IMPERIAL GAZETTEER OF INDIA

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Karāchi District.—District in Sind, Bombay, lying between 23° 35′ and 26° 22′ N. and 66° 42′ and 68° 48′ E., with an area of 11,970 square miles. It is bounded on the north by Lārkāna; on the east by the Indus and Hyderābād District; on the south by the sea and the Kori river; and on the west by the sea and the State of Las Bela (Baluchistān), the river Hab forming for a considerable distance the line of demarcation. The District, which covers a large tract of land stretching from the mouth of the Indus to the Baluchi boundary, differs considerably in appearance from the general level of Sind by its possession of a hilly western region, lying in the *mahāl* of Kohistān and the *tāluka* of Karāchi. Numerous lateral ranges of considerable height here push forward into the plain from the KĪRTHAR mountains, and diversify the usually monotonous aspect of the arid surface by their spurs and offshoots. From this lofty and barren tract, intersected by deep and wide valleys, the general aspect of the country, as it runs south eastward in a vast sloping plain, becomes more and more level, until in the extreme south the Indus delta presents a broad expanse of low, flat alluvium, stretching away to the horizon in one unbroken sheet, varied only by the numerous creeks communicating with the ocean. Large forests of *babūl* and other trees fringe the river banks, and impart a somewhat fresher appearance to the otherwise dreary landscape. Elsewhere, however, the features of the Sind delta stand unrelieved in their naked monotony.

Physical aspects.

Apart from the INDUS and the HAB rivers, there are only a few minor torrents in the District. These take their rise in the western hills, but consist of dry watercourses for the greater portion of the year, filled only on the rare occasions when heavy rains fall on the higher ranges in which they have their sources. The Hajāmro and Baghar are offshoots of the Indus, the former now constituting the chief channel to the sea. At PĪR MANGHO there are hot springs, situated

among barren and rocky hills, and famous for their healing qualities, as well as for the crocodiles in an adjacent enclosure. Other hot sulphur springs are to be found at Lakhi in the Kotri *tāluka*, which attract a number of pilgrims every year.

In Karāchi District the highly interesting geological series of Sind is most completely developed. It consists of upper and lower Manchhar beds of upper and middle miocene age, corresponding with the Siwāliks of Baluchistān and of the Himālayas; and the Gāj group containing highly fossiliferous marine beds, whose age is lower to middle Miocene. A second series is the upper Nāri or oligocene, consisting of alternating fresh-water and marine strata; and this gives way in places to the lower Nāri or upper eocene, a highly fossiliferous Nummulitic limestone, and to the upper limestone and shales of the Nummulitic Kīrthar group, of middle eocene age, which corresponds with the Spīntangi and Ghāzij of Baluchistān. One also finds a lower limestone and shale group, likewise Nummulitic and classed as Kīrthar, but not known outside of Sind, to which nearly all the Kīrthar outcrops in Karāchi District belong. The upper Rānikot, another highly fossiliferous marine group, containing in its upper beds the oldest Nummulitic strata known in India, is approximately on the same horizon as the London Clay, and alternates with the lower Rānikot—fluviatile beds with lignites and fossil remains of plants. Other features of the series are representatives of the Deccan trap basalts: the *Cardita beaumonti* beds, which are lowermost eocene or uppermost Cretaceous; and lastly the hippuritic limestone. All these rocks outcrop, each in turn, in a succession of gentle synclinal and anticlinal folds, whose structure recalls that of the Jura mountains. There is scarcely another part of the world that contains so complete a development of the Tertiary. The southern part of the District is covered by the Indus alluvium.

Among fruit trees, which are not numerous, the mango, *ber*, apple, date, fig, plantain, and pomegranate are noticeable. The timber is almost entirely *babūl*; and the *timur* or mangrove, found near the salt creeks, provides firewood for steamers and fodder for camels. Of maritime plants, the *chānwara* and *kaudel* are common on the coast. The tamarisk grows in patches which are peculiarly dense in portions of the Shāhbandar *tāluka*; while the casuarina has been planted with some success at Karāchi.

The wild animals found in the hilly portions are the leopard, hyena, wolf, jackal, fox, ibex, antelope, and *gad* or wild sheep. Crocodiles are found at Magar Talao; and they are also numerous in the pools of the Hab river, in the Indus, and in some of the large canals and mountain torrents.

The climate of Karāchi city and the neighbouring country, which is in every direction open to the sea-breeze, possesses a great superiority

over that prevailing throughout the remainder of Sind. The hill country of Kohistān is also cooler in summer and warmer in winter than is the case in the plains. In the north, on the other hand, near the barren LAKHI range of hills, the heat often becomes insupportable. The hot season commences about the middle or end of March, reaches its maximum in the month of July, and lasts till the end of August, when the temperature once more becomes tolerably cool. The annual temperature averages 79°. The rainfall at Karāchi is slight and fluctuating, the annual average hardly exceeding 5 inches. Sometimes one or two years pass with scarcely a shower. The average maximum rainfall elsewhere is 9 inches in the Karāchi *taluka*, and the minimum 5 inches at Mānjhand.

History.

Alexander the Great, towards the close of his Indian expedition, dispatched Nearchus, doubtless from some point (suggested to be at Tatta) in this District, to explore the Persian Gulf. The date 713 marks the first Arab invasion of the District, which later resulted in the formation of the local Arab principality of Mansūra, nearly corresponding with modern SIND. Between 1019 and 1026 the invasions of Mahmūd of Ghazni took place and paved the way for the supremacy of the Sūmra dynasty, whose founder was a titular vassal of the Ghaznivids; and in 1333 the Sammā tribe from Cutch settled first at Sehwān in Lārkāna District and afterwards at Tatta. Close under the Makli hills stood Samui, the capital of the Sammā princes, originally a Hindu or Buddhist race. Converted to the faith of Islām about the close of the fourteenth century, they continued to retain their practical autonomy, in spite of a nominal allegiance tendered to Firoz Tughlak of Delhi; and the town of TATTA, where they generally resided, became in after years the chief centre of population and commerce for the whole of Sind.

