ..	Sayed Khán, ruler of Káshgar, had sent troops to invade Kashmir. The whole of winter passed in warfare and peace was concluded in the month of July. Owing to the skirmishes the land could not be cultivated and famine was the result which lasted two years and many people perished of starvation.
1575 A.D.	Ali Sháh Chak ..	Snow fell in the month of September which destroyed the rice crops and famine was the result which lasted three years.
1603 A.D.	Ali Akbar ..	Famine occurred on account of untimely rains. Akbar, the Great, sent grains from the Punjáb, but they were not sufficient and many people perished of starvation. The famine lasted two years.
1646 A.D.	Tarbiat Khán ..	The autumn crops were spoiled causing a famine. Sháh Jehán sent large quantities of grains from Gujrát, Multán and Lahore to be distributed among the famine-stricken.
1685 A.D.	Hifzullah Khán ..	The crops were spoiled by rains and famine occurred.
1723 A.D.	Azam Khán ..	Owing to excessive rains the crops were destroyed. A *kharwár* of *sháli* used to sell at Rs. 8. The famine lasted two years.
1731 A.D.	Ihtirám Khán ..	The autumn crops could not ripen on account of rains and it resulted in famine.
1745 A.D.	Afrásiáb Khán ..	The people had been reduced to the depth of distress owing

Year.	In whose time.	Extent of damages caused.
		to plunders by Bambus. They could not attend to sowings in the spring. Excessive rains in the spring also prevented them from cultivation. The result was a famine lasting seven months after which new crops were harvested. Two seers of rice used to sell for one rupee.
1755 A.D.	Sukha Jewan ..	The famine occurred owing to excessive rains which spoiled the crops. Khwája Abul Hasan Bánde, who was in charge of the Revenue Department, distributed the grains that were in store among the people in proportion to each family's requirements. One lakh *kharwárs* of grains were distributed among the Zamindárs as "Taccávi advance" on condition that it would be recovered from them next year. The advance remained unrecovered, but one *trak* per *kharwár* or one anna per rupee was recovered yearly from the Zemindárs by way of interest till 1833 A.D., and as in this way the advance had been recovered five times over it was totally remitted.
1765 A.D.	Nurdin Khán ..	The famine raged for six months owing to damage to the crops by excessive rains.
1813 A.D.	Azim Khán ..	The famine was caused owing to the crops not having ripened. A *kharwár* of *sháli* sold at Rs. 16 *khám*. The famine lasted about two years and scarcity for about six years.

Year.	In whose time.	Extent of damages caused.
1832 A.D.	Sher Singh ..	Mahárája Ranjit Singh started from Lahore to visit Kashmir. He deputed Jamádár Khushál Singh and Shekh Ghulám Mohi-ud-Din to collect supplies for his camp. They executed the orders with such rigour that the result was scarcity all over the country. Ranjit Singh, however, came to know of this scarcity and returned from Punch to Lahore. Then in the month of October when *sháli* had not yet been harvested there occurred a heavy snowfall which destroyed the crops. The consequence was a very severe famine. Even two seers of rice could not be had for one rupee. In 1833 A.D. Col. Mián Singh came to Kashmir as Governor. One evening he witnessed from a balcony of the Sher Gadhi Palace that there was not a single lamp lit in the city and heard no cock crowing in the morning, all fowls having been eaten up by the famine-stricken. This produced a distressing effect upon his mind, and he, with great endeavours, obtained a quantity of grains from the Punjáb and made the Zamindárs sow them. He also got fowls from the Punjáb and started their breed afresh. Some crops were produced and next year the famine disappeared.
1864 A.D.	Mahárája Ranbir Singh.	The harvest was scanty, and during the following spring there was scarcity, though there was plenty of corn in

Year.	In whose time.	Extent of damages caused.
		store in State godowns. Mahárája Ranbir Singh deputed Dewán Kripá Rám to make necessary arrangements. The Dewan reached Srinagar in June and found 60,000 *kharwárs* in the godowns. He caused this quantity to be sold freely in the bazar and thus relieved the tension of the situation. The Mahárája sent large quantities of grains from the Punjáb and had it sold in Kashmir at cheaper rates than they had actually cost. One lakh of rupees worth grains were distributed among the poor. Dewán Kripá Rám distributed 60,000 *kharwárs* of *sháli* at once in the month of October giving one *kharwár* to each family, and the famine disappeared.
1877 A.D.	Mahárája Ranbir Singh.	In autumn, when the *sháli* crops were still unharvested, rain fell continually for two and half months, destroying all the crops. Up to next spring there was no sign of famine as the grains in store were being sold to the people. After this there were no grains for seeds left and consequently no fresh cultivation could be done. The famine then began to rage severely. Even three seers of rice were not available for one rupee. Two-thirds of the population died of starvation. Mahárája Ranbir Singh, out of his characteristic generosity, got 195,714 maunds of grains transported from the Punjáb for the relief of the famine-stricken. This direful calamity lasted two and half years.

Epidemics.

The Happy Valley, so much sung in both prose and poetry for its natural beauty, was until lately notorious for filth. The dirt everywhere was an unendurable strain on eye and attention. Its capital, Srinagar, could be compared to another place beginning with h———— not heaven, to be sure. Latrine, public or private, there was none, and never a broom touched a public lane. Dr. W. Wakefield wrote in his book "The Happy Valley," published in 1879 A.D.—"Instead of a people that one would expect to find the cleanest of the cleanly, a short glance at their visible condition suffices to inform the spectator that he sees before him human beings, fashioned in the image of their Creator, but, alas! for their manners and customs, veritably the dirtiest of the dirty." In describing the insanitary condition of Srinagar, Dr. Mitra in his book "Medical and Surgical Practice in Kashmir," published in 1889, wrote as follows :—"The great elevation of the Valley and its favourable bracing cold climate prevent those bad results which would otherwise have manifested themselves under such insanitary conditions, but the conditions favourable for the growth and spread of zymotic and preventible diseases are here ; the town is a fit nidus for the development of disease germs—a most combustible fuel is there as it were, and a slight spark will ignite the whole and produce a disastrous conflagration." Again—"The scene of death and desolation during the summer of 1888 was one that will not soon pass away from living memory .... After two months the epidemic (of cholera) gradually began to decrease, and everybody began to feel safer, and thought that a new lease of life had been given. But, alas! peace has not yet come to those who understand how cholera came, how it revelled and feasted with every imaginable insanitary condition around it, how easy it is for it to come again, and how wide open the gates of this city are to welcome its dire visitors." Dr. A. Neve in his "Kashmir Mission Report for 1888" wrote :—"The wonder is, not that cholera came, but that it ever went away ; not that it slew 10,000 victims, but that so many escaped its ravages." Again—"Enough that cholera came and will come again, aye, and again, as long as it is thus prepared for, and invited and feasted by, a city reared on

filth, a people born in filth, living in filth and drinking filth."

So epidemics of cholera or other preventible diseases used to come and, after killing thousands, die their natural death and then come again, but no attempt was made to prevent their recurrence. After the cholera epidemic of 1892 the authorities—thanks to strenuous and ceaseless endeavours of Dr. Mitra, the then Chief Medical Officer of Kashmir and President of the Srinagar Municipality—took vigorous measures to sanitate the city of Srinagar and also the other Mofussil towns. An abundant supply of pure transparent pipe-water was brought into Srinagar ; roads were widened and paved or metalled ; latrines built ; and arrangements for cleaning the lanes made. Since then cholera appeared five or six times, but prevailed in a mild form, and seizures in Srinagar were very little compared with the figures of previous epidemics.

Vaccination has been introduced since 1894, and, needless to say, it has been a great boon conferred on humanity. Formerly small-pox played great havoc among children, decimating the population, but now a death from this disease is a rare occurrence.

A scheme for protecting the springs all over the country from contamination is under consideration of the Durbar, and when this is carried out, the country will become much less liable to the scourge of epidemic diseases.

I give below a statement showing epidemics that devastated the country from time to time :—

Year.	In whose time.	Extent of damages caused.
A.D. 1089–1101	Harsha ..	An epidemic of plague occurred.
1604 ..	Ahmad Beg Khán ..	An epidemic of cholera lasted 40 days with such virulence that it staggered humanity. The number of the dead was so immense that they could not be buried or cremated and, therefore, had to be thrown into the river.

Year.	In whose time.	Extent of damages caused.
1783 ..	Azád Khán ..	Thousands of people died of cholera in the city of Srinagar, but the Mofussils enjoyed complete immunity from the disease.
1819 ..	Diwán Moti Rám ..	Thousands of people fell victims to cholera.
1827 ..	Diwán Kripá Rám ..	An epidemic of cholera prevailed for one month during which thousands of people perished.
1845 ..	Shekh Gulám Mohi-ud-Din.	An epidemic of cholera raged for three months with such severity that cloth for shrouds became so scarce that the dead had to be disposed of naked or covered with grass.
1857–1858 ..	Mahárája Ranbir Singh.	Cholera raged in December and January and then ceased, but reappeared after three months and prevailed for two months more.
1867 ..	Do. ..	Cholera prevailed for four months and killed thousands of people.
1872 ..	Do. ..	An epidemic of cholera commenced from August and lasted four months, killing thousands of people.
1875–1876 ..	Do. ..	Cholera lasted 13 months from 29th December 1875 to January 1876, during which thousands died.
1879 ..	Do. ..	Cholera prevailed for 40 days and many people died.
1888 ..	Mahárája Pratáp Singh.	It was a very virulent epidemic of cholera, about 10,000 human lives being destroyed within two months.

Year.	In whose time.	Extent of damages caused.
1892 ..	Mahárája Pratap Singh	This epidemic of cholera was more severe than that of 1888. There were 16,845 seizures and 11,712 deaths, out of which 9,041 cases and 5,781 deaths occurred at Srinagar. It raged for four months from May to August.
1900–1902..	Do. ..	19,265 cases and 10,811 deaths from cholera occurred, out of which 2,439 cases and 1,293 deaths were at Srinagar, the epidemic lasting 18 months from August 1900 to January 1902.
1903–1904..	Do. ..	This was an epidemic of plague which prevailed from 19th November 1903 to 11th July 1904, killing 1,379 persons in Mofussils and 56 in Srinagar.
1906–1907..	Do. ..	Cholera prevailed from 13th November 1906 to 31st January 1907, during which 1,626 persons out of 2,629 cases died, 194 deaths occurring in Srinagar.
1910 ..	Do. ..	Cholera prevailed for five and a half months from 4th June to 17th November, during which 18,448 cases occurred and 9,211 lives were lost, 2,239 cases and 1,018 deaths occurring in Srinagar.

The above statement proves, beyond all doubt, that so long as Kashmir enjoyed its isolated position, it was immune from cholera, but as communications with the Punjáb increased, the number of invasions of the disease also increased. It further proves that cholera germs cannot germinate in the Kashmir climate, but as the insanitary conditions prevailing in the country are very bad, the

germs, on obtaining by chance an admission, thrive, grow and multiply for a limited period, until they die a natural death. Distance being no longer a safeguard against the influx of the disease, the remedy, in which alone the country's safety now lies, is none but improved sanitation.

Phenomena in Kashmir.

There are many places and things in Kashmir which are peculiar in themselves and some of them quite beyond ordinary human comprehension. The orthodox Hindus taking them as Divine manifestations worship them, while others consider that they are merely Nature's phenomena. Some of these I have visited and seen myself, and in regard to others which I have not been able to visit, I have ascertained facts from different reliable persons who have actually been to the places and seen the things for themselves. Anything I could not give credence to in regard to places mentioned below, has been omitted by me. There are other places about which wonderful stories are told, but I have omitted them also, as I was not able to visit them myself, nor any trustworthy person could corroborate to me the stories told of them. I give the information I have collected with the object that it may draw the attention of some scientist who may explain these freaks of Nature.

1. *Amar Náth.*—The celebrated cave of Amar Náth, situated in a long glacial gorge high among the eastern mountains, is visited by thousands of Hindu pilgrims from Kashmir and different parts of India on the full-moon day of the month of Sáwan (July-August) every year. It contains a self-formed Linga (the emblem of Shiva) of ice, which, waxes and wanes with the moon. The cave is 91 miles, divided into eight stages, from Srinagar, viz., Avantipur, Anantnág, Mattan, Pahalgám Chandanwári, Wáwjan, Panchatarani and Amar Náth; the last four stages being in mountainous regions destitute of human beings, where there are no trees to afford shelter and where for firewood juniper has to be used.

This pilgrimage is mentioned in book I,—267 of the Rajatarangini in the accounts of King Nara who reigned in

1048–1008 B.C., which proves that even before the time of Kalhana, the author of the book, who lived in the beginning of the twelfth century of Christian era, it was annually visited by pilgrims.

On the 11th day of the bright fortnight of Sáwan all pilgrims gather at Pahalgám and on the 12th march in a big caravan—a canvas town, bazar and all, springing up at each stage, reminding one of a long past age when the Rishis migrated in a host to Kashmir to practise austere penances, and of the fact that through all the centuries as now religion has been the overmastering passion of the Hindu race. It is for the sake of common safety that the pilgrims travel together in a compact body, as it is not unoften that in these cold bleak mountains, even in August, snow-storms occur in which hundreds of people perish. Those who perish are generally the Sádhus having little or no cloth to cover their bodies and no canvas or cloth sheet to pitch up for taking shelter in. The State has been issuing rations according to the following scale to such mendicants who come from India since the time of Mahárája Guláb Singh, so long as they sojourn in Kashmir preparatory to performing the pilgrimage :—

Cash payment on the day of the Sádhu's name being registered	1	rupee
Daily ration	1	seer rice
Daily cash payment	3	pies
For *charas* for the whole season ..	6	annas

When they start from Pahalgám, they are given each 3 seers of rice and 6 annas more in cash for *charas*, etc., for the days to be occupied by the journey. After this nothing is given by the State, as the Sádhus are supposed to leave the country after performing the pilgrimage. The Sádhus, who have got families with them, are given for the whole season for each adult member of the family :—*At Srinagar* : Cash 10 annas, Rice 8 seers. *At Pahalgám* : Cash 4 annas, Rice 3 seers.

Mahárája Pratáb Singh visited this pilgrimage thrice and saw with his own eyes what privations the pilgrims were suffering. Twenty-five years ago a mountain road was constructed from Pahalgám to Amar Náth. An excellent motor road has lately been opened right up to Pahalgám,

a total distance of some sixty miles from Srinagar. The tahsildar of the Anantnág tahsil, one magistrate, one medical officer and a band of policemen are deputed in charge of the pilgrim camp, and these officers do all in their power to render aid to the pilgrims. In spite of these arrangements, the toll of mortality was appalling whenever inclement weather prevailed. Now the State has conferred the greatest boon on the pilgrims by the construction of sheds at the stages. Five sheds costing Rs. 30,000 have been built at Pahalgám and the same number at Chandanwári, four at Wawjan and four at Panchatarani, each shed being 30 ft. by 15 ft. in dimensions.

The pilgrims bathe at the following places :—

Ganpatyár, Shurahyár, Shivapura, Pándrenthan, Sidhayár, Bárus, Jaubrári, Mithawan, Avantipura, Hári, Gyúru, Vágahom, Chakadhar, Divakiyár, Harishchandra, Thajiwára, Sirahámа, Badur, Sri Gufawára, Sakhras, Salar, Kothus, Khelan, Ganeshbal, Mámleshwar, Braghu Tirtha, Rám-kund, Sitá-kund, Lachhman-kund, Hanumán-kund, Nila Ganga, Chandanwári, Shisharam Nág, Wáwjan, Panchatarani, Amrávati, Sangam, Naudal.

There is another route to Amar Náth *viâ* Báltal, which is nearer by two stages, being only 71 miles from Srinagar and very much easier. Up to Báltal the road (59 miles) has already been constructed and is always kept in good condition, it being the highway to Ladákh and Central Asia. From Báltal to Amar Náth there is a distance of only 12 miles and out of this a road for three miles from Sangam to Amar Náth is already in existence. So there remain only nine miles from Báltal to Sangam which have got no road. There is a glacier on these nine miles over which people travel, but it is rendered impassable when the ice bridges melt in July. There are no engineering difficulties in the construction of the road, the hills on either side of the glacier having a gentle slope and very little jungle cutting being necessary to complete it. If this road is constructed, pilgrims will be for only one day in barren and dangerous regions, as up to Báltal there are shady *koil* trees to afford shelter and fuel—the two greatest necessaries of life here—and up to the village Nilagrár, six miles this side of Sonamarg, people inhabit permanently everywhere.

Tradition says that when the capital of Kashmir was at Sandimatnagar, which now forms the bed of the Wular Lake, pilgrims to Amar Náth used to go by this way. So if this small piece of road from Báltal to Sangam is constructed, it will be the conferment of an inestimable boon to pilgrims as well as excursionsts who would like to visit the pilgrimage before July.

The following interesting account of the pilgrimage to Amar Náth has been culled from the *Life of Swami Vivekananda* :—

" The procession of several thousands of pilgrims to the far-away Cave of Amar Náth, nestled in a glacial gorge of the Western Himalayas, through some of the most charming scenery in the world, is fascinating in the extreme. It strikes one with wonderment to observe the quiet and orderly way in which a canvas town springs up in some valley with incredible rapidity at each halting-place with its tents of various colours and of all shapes and sizes, with its bazaars, and broad streets running through the middle, and all vanishing as quickly at the break of dawn, when the whole army of gay pilgrims are on the march once more for the day. Then again, the glow of countless cooking-fires, the ashen-clad Sádhus under the canopy of their large *geru* umbrellas pitched in the ground, sitting and discussing or meditating before their *dhunis*, the Sannyasins of all orders in their various garbs, the men and women with children from all parts of the country in their characteristic costumes, and their devout faces, the torches shimmering at night-fall, the blowing of conch-shells and horns, the singing of hymns and prayers in chorus,—all these and many other romantic sights and experiences of a pilgrimage, which can be met with nowhere else outside of India, are the most impressive, and convey, to some extent, an idea of the overmastering passion of the race for religion. Of the psychological aspect and significance of such pilgrimages, done on foot for days and days, much could be written. Suffice it to say, that it is one of those ancient institutions which have, above all, kept the fire of spirituality burning in the hearts of the people. One sees here the very soul of the Hindu nation laid bare in all its innate beauty and sweetness of faith and devotion.

"Passing Bawan, noted for its holy springs, and Eish-muqám, and Ganeshbal, the pilgrims reached Pahalgám, the village of the shepherds, and encamped at the foot of an arrow-shaped ravine beside the roaring torrents of the Lidar. Here they made a halt for a day to observe the *Ekádashi* fast. Coming near Chandanwára, the next stage, they had to do on foot the first glacier, which proved to be a tremendous climb of several thousand feet. Extremely exhausted with making another steep climb, and finally scrambling up and down along irregular goat-paths at the edge of precipitous slopes they pitched their tents at a place amongst the snow-peaks, at an altitude of 18,000 feet, much higher than the glacier itself. The whole of the following morning was a steady climb over the Pish-Bal hill till at last the source of the Lidar, Shishram Nag, lay five hundred feet below, hushed in its icy cradle. Next day, crossing frost-bound peaks and glaciers over the Maha Gunas mountain the procession came down to Panchatarani, the place of the five streams. In each of these the pilgrims were required to make ablutions passing from one stream to another in wet clothes, in spite of the intense cold.

"On the 2nd of August, the day of Amar Náth itself, the pilgrims, after making a steep climb over the Rattan Pantsál and Bhairau Bál mountains and then a precipitous descent down the deep valley (after passing through the narrow hole of the Gharba Yátra on the razor-backed ridge), in which one false step would mean instant death, reached a flowing stream (Amrávati). In this they had to bathe and smear their bodies with clay-marl from bed before entering the sacred precincts of the Cave after another stiff ascent. They then reached the great Cave, in a very passion of the Shiva consciousness, the whole frame of many shaking with emotion. The Cave itself was 'large enough to hold a cathedral, and the great Ice-Shiva, in a niche of deepest shadow, seemed as if throned on its own base.' Then their bodies purified and whitened with the chalky silt, their face aflame with supreme devotion to Shiva, they entered the shrine itself, nude, except for a loin-cloth ; and kneeling in adoration they bowed low before the Lord. The awesome majesty of the whole atmosphere with the song of praise from a hundred throats resounding in the Cave, and

the shining purity of the great Ice-Lingám, overpowered all.

"Here there was all worship. 'I can well imagine,' Swami Vivekananda has said after visiting the pilgrimage, 'how this cave was first discovered. A party of shepherds, one summer day, must have lost their flocks and wandered in here in search of them. What must have been their feeling as they found themselves unexpectedly before this unmelting Ice-Lingám, white like camphor, with the vault itself dripping offerings of water over it for centuries unseen of mortal eyes. Then when they came home they whispered to the other shepherds in the valleys how they had suddenly come upon Mahadeva.'

"The journey down the mountain trails to Pahalgám was indeed as interesting as before. Amongst other sites the party passed the celebrated Lake of Death, into which, on one occasion, some forty pilgrims had been plunged by an avalanche, started, it is believed, by the volume of their song. The pilgrims shortened their journey to Astán-Marg by taking to a narrow sheep-track down the face of a steep cliff (Sásakat) and then proceeded to Pahalgám."

2. *Tulamul in Lár.*—There is a spring at this village, the water of which changes colour every now and then. Sometimes it is pink, sometimes green, and so on. The Hindus worship here. A large fair is held each month on the 8th and 15th days of the bright fortnight, specially of Jeth (May-June).

3. At Takar in Uttar Machhipura there is a spring, the water of which, like the Tulamul spring, changes colour every now and then.

4. *Trisandhya or Sunda-brári.*—This is the name of an intermittent spring to the south of the Divalgám village in Brang. It remains dry all the year round except in the months of Baisakh and Jeth (April-June). At first the water flows out from it continuously for some days as from an ordinary spring and then it does so at intervals, that is to say, the spring becomes quite void of water and then water reappears therein and flows out. This intermittance occurs several times in 24 hours, until in course of time the number of ebb and flow gradually dwindles down to none. A

Persian poet has written the following couplet describing this spring :—

Turfa 'aine hast dar Kashmir námash Sunda-brár
Amad-o-rafte 'ajab dárad ba roz-o-shab sih hál.

5. *Rudra-Sandhya.*—This is also a spring like Trisandhya, dry during the whole year but flowing with water continuously for some days and then getting void of it at intervals during the months of Baisakh and Jeth (April-June). It is six miles from Vernág towards the west.

6. *Vásuknág.*—This is a large spring, six miles further west from Rudra-Sandhya. It remains quite dry for six months of winter but flowing with water (which forms a big stream irrigating a large area) for six months of summer.

7. There is a spring situated five miles to the east of Vernág which is called Pavana-Sandhya. It ebbs and flows continually as though it breathes *pavana* or air like a living creature, hence its name. A Persian poet describes it in the following couplet :—

Chishmae dígar ba Kashmir ast námash Pavana-Sand
Hast har dam ámad-o-raftash chu anfáse rajál.

8. *Sata Rishi.*—These are seven springs close to one another at Vithavatur near Vernág, which, like Vásuknág, remain dry for six months of winter and flowing with water during summer months.

9. At Halamatpura in Uttar Machhipura there are five springs near one another. A *lingá* of stone is in one of these springs, which is said to move by itself round it, making one move from one corner to the other in one month. Some people explain this as below. The bed of the spring is sandy and its level varies with the action of water-oozing which makes one corner higher and the other lower alternately, and thus the *lingá* (which does not stand vertical but is lying in a horizontal position) in the bed of the spring rolls down slowly from the higher to the lower corner under the law of gravitation.

10. At Dubjan in Shupyan there is a spring called Tatadán, the water of which is warm. A similar spring exists at a place 68 miles from Anantnág across the Margan pass.

11. In Brang there is a spring at the village Gagar-Tshunda (10½ miles from Anantnág towards Vernág) above Lárikpura which is called Kon-nág by the Muhammadans and Sitá-kund by the Hindus. Some of the fish therein are blind in one eye.

12. In Lár is the lofty mountain called Harmukh. The popular notion is that a snake within sight of this mountain will not bite.

13. There is a cave temple, called Dyáneshvar, on a hill 12 miles to the east of Bandipura above Simthan village in the Arin Nullah, in which there are stone udders of cow on its ceiling, from which water drops down below. It is reached through a narrow passage about a yard in diameter and two chains long. There is a self-formed *lingá* in it.

14. There is a cave at Bumzu to the north of Mattan, the length of which none has yet been able to find. Another similar cave exists at Biru in which the famous ascetic and philosopher, Abhinaugupta, together with his 1,200 disciples is said to have entered and to have not returned.

15. There is a place called Svayambhu or Suyam, half a mile to the south-west of the village Nichihom in Machhipura, where after long periods, say once in 30 years, the earth gets heated for a year or so. The Hindus then go there on pilgrimage. Rice with water in pots, buried to neck into the earth, gets cooked by this heat, and the Hindus offer cakes of rice, thus cooked, in the name of their deceased relations. A flame is also produced by pouring down ghee and sugar and camphor in a hole dug into the earth about a foot deep. This is evidently a volcanic phenomenon.

16. There is a tiny little island in the midst of the Jhelum at Priyág on the junction of the Sindh with the Jhelum, on which is a small Chenar which does not either grow taller or shorter or bigger, though ages have passed since when it is there.

17. At the Wuyan village (Ular), 11¾ miles to the south-east of Srinagar, there is a spring, bathing in which has the effect of curing itch. There is a similar spring at Anantnág called Malaknág and also at Sadarkutbal, 22 miles from Srinagar on the Bandipur Road. Medical men say that they are thermal springs containing iron and sulphurated hydrogen.

18. There is a spring on the top of the Sarbal mountain in Kothár which is called Tsuhar-nág. The water of it gushes out with great force, making whirls like the potter's wheel.

19. There is a rock on the top of a hillock called Haldar, overlooking the Manasbal lake towards its north-east. It rises 1½ mile above the shrine of Bábá Sáleh or 2½ miles above the lake. The spot is called Mukhta Pukhar and is situated near the village called Ingura to the north of the Lar Kul Nullah. The ascent to it is over the plateau called Ranin. From underneath this rock a little water is oozing out. Every year on the Nirjala Ekádashi day a fair is held here. The pilgrims sing in one chorus—

Balabhadra Haldaro palah talah poni tráv, meaning—

O Balabhadra Haldara (Krishna's elder brother) allow water to flow out from under this rock!

Then suddenly water flows out in a large volume from underneath of this rock which suffices for the bathing of the pilgrims assembled.

At this spot there was a stone image of cow from whose four udders water used to come out in drops. It is said that about one hundred years ago this image was removed by the Zamindars of the neighbouring villages and buried somewhere under the rocky earth near by.

20. At Yáripura village, five miles to the north of Kulagám, a thick roundish, somewhat flat-surfaced boulder, not exceeding one maund in weight, is lifted by 11 Mahomedan priests standing in a circle round it, each holding it upon his right hand index-finger while uttering the number 11.

Ancient Monuments.