In 1521 Shāh Beg, founder of the Arghun dynasty, completely defeated the last Sammā prince, and established his own claim to the sovereignty of the lower Indus valley; but, after a continuance of only thirty-four years, the Arghūn line became extinct in the person of Shāh Hasan, son of the founder, who died childless in 1554. Mirza Jāni Beg, the last local ruler of Tatta, was defeated by an army of the Mughal emperor Akbar in 1592; and the District, together with the rest of Sind, became incorporated with the Multān *Sūbah* in the imperial organization. The country of Tatta, however, was made over to Jānī Beg, who entered the Mughal service after his defeat, and compromised for his independence by accepting his former territories in *jāgīr*. Continued struggles for the governorship of Tatta led Jahāngīr to abolish the hereditary viceroyalty, and to appoint instead special lieutenants holding office during the imperial pleasure. The town of Karāchi appears to have attained little importance under either the

native dynasties or the Mughal administration. Its rise into notice began with the period of the Tālpur Mīrs, in succession to the Kalhora princes, who had usurped power on the break-up of the Mughal empire. They were the first to recognize the value of the harbour for commerce, and in 1792 recovered Karāchi from the Khān of Kalāt; but soon afterwards they divided into three branches, each ruling independently in a separate part of Sind. The British endeavoured to enter into friendly treaties with the Mīrs; but their jealousy and mistrust of the motives of the Government prevented any cordial understanding, and in 1838 they offered considerable opposition to the march of British troops on their way to the first Afghān War. After Shāh Shujā was placed on the throne, the Mīrs were required to pay the arrears of tribute due to the Afghān ruler and to permit the establishment of a British force in Sind. Failure having been made in payment of the stipulated tribute, the Mīrs were required to cede certain territory. The army, however, resisted this loss of independence, and attacking the Hyderābād Residency precipitated the conflict which ended in the annexation of Sind to the British dominions. The District passed to the British in 1843. Karāchi town grew rapidly under the new administration, and became the principal port of North-western India. The District, as at first constituted, did not embrace the same area as at present; in 1861 a portion of the Indus delta, composing the present Shāhbandar *tāluka*, was added to it from Hyderābād, while in 1901 three *tālukas* were taken from it to form part of the new District of Lārkāna.

Among the remains of interest in the District may be mentioned those situated in the town of TATTA. The town is of great antiquity, and possesses a number of tombs, inscriptions, mosques, and a fort. The Jāma Masjid is decorated with coloured tile-work of the well-known Multān type. The design and shades of colour are very beautiful. The Dabgar Masjid has a fine central *mihrāb*, carved with delicate surface tracery. The old fort at Tatta was commenced about 1699, but was never completed. The ruined city of BHAMBORE is an interesting archaeological relic. In the delta of the Indus are numerous sites of ruined cities, such as Lāhori, Kākar, Bukera, Samui, Fathbāgh, Kāt Bāmbhan, Jūn, Thari, Badin, and Tūr, as well as the remains of Dāro and Lohan. Among ruined forts once of importance are those of Charlo Chakar and Raniji.

Population.

In 1872 the population was 442,177; in 1881, 495,860; in 1891, 571,951; and in 1901, 607,828. Since the date of the last Census, a new District has been created by the transfer of certain *tālukas* from Shikārpur and Karāchi Districts. The population of the present area of Karāchi District (446,513) shows an increase of 8 per cent. over the population of the same area in 1891.

The population is distributed, as follows, in nine *tālukas* and the Kohistān tract:—

Tāluka or *Mahāl.*	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kotri*	1,485	2	62	57,530	39	+ 2	2,287
Kohistān *mahāl*	1,806	...	2	12,877	7	— 20	141
Karāchi	1,678	1	14	136,297	81	+ 10	9,590
Tatta	1,229	1	35	41,745	34	+ 12	1,425
Mīrpur Sakro	1,137	...	74	27,600	24	+ 6	354
Ghorābāri	566	...	51	26,237	61	+ 14	431
Keti *mahāl*		1	42	8,499			
Mīrpur Batoro	269	...	62	37,116	138	+ 5	583
Sujāwal	267	...	65	33,251	125	+ 13	530
Jāti	2,145	...	117	31,752	15	+ 14	310
Shāhbandar	1,388	...	104	33,69	24	+ 14	323
District total	11,970	5	628	446,513	37	+ 8	15,974

* Including the Mānjhand *mahāl*, for which separate statistics are not available.

There are 5 towns, KARĀCHI, the capital of the province and head-quarters of the District, KETI, KOTRI, MĀNJHAND, and TATTA; and 628 villages. The density of population varies according as the tract concerned happens to be desert, barren hill, or cultivable. Of the population, 77 per cent. are Musalmāns, 21 per cent. Hindus, and 1 per cent. Christians. Sindī is spoken by 340,837 persons, or 76 per cent. of the total.

The Muhammadans consist mainly of Sindī tribes, of whom half (112,000) returned themselves as Sammās and 9,000 as Sūmras, suggesting some connexion with the once-powerful dynasties known by those names. The Muhānas or fishermen number 31,000. Of foreign tribes, the Baluchis are represented by 28,000, and the Brāhuis by 10,000. There are 17,000 Jats. Among Hindus, the trading caste known as Lohāna or Luvāna is alone of numerical importance, with 35,000. Brāhmans, Rājputs, and Bhātias scarcely number 3,000 each. The low castes are represented by 8,000 Dheds. Agriculture supports 45 per cent. of the population; industries, commerce, and the professions 24, 2, and 2 per cent. respectively.

Of the 2,707 native Christians in 1901, more than 2,500 were Roman Catholics and 129 belonged to the Anglican communion. Karāchi is the head-quarters of the Church of England Mission, the Church of England Zanāna Mission, and the Methodist Episcopal Mission. The first-named society maintains three boys' schools; the second, nine girls' schools and a small orphanage; the third, four boys' schools and four girls' schools, including two poor schools; the fourth, two boys'

schools. The Roman Catholic and Zanāna Missions have branches at Kotrī and Jherruck respectively.

Agriculture.

In the Karāchi *tāluka* cultivation exists only on a few isolated spots, and depends upon wells, springs, or natural rainfall. Here the chief crops are *jowār*, *bājra*, barley, and sugar-cane, grown chiefly on the Malir plain, distant about 12 miles from Karāchi city, and easily accessible by rail. In the delta *tālukas* of Tátta and Shāhbandar, where numerous creeks and channels intersect the alluvial flats, rice forms the staple crop; but wheat, sugar-cane, millets, cotton, and tobacco are also grown. In the barren hills of Kohistān, agriculture is but little practised, except within embankments erected to impound the scanty rainfall or along watercourses fed by small hill streams; and the nomad population devotes itself almost entirely to grazing cattle in the southern plains, where abundance of forage springs up spontaneously after the slightest fall of rain.