Ancient monuments of very great archæological interest, which disclose the existence of a lost civilization, are numerous in Kashmir. They were built to endure for all time. Their solidity of construction and their gigantic size strike one with wonder that puny man could have built them. Kings have come and gone, civilizations have bloomed and vanished since they were built. People go and pace around them and gaze on them with amazement. But the disintegrating hand of Time and vandalistic propensities of

certain bigoted rulers, specially of Sikandar the Iconoclast (1392-1416 A.D.) have laid them to ruins. The climate of Kashmir is peculiarly destructive to them. Besides the chemical constituents of the atmosphere, namely, carbonic acid gas and oxygen, the frosted snow lying upon the stones (uncovered by any shelter) for nearly five months of winter, is ever slowly and silently smouldering them, so that some of them have become friable. The founders of these monuments were wise enough to use sculptured stones of very large dimensions, as smaller ones should have, under these adverse conditions, crumbled and vanished long ago. The State has made arrangements to conserve these relics of ancient glory. An official, bearing the designation of Superintendent of Archæological Department, has been appointed whose business it is to look after them and save them from decay. The following are those ancient edifices of which some traces are still to be found :—

1. *Temple at Bandi.*—The first ancient monument that a traveller comes across while on his way to Kashmir is the temple of green stones situated on the road at the 76th mile from Kohála. It is now in a ruinous condition. Its builder and the date of its building are unknown. Some think that it is a Buddhist monument, while others assert that it was a Hindu temple dedicated to the goddess Káli and built about 700 A.D.

2. *Temple at Buniár.*—Next comes the temple at Buniár which is situated, like the above, on the road near the 85th mile from Kohála. It is in a most perfect condition in the Valley. The name of the builder of this temple and the date of its construction are not known. It is said it was built in the 5th century of the Christian era and was dedicated to goddess Bhaváni.

3. *Linga at Shiri.*—Near the 94th mile from Kohála there is a colossal *linga* carved with figures on all sides which stands about 12 feet high.

4. *Temple at Fatehgarh.*—At the village Fatehgarh, 1¼ mile to the south of Shiri, stand the ruins of an ancient temple. Mahárája Ranjit Singh had a fort built round it, using some of the stones of the ruined temple for the construction of his walls of defence. Some of the stones are

very large, measuring about 11 feet in length, 4 feet in height and 3 feet in thickness. The name of the builder is unknown.

5. *Naráyan Thal.*—The temple at Naráyan Thal stands in a small tank on the right bank of the Jhelum, one mile from Báramulla on the old road to Muzaffárábád and about two and half miles to the south-west of the former place. It is situated at the foot of a hill in a hollow. Nothing is known about its old history.

6. *Temple at Tápar.*—At the village Tápar, twelve miles onward from Báramulla towards Srinagar, are the ruins of a temple called Narendreshvara, which was built by Narendra-prabhá, queen of Partápáditya II, who reigned in Kashmir from 634 to 684 A.D. It was ruined by Sikandar, the Iconoclast. Zain-ul-ábdin (1423-74 A.D.) used the stones in the construction of the bund from Náidkhai to Sopur.

7. *Temple at Pattan.*—At Pattan, five miles further on from Tápar, are two large stone temples on the road side These, which bore the name of Shankara-Gaurisha and Sugandheshvara, were built by Shankara-Varman, who reigned in Kashmir from 883 to 902 A.D., and his queen Sugandha. There is also a stone stupa here at the 19th mile from Srinagar.

8. *Shankaráchárya or Takht-i-Sulemán.*—The most conspicuous monument that draws the attention of a visitor on reaching Srinagar is the Shankaráchárya temple on the crest of the Takht-i-Sulemán hill. It was originally built by Sandimán, who reigned in Kashmir from 2629-2564 B.C. It was repaired by King Gopáditya (426-365 B.C.) and by King Lalitáditya (697-734 A.D.). Sikandar did not break it. Zain-ul-ábdin repaired its roof which had tumbled down by earthquake. Shekh Ghulám Mohiud-din, a Sikh Governor (1841-46 A.D.), also repaired its dome. There were steps of sculptured stones from the Jhelum river, leading right up to the top of the hill. With these stones, it is said, the Pathar Masjid in the city was built by Núr Jahán, queen of Jahángir. The Buddhists still regard this temple sacred and call it Pas-Pahar.

9. *Narpirasthán.*—In the city of Srinagar, the first ancient edifice that one sees is the temple of Narendra-svámin (which was built by Lkhana-Naráindráditya, who

reigned in Kashmir from 178 to 191 A.D.). It is about 100 yards from the right bank of the river between the 2nd and 3rd Bridges. It has been turned into a Ziárat and is called Narpirasthán.

10. *Sháh-Hamadán Mosque.*—Going down by boat further on, one's attention is arrested by a large wooden building on the right bank between the 3rd and 4th Bridges which is called Sháh Hamadán. It is a Muhammadan shrine, built in memory of Sháh Hamadán, *alias* Mir Sayid Ali, a saint of Hamadán in Persia, who came in Kashmir in the reign of Sultán Qutb-ud-din (1373-98 A.D.) and practically established Islám in the country. Qutb-ud-din originally built it with the materials of a Hindu temple at this place which was called Káli-Shri and was dedicated to the goddess Káli by King Pravarasena II (79-139 A.D.). The Hindus worship Káli here on the river bank and say the spring of the goddess is inside the mosque. In 1395 A.D. Sikandar made an extension to this mosque.

In 1479 A.D. it was destroyed by fire and the king of the time, Sultán Hassan Sháh, rebuilt it. It was single-storied. During the reign of Sultán Muhammad Sháh, a Shia, named Mir Shamas Aráqi, arrived in Kashmir. He got a double storied Shia mosque built at Zadibal. Gházi Khán, Musa Raina and Káji Chak, who were the ministers of Sultán Muhammad Sháh, were converted by him to the Shia cult and, at his instance, they got the permission of the Sultán to pull down the Sháh Hamadán mosque, telling him deceptively that it did not look well as single-storied and that it would be made double-storied. The mosque was pulled down but its rebuilding was indefinitely postponed. Then after two years, Káji Chak's sister, named Sáleh Máji, wife of Sultán Muhammad Sháh, rebuilt the mosque, selling her dowry to meet the expenditure. It cost her three thousand rupees and sixty thousand copper coins.

In 1731 A.D. the mosque got again burnt down and was reconstructed by Abul Barkat Khán, and is standing since then, being repaired from time to time.

Soon after the conquest of Kashmir by the Sikhs, Hari Singh, the first Sikh governor, ordered the demolition of the mosque, saying that, as it was a Hindu shrine, the Muhammadans should take off their possession from there. He sent

guns which were levelled towards the mosque from the Pathar Masjid *Ghat*, and now everything was ready to blow it away. The Muhammadans then went to Pandit Bir Bal Dar who, having brought the Sikhs in Kashmir was in great power, and requested him to intervene and save the mosque. He at once went to the governor and told him that the Hindu shrine, though in the keeping of the Muhammadans, was in a most protected condition and the removal of the mosque would be undesirable, as it would simply lay it open to constant pollutive touch of all sorts of people. Thereupon Hari Singh desisted from pulling it down.

11. *Pathar Masjid.*—Just opposite the Sháh Hamadán mosque on the left bank of the river is a mosque built of polished stones which is called Pathar Masjid or Nau Masjid. It was constructed by Queen Núr Jahán, and it is said the stones of the stairs, which led up to the top of Shankarachárya hill, were used in building it. When it was completed, the Sunnis rejected it as a mosque, for the reason of its having been built by a woman of the Shia sect.

12. *Mahá Shri.*—Below the 4th Bridge on the right bank of the river is a five-domed temple called Mahá Shri, which was built by King Pravarasena II. It has been turned into a graveyard. The wife of Sikandar was buried in its interior. Zain-ul-ábdin was buried outside the temple, hence the locality is since called Bad Sháh, which was the title of Zain-ul-ábdin.

13. *Skanda-bhavana.*—At the 6th Bridge at some distance from the right bank of the river towards the north are the ruins of the temple of Skanda-bhavana, now called Khandabhavan, which was built by Skanda-gupta, minister of King Yudhishthira II (139-78 A.D.). It has been utilized as the Ziárat of Pir Muhammad Basur.

There are also the ruins of an ancient temple near the river bank at the 6th Bridge which was founded by Pravarasena II, and called Lauki Shrí. The ghat of this temple is still called Lokhari-Yár, a corruption of Lauki-Shrí-Yár.

14. *Tribhavana-svámin.*—Passing further on below the 6th Bridge, there are on the left bank of the river the ruins of a stone temple called Tribhavana-svámin, which was built by Chandrapida, who reigned in Kashmir from 684 to 693

A.D. A Muhammadan saint, named Thaga Bábá Sáhib, is buried close to it and hence the place is now called Thaga Bábá Sáhib.

15. *Kshema-Gaurishvara.*—Passing on below the 7th Bridge at the confluence of the Dudganga river with the Jhelum, King Kshema-Gupta (950–958 A.D.) built a temple of Shiva, calling it after his own name Kshema-Gaurishvara. A number of sculptured stones of this temple, together with one bearing an inscription in Shárada character, have been lately unearthed at this place.

16. *Diddá-Matha.*—Just opposite to the above place on the right bank of the Jhelum, Diddá, queen of Kshema-Gupta, built a Matha called Diddá Matha, and hence the whole ward of the city in which it was situated is even now called Didda-Mar. This Matha has been converted into the tomb of Malik Sáhib.

17. *Ali Masjid.*—From Diddá Matha if one goes towards the north he has to cross a large plain *Aidgáh* used for mass prayer meetings by the Muhammadans, to reach a big mosque called Ali Masjid. It was originally built by Ali Sháh, brother of Zain-ul-ábdin, in 1397 A.D. It was destroyed by fire in 1800 A.D. and was then reconstructed by Gul Muhammad Khán, a big official of the time.

18. *Vikrameshvara.*—About two miles further on towards the north near Vichárnág, are the ruins of the temple of Vikrameshvara, built by Vikramáditya (521-63 A.D.). It was destroyed by Sikandar, who utilized its stones in the construction of a mosque and a school near by.

19. *Amritabhavana.*—Passing half a mile further east, one reaches the ruins of the temples of Amritabhavana built by Amritaprabha, queen of Megaváhana (22 B.C.—13 A.D.). The locality is now called Vántabhavan.

20. There are other ruins of Hindu temples in different places between Srinagar and Vichárnág, which have been converted into Ziárats and burial-grounds and nothing is known about their antiquity.

21. *Ráneshvara.*—About two miles from Vichárnág towards the south, is the temple of Ráneshvara built by King Ranáditya (414-74 A.D.). It has been utilized as the Ziárat of Madin Sáhib.

22. *Vishnu Raná-svámin.*—Proceeding further on to the south, there is a very large Chak burial-ground containing many curious and ancient edifices. Here was the temple Vishnu Raná-svámin built by the queen of King Ranáditya.

23. *Jáma Masjid.*—About four minutes' walk towards the south-east is the famous Jáma Masjid or Bad Mashid, built originally by Sikandar in 1404 A.D. with the materials of a large stone temple constructed by King Tárápida (693-97 A.D.). The roof of the four surrounding cloisters of the building is supported by two rows of pillars, 372 in all, the smaller ones measuring above 21 feet in height, while the loftier ones under the domes and spires being more than double that height—producing a most imposing effect. The court-yard measures 254×234 feet. There are remains of several stone temples round this mosque, whose builders are not known.

The history of Jáma Masjid is of interest and it has passed through many vicissitudes. Thrice it was destroyed by fire and rebuilt: once in 1479 A.D., again in the days of Jahángir in 1619 A.D. and once more during the reign of Aurangzeb in 1674 A.D.; the present structure dating from the days of Aurangzeb. In the time of Sikhs it was closed for 23 years and was re-opened in 1841 A.D. by Ghulám Mohi-ud-din, one of the governors of Sikhs.

The site of the mosque is considered sacred by the Buddhists also, and even now men from Ladákh visit the Jáma Masjid and call it by its old name Tsitsung Tsublak Kang.

The Mahárája gave Rs. 12,000 in September 1893 and again Rs. 40,000 in September 1912 for the repairs of this mosque.

24. *Sadbháva-Shri.*—A few minutes' walk to the west of the great mosque near Kádi Kadal, there is the temple of Sadbháva-Shri, built by Pravarasena II, which has been utilized as the Ziárat of Pir Háji Muhammad. Sultán Qutb-ud-din was buried here.

25. *Pravarisha.*—Turning now again towards the east beyond the Great Mosque, is the temple of Pravarisha, built by King Pravarasena II. It has been utilized as the Ziárat of Baháuddin Sáhib.

26. *Ziárat of Akhun Mullah Sháh.*—On the southern slope of the Hari Parbat hill, is the Ziárat of Akhun Mullah Sháh, who was the spiritual leader of Emperor Shah Jahán and of his eldest son, Dára Shikuh. This building is now in ruins.

27. *Ruined Mosque at Hassanábád.*—About half a mile further on towards the south-east near Náidyár, there is a fine old ruined mosque built by the Muhammadans of the Shia sect in the time of Akbar. Colonel Mián Singh, a Sikh governor, demolished it and the blocks of limestone were carried away to form the ghat of Basant Bágh opposite the Shergadhi palace. This place was the scene of religious strife, bloodshed, fire and plunder, which occurred in 1874 A.D. between the Sunnis and Shiás.

28. *Hazratbal.*—On the bank of the Dal Lake, about two miles from Hassanábád, is the greatest shrine of the Muhammadans in Kashmir, called Hazratbal. In it is the sacred hair of the Prophet which is shown to the people on certain days in the year when large crowds of the Muhammadans congregate here. This holy relic was brought to Kashmir by Khwája Nurdin from Bejapur in 1700 A.D.

29. *Nasim Bágh.*—About half a mile further, on the border of the Dal Lake, is the Nasim Bágh (Garden of Breeze), laid out by Emperor Sháh Jahán. It contains hundreds of magnificent shady Chenárs (1,200 had been originally planted) and is a most delightful camping-ground. A Persian poet has said—

Dar jahán chún ba hukm-i-Sháh-i-Jahán,
Dauhæ tázah az na'im ámad,
Kard gulgasht-i-án chu Sháh-i-Jahán
Bulbul az shákha gul kalím ámad;
Guft tárikha dauhæ sháhi,
Az bihishte Adan Nasím ámad.

When in this land by order of Sháh Jahán
A fresh garden came into existence out of magnificence.
When Sháh Jahán roamed therein
Bulbul spoke from a blossomed branch
Said the date of the royal garden
" From the paradise of Eden breeze has come."