The chief statistics of cultivation in 1903–4 are shown below, in square miles:—

Taluka	Total.	Cultivated	Irrigated	Waste	Forests
Kotri . .	3,305	329	51	79	56
Karāchi .	1,678	63	0	84	...
Tatta . .	1,215	68	32	65	51
Mīrpur Sakro .	1,137	104	35	100	...
Ghorābāri . .	566	102	17	240	11
Mīrpur Batoro .	269	100	63	65	39
Sujāwal . .	267	84	53	69	47
Jāti . .	2,145	97	50	132	..
Shāhbandar .	1,388	158	49	1,055	8
Total	11,970*	1,103	380	1,889	262

* According to the latest information

Of the area cropped, 22 square miles were under wheat, 13 under barley, 245 under rice, and 100 under millets (*jowār* and *bājra*). Rice is the principal crop, except in the Kohistān tract and the *tālukas* of Karāchi and Kotri. Millets take the place of rice in Kotri. Among the pulses *mūng* is an important crop. During the decade ending 1903–4 nearly 9 lakhs was advanced to cultivators under the Land Improvement Loans Act and the Agriculturists' Loans Act, out of which 1·8 lakhs was lent in 1899–1900, and 1·3 lakhs in each of the years 1900–1 and 1901–2. The money is usually employed on erecting embankments (*bands*) and clearing canals.

The chief domestic animals are camels, buffaloes, and cattle. The buffaloes are commonest in the deltaic swamps, and produce *ghī* famous all over Western India. The Karāchi cows are noted as good milkers, and many of them are shipped to Bombay for sale. The best of these

cattle are bred within a radius of 30 or 40 miles from Karāchi city, chiefly in the hill tracts.

Of the total cultivated area of 1,103 square miles, 380 square miles, or 34 per cent., were irrigated in 1903–4. The chief sources of irrigation are: Government canals, 118 square miles; private canals, 206; and other sources, 56. Throughout Sind nearly every canal is fed by the Indus; and in 1903-4 nearly 34 per cent. of the total irrigated area of the District was supplied by the Pinjari canal, fed by the Shāhbandar embankment of the Indus. The Baghar, a small canal on the right bank, irrigated nearly 43 square miles, the Kotri 24, and the Kokwari 23 square miles. Of the irrigated land, 87 per cent. is sown for the *kharīf* or autumn harvest. There are only twenty-seven wells in the District used for irrigation.

Fisheries, &c.

Sea-fishing is carried on by the Muhāna tribe of Musalmāns, who reside for the most part in hamlets near Karāchi. The principal fish caught on the coast are sharks, rays, and skates. The pearl oyster is found at several places, and the Mīrs conducted pearl operations on their own account. Under British rule, the right has been let for a small sum, but the pearls are very inferior in size and quality, so that the industry has greatly declined during the last twenty-five years. At present practically no pearl fishing is carried on. Considerable fisheries also exist in the river Indus, chiefly for the fish known as *palla*, which are annually leased out by Government for about Rs. 20,000.

The forest lands include tracts in the Jherruck forest division, south of Kotri, producing timber and fuel, with an area of 212 square miles in charge of a divisional forest officer. A portion of the Hyderābād forest division, measuring 48 square miles and situated north of Kotri, also lies within Karāchi District. The forest lands are situated on the banks of the Indus, for the most part in the Shāhbandar *tāluka*. The principal trees are the *babūl* and tamarisk, the latter being found chiefly in the Shāhbandar jungles. Forest receipts in 1903–4 amounted to Rs. 52. Good building stone occurs among the arenaceous limestones of the Gāj group near Karāchi.

Trade and communications.

Local manufactures are confined to cotton cloth, silk scarves, carpets, rugs, and the ordinary metal and earthenware. Besides a few factories in Karāchi city, there are few industries of importance. Tatta is noted for *lungīs*, used by women as robes or shawls. Extensive salt deposits of the purest description occur in the Shāhbandar *tāluka*, on the Sirganda creek, a branch of the Indus, accessible for small craft of from 50 to 60 tons burden. Salt is manufactured from salt water by artificial means at the Maurypur works on the sea-coast, a few miles from Karāchi. Out of 15 factories, 5 are cotton-gins and presses, employing 356 persons, and the rest

include 2 metal foundries, 2 bone-mills, an arsenal, a printing press, and a railway workshop.

The traffic centres mainly in the city and port of KARĀCHI. The staple exports consist of grain, principally wheat, cotton, wool, hides and skins; and the chief imports are sugar, kerosene, piece-goods, liquor, and metals. Karāchi District contains three seaports: namely, Karāchi, KETI, and Sirganda. The average value of the foreign trade, which is practically confined to Karāchi port, for the five years ending 1902–3 was: imports, 505 lakhs; exports, 712 lakhs; total, 1217 lakhs. In 1903–4 the value of the imports was 591 lakhs, and of the exports 1345 lakhs; total, 1936 lakhs, or 719 lakhs above the average of the previous five years. The average value of the coastwise trade for all ports for the five years ending 1902–3 was: imports, 340 lakhs; exports, 251 lakhs; total, 591 lakhs. In 1903–4 the coastwise trade was returned as follows: imports, 375 lakhs; exports, 188 lakhs; total, 563 lakhs, or 28 lakhs below the average of the previous five years, which resulted from a decrease in the exports to Bombay of raw cotton, wheat, and rapeseed. The coast-borne trade includes reimports and re-exports from and to Karāchi, which are included in the values of the foreign trade given above.

Besides being the port of call of various steamer lines, chief among which is the British India Steam Navigation Company, Karāchi is connected with two important railway systems and a number of trade routes from Afghānistān, Kalāt, and Central Asia. The North-Western Railway links the District with the Punjab and the United Provinces, while the Jodhpur-Bīkaner Railway supplies railway communication with the Thar and Pārkar District and, by a circuitous route, with Bombay. A line running for 54 miles from Hyderābād town to Badin, the headquarters of the Badin *tāluka* of Hyderābād, was opened in 1904. This line is to form part of the proposed direct railway between Sind and Bombay, which will run through Karāchi District and pass either through Cutch or through the Thar and Pārkar District. Three important trade route converge at Karāchi, placing it in direct communication with the interior of Sind, with Las Bela, and with Kalāt. The total length of metalled roads in the District outside the municipal towns is 7 miles, and of unmetalled roads 1,321 miles. The total cost of their maintenance in 1903–4 was Rs. 19,631, of which Rs. 16,700 was paid from Local funds. Avenues of trees are maintained along 185 miles.

The District has three subdivisions, comprising nine *tālukas* and three *mahāls*, in charge of two Assistant Collectors and a Deputy-Collector.

Administration. The nine *tālukas* are each under a *mukhtiārkār*, corresponding to the *māmlatdār* of the Bombay Presidency proper. The three *mahāls* are Keti Bandar, Mānjhand, and

Kohistān. The city of Karāchi forms a separate charge under the City Deputy-Collector.

The functions of the former District and Sessions Judge are now performed by two Additional Judicial Commissioners, who, together with the Judicial Commissioner, compose the Chief Court in Sind. Subordinate to them are a Judge of the Small Cause Court and a Subordinate Judge, sitting at Kotri. The city is under the separate charge of a City Magistrate, and there is a Cantonment Magistrate for the Karāchi and Manora cantonment. Magisterial work in the District is, as usual, carried on by the administrative staff. Cattle-lifting is a very prevalent form of crime, and, as in other Districts, blood-feuds arising from intrigues with women are common among the hill tribes.

Before the introduction of the present settlement rates into all *tālukas* between 1876–7 and 1889–90, there were only two rates of land revenue levied in the District: that is to say, garden and 'dry-crop' rates, the former at R. 1 and the latter at 8 annas per acre. The present revenue system of Karāchi is adapted to the system of cultivation, depending almost entirely upon irrigation. The irrigation settlement (*see* SIND) is in force in all *tālukas* of the District, and is fixed for a term of ten years. Kohistān is settled under a special lease system, which expires in 1909, but the lease has been extended for another five years. Under this system the landholder is allowed to cultivate on payment of a fixed annual rent, amounting to about 8 annas per acre. Owing to the precarious water-supply of this tract, which is entirely dependent upon the rainfall, the irrigation settlement has not been introduced into Kohistān. The average land revenue rates per acre in the District are: garden land, Rs. 3 9 (maximum Rs. 4, minimum Rs. 2–10); rice land, Rs. 2–14 (maximum Rs. 3–8, minimum Rs. 2–4); and 'dry' land, Rs. 2–0 (maximum Rs. 2–8, minimum Rs. 1–4).

Collections on account of land revenue and revenue from all sources have been in thousands of rupees:—

	1880–1	1890–1	1900–1	1903–4.
Land revenue . .	7,21	13,05	12,02	8,53
Total revenue . .	22,29	33,01	69,22	60,06

There are five municipalities in the District: namely, KARĀCHI, KOTRI, MĀNJHAND, TATTA, and KETI BANDAR. Elsewhere, local affairs are managed by the District and *tāluka* boards, the total receipts of which in 1903–4 were nearly 1½ lakhs, the principal source of income being the land cess. The expenditure in the same year amounted to one lakh, of which Rs. 30,000 was spent upon roads and buildings.

The District Superintendent of police has two Assistants and seven inspectors. There are nineteen police stations in the District. The total number of police in 1904 was 1,142, of whom 23 were chief constables, 184 head constables, and 935 constables. The District contains a District jail (at Karāchi), 11 sub-jails, and 6 lock-ups. The daily average number of prisoners in 1904 was 254, of whom 2 were females. A new jail with accommodation for 374 prisoners is under construction.

Of the total population, 3·3 per cent. (5·6 males and 0·5 females) are literate. As in other Sind Districts, education is backward as compared with the Presidency proper, and such advance as has been made is more observable in Karāchi city than in the towns and villages in the interior. The least backward *tālukas* are Kotri and Tatta. In 1880–1 there were 65 schools, attended by 4,581 pupils. The number of pupils rose to 13,856 in 1891 and to 16,602 in 1901. In 1903–4 there were 297 educational institutions, public and private, including an Arts college at Karāchi city, 6 high schools, 8 middle schools, 2 training schools, 2 special schools, and 186 primary and elementary. These institutions were attended by 13,605 pupils, including 3,028 girls. Of the 205 institutions classed as public, 2 were managed by Government, 69 by the local boards and municipalities, while 134 were aided. The great majority of the pupils are in primary schools. Attempts have recently been made by the Muhammadan community to encourage education, and a society has been formed to promote this object. The total expenditure on education in 1903–4 was 2½ lakhs, of which about Rs. 50,000 was derived from fees. Of the total, 55 per cent. was devoted to primary education.

The District has 2 hospitals and 13 dispensaries and other institutions, containing accommodation for 186 in-patients. The existing civil hospital at Karāchi is being replaced by a more modern building. In these institutions, 104,000 cases were treated in 1904, of whom 1,928 were in-patients, and 3,473 operations were performed. The expenditure was Rs. 64,000, of which Rs. 30,000 was met from Local and municipal funds.

The number of persons successfully vaccinated in 1903–4 was 12,359, representing a proportion of 27 per 1,000, which exceeds the average for the Presidency. Vaccination is compulsory only in Karāchi city.

[A. W. Hughes, *Gazetteer of the Province of Sind* (1876, new edition in the press).]

Karāchi Tāluka.— South western *tāluka* of Karāchi District, Sind, Bombay, lying between 24° 46′ and 25° 39′ N. and 66° 42′ and 67° 53′ E., with an area of 1,678 square miles. It contains one city, KARĀCHI (population, 116,663), the head-quarters of the District and of the *tāluka*; and 14 villages. The population increased from 124,274 in 1891 to 136,297 in 1901. The density is 81 persons per square mile. The

land revenue and cesses in 1903–4 amounted to Rs. 32,010. The aspect of the *tāluka*, excepting the portion bordering on the sea, is hilly, especially towards the north and west where ranges of lofty and barren hills run from north to south, with wide valleys between them. A small chain of hills runs within the *tāluka* for some miles parallel to the Hab river, terminating in the headland of Ras Muār or Cape Monze, a landmark for sailors making the port of Karāchi. After a heavy fall of rain these hills afford abundant pasturage. The *tāluka* contains no canals, but is drained by several mountain torrents, the chief of which are the Malir and Layāri. Salt marshes occur along the sea coast, and abound with mangroves and other trees. Much of the fertile portion of the *tāluka* is devoted to raising vegetables and fruit for the Karāchi market. Agriculture depends chiefly upon wells and springs, the principal crops being *jowār*, *bājra*, barley, and sugar-cane, which are chiefly grown at Malir.