The last line of the stanza gives the chronogram of the laying out of the garden, viz., 1045 Hijra (1635 A.D.).

30. *Suna Lank.*—From Nasim Bágh one can see in the centre of the Dal Lake a small island called Suna Lank. Zain-ul-ábdin, who reigned in Kashmir from 1423 to 1474 A.D., built a three-storeyed cottage here which afterwards tumbled down by an earthquake. Jahángir and his beautiful and accomplished queen, Núr Jahán, who had the fine taste to select lovely spots throughout the Happy Valley where the Emperor's pleasure gardens are to be found, did not miss this beauty spot and they constructed a villa here in which they occasionally retired from the cares of the world. This villa fell in course of time into decadence. Then Amir Khán Jawán Sher, the founder of the Shergarhi, who was one of the Durani governors of Kashmir (1770-76 A.D.) and who was also a pleasure-loving man, rebuilt that villa and used to spend most of his time with a Dal Hánji wife in merry-making there. This structure, too, has since vanished.

31. *Habbak.*—Half a mile from Nasim Bágh in its north is the garden at Habbak. It was laid out by Saif Khán, one of the Moghal governors of Kashmir (1665-68 A.D.), and it was called Saif-ábád after his name. He desired to make it excel the Nashátbagh and Shálamár in beauty. He brought a stream of water from the Sindh Nullah to feed the fountains, grottos and cascades in this garden. But before the excavation of the stream was completed, he was summoned back to Delhi by his master, Aurangzeb. He had deferred planting groves of plane trees and cypresses therein, pending the coming of water by the excavated stream, but as he had suddenly to depart from Kashmir he could not plant them. The garden having thus remained shadowless for want of trees, the poet said :

Sáyih gar nist Saifábád rá
Mitwán Paighambare bághát guft.

Saifabad has got no shade

It might therefore be called the Prophet of the gardens.

Mahárája Ranbir Singh started flour and rice pounding mills in this garden in 1870 A.D. which were worked by water power by jail prisoners. He also started a silk factory here. Since then it is called Raghunáthpura.

32. *Shálamár.*—On the north-eastern corner of the Dal Lake, is the celebrated Shálamár. According to a legend, Pravarasena II, the founder of the city of Srinagar, had built a villa on the edge of the Dal Lake in its north-eastern corner, calling it Shálamár, which, in Sanskrit, means "the abode of love." The king used to go often to visit a saint, named Sukarma-Svámi, living near Hárwan, and took rest in this villa on his way to, and from, that place. In course of time this villa vanished, and then the village, that had sprung up in its neighbourhood, was called Shálamár after the name of the villa.

In 1619 A.D., the Moghul Emperor Jahángir laid out a garden at this village and called it "Farah-bakhsh" meaning "Delightful." A Persian poet gives the chronogram of the laying out of the garden, viz., 1031 Hijra in "Farhatgáh-i-Sháhí" in the following stanza :—

Chu shud árástah Bàgha Farah-bakhsh
Ba hukme Hazrate Zille Iláhí,
Shahanshához shahán Sháhe Jahángir
Ki mashhúr ast az mah tà ba máhí,
Paye táríkha in gulzár-i-rihán
Khirad farmúd "Farhatgáh-i-Sháhi."

When Farah-baksh Bágh was prepared
By order of the Shadow of God.
Jahángir, the Emperor,
Who is famous from the moon to the fish ;
For the year of this flower garden
Wisdom suggested "the royal delightful resort."

In 1630 A.D., Zafar Khán, a Moghul governor of Kashmir, made an extension to this garden towards its north by order of Sháh Jahán. This new portion of the garden was called "Faiz-bakhsh" meaning "Bountiful." Khisáli, a Persian poet, has written :—

Chu bághe Faiz-bakhsh az hukm-i-sháhí,
Abar bághe Iram gashtah mubáhí.
Farah-bakhsh az kamále iftikhárash,
Chu gul bar farqa khud dádah qarárash.
Azin rú Káshmír fakhre jahán ast,

Ki dar wai gulshane Sháhe Jahán ast.
Paye tárikh-a-sálash subhgáhe
Khirad guftá " masarrat-gáh-i-sháhí."

When Faiz-bakhsh, by the imperial order
Became the pride of the garden of Eden,
Farah-bakhsh, with much pride,
Placed it like a flower upon its head.
Kashmir is the pride of the world, because
Within it is the garden of Sháh Jahán.
For its year one morning
Intellect suggested " a royal pleasure resort."

The words " masarrat-gáh-i-sháhi " in the last line of the above stanza indicate the chronogram of the laying out of the garden, viz., 1042 Hijra (1632 A.D.).

The Shálamár is connected with the Dal Lake by an artificial canal, twelve yards wide and about a mile long. On each side of this canal, there is a broad and green path, overshadowed by large trees, and, where it joins the lake, there are blocks of masonry on both sides, which indicate the site of an old gateway. There are also the remains of a stone embankment which formerly lined the canal throughout.

The Shálamár is 590 yards long and its width at the lower end is 207 yards, while that of the upper end is 267 yards. It is surrounded by a brick and stone wall about ten feet high and is arranged in four terraces lying one above another and of nearly equal dimensions. There is a line of tanks or reservoirs along the middle of the whole length of the garden and they are connected by a canal, 18 inches deep and from 9 to 14 yards wide. The tanks and the canal are lined with polished limestone, resembling black marble, and they are provided with fountains. The water is obtained from the Hárwan stream behind the garden ; it enters into its upper end and flows down from each successive terrace in beautiful cascades into the reservoir below containing numerous fountains, and, after leaving the garden, it falls into the outer canal, by which it is conducted to the lake.

The uppermost or fourth terrace was the private portion of the garden where the Eves created an Eden on earth

in the palmy days of the Moghul Emperors. It contains in its centre a magnificent black stone pavilion which is raised upon a platform a little more than three feet high and 65 feet square. Its roof is sloping, about 20 feet high and supported on each side by a row of six elaborately carved black marble pillars which are of polygonal shape and fluted. It was used as a banqueting-hall, a favourite place for entertainments of various kinds. When at night the fountains were playing and the canal and its cascades, the pavilion and the garden were lit up with various coloured lamps shedding their light upon the throng of gaudy and jewel-bedecked guests and causing reflection on the tanks and water-courses so as to appear like fiery lakes, the effect must have been exceedingly pretty. Frogs made of silver, strung on silver wire, were tied round the fringes of the ponds touching the water and, as they were made so ingeniously by some expert mechanic, the ebb and flow of the water, caused by the fall of the cascades and fountains, shook them and made them croak as if they were living. This article used to be buried secretly somewhere in the garden by the gardener after use on festive occasions. He never informed even his own family members of the spot where it was hidden, lest the matter might get known and the article be stolen for its valuable metal. This gardener died and, as his death was sudden, he could not divulge this secret to any one. So the above article still remains buried unknown underneath the earth somewhere in the garden.

The pavilion is surrounded by a fine reservoir which is 52 yards square and about $3\frac{1}{2}$ feet deep. It is lined with stone and contains 140 large fountains. Upon each side of the terrace, built against the wall, there is also a lodge. These formed the private dwellings of the royal family. On the edge of each of the three lower terraces there is also a small pavilion which overlooks the fountains in the tank below. Each of these consists of two apartments on each side of the canal over which is a covered archway uniting the two, and that of the lowest is supported by sixteen black stone pillars which are fluted and of polygonal shape.

Bernier, who visited Kashmir with Aurangzeb, gives an interesting account of this garden in his travels and says that the doors and pillars made of stone used in the garden were

found in some of the idol temples demolished by Sháh Jahán, and that it was impossible to estimate their value.

It was in this garden that the Emperor Jahángir enjoyed the intense delight of making up the quarrel with his Nur Mahal " the light of the Harem."

33. *Gupta Ganga.*—1⅓ mile from the Shálamár gate to the south, is the famous spring of Gupta Ganga at which a fair is annually held on the Basákhi day. Immediately behind the tank is a ruined mound with its base formed of carved stone slabs of evident antiquity. It marks the site of a temple built by King Sandhimati, *alias* Aryáráj (69-22 B.C.).

34. *Nashát Bágh.*—A few hundred yards from Gupta Ganga is the Nashát Bágh, or " the Pleasure Garden," which is situated two miles to the south of the Shálamár. It was laid out by Asaf Jáh, brother of Núr Jahán, queen of Jahángir. A Persian poet thus rapturously sings its praise :—

Chún Bágha Nashát shud shigufta
Az yásaman o rihán u gul há,
Khurshid-i-jahán u Asafe dahr
Gustard bisát u khurd mul há
Dar gosh-i-nasim guft sálash
Gulzár-i-nashát u 'aish-i-dil há.

When Nashát Bágh was in blossom,
With fresh jasmine and other flowers,
Asaf—the sun of the world—Solomon's vazier of the universe—
Spread the carpet and took liquors,
In the ear of breeze it said its year
" The garden of Nashát and the delight of hearts."

The last line of the above stanza gives 1044 Hijra (1634 A.D.) as the chronogram of the laying out of the garden.

In 1634 A.D., this garden was visited by Sháh Jahán. He found it was far better in point of scenery than the Shálamár and spoke to Asaf Jáh thrice that it was a delightful garden, expecting that Asaf Jáh would tell him that it might be accepted by the Emperor as his own garden. But Asaf Jáh kept silent. This inwardly displeased the Emperor.

The garden was, as it is now, supplied with water from the same stream which supplied the Shálamár, and the Emperor, in his anger, ordered that, as the watercourse belonged to the Shálamár only, no water should run to any other garden from it. This at once made the Nashát shorn of all its beauty. Asaf Jáh, who was staying in the garden, felt very sad but, of course, could do nothing. One day, observing the desolate look the garden wore for want of water, he felt exceedingly grieved, and throwing himself on his back in a corner heaved up deep sighs, and in this melancholy mood went to sleep. A servant of his knowing the cause of the grief that weighed down upon him, went to the place where the stream was stopped and, removing the blockage, brought water to the Nashát. At once did the fountains begin to play and the cascades to make a pleasing noise, and this awakened up Asaf Jáh. He enquired, in surprise, how the water had come and got much alarmed lest the Emperor might hear of this and get annoyed. His servant stood up before him and told him that, as he had seen him in sorrow for want of water in the garden, he could not bear it and, therefore, secretly went and removed the blockage from the stream. Asaf Jáh upbraided him for having done so and hastily got the stream closed again. The news reached the ears of the Emperor and he summoned the man who had committed the offence. The poor man, trembling with fear, pleaded guilty and spoke, with folded hands, to the Emperor that he had done this because the sorrow of his master, caused for want of water in his garden, was unbearable to him, and that he would submit to any punishment the Imperial Majesty might award to him for the offence. Now everybody thought the man would be given a very severe punishment, but, to their surprise and delight, the Emperor admired the devotion of this faithful servant and bestowed a *khilat* of honour upon him and, besides, gave his master, Asaf Jáh, a *sanad* granting him the right of drawing water from the Shálamár stream, for the Nashát Bágh.

The Nashát Bágh is 595 yards long and 360 yards wide and is surrounded by a stone and brick wall which, on the front side, is 13 feet high. It is arranged in ten terraces, the upper three of which are much higher than the others, being from 16 to 18 feet, one above the other. There is a line of

tanks along the centre of the whole garden and they are connected by a canal about 13 feet wide and 8 inches deep. The tank and the canal are lined with polished stone containing numerous fountains, and a grassy path with stone steps traverses each side of the canal. The stream, which feeds it enters the garden at the upper end and flows down the successive terraces in cascades which are formed by inclined walls of masonry and are covered with stone slabs beautifully scalloped to vary the appearance of the water. Some of the cascades are very fine, being from 12 to 18 feet high.

There are two principal pavilions, one at the lower and the other at the upper end of the garden. The lower pavilion is double-storied and built of wood and plaster upon a foundation of stones. Its lower floor is 59 feet long and 48 feet wide and enclosed on two sides by beautiful lattice windows made of wood. In the middle of it there is a reservoir about 14 feet square and 3 feet deep which is full of fountains.

The upper storey possesses a lofty corridor on its eastern and western sides. On its northern side there is an apartment, 25 feet long and 14½ feet wide, which is enclosed by lattice work, and on the southern side there is also a similar but smaller apartment. An opening in the middle of the floor, about 27 feet square, commands a view of the fountains in the reservoir below. In front of this pavilion and upon the terrace below it, there is a very large reservoir filled with fountains.

The upper pavilion is situated upon the edge of the highest terrace and consists of a double-storied building on each side of the canal which is crossed by an archway uniting the two. The lower storey of each building contains one room which is 26 feet long and 13 feet wide. The archway between them is supported on each side of the canal by a double row of wooden pillars painted red and green, and it is 43 feet long, 36 feet wide and about 40 feet high. On the terrace below this pavilion there is also a very fine reservoir which is 102 feet wide, 123 feet long and 3 feet deep and it contains 25 large fountains.

Giant plane trees (chenárs) shade the walks which are bordered by lines of cypresses and all around is soft green turf. Lofty crags rise for thousands of feet precipitously above the garden, forming an effective contrast to the gentle

beauty of a white soft expanse of the lake and village-dotted plane in the opposite direction. The water runs through the garden for irrigation purposes, but when picnics or pleasure parties are held, it is turned into the limestone channels and the fountains play, and, when the garden is lighted up by illumination in the evening, on festive occasions, the whole place looks like a Fairy Tale scene. The best time to spend in this lovely garden is morning when it is shady here and the lake far below is glittering with the light of the sun. The poet has truly said :—

Subha dar Bágha Nashát o shám dar Bágha Nasim,
Shálamár o lála-zár o sair-i-Kashmir ast u bas.

Morning at the Nashát Bágh and evening at the Nasim Bágh,
Shálamár, and tulip fields,—these are the places of excursion in Kashmir and none else.