Karāchi City.—Capital of Sind, Bombay, and head-quarters of the District and *taluka* of the same name, situated in 24° 51′ N. and 67° 4′ E., at the extreme northern end of the Indus delta, near the southern base of the Pab mountains and close to the border of Baluchistān. It is 993 miles distant from Bombay by rail, the distance in nautical miles being 483. Two routes connect the city with Lahore, by Sukkur, and by the Kotri Rohri railway, the distance by each being about 800 miles. Population has increased rapidly: (1872) 56,753, (1881) 73,560, (1891) 105,199, and (1901) 116,663, of whom 8,019 resided in the cantonment. Muhammadans number 60,003, Hindus 48,169, Christians 6,158, and Pārsīs 1,823.

Population.

The bay of Karāchi is formed by the projecting point of Manora Head, the extremity of a reef 10 miles in length, which supplies a natural barrier against the Arabian Sea. The opening of the bay between Manora and the opposite sanitarium of Clifton has a width of about 3½ miles; but the mouth is blocked by a group of rocky islets, known as the Oyster Rocks, as well as by what was formerly the larger island of Kiamāri, now part of the mainland owing to the action of sand-drifts. The harbour stretches for 5 miles northward from Manora Head to the narrows of the Layāri river, and about the same distance from the old town of Karāchi on the eastern shore to the extreme western point. Only a small portion of this extensive area, however, is capable of accommodating large vessels. Manora Head, the first object visible to a voyager approaching Karāchi from the sea, is crowned by a lighthouse, having a fixed light 148 feet above sea-level, and visible for 20 miles around in clear weather. The point was formerly guarded by a fort, said to have been first erected in 1797; but this has now yielded place to a modern fortification, the port and pilot establishment, the buildings in

Description.

connexion with the harbour improvements, and a portion of the Indo-European Telegraph department. Besides a library, billiard-room, and European school, Manora possesses an English church, intended for the crews of vessels frequenting the harbour. It has recently been made a cantonment, and is shortly to be constituted a military sanitarium in place of Ghizri, lately abandoned.

On the opposite side of the mouth, Kiamāri forms the landing-place for all passengers and goods bound for Karāchi, and has three piers. A road running along the Napier Mole, three miles long, connects the island with the city and mainland, and is traversed by the East India Tramway. The North-Western Railway also extends to Kiamāri: but instead of following the mole, it takes a more circuitous route, to the south, by the edge of a large lagoon, the waters of which are passed through the mole by a screw-pile bridge, 1,200 feet in length, erected in 1865 at a cost of about 5 lakhs, so as to allow them to flow uninterruptedly into the harbour as a means of scouring the channel. At the northern extremity of this bridge, and running in a westerly direction, stands the native jetty, built of stone at an expense of 4¼ lakhs. At the end of the mole, on the mainland side, the custom-house runs right across the road, which pierces it by five arches, thus intercepting all traffic.

Two principal thoroughfares lead from the custom-house to the Karāchi cantonment, known respectively as the Bandar and the McLeod Roads, at the junction of which stands a handsome clock tower, the public memorial to Sir William Merewether. The oldest portion of the town is situated along the former route, close to the harbour, containing the most thickly populated quarter in Karāchi. The municipality has widened and paved the streets, and effected other improvements which must conduce to the health of the inhabitants, who are chiefly Hindu and Muhammadan merchants. The Layāri, a river merely in name, as it contains water only three or four times a year, separates this quarter from the Layāri suburb. On the McLeod Road are situated the Chief Court, the Bank of Bombay, the National Bank of India, the city railway station, the general post office, the telegraph office, the Mansfield import yard, Messrs. Herman & Co.'s ironworks, and three important cotton-presses—the McLeod Road presses, owned by the Sind Press Company, capable of turning out daily 350 pressed bales of cotton; the Tyābjī presses, erected in 1865 at a cost of 2¼ lakhs, and turning out 250 bales; and the Albert Presses, leased to the Sind Press Company, and turning out 390 bales. This quarter also contains the Edaljī Dinsha dispensary, several schools, the Sind College, a new Hindu temple, and most of the offices belonging to European merchants. The Afghān *sarai*, intended for the use of caravans from Kandahār, and rebuilt by the municipality

in 1873 at a cost of Rs. 20,000, covers an area of about 3 acres. Nearer to the cantonment, a number of bungalows stand on the intervening space, while the civil lines skirt the cantonment itself to the eastward. The military quarter, which is situated to the north and east of the city proper, consists of three portions: the dépot lines, the artillery lines, and the European infantry lines. The depôt lines are the oldest military portion of Karāchi, and were originally intended to supply accommodation to troops passing up-country from the sea or vice versa. Here also is the arsenal. The public garden, distant about half a mile from cantonments, covers an area of 40 acres, neatly laid out with trees and shrubs, and contains an excellent zoological collection.