35. *Chashma Sháhi.*—Proceeding 2½ miles from Nashát Bágh towards the south, one reaches the Chashma Sháhi spring, much esteemed for its pure, transparent and cold water. It is nearly a mile from the south-eastern margin of the Dal Lake. There are three terraces in the small garden in which the spring is situated, also a central canal, tanks, waterfalls and fountains, all fed by the spring which is situated at the south end of the garden. This garden was laid out by Ali Mardán Khán by order of Sháh Jahán. The chronogram of the laying out of this garden, viz., 1042 Hijra (1632 A.D.), is given in *Kausare Sháhi* in the following Persian stanza :—

Dosh dídam nishasta bar kausar
Sháhi Márdán Ali Jam jáhí.
Guftamash al salám, guft'alek,
Guft bar gú digar chih mikhwáhí.
Guftamash bahr-i-chashma tárikhe.
Guft bar gúi "Kausare Sháhi."

Yesterday I saw sitting at the spring of paradise,
Sháh Mardán Ali of Jamshed's splendour.
He said "Say what do you want."
I told him "A date for the spring."
He said "Say Royal Spring."

From Chashma Sháhi is sighted a small island in the centre of the Dal (Kotwal) which is called Rupa Lank on which Sultán Hasan Sháh had built a cottage which was destroyed in the time of the Sikhs.

36. *Pari Mahal.*—Pari Mahal (Fairies' Palace), also called Kúntilun, is an old ruin standing grandly on a spur of the Zebanwan mountain on the southern side of the Dal Lake. It is about a mile from the margin of the lake and terraced up the hill side, the face of each terrace having deep arches. It was a school of astrology, built by Prince Dárá Shikuh (Sháh Jahán's eldest son) for his tutor, Mulla Sháh, whose Ziárat is situated on the southern slope of the Hari Parbat hill.

37. *Pándrenthan.*—On the road to Anantnág, the first ancient edifice that is met with is the old Hindu temple standing in the middle of a tank at Pándrenthan, $3\frac{3}{4}$ miles from Srinagar. It was erected during the reign of King Pártha (921-31 A.D.) by his prime minister, Meru, who dedicated it to Mahádeva under the title of Meru Vardhana Svámin. The ground about it was then occupied by the original city of Srinagar, the modern name of Pándrenthan being a corruption of the Sanskrit Puránadhishthána (old capital). This old city was destroyed by fire in the reign of Abhimanyu about the year 960 A.D.

38. *Mosque at Pántachhuk.*—About two miles further up is a wooden mosque. It was erected by Hubb Khotan, wife of Yusuf Chak who ruled in Kashmir in 1578-84 A.D. Hubb Khotan was a peasant woman but being very handsome, described by Persian historians as the very perfection of youth, health and grace, and highly gifted with the fine art of singing songs in solos, Yusuf Chak fell in love with her and married her after she had divorced her peasant husband. Here was a romance something like that of the celebrated Queen Núr Jahán. Yusuf Chak was no less a pleasure-loving prince than Jahángir. He luxuriated in the spell of lovely weather at Gulmarg, Sonamarg, Ahrabal and Achhabal and on the Dal lake, his motto being—

Ba 'aish kosh ki tá chashm mizani barham
Khizán hamirasad-o-naubahár miguzarad.
Hasten to be merry, as within a twinkle of eye
Autumn may approach and spring may pass away.

39. *Khunmuh.*—About five miles to the north-east of Pándrenthan, lies the village of Khunmuh, the ancient Khunamusa, famous as the birth-place of Bilhana, the poet. It contains the ruins of some old temples in the middle of small tanks found here and there which have been converted into Ziárats.

40. *Miniature temple at Khrew.*—About three miles from Khunmuh, lies the village of Khrew, the ancient Khaduvi, where there is a monolithic temple (miniature) of stone. Nothing about its antiquity is known. On the hill here is the shrine of Jwálá Ji on which a temple has been built by Dr. Bál Kishen Kaul which is reached by a long flight of hewn stone steps.

41. *Ruins of temple at Pámpur.*—About four miles towards the south-west of Khrew is the town of Pámpur, the ancient Padmapur, founded by Padma, the powerful uncle of the puppet-king Chippata-Jayápida. Padma built here a temple, called Vishnu-Padma Svámin, of which scanty remains are now to be found. Close by is the Ziárat of Mir Muhammad Hamadáni with some fine and ancient columns and ornamented slabs which are likely to have been taken from the above-mentioned temple.

42. *Temples at Ladhuv.*—About four miles from Pámpur towards the south-east, there are two temples at Sandyásarnág, one surrounded by water and a smaller one near by. Nothing is known about the antiquity of them.

43. *Miniature temple at Kuil.*—Six miles from Ladhuv towards the south-west across the Jhelum at Kuil, a village at the foot of the Naunagar plateau at its northern end, there is a miniature temple cut out of one stone. Its founder and date of building are not known.

44. *Páyar.*—About two miles further on from Kuil towards the south-west at Páyar, is an ancient temple. It is in almost perfect condition, and, in intrinsic beauty and elegance of outline, is superior to all the existing remains in Kashmir of similar dimensions. Its excellent preservation is due to its retired situation and the marvellous solidity of its construction. The interior is occupied by a large *Lingá.* The temple was built by King Narendráditya who reigned in Kashmir from 483 to 490 A.D.

45. *Temple ruins at Jaubrár and Avantipura.*—Avantipura lies on the right bank of the Jhelum about four miles towards the east of Kuil. It was once a large city founded by King Avantivarma, who reigned in Kashmir from 855 to 883 A.D. The whole neighbourhood is filled with ruins, but the only traces of its former greatness are the two temples which he founded, one before, and the other and larger one, after, his accession to the throne. Both were dedicated to Mahádeva, the former under the title of Avanti-svámi and the latter under that of Avantishvara. These two temples are situated on the bank of the river, one at Avantipura and the other about a mile to the north near the village of Jaubrár. They dazzle the visitor with their sumptuousness, magnificence and grandeur.

46. *Temple of Narasthán.*—At Narasthán, about ten miles north-east of Avantipura, are the ruins of a temple. The situation overlooking the narrow valley is picturesque, and behind it the ground is sloping up towards the lofty mountains. Nothing is known as to who built it and when it was constructed.

47. *Moghul garden at Bijbihára.*—Ten and half miles from Avantipura to the south, lies the town of Bijbihára. Here on both sides of the river is the garden of Dárá Shikuh, in which there are magnificent Chenárs. One Chenár is so thick that its trunk measures 54 feet in circumference at the ground level. The two portions of the garden were once united by a bridge, the ruins of which are still found.

48. *Ruins at Lokabhavana.*—Twelve and half miles from Bijbihára towards the south, is the village Lokabhavana, now called Lárikpura. King Lalitáditya (699-736 A.D.) built a town here. There are several ruins and a spring at this place and a small garden pavilion erected by Aurangzeb near the spring.

49. *Verinág.*—Nine and half miles from Lárikpura to the south, lies Verinág, a village at the foot of the Pir Panjál pass. It is famous for its spring. The water issues from the north-eastern side of a high and well-wooded hill and is received into an octagonal stone basin, 10 feet deep, which was constructed by Jahángir in 1612 A.D. The fine garden, with fountains, aqueducts, and a cascade, in front of the spring, was laid out by Sháh Jahán about 1619 A.D.

50. *Temple and spring at Kuthár.*—About ten miles from Verinág in the Arapath valley, there is a spring called Pápashodhan Nág near the village Kuthár, round which are still to be found some remains of the enclosure erected by King Bhoja of Málva (during Ananta's time, 1028-63 A.D.). The tank of the spring was constructed by a Rája of the Deccan, named Matshakund, who, according to a legend, had ears like those of a buffalo which he got rid of by bathing n this spring.

51. *Achhabal.*—About four miles to the south-west of Pápashodhan spring, lies Achhabal, the ancient Akshavala, founded by King Aksha which, when originally founded by King Aksha who reigned in Kashmir from 486 to 426 B.C., was a large town.

The place is noted for its spring, which is the finest in Kashmir and supposed to be the re-appearance of a portion of the river Bringhi whose water suddenly disappears through a large fissure underneath a hill at the village Divalgám in Brang. It is said that once, in order to test this, a quantity of chaff was thrown in the Bringhi river at the place its water disappears at Divalgám and that chaff came out of the Achhabal spring.

The water of the spring issues from several places near the foot of a low spur called Sosanwár, which is densely covered with deodars, and at one place it gushes out from an oblique fissure, large enough to admit a man's body, and forms a volume some 18 inches high and about a foot in diameter. It comes out as if it remounted from the bottom of a well with violence and boiling.

In 1640 A.D., Jahánára Pádsháh Begum, daughter of Sháh Jahán and Mumtaz-i-Mahal, finding here the most splendid opportunity afforded for man's hand to lend help to Nature, laid out a garden at this place, calling it Begamábád. It was also called Sáhibah-ábád. It may be stated here that it was this lady who was severely injured by her dress catching fire in 1644 A.D. and was cured under the treatment of Dr. Gabriel Boughton at Agra who got as his fee from the Emperor the right for his countrymen to trade free of customs and other duties in Bengal. The Achhabal garden is 467 feet long and 45 feet broad and is surrounded by a stone wall and divided into two portions. It contains many fruit trees

and some very large Chenárs, and the ruins of a Hamam (Turkish bath) and other buildings. The water of the spring flows through the garden which is traversed by three canals; the central one about 16 feet wide and one on each side, about 6½ feet wide. Along the central canal there are two large tanks; the upper one is 188 feet long and 74 feet broad and contains in its centre a wooden pavilion which is about 18 feet square and rests upon a platform of masonry; and the lower tank is about 80 feet square. There are three waterfalls in the upper part of the garden, one on each canal, and the largest is the middle one, which is twelve feet high and about eight feet broad. There are also three waterfalls outside the lower end of the garden, one on each canal and the largest is the middle one, which is eight feet high and about six feet wide. The tanks and canals are lined with stone and abound with fish, and a large number of fountains are erected in them.

Trout-culture has lately been started here.

52. *Mártand Temple.*—Four miles to the north of Achhabal on the plateau, is situated the most impressive and the grandest ancient ruins in Kashmir. This temple, called Mártandeshvara, is said to have been built by King Rámadeva (3005—2936 B.C.) with large, ornamented and beautifully carved stones, erecting it to the height of 50 yards. It is rectangular in shape. Some stones of this temple are six to nine feet in length, and it is surprising how they were brought here and piled up.

There are ruins of a quadrangle and rectangular colonnade round the temple, having on all its sides niches and a row of octagonal pillars which give to the whole a complexity which never fails to strike the beholder with astonishment and awe. This colonnade was, it is said, erected by Lalitáditya (697—734 A.D.). Rámadeva had founded a large city on this plateau which was called Bábul, and the present Mártand canal, whose ancient name was Váhni, had been originally brought here by him. Several pillars of the colonnade are still standing and between each are trefoiled niches, while the capitals of the larger pillars are richly carved and ornamented, their shafts, which are grooved rather than fluted, being also surmounted by an ornamented neck of beads. The façade of the building, which stands in the interior, is abreast of the

gates of either colonnade and one-third of the whole length of the quadrangle intervenes between it and the front gate which faces to the west, a bank of stones occupying the place where there was originally a flight of steps leading to the doorway. Both sides of the doorway on the front are carved, being miniature representations of those in the interior; but they are so much injured by time as to be scarcely perceptible, except when the sun brings them out with a strong shadow. The interior is divided into two compartments; that at the entrance s nine yards in length, and at the western end is in an inner chamber or crypt five yards long, surrounded by blank walls, but open like the other to the face of day, all semblance of a roof having long since disappeared beneath the shocks of earthquakes and the unsparing hand of Sikandar But-Shikan.

In the centre of either side of the larger anterior chamber is a window reaching to the floor, and about eight feet in height. The walls, thus divided quarterly, are filled up with single figures in relief, two of the sun and two of the Goddess of Wealth, one in each panel. The building was apparently two stories high, and judging from other ruins in the country, the upper part was certainly pyramidal, and the whole fabric must have been of considerable height; for its present height of 40 feet or so has been diminished by earthquakes. Perhaps the only unaccountable parts of the ruins are two side buildings like detached wings, sculptured with figures of the same character as those inside the building; but most probably these were merely ornamental, and joined by a flying buttress to the upper part of the centre building.

53. *Mattan.*—About 1½ mile from the Mártand temple towards the north below the plateau, is the Mattan or Bhavan spring. It is a famous Hindu pilgrimage where, during certain months in each Hindu leap year, pilgrims perform *Shráddha* of their deceased relations. A garden was laid out in front of this spring by Asaf Jáh by order of Sháh Jahán.

54. *Temples at Bumzu.*—The caves of Bumzu are situated on the left bank of the Liddar river about a mile north of Mattan. One cave is interminable and in it, after passing a passage 50 feet in length, one reaches the door of a temple. About 20 feet from the entrance there is a low and

narrow passage leading off to the left and about 60 feet beyond it on the same side is a small and circular chamber.

Another cave is in the same mountain about three minutes' walk further on. Its entrance is about 100 feet above the ground. There is a stone temple in it.

Just below this cave is a stone temple built by Bhima Sháhi, king of Kabul, the maternal grandfather of Queen Didda in the lifetime of her husband, Kshemagupta, which is plastered with earth and converted into the Ziárat of Bábá Bámdin, a Muhammadan saint. Another temple close by has been turned into the tomb of Rukh Din Reshi, disciple of Bábá Bámdin.

55. *Temple at Mámal.*—Going further up in the Liddar valley on the other side of the river, opposite the Pahalgám camping ground, are found the ruins of a small temple with a stone lined tank in front. Its builder is unknown.

56. *Ruins at Sangam near Amburher.*—Returning to Srinagar, if one goes by road to the Sindh valley, he will find, at a distance of 6¼ miles from Srinagar, a village, called Amburher. Queen Suryamati (1028-86 A.D.) founded two *Mathas* here. Ruins of old temples scattered here and there are found at this place.