The architecture of Karāchi is essentially modern and Anglo-Indian. The Anglican Church of the Holy Trinity is situated just outside the cantonments. It stands in a large open space, 15 acres in extent, and consists of a heavy, ungainly Italian nave, with an ugly tower, the upper portion of which has recently been removed as unsafe. St. Patrick's Roman Catholic school, formerly a church, is a fine stone building, capable of accommodating 40 boarders and 200 day-scholars. The European and Indo-European school, known as the Karāchi Grammar School, founded in 1854, under the auspices of Sir Bartle Frere, then Commissioner of Sind, occupies a handsome stone structure in the depôt lines. The other chief modern institutions include a Muhammadan college, the Presbyterian Church of St. Andrew, Christ Church and the Anglican Mission schools, the Napier Barracks, the Sind Club, the Empress market, the Pārsī Virbaiji school, and the post office. The Frere Hall, a municipal building, stands near the Sind Club. It was opened in a somewhat unfinished state in October, 1865, up to which date 1¾ lakhs had been expended upon its erection. This hall, which is a comparatively good specimen of slightly adapted Venetian Gothic, contains the Karāchi general library. A fine statue of the Queen-Empress Victoria, erected by public subscription in the grounds of Frere Hall, was unveiled by His Royal Highness the Prince of Wales in March, 1906. Government House, the residence of the Commissioner of Sind, is situated in the civil quarter, and consists of a central building with two wings, approached by five separate carriage drives. Though commodious and comfortable in its interior arrangements, the exterior can lay no claim to architectural beauty. It was originally built by Sir Charles Napier when governor of the province, and has now been improved and fitted with an electric light and fan installation.

The climate of Karāchi, owing to the prevalence of sea-breezes during eight months of the year, is more healthy than any other in Sind. The low situation of the city, and the near neighbourhood of marsh land, render the atmosphere moist and warm; but the heat

during the hottest months cannot compare with that experienced in the interior. The mean annual temperature, calculated from data for twenty-five years ending 1901, may be stated at 65° in January, 85° in May, and 75° in November. The hottest weather occurs in April, May, and June, though September and October are also often close and sultry. The annual rainfall averages about 5 inches. The first case of plague occurred early in December of 1896, the locality attacked being the old town quarter, and nearly 3,400 persons died in the first year. The total mortality from plague until the end of March, 1904, was 19,010.

History.

Karāchi came into British possession in 1843. The town may be regarded as almost a creation of British rule, its extensive commerce, splendid harbour works, and numerous flourishing institutions having all sprung up since the introduction of settled administration. Before 1725 no town whatever appears to have existed on the site; but a place named Kharak, with a considerable commerce, is mentioned as lying on the other side of the Hab river at the confluence of the river and the sea. The entrance to Kharak harbour having become blocked with sand, a migration was made to a spot near the present head of Karāchi harbour, and at that time (1729) called Kalāchi Kun; and in time, under Jām Daria Khān Jokia, trade began to centre upon the convenient harbour. Cannon brought from Muscat protected the little fort, and the name of Karāchi, supposed to be a corrupt form of Kalāchi, was bestowed upon the rising village. The hopeless blocking up of Shāhbandar harbour shortly afterwards drove much of its former trade and population to Karāchi.

Under the Kalhora princes, the Khān of Kalāt obtained a grant of the town, which he garrisoned from his own territory. Within the short period 1792–5, three Baloch armies appeared before the town; but only on the third occasion did the Tālpur chief of Hyderābād, who led the Baloch troops, gain possession by force of arms. A fort was built at Manora, at the mouth of the harbour. The Tālpur chiefs made considerable efforts to increase the trade of Karāchi, so that in 1838 the town and suburbs had a population of 14,000, half of whom were Hindus. The houses were all flat roofed, and built of mud, very few of them having more than one storey: each house had its *bādgīr* or wind-catcher for the purposes of ventilation. The government under the Mirs was vested in a civil and military official, the Nawab, who ruled despotically over the town and neighbourhood.

Commerce.

Even before the period of British rule, the commerce of Karāchi had attained to some importance, owing to the value of the river Indus as a channel of communication. Nevertheless, the sparse population of the country, combined with the short-sighted policy of its rulers, prevented it from reaching its proper develop-

ment. Under the Tālpur Mīrs, all imports were subjected to a 4 per cent. and all exports to a $2\frac{1}{2}$ per cent. duty. In 1809 the customs revenue amounted to Rs. 99,000; by 1837 it had risen to Rs. 1,74,000. In the latter year the whole trade of the port was valued at about 40 lakhs, the following being the principal items: imports—English silk, broadcloth, chintz, &c., Bengal and China raw silk, slaves, dates, sugar, ivory, copper, spices, and cotton; exports—opium, *ghī*, indigo, wheat, madder, wool, raisins, and salted fish. Slaves came chiefly from Muscat, and consisted of negroes or Abyssinians. Opium to the extent of 500 camel loads came from Mārwār, and was exported to the Portuguese town of Damān. Almost all the goods imported into Sind were then consumed within the province, only Rs. 1,50,000 worth being sent across the frontier.

In 1843-4, the first year of British rule, the trade of Karāchi, including Keti and Sirganda, had a total value of about 12 lakhs, due to a decline in the opium trade, which had steadily fallen since 1837, when its value was estimated at 16 lakhs. The second year of British rule saw a rise to 23, the third to 35, and the fifth to 44 lakhs. By 1852–3 the total value had risen to 81 lakhs. In 1857–8 the exports nearly overtook the imports, the two standing respectively at 107 and 108 lakhs. The American Civil War gave an enormous impetus to the trade of Karāchi, by the high demand for Indian cotton which it created in European markets; and in 1863–4 the total value of the trade amounted to no less than 6 crores: namely, imports 2 and exports 4 crores. The restoration of peace in America, however, brought about a lower price for cotton in Lancashire, and the trade of Karāchi gradually returned to what was then considered its normal level. The total value sank to 4 crores in 1867–8, and $3\frac{1}{2}$ crores in 1873–4; but by 1882–3 it had risen again to 7 crores, and in 1892–3 to 11 crores.

In 1903–4 the trade of Karāchi port, exclusive of Government stores and treasure, had increased in value to 24·9 crores (of which 5·5 represented coasting trade): namely, imports 9·6 crores, and exports 15·2 crores. The main cause of the growth is due to the annually increasing exports of wheat and other food grains, and oilseeds, which are brought by rail from irrigated tracts of Sind and the Punjab. The following were the chief articles of foreign import, with their values, in 1903–4: apparel, 14 lakhs; cotton piece goods, 2 crores; cotton twist and yarn, 10 lakhs; manufactures of wool, 20 lakhs; hardware and cutlery, 13 lakhs; wines and liqueurs, 9 lakhs; spirits, 11 lakhs; metals, wrought and unwrought (chiefly copper, iron, and steel), 43 lakhs; provisions, 19 lakhs; sugar, 102 lakhs; machinery and mill work, 10 lakhs; mineral oil, 22 lakhs; and treasure, 44 lakhs. Total imports from foreign ports (including treasure), 5·9 crores.

From the United Kingdom Karāchi imports cotton manufactures,

railway materials, liquors, coal and coke, machinery, metals, provisions, apparel, drugs, and medicines; from Bombay, cotton piece-goods and twist, treasure, metals, silk, sugar, tea, jute, spices, dyes, woollen manufactures, coco-nuts, manufactured silk, liquors, fruit, and vegetables; from the Persian Gulf, dried fruits, treasure, wool, grain, and horses; from the coast of Makrān, wool, provisions, grain, and pulses; from Calcutta, jute, grain, and pulses; and from Russia, mineral oil.

The following list shows the value of the exports to foreign ports in 1903–4: raw cotton, $2\frac{3}{4}$ crores; grain and pulses, $7\frac{3}{4}$ crores, of which $7\frac{1}{2}$ crores represented wheat; hides and skins, 47 lakhs; oilseeds, chiefly rape and *til*, one crore; raw wool, $52\frac{1}{4}$ lakhs; bones, 17 lakhs. Total value of exports (including treasure), $13\frac{1}{2}$ crores.

To the United Kingdom Karāchi exports cotton, wool, wheat, seeds, skins, and bones; to France, wheat, cotton, bones, hides, gram, gingelly, and rapeseed; to Germany, wheat, cotton, hides, bones, and seeds; to Japan, cotton; to Russia, indigo and cotton; to Bombay, Cutch, and Gujarāt, cotton, grain, indigo, seeds, skins, fish-maws and shark-fins; to Mauritius, grain and pulses; to Persia, rice; to Madras, rice and skins; and to China, raw cotton.

The inland trade of Karāchi includes wheat from the Punjab and the United Provinces, cotton from the Punjab, a large quantity of wool, dried fruits, and horses from Kandahār and Kalāt; while camels, bullocks, and donkeys bring in firewood, grass, *ghī*, palm-leaves, hides, &c., from Las Bela and Kohistān.

The harbour of Karāchi during the period of the Tālpur Mīrs, and for the first few years after British annexation, was capable of accommodating only small native craft. Steamers and large ships anchored outside Manora Point, whence men and stores were conveyed in boats up the river, as far as the tide permitted, and then transferred into canoes, which carried them through a sea of liquid mud to a spot near the site of the existing custom-house. In process of time, however, it became apparent that the bar did not interpose so great an obstacle as was originally supposed, and that square-rigged vessels of a certain draught could cross it with safety. In 1854, under the Commissionership of Sir Bartle Frere, the Napier Mole road or causeway, connecting Karāchi with the island of Kiamāri, was completed, which offered additional inducements to ships for visiting the harbour.

In 1856 a scheme for improving the harbour by deepening the water on the bar was submitted for the opinion of Mr. James Walker, an eminent London engineer, who estimated the cost of works to provide an ample width of passage, with a depth of 25 feet at neap tides, at 29 lakhs. After much debate and intermissions, owing to partial failures, the principal part of the works—the Manora breakwater, 1,503 feet in length—was commenced in 1869, and completed in 1873 at

a cost of 7 lakhs. It affords complete shelter to the entrance channel (eastern) over the bar during the south-west monsoon, and, combined with other works, has already led to the deepening at the entrance to 20 feet at low-water spring tides. The rise and fall is about 8 feet. Further progress was ensured by the creation in 1880 of a Harbour Board, for the purpose of levying shipping dues, which eventually was transformed into the Port Trust by Act VI of 1886. Among the works carried out by the board are the Kiamāri and East Channel groynes or stone banks, which direct and confine into one channel the tidal flow; extensive dredging, boring, and submarine blasting operations; the Merewether Pier, opened in 1882, to accommodate one steamer and provide facilities for trooping; the Erskine wharf, 2,000 feet long, and the James wharf, 1,900 feet long, which can together accommodate ten large steamers and are linked for cargo purposes with the North-Western Railway by a commodious railway yard; a special pier for oil-steamers, to serve the four bulk-oil installations at Kiamāri; and the Mansfield import yard, with warehouse accommodation for all goods landed at the wharves. In the harbour entrance, within shelter of the breakwater, there is a minimum depth of 24½ feet of water, which is maintained and will eventually be improved by dredging during the fair season. Further developments are under consideration, while the reclamation of a large area and the construction of two new steamer berths, with a minimum depth of 28 feet, are now being carried out.

In 1847–8 the number of vessels which entered the harbour was 891, all native craft, with a total burden of 30,509 tons. In 1903–4, 384 vessels (of which 174 were steam-vessels) entered Karāchi harbour with cargoes from foreign ports: gross tonnage, 301,109 tons. In the same year 515 vessels (of which 344 were steam-vessels) cleared with cargoes for foreign ports; gross tonnage, 720,919 tons. From the ports on the coasts of India and Burma 1,311 vessels entered Karāchi laden with cargoes; tonnage, 567,436 tons. For the ports on the coasts of India and Burma 1,177 vessels left Karāchi laden with cargoes; tonnage, 392,463 tons. The affairs of the port are managed by the Karāchi Port Trust, the income of which in 1903–4 was about 19 lakhs and the expenditure 13 lakhs. During the three years ending 1904–5, the average income expanded to more than 21 lakhs and the expenditure to 15½ lakhs. The surplus is devoted to paying off the debt of 66 lakhs, which has now been reduced to 58½ lakhs. The principal steamship lines are the Ellerman, Wilson, Strick, Hansa, Austrian Lloyd, British India, and Bombay Steam Navigation Company.

The Karāchi municipality was established in 1852, and had an income during the decade ending 1901 of about 12 lakhs. In 1903–4 the income was 15 lakhs and the expenditure 14 lakhs. The chief heads of municipal revenue are: octroi (10 lakhs, excluding refunds of

6 lakhs), tax on houses and lands (Rs. 53,000), and rents (Rs. 27,000); and the chief items of expenditure are administration and collection charges (7 lakhs), water-supply and drainage (Rs. 62,000), conservancy (Rs. 1,50,000), hospital and dispensary (Rs. 15,000), public works (Rs. 1,63,000), and education (Rs. 49,000). The management of the cantonment is in the hands of a committee, which had an income and expenditure of about Rs. 18,500 in 1903-4. The normal strength of the Karāchi garrison is 1,300, and of the volunteer forces 800.