57. Near Bachhpura village there is an old Chenár garden called Iláhi Bágh, which was planted by Jahángir, who, together with his Queen Núr Jahán, used to visit it on clear moon-lit nights in a small boat which was towed up through the Buta Kadal Nullah by only female servants, the jingles on whose feet made a sweet music.

The chronogram of the laying out of this garden, viz., 1050 Hijra (1639 A.D.) is to be got from Bágh Iláhi in the following Persian couplet :—

Falak áshufta búd az bahr-i-sálash
Malak guftá bigu Bágha Iláhi.

Heaven was puzzled for its year,
The Angel said " Say, the Divine Garden."

58. *Ruined temple at Thiun.*—At a village called Thiun, in the Sindh valley, there are ruins of an ancient temple whose founder is not known.

59. *Ruins of temples at Nárán Nág.*—At Nárán Nág in the Sindh valley, 30 miles from Srinagar, there are some ruined temples. They are in two groups situated at a distance of 200 yards from each other and consist of six and eleven buildings respectively. King Jalauka (1394-34 B.C.), King Narendráditya Khinkhila (308-272 B.C.) and King Lalitáditya Mukhtapida (697–734 AD.) each, erected a temple here.

60. *Tulamulla.*—On the return journey if one goes from Gándarbal (17¾ miles from Nárán Nág) to Tulamulla, about three miles towards the west, he will find there a spring which is a most popular pilgrimage of the Hindus. Its water changes colour every now and then being sometimes pink, sometimes green and so on. In its centre was an ancient temple built of large slabs of dressed white stones, whose builder's name is unknown. That temple had tumbled down. The late Mahárája Pratáp Singh got the old stones built into a platform on the original site in the centre of the spring and erected a small temple of white marble on this platform.

61. *Ruins at Paraspura.*—About five miles to the west of Tulamulla, lies the plateau of Paraspura, called Parihâspura in olden times. A city had been founded here by Lalitáditya, in which many temples were erected. Of these there remains now only a confused mass of huge blocks of stones. A century and a half after Lalitáditya's death, King Shankara-Varma used some of the materials of these temples in building his own at Pattan. King Harsha (1089-1101 A.D.) spoliated them of silver images, and Sikandar finally destroyed them.

62. *Ruins at Andarkot.*—About three miles from Paraspur towards the north, lies the village Andarkot. There are ruins of ancient temples here which were built by King Jayápida (753-84 A.D.) whose capital was at this place.

63. *Miniature temple at Mánasbal.*—Further on from Andarkot at the south-eastern corner of the Mánasbal Lake, is a miniature temple built of stones standing in the water. Nothing is known of the history of this temple.

64. *Suna-Lank.*—About 15 miles down the river Jhelum from Mánasbal, is a small island in the Wular Lake.

It was raised and shaped by Zain-ul-ábdin in 1421 A.D. with the object that boats, caught in sudden gales of wind in the lake, might get a mooring place here and be saved from being swamped. It is said that there existed a ruined temple under water here on the top of which Zain-ul-ábdin raised this island. The words *khurram bád* in the following Persian couplet give the chronogram, viz., 847 Hijra (1443 A.D.) :—

In buqa chu bunyád-i-falak mahkam bád
Mashhúr ba Zaina Dab dar álam bád
Sháh Zainulábdín tá ki daro jashn kunad
Paiwasta chu tárikha khudash khurram bád.

May this place endure like the foundation of heaven !
Be known to the world by the name of Zaina Dab !
So that Zain-ul-ábdin may hold festivities therein,
May it ever be pleasant like his own date !

65. *Ruins at Firozpur.*—About 1½ mile above the bridge over the stream below Gulmarg at a village called Drang, there are ruins of an ancient temple. Nothing is known about the old history of these ruins. The word " Drang " signifies a watch station established near mountain passes for guarding the approaches to the Valley. This Drang might have been built to watch the approaches by the Firozpur Nullah.

Srinagar.

The Capital of Kashmir is Srinagar founded by Pravarasena II who ruled from 79 to 139 A.D. It is situated almost in the centre of the Kashmir Valley and stands for over three miles on both banks of the Jhelum spanned by seven bridges, which form the principal means of intercommunication between the two sides of the city. These bridges, except the Amira Kadal, have been built on stacks of logs on the cantilever principle. This city may well be called Asiatic Venice, intersected as it is by several canals, viz., Már (excavated by Zain-ul-ábdin in 1420-70 A.D.), Suntikul, Dúdganga, Kutakul and Sunarkul, all full of gay house-boats, shikáras, and other boats which span on them their quiet careers. These water-courses ripple by day and twinkle by night. The height of the city above the sea-level is 5,250 feet.

The number of its houses is 25,673, its area $9\frac{7}{128}$ square miles, and its population as follows :—

Muhammadans ..	..	110,935	
Hindus ..	..	30,004	
Sikhs	..	541	
Other Religionists	..	255	
TOTAL ..	..	141,735	Males .. 76,604
			Females 65,131

FIRES.

Earthquakes and floods have rendered it necessary to use timber largely in the construction of houses in Kashmir, but cold drives the people to make free use of the *kángri* with live charcoals, and these have combined to make the houses peculiarly liable to fire. The Durbár have organized a Fire Brigade in Srinagar since 1894 which, assisted by the water-works which have got so much pressure as to discharge water on the top of the highest house in the city, has greatly minimized the chances of fire. Subjoined is the list of great fires that occurred from time to time in the Srinagar town :—

Year.	In whose time.	Extent of damages caused.
958-972 A.D.	Abhimanyu ..	The ancient city of Srinagar, founded by Ashoka at Puránadishthána or Pándrenthan, was destroyed.
1322 A.D.	Sahadeva ..	Zulqadr Khán *alias* Dulchu with 60,000 troops invaded Kashmir, and with ruthless vigour that comes of political panic, this barbarous invader pillaged and plundered and set fire to the whole city of Srinagar, rendering thousands homeless.
1493 A.D.	Sultán Muhammad Sháh and Sultán Fateh Sháh.	These two rivals were at war with each other at Srinagar and each, dead to the thought that he was inflicting misery on the poor innocent people,

Year.	In whose time.	Extent of damages caused.
		set fire to the city, simply for this that he might have the consolation that his opponent would find it a waste if he ultimately succeeded to take it.
1479 A.D.	Sultán Hasan Sháh	The portion of the city from Sikandarpura to Aláuddinpura with 10,000 houses, among which were the Jáma Masjid and Sháh Hamadán mosque, were destroyed.
1619 A.D.	Diláwar Khán ..	Fire occurred at Sikandarpura, destroying 11,000 houses as far as Rájver Kadal and Saráf Kadal. The Jáma Masjid, which had been rebuilt, was again reduced to ashes.
1674 A.D.	Iftikhár Khán ..	Fire, which broke out at Káwdára, destroyed the portion of the city from there to the Jáma Masjid, reducing 12,000 houses to ashes. The Jáma Masjid, which had been rebuilt by Jahángir, was for the third time destroyed by fire.
1710 A.D.	Nawázish Khán ..	20 Mohallas from Saráf Kadal to Malchimar were destroyed.
1737 A.D.	Abul Barkát Khán	Abul Barkát Khán was at war with his officials. Each party set fire to the city, which resulted in the destruction of 20,000 houses. That they thus inflicted untold misery on the poor innocent people never crossed their hard hearts.
1739 A.D.	Ati Ulláh Khán *alias* Ináyat Ulláh Khán.	Fakhr-ud-daula had been deputed by Nádir Sháh as governor of Kashmir in place of Ati Ullah Khán, but the

Year.	In whose time.	Extent of damages caused.
		latter, supported by his councillors, went to oppose him, destroying 15,000 houses of the city and suburbs with the malicious object that if he was defeated he would have one consolation that his successor would find the city in a ruined condition.
1744 A.D.	Abul Barkát Khán.	Khakhas, Bambas and Kishtwáris made a raid on Kashmir and plundered the people, burning 15 mohallas of the city of Srinagar.
1744 A.D.	Afrásiáb Khán ..	There was famine and the hungry people, headed by K. Aláud-din Naqshbandi *alias* Khwája Mirza and Háji Attiq Ulláh Qádiri, mobbed the corn dealers at Zaina Kadal, set fire to 10 or 12 mohallas and plundered them.
1782 A.D.	Azád Khán ..	An extensive fire occurred at Tankipura, from which burning pieces of birch bark rising in the air flew across the river and fell on thatched houses at Ahlamar, Haba Kadal and Sadi Qázizád, producing fresh conflagrations there in which 8,000 houses were destroyed.
1800 A.D.	Abdulláh Khán ..	Fire occurred at Saráf Kadal, destroying several mohallas.
1850 A.D.	Mahárája Guláb Singh.	About 2,000 houses were destroyed, from Tankipura to Zaindár Sháh Mohalla.
1875 A.D.	Mahárája Ranbir Singh.	Again at Tankipura fire broke out which destroyed 700 houses.
1878 A.D.	Do. ..	1,000 houses from Haba Kadal to Sadi Qázizád were reduced to ashes.

Year.	In whose time.	Extent of damages caused.
1892 A.D.	Mahárája Pratáp Singh.	Fire occurred at Haba Kadal which extended down to Fateh Kadal and also across the river, destroying 1,343 houses and rendering 7,552 persons homeless.
1899 A.D.	Do. ..	Mahárája Ranbirganj Bazar, the centre of trade in Srinagar, was destroyed and immense loss of property occurred.

The city wears a poor look, though the name Srinagar implies "the city of the goddess of wealth." Mahárája Ranbirganj Bazar, originally built by Mahárája Ranbir Singh, is the central mart of trade. The sanitation of the city is good; a supply of abundant pipe water is available day and night; conservancy is well looked after and vaccination operations are extensively performed. The palace and the roads and most of the houses have electric light. There are in the city the Mission Hospital, the State Hospital, the Diamond Jubilee Zenana Hospital and the Mission Zenana Hospital: all doing good work. The Museum in the Lálmandi, the Hazúri Bágh, the Silk Factory and the Rája Sir Amar Singh Technical Institute are in the southern suburbs of the city. The Sháh Hamadán Mosque, Pathar Masjid and Jáma Masjid are notable places of Muhammadans within the city. The Mahárája's Palace is on the left bank of the river below the 1st Bridge.

European visitors reside in the Shekh Bágh, Harisingh Bágh, Munshi Bágh, Rám Munshi Bágh, Sunwár, Samandar Bágh and Chenár Bágh. The Residency is at the Kothi Bágh. There is a very charming club outside the eastern gate of the Residency which, besides the reading room and billiard and card rooms, has a large ball room and a most excellent library

Beautiful villas have been built at Gupkár overlooking the Dal Lake and at Sonawár. Most of the visitors live in house-boats, some of which are really moving palaces.

There are pretty gardens, laid out by the Moghul Emperors, round the Dal Lake, namely, Shálamár, Nashát, Nasim, Nagin, and Chishma Sháhi.

There are two small hills near the city, one Shankráchárj or the Takht-i-Sulemán, nearly 1,000 feet above Srinagar, crowned by an ancient temple, and the other, Hari Parbat, 250 feet high with a fort (built by Atá Muhammad Khán, a Pathán Governor, in 1812 A.D.) on its crest. A wall was built by Akbar the Great, in 1586 A.D., around the latter hill at a cost of eleven millions of rupees. It is about three miles long and 28 feet in height.

Jammu Province.

The Jammu province embraces the hilly country extending down to the plains of the Punjáb from the snowy range of mountains bounding Kashmir on the south. The area is more than double of Kashmir province, viz., 12,165 square miles and consists of three divisions which are :—1. Dogar. 2. Chibál. 3. Pahár.

In olden times the area situate between *Do-garths* or two lakes, namely, Mánsar ($\frac{1}{2} \times \frac{3}{4}$ mile) and Saruinsar ($\frac{1}{4} \times \frac{1}{2}$ mile) in the Sámba Tehsil, was called Do-garth which has, in course of time, been shortened into Dogar, and the people living in this area were called Dogras. Now, roughly speaking, the whole tract between Chenáb and Rávi to the south of the Karáhi Dhár hills down to the British border is called Dogar.

The area between the Chenáb and Jhelum to the south of Káli Dhár hills down to the line of British border is called Chibál or the land of Chibs, a Muhammadan tribe who formed several independent principalities in this area before Mahárája Guláb Singh subdued them.

The rest of the province to the north is called Pahár or hilly tracts, and the inhabitants thereof are called Paháris.

The population of the province is 1,640,259 (male 859,619 and female 780,640), of whom Muhammadans number 989,644, Hindus 626,806, Sikhs 21,627, Buddhists 442 and other religionists 1,740.

The notable places in the province, in addition to the towns mentioned elsewhere, are :—

1. Purmandal, 16 miles to the east of Jammu, where there are several temples built by Mahárája Ranbir Singh.

2. Vaishnau or Trikata Devi on a mountain in the Riási Tehsil, 39 miles to the north of Jammu. This is a shrine of the Hindus where pilgrims in large numbers, not only from Jammu but also from distant parts of the Punjáb, go during the months of Asuj and Kátak. Katra is the name of the village wherefrom the ascent to the mountain commences and where the pilgrims stay both before and after visiting the shrine.

3. Blaur, 19 miles to the north-west of Basohli. It was the capital of a Hindu principality. There is an ancient temple there which is now almost in ruins. It is not known who built it, nor when it was constructed.

4. Tredh on the Birun Nullah near Kirmichi, four miles from Udhampur. Ruins of old temples are to be found here.

5. Near Batot, the fourth stage from Jammu on the Bánihál road, is an extensive meadow on the top of the adjacent hill which is called Ladheki-dhár and which is much frequented by herdsmen in summer with their herds, for pasture. A delightful view of the plains of the Punjáb towards the west and south and of lofty mountains towards the east and west can be obtained from here.

6. Shudh Mahádev above Chineni. A large annual fair is held here by the Hindus on the 15th day of the bright fortnight of Hár (June-July).

7. Gajpat. This is the name of a fort built on the top of a grim isolated hill overhanging the Chenáb river between Batot and Rámban. Political or refractory prisoners used to be detained here, but now it is in a dilapidated condition.

8. Rámban. It is a stage on the Bánihál road, midway between Jammu and Kashmir. The Chenáb is here crossed by a suspension bridge built in 1888 A.D.

9. Doda between Kishtwár and Rámban, 24 miles towards the east of Batot on the Bánihál road. Poppy is extensively cultivated here and in Kishtwár, which is a source of considerable income to the Zamindárs. Opium required

for consumption in the whole State is supplied from here. This part of the country being mountainous, black bears, leopards and other big game are to be found here in considerable numbers.

10. Sarthal, five miles from Kishtwár. There is a shrine of Hindus here which is visited by pilgrims from far and near.

11. Pádar. This place was taken from Chamba by the troops of Mahárája Guláb Singh under General Zoráwar in 1844 A.D. It is noted for the mine of sapphires. There is also a hot water spring here. Plenty of big game are obtainable in the forests here.

12. Mangaldev, Kángra, Mangla and Taroch. These are the well known forts, the first two in the Bhimber Tehsil and the other two in the Mirpur Tehsil.

13. Káhnachak. This village is situated on one of the branch streams of the Chenáb, 12 miles from Jammu, and is noted for the manufacture of lacquer work. Near by, is the village Chhari where the shrine of Bábá Jetu is situated and where a fair is annually held on the 15th day of the bright fortnight of Magar (October-November) at which thousands of people assemble. A cattle fair is also held here on that occasion.

14. Bánihál or Devgol in the Rámban Tehsil, Jasrota in the Kathua Tehsil, Hiránagar in the Jasmergarh Tehsil, Manáwar in the Akhnur Tehsil, Ranbirsinghpura or Navá-shahr and Bishnah in the Ranbirsinghpura Tehsil, Padu in the Basohli Tehsil and Nau Shahra and Thana in the Rámpur-Rajouri Tehsil are centres of trade.

Jammu City.

The Jammu city is the second capital of the State where His Highness the Mahárája resides in winter. It is 1,250 feet above the sea-level and is situated on a slope just above the right bank of the Tawi river. This river, by the way, has its source in the Kaplas mountains above Chineni, and falls into the Chenáb about ten miles to the west of Jammu. It is said that Jámawant, one of the warriors in Ráma's army, used to practise austere penances here in a cave which exists even

up to now near Pirkhuh, and Jammu was called after his name. The Jammu Ráj, according to its family legend, traces its descent to a scion of the solar dynasty, named Agni Giris who, in olden days, came over from Ajudhya. His seventh descendant, Jambu Lochan, laid the foundation of the Jammu city. He was succeeded by his son, Puran Karn. Puran Karn had two sons, named Daya Karn and Dharm Karn. The former conquered Kashmir and ruled over it. The sovereignty thus established over Kashmir continued in his line for 55 generations. About the middle of the eighteenth century, Rája Ranjit Deo, son of Rája Dhrub Deo, ruled over Jammu. He was a man of considerable mark but after his death about 1780 A.D., his three sons quarrelled among themselves. This led the Sikhs to invade Jammu. Thenceforth up to 1846 A.D., Jammu became subject to the Sikh power. Ranjit Deo had three brothers, named Kansar Deo, Balaut Singh and Surat Singh. Mahárája Guláb Singh was the great grandson of Surat Singh and had two brothers, Rájas Dhyán Singh and Suchet Singh. As a young man, Mahárája Guláb Singh sought service at the court of Mahárája Ranjit Singh. He greatly distinguished himself and subdued all the Hill States adjoining Jammu. For his eminent services he was presented by Mahárája Ranjit Singh with the hereditary principality of Jammu, whence nominally on behalf of Mahárája Ranjit Singh he soon extended his authority over his Rájput neighbours, and eventually into Ladákh and Baltistán. After the first Sikh war at Sobraon, the British made over to him, by the treaty of the 9th March, 1846, all the territories he held as feudatory of the Sikhs and a week later by another treaty gave him Kashmir on payment of 75 lakhs of rupees. After reigning for ten years and ten months Mahárája Guláb Singh died in Kashmir on 4th September, 1857. He was succeeded by his son, General Mahárája Ranbir Singh, G.C.S.I., who, having ruled gloriously for twenty-eight years and eight days, breathed his last at Jammu on 12th September, 1885. He was succeeded by his son, Mahárája General Sir Pratáp Singh, G.C.S.I., G.C.I.E., G.B.E., etc., whose benign reign extended over 40 years and 1½ month, and he breathed his last at Srinagar on 23rd September, 1925, at the advanced age of 76 years. Then the present enlightened and benevolent ruler, Mahárája General Sir Hari Singh Bahadur, K.C.I.E., K.C.V.O., etc., ascended the

gaddi. Pandit Mahanand Ju Shastri, a most learned Sanskrit scholar, describes this latter event in the following eloquent lines :—

काश्मीरा दनुजारिपूरिति कथा संगच्छते सत्यतो
यद्देतर्हि महीश्वरो हरिपदं नाकाधिपः काश्यपीम् ।
आक्रामद्धरिसिंहरूपदृपतिव्याजेन सौख्यान्वित
आकल्पं परिवर्तनं स्थिरतरं भूयाद् द्वयोः श्रेयसे ॥

The saying " Kashmir is Paradise-like " has proved to be true because no sooner has its late Ruler (Mahárája Pratáp Singh) ascended the Hari-pad (Paradise), than Rája Hari (Indra) ascended the throne of Kashmir.

My prayer is that, so long as the solar system lasts, this sweet exchange of their places may be happy !

Jammu has always been an important place. The Province was divided into as many as twenty-two principalities (until they were subdued by Mahárája Guláb Singh), but Jammu was the most powerful of them all and of placid dignity—hence the saying—

Báis Ráj Pahár de
Bich Jammu sardár.

The population of the town is as follows :—

Hindus	.. ..	20,220	
Muhammadans	.. ..	9,001	
Sikhs	.. ..	708	
Other Religionists	..	1,577	
TOTAL	.. ..	31,506	Males 19,121 Females 12,385

The total number of houses in the town is 7,492 and its area is one square mile.

Situated as it is on the slope of a hill, Jammu has the advantage of commanding a splendid scenery of the vast plains, green with the fields of wheat and barley and rice and with clusters of mango and other evergreen trees—plains, so vast

as to end in the haze of the horizon, with the Tawi and the Chenáb glistening like silver threads yonder away. It has also a natural drainage. Each rainfall flushes down the whole town clean.

The town has a large number of temples whose dazzling pinnacles, high and low, are standing like sentinels expressive of the Hindu Ráj. While travelling towards Jammu by train or otherwise, one is irresistibly struck by the distant view of the city, which, from its position on an elevation, looks exquisitely grand and picturesque.

The Palace is situated on the highest point of the elevation, commanding the sight of the city stretched over the gentle slope below. It looks as if the Mahárája watches his people from the Palace as does a shepherd his fold from an elevated spot.

The Museum or Ajáib Ghar, built in 1875 for accommodating the Royal Visitor, the late King Edward VII, then Prince of Wales, is a grand building. It is now used as a recreation place, where officials and others collect in the evening and indulge in amusements. A library and a reading-room are also located therein. Close to the Museum is the magnificent building of the Ranbir High School. This institution is called after the name of the late Mahárája Ranbir Singh. The Prince of Wales College is near the Ranbir canal. It was established in 1905 to commemorate the visit of Their Majesties the King-Emperor and Queen-Empress, then Prince and Princess of Wales, to Jammu in that year. The Hospital is situated at a little distance from the Museum. The Rámnagar Palace, erected by the late Rája Sir Amar Singh, is also worth visiting. Its imposing size, its artistic design and its various types of architecture remind one of the elevated, polished and pleasant taste, and high genius of its builder. The Residency is in the south of the city. The Báhu fort, just opposite the Residency across the Tawi, is one of the notable places. The Military cantonments are at Satwári, five miles from Jammu towards the south-west. Three miles from Jammu on the Akhnur road, is the Amar Villa, a pretty house built by the late Diwán Amar Nath, C.I.E., with a beautiful garden laid out around it. On the Ranbir canal, just below Jammu to the west, 100 horse-power of electricity is generated by water power produced

by a fall given to the canal near the place where it runs down a subterraneous passage across the Tawi river. The power is utilized for water-works in pumping up the water-supply from the river bed to the city, and in heating the water basins in the silk factory and turning the reeling machinery as well as in lighting the city of Jammu. The Tawi is crossed by a large suspension bridge. The Siálkot-Wazirábád branch Railway line was extended to this place in 1889 and since then trade has received a great impetus.

Frontier Districts.

This part of the State is across the Himalayas with the Karákoram and Eastern Kiunlun mountains on its north, Tibet on its east, Kashmir and Jammu on its south and Yágistán and Chitrál on its west. The Indus flows through it. It consists of three divisions namely (1) Ladákh or little Tibet, (2) Baltistán, called Chera Bhotun by the Kashmiris, and (3) Dárdistán. The total population is as follows :—

Hindus	..	..	1,199
Muhammadans	..	..	234,467
Buddhists	..	..	37,241
Sikhs	..	..	138
Other Religionists		..	128
Total	..	..	273,173 (Males 139,679, Females 133,494)

The total number of houses is 48,230.

The area is about twice of Jammu and Kashmir, viz., 63,560 square miles, so it is very thinly populated. The people are quite distinct from those of Jammu and Kashmir, and their religion, language, manners and customs are also different

Ladakh.

Ladákh is bounded on the north by the Karákoram, on the east by Tibet, on the south by the Himalayas and on the west by Baltistán. It comprises a vast area in which are the following sub-divisions :—Rukshuk, Zanskár, Lubra, Leh, Drás and Kargil.

Leh is the most important place, it being an entrepot for trade between India on the south and of Yárkand, Khotan and Tibet on the north and east. A big bazár is held here in September every year when the *caravans* from Turkistán, Siberia and Tibet and the distant parts of Central Asia come to barter their goods with those brought during the summer by traders from Kashmir and different parts of India. A British Commissioner stays here in summer. There are vast deserts in Ladákh, such as Lingzhithang (16,000 feet) and Kuenlun (17,000 feet). The height of the mountains ranges from 17,000 to 21,000 feet, and there are certain peaks which are over 25,000 feet. No place in this area is less than 9,000 feet above the sea, and the mountains are arid with no signs of greenery thereon. Firewood is nowhere to be found except in nullahs where willows and poplars grow. The chief articles of produce are wheat, barley and *grim*. There is practically no rainfall. The seasons are only two—summer and winter. In summer the days are warm but the nights cold, so cold that water freezes sometimes. The winter is exceedingly cold, though snow falls very rarely. The fruits grow in comparatively hot and moist places. The Ladákhis are divided into four principal castes, namely, (1) Gyápo or Rája, (2) Jirak or officials, (3) Mungrik or cultivators, and (4) Ringan or menials. The majority are cultivators. The Yárkandis and a mongrel race of Arghons as they are called—the half-caste offspring of Musalmán Turki caravan drivers who enter into temporary marriage with Ladákhi Buddhist women—and the Muhammadan inhabitants of Purik or Kargil are traders. There is a kind of *Nil-gai*, called Zoh and it is used for drawing the plough. Deer, Kels and goats which yield sháwl wool, rabbits, wolves or *shaukus* as they are called by the Ladákhis and *chikors* abound. There are hot springs in the *illáqa* of Lubra. There is a tribe, called Changpa, in the *illáqa* of Rukshuk, who are nomads. Except at Kargil or Purik, where there are Muhammadan inhabitants, the people generally profess Buddhism, among whom the custom of polyandry is common. It forms a check on population. The eldest brother's wife is the joint wife of his two younger brothers next to himself in age. These two brothers are called Farsukhs or minor husbands. If there are more than three brothers, the others become *Magpas*.

It is not obligatory on a Ladákhi woman to become joint wife of a man and his two younger brothers. She sometimes enters into a periodical marriage contract with a man, and this man is called *Magpa*. There are numerous Buddhist monasteries or temples called Gunpas. These Gunpas are rich with gold worth, in some cases, lakhs of rupees. The most famous Gunpa is Hemi, 18 miles to the south of Leh. Almost every family offers a boy or a girl for worshipping in the Gunpas. These boys and girls are called Lámas and Chomos respectively. There are three chief Lámas in Ladákh who are called Kushks and who are held in great veneration by the people and they are in charge of important Gunpas. All these Lámas or Chomos are followers of the Great Láma of Lhása. The Buddhists wear on their heads long tufts of hair reaching down to their loins on the back. A kind of intoxicating liquor made of *grim*, which is called *chhang*, is commonly used by the people. The people are dirty ; a bath is seldom or never had by them, owing evidently to the intensity of the cold. They are also short statured, men being generally 5′ 2″ and women 4′ 8″. Formerly this country was a part of Tibet under a governor called Gyápu, but in 1539 A.D. it was invaded by Sultán Sayid of Yárkand and then in 1685 A.D. by Kalmákun. The Muhammadan Rájas of Skardu took possession of this country twice, viz., in 1620 and 1720-50 A.D.

About the middle of the seventeenth century, the king of Western Tibet was at war with Chinese Tibet and he asked help from the Moghul Emperor Sháh Jahán. Sháh Jahán sent an army from Kashmir which crossed the Indus at Khalatze on two wooden bridges and marched to Bazgu village. The Moghuls, who had taken up their position on the plain of Jargyal between Bazgu and Nemo, were defeated after a fierce battle. In return for this aid, the king of Ladákh promised to give Kashmir the monopoly of the shawl wool trade. But soon after the Moghuls returned to Kashmir, the Mongols again came on and then the king of Ladákh had to submit and pay a yearly tribute to Chinese Tibet.

In 1834 A.D., Mahárája Guláb Singh sent a force under Wazir Zoráwar to invade Ladákh. They had a skirmish at the Pashkyum valley with the Ladákhis and defeated them. Mustering an army of 15,000, the Ladákhis again

marched down to attack the Dogras near Langkartse, between Kargil and Suru, but, on the approach of the Dogras, they fled again, losing 400 of their number who fell through a snow bridge and were drowned and 200 who were made prisoners including their General. The Ladákhis then retreated to Moulbe and afterwards to Leh, being pursued by the Dogras. The king of Ladákh then submitted, agreeing to pay a war indemnity of Rs. 50,000 and a yearly tribute of Rs. 20,000.

While the Dogra troops were engaged in these operations, the chief of Sod attacked and seized a Dogra fort at Suru. On hearing this Wazir Zoráwar marched there and re-took the fort, putting the enemy to the sword. He offered a reward of Rs. 50 for each person who had joined the force of the chief of Sod, 200 were surrendered and he beheaded them all.

In 1841 A.D., Wazir Zoráwar was deputed by Mahárája Guláb Singh from Jammu with 12,000 troops towards Lhása. Having proceeded twelve marches, he reached Guhrak, which is situated on the border of Lhása, where he fought a battle with the Lhása troops and defeated them. He then returned to Mántaláv, taking the forts of Gurhang and Purang by storm. Soon after, Lhása troops came back under Chhagjut and re-took the possession of the Gurhang fort. A fierce battle was fought in which Wazir Zoráwar with all his troops was killed, only 25 soldiers having survived to tell the dismal tale. The Lhása troops advanced to Ladákh. Mahárája Guláb Singh then sent a punitive force of 6,000 strong under the command of Diwán Hari Chand and Wazir Ratnu. They had a skirmish with the enemy at Kargil in which 300 of the latter were killed and more than 3,000 were drowned in the river there. The Mahárája's troops then marched on to Leh, wherefrom one thousand soldiers of the enemy, under Bakhshi Achhinjut and Karan Sháh, retreated but concentrated themselves at the Chamrah Gunpha. Diwán Hari Chand laid siege to it and shelled it with guns stationed at a height overlooking the Gunpha, and also cut off its water-supply. The result was that the enemy surrendered unconditionally. Achhinjut and Karan Sháh were taken prisoners and brought to Leh, but after nine days they escaped. The Diwán's troops pursued and overtook them and fought with them, in which 100

of the enemy were killed and 400 were taken prisoners. Soon after, Bakhshi Jhagjut with 6,000 troops and one gun made another attack and then entrenched at 30 miles from Leh. The Diwán besieged them for eight days and flooded them by cutting a stream flowing above the place they were entrenched at and then they surrendered. Bakhshi Achhinjut and Karan Sháh were taken prisoners and brought to Srinagar before Mahárája Guláb Singh who had come from Jammu and was encamped at Nasim Bágh. The Mahárája pardoned them and set them free to go to their own country, concluding a treaty of peace with Lhása in September 1842 according to which Ladákh came permanently under Jammu, and traders of Ladákh and Lhása got the reciprocal concession of conducting trade freely in both the countries.

Baltistan.

Baltistán or Skardu extends on both sides of the Indus for 150 miles. It is bounded on the north by the Karákoram mountains, on the east by Ladákh, on the south by the Himalayas and on the west by Dárdistán. There are very high mountains and side valleys in this country. The valley of Shiyok and the *illáqas* of Shigar and Skardu are well populated. Its sub-divisions are Kharmang, Khaplu, Shigar, Skardu, and Rondu. Shigar is a fertile part of the country. Khaplu is situated in the southern valley of the Shiyok. The people are of the same stock as Ladákhis ; but by marrying with the Dárds, who are the inhabitants of Gilgit, their features, etc., have undergone considerable change. They are Muhammadans of the Shia and Núrbakhshi sects. Here the other extreme of the custom prevailing in Ladákh, namely, polygamy, is common. The cultivable land is very little, hence the people migrate every year in search of labour to Kashmir, Simla and other hilly countries. They are hard-working and cheerful labourers. There are people of the Dárd tribe inhabiting high lands in Drás who are called Baropá or hillmen and they talk in a different tongue called Shina. The climate is like that of Kashmir. The fruits are very sweet, specially grapes, melons and apricots. Caraway seeds are plentiful. The river is crossed in boats made of hides which are called Zak. Wherever the river is narrow it is crossed by rope bridges. There are several

hot springs and also several glaciers of which the glacier of Báltoru is, except the ice-bound oceans of Arctic regions, the greatest in the world. The people were Sunnis before, but in 1493 A.D. they were converted as Shias and Núr Bakhshies by Mir Shamas Aráqi. The Rájas of the place are said to be the descendants of Sikandar of Káshgar. They were in olden days under the suzerainty of the kings of Kashmir, but in the time of Chaks they were independent. During the Moghul period they were once more tributaries to Kashmir but when Afgháns came, they were again independent. In 1837 A.D. Rája Ahmad Sháh was the chief of the place. His second son, Muhammad Sháh, had revolted against him and had gone to Colonel Mián Singh, a Sikh governor of Kashmir, who had given him Tilel as *Jágir*. When Wazir Zoráwar invaded Ladákh, Muhammad Sháh started to assist him, but Ahmad Sháh sent his men after his son and having caught him, took him to Skardu where he was detained as a prisoner. Thereupon Wazir Zoráwar was enraged and he marched with his troops to Skardu and conquered it. The place was, however, restored to Ahmad Sháh on his paying a heavy war indemnity. When Wazir Zoráwar was killed at Mántaláv, the Raja of Skardu rebelled again and then Mahárája Guláb Singh despatched a punitive force there to punish him and Diwán Hari Chand also attacked Skardu from Ladákh side. Skardu was seized, Ahmad Sháh with all his family being sent to Jammu as prisoner, where he afterwards died. His son, Muhammad Shah, was granted an allowance by the Mahárája at Skardu.

Dardistan.

Dárdistán is bounded on the north by the Karákoram and Hindukush mountains and Pámir ; on the east by Baltistán, on the west by Yágistán ; and on the south by Kashmir. The following are its sub-divisions :—

Astor, Bunji, Chilás, Gilgit, Hunza, Nagar, Puniál and Yásin and Chitrál.

Gilgit is a very important place owing to its being situated on the frontier. There is a British Political Agency here. The inhabitants of Dárdistán are called Gilchas and Dárds and are believed to be the descendants of Aryans.

Their features somewhat resemble those of the Kashmiris, but they wear a crafty look. They are hardy, brave and tall, and some are fair-complexioned and good-looking. The Indus flows for 150 miles through this country, draining the water of the northern and southern mountains. The rainfall is slight. In the northern tracts apricots, walnuts, poplars, willows, etc., and nearly all the fruits of Kashmir are to be found, especially in Hunza, and Nagar where they are very sweet and delicious. The area from Astor to Gilgit is as hot as the Punjáb. Grass and timber are scarce. In the *illáqa* of Astor a kind of plant of asafœtida is to be found. Little fields of corn are met with in the neighbourhood of villages. The chief agricultural products are wheat, barley or *grim* and Indian corn. The Káfiristán, which is now a province of Afghánistán, originally belonged to Dárdistán. The people of Gilgit are Muhammadans of both Shia and Sunni sects. The people of Nagar are Muhammadans of the Shia sect; and those of Hunza of the Ali-Iláhi, i.e., believers in Ali as God, and the others are Mulahis. The Chiefs of Gilgit, living as they were in mountain fastnesses, were in olden days notorious for carrying on raids into the countries of their neighbours with impunity. In the time of Moghuls, Gilgit was under the suzerainty of Kashmir, but when the Afgháns appeared, it became independent. Several neighbouring chiefs took it one after the other, but no sooner one occupied it he was killed by his rival. During the Sikh period, Muhammad Khán was its ruler and suddenly one day Sulemán Sháh, Chief of Yásin, raided and took the country. Soon after, Azád Khán, Chief of Puniál, attacked and murdered Sulemán Sháh and declared himself the master of the country. He had not long to wait when Tibar Sháh, Chief of Nagar, came and killed Azád Khán. Tibar Khán ruled for some time, and when he died he was succeeded by his son, Sikandar Khán. The latter was killed by Gauhar Amán, son of Sulemán Sháh, who then usurped the throne.

In 1842 A.D., Karim Khán, brother of Sikandar Khán, sought the assistance of Gulám Mohiuddin, a Sikh governor of Kashmir, against his enemy. The latter sent troops under Nathu Sháh and Mathra Dás to Gilgit. Gauhar Amán fled precipitately to Puniál after being defeated by the Kashmir troops. Karim Khán then assumed the sovereignty of Gilgit.

Nathu Sháh remained there with him to see that he was not again molested and Mathra Dás returned to Kashmir. Nathu Sháh managed to make friendship with the different neighbouring chiefs. He married the daughter of Gauhar Amán to himself and the daughters of Hunza and Nagar Chiefs to his sons.

In 1845 when the break-up of the Sikh rule occurred, Nathu Sháh came to, and sought service of, Mahárája Guláb Singh who appointed him as governor of Gilgit and two European officers accompanied him there. The Chief of Hunza got jealous of him for his bringing European officers, and killed him together with Karim Khán. Gauhar Amán, the Chief of Puniál and Yásin, invaded Gilgit with the assistance of the people of Dalel. Mahárája Guláb Singh then sent troops from Kashmir which were reinforced by those stationed at Astor and Skardu, and they defeated Gauhar Amán. Bhup Singh and Sant Singh were the Mahárája's officers commanding the garrison, who governed these parts for some time peacefully but afterwards the sons of Gauhar Amán, named Mulk Amán, Mir-Wali, Mir-Gházi, and Pahalwán Bahádur, being assisted by Dárds and Hunza people, held Bhup Singh into an ambuscade at the Niladár hill and massacred 1,100 of his troops and took 200 soldiers as prisoners who were sold as slaves after forcibly converting them to Islam. Only one woman escaped, crossing the Indus by holding the tail of a cow swimming across the river and reached Bunji to tell this horrible tale. Gauhar Amán was again the sole master of Gilgit. After the death of Gauhar Amán in 1856 A.D., Mahárája Ranbir Singh deputed General Devi Singh with a large force to reconquer Gilgit. The enemy fled away before this force and General Devi Singh occupied the district as far as Yásin. He then returned, keeping Uzmat Sháh, son of Sulemán Sháh, and Isá Bahádur, as governors of Yásin and Puniál respectively.

In 1859 A.D., Mulk Amán revolted again and then Mahárája Ranbir Singh despatched a punitive force under the command of General Hushiára to punish him. Thereupon he retreated to Chitrál, and Gilgit was permanently annexed to Kashmir.

Chilás and Dalel were taken by the Mahárája's troops in 1851 and 1866 respectively.

Yásin was taken in 1859 but was subsequently ceded to the sons of Gauhar Amán, with whom a treaty of peace was concluded.

The Chiefs of Hunza and Nagar, though tributary to Kashmir, often gave trouble to the Mahárája's garrison at Gilgit, but in December 1891, these two principalities were subjugated by British Indian and Kashmir Imperial Service Troops under the command of Colonel A. Durand, the then British Political Agent of Gilgit.

The population of these frontier principalities, according to the census of 1921, is as below—

Nagar	14,188
Chilás	13,135
Hunza	12,117
Yasin	7,065
Punial	5,492
Ghizar	3,953
Ishkoman	2,753
Kuh	2,288

JAMMU AND KASHMIR STATE

SCALE 32 MILES TO 1 INCH

REFERENCES	
NAME	MARK
STATE BOUNDARY	
PROVINCE	
DISTRICT	
TAHSIL	
RIVERS	
LAKES	
JAGIRS AND FRONTIER ILAQAS	

73° 74° 75° 76° 77° 78° 79° 80°

37° 36° 35° 34° 33° 32°

CHITRAL
Yasin
Ishkoman
FRONTIER
DARELI
TANGIR
N. W. F. PROVINCE
PUNIAL
GILGIT
Gilgit
INDUS R.
GILGIT
Astor
HAZARA
MANSEHRA
ABBOTTABAD
MUZAFFARABAD
KISHAN GANGA R.
Muzaffarabad
UTTARMACHHIPURA
Wular Lake
Handwara
Sopur
Uri
URI
JHELUM R.
Baramula
BARAMULA
TAHSIL KHAS
GANDERBAL
SRINAGAR
SRI PARTAP SINGH PUR
Charar
AWANTIPUR
SOUTH KASHMIR
Shopyan
KULGAM
ANANTNAG
Islamabad
Punch
PUNCH
Koeli
PUNCH R.
RAWALPINDI
MIRPUR
Mir pur
RIASI
Riasi
RAMBAN
CHINAB R.
UDHAM PUR
JAMMU
Bhimber
Akhnur
AKHNUR
TAWI
Ramndgar
RAMNAGAR
JAMMU
RANBIR SINGH PURA
SAMBA
Samba
JASMER GARH
KATHUA
BASOHLI
Basohli
Kathua
RAVI RIVER
GURDASPUR
KANGRA
JHELUM
GUJRAT
SIALKOT
HUNZA NAGAR
HUNZA LAQAS
MUSTAGH KARAKORAM MOUNTAINS
Hunza
Nagar
Skardu
Baltistan
Khaplu
Chorbat
INDUS R.
SHIGAR R.
HINCO R.
AS R.
SUR R.
KISHTWAR
Padar
ZANSKAR
ZANSKAR R.
DODA
BHADARWAH
JAGIR BHADARWAH
Bhadarwah
CHAMBA
PANGI LAHOL
SPITI TSOTSO CHUMURTI
TIBET
NUBRA R.
SHAYOK R.
Nubra
LEH
Himis Monastery
INDUS R.
SCATI LAKE
LINGZI THANG PLAINS
17100 TO 17300
CHANG CHENMO R.
Chang Chenmo valley
Pangkong Lake
RUPSHU
Tsho Morari L.
KARAKORAM
YARKAND

LITHO BY THACKER, SPINK & Co. CALCUTTA.