The difficulty of water-supply long formed one of the chief drawbacks to Karāchi, most of the wells being too brackish for drinking purposes. Formerly the supply was mainly derived from wells tapping a subterranean bed of the Layāri. The inhabitants of Kiamāri, and the shipping in the harbour, obtained water from carts, which brought it up from 'camp'.[1] For the purposes of ice manufacture, water was formerly imported by rail from Kotri. A scheme for constructing an underground aqueduct, 18 miles in length, from the Malir river at a cost of 5 lakhs was completed in 1882, and Karachi is now in possession of a pure water supply. The capital outlay on this undertaking, including pipes for distributing the water to the city, Kiamāri, and the cantonment, amounted to 17 lakhs; and the annual charges are 3 lakhs, of which Rs. 32,600 represents maintenance charges.

Education.

Education is carried on by the Sind College, the Government high school, Anglo-vernacular schools, the Government vernacular school, and several female and other minor establishments. The total number of boys' schools is 48, with a daily attendance of 6,239, and of girls' schools 20, with an attendance of 1,861. The Dayārām Jethmal Sind Arts College was established in 1887. It is attended by 120 scholars, some of whom are accommodated in a hostel attached to it. A law class prepares students for the first LL.B. The Nārāyan Jagannāth high school prepares students for the matriculation and school final examination. It is managed by Government, and Rs. 10,000 is annually contributed from Provincial revenues. Among the special schools may be mentioned the Muhammadan high school (*Madrasat ul Islam*), the normal class for the training of mistresses, and the engineering class. Newspapers or periodicals published at Karāchi include four English (the *Sind Gazette*, the *Sind Times*, the *Phoenix*, and the *Karachi Chronicle*) and four native (in Sindī, Gujarātī, and Persian).

Medical.

The city possesses a civil hospital, a Dufferin hospital for females, and four dispensaries. These institutions afforded relief in 1904 to 70,155 persons, of whom 1,543 were in-patients treated in the civil hospital. The Dufferin hospital,

[1] The portion of Karāchi comprising the Sadr bazar civil lines, &c., is locally known as 'camp,' as opposed to the old town proper and Kiamāri.

built by Mr. Edaljī Dinsha in 1901, treated 10,017 patients in 1904; of whom 206 were in-patients. A sick hospital, now called the military hospital, was established in 1869, in connexion with the cantonment, and in 1901 the cantonment hospital was opened in the Preedy quarter of the city. Adjacent to the barracks is a third hospital, known as the followers' hospital, where camp servants are treated.

[A. F. Baillie, *Kurrachee, Past, Present and Future* (1890); *Official Compendium of Military Information regarding Karachi* (Bombay, 1896); *Karāchi Harbour Works* (Bombay, 1867); *An Account of the Port of Karāchi* (Karāchi, 1892).]

Karād Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 5′ and 17° 30′ N. and 74° and 74′ 18′ E., with an area of 378 square miles. There is one town, KARAD (population, 11,499), the head-quarters; and 98 villages, including KALE (5,077). The population in 1901 was 134,947, compared with 154,383 in 1891. The density, 357 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 2·9 lakhs, and for cesses Rs. 24,000. The *tāluka* is a portion of the valley of the Kistna river which runs 30 miles from north to south between two parallel chains of hills. The western chain is broken half-way by the Koyna, which joins the Kistna at Karād. The land is generally flat and open, but becomes rougher as it rises towards the hills. Gardens and groves and several charming river reaches lend a picturesque appearance to the country. The soil is extremely fertile. In the cold season the days are warm and the nights bitterly cold, and in the hot season Karād is one of the hottest parts of the District. The annual rainfall averages 30 inches.

Karād Town (*Karhad*, originally *Karahākada*).—Head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 17′ N. and 74° 11′ E., at the confluence of the Koyna and Kistna, on the Bombay Madras high road, 31 miles south-south-east of Sātāra town, and about 4 miles south west of Karād Road on the Southern Mahratta Railway. Population (1901), 11,499. The town was constituted a municipality in 1885. During the decade ending 1901 the income averaged Rs. 10,500. In 1903–4 the income was Rs. 12,000. It is referred to in ancient writings as Karahākada, and has given its name to a subdivision of Brāhmans. In the north-east is an old mud fort containing the mansion of the Pant Pratinidhi, the most noteworthy objects in which are an audience hall with an ornamental ceiling of teak and iron, built about 1800, and a curious step-well. The mosque of Karād is interesting, as it contains nine Arabic inscriptions. One of these shows that it was built during the reign of the fifth Bijāpur king, Ali Adil Shāh (1557–79), by one Ibrāhim Khan. About 3 miles to the south-west is a group of 54 Buddhist caves of

a very plain and early type. The town contains a Subordinate Judge's court, a dispensary, and an English school.

Karadge.—Village in the Chikodi *tāluka* of Belgaum District, Bombay, situated in 16° 33′ N. and 74° 30′ E. Population (1901), 5,138. The village, which is purely agricultural, contains a boys' school with 66 pupils.

Kārāgola.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in 25° 24′ N. and 87° 28′ E., on the left bank of the Ganges. Kārāgola is on the old route from Calcutta to Darjeeling, and is a place of call of the Ganges Dispatch Service, though the steamer now touches 2 miles below the village. The fair held here was formerly one of the largest in Bengal, but has recently lost much of its importance. It takes place at the time of the full moon in the month of Māgh (about February); and a brisk trade is carried on in nuts and spices, as well as in tents, carpets, and wooden furniture imported from Monghyr.

Karaia.—Village in the Gwalior Gird district of Gwalior State, Central India, situated in 25° 54′ N. and 78° 1′ E. Population (1901), 4,989. The place is held by a family of Ponwār Thākurs on a quit rent. It is said to have been founded in 1564, but nothing is known of its early history. In 1852 it fell to Sindhia, and until 1868 was in a prosperous condition. It afterwards, however, became notorious for the depredations committed by the Ponwārs, their excesses reaching such a pitch as to necessitate the forcible depopulation of the place in 1893. It has since then been slowly recovering its position.

Kāraikkudi.—Town in the Tiruppattūr *tahsīl* of the Sivaganga estate, Madura District, Madras, situated in 10° 4′ N. and 78° 47′ E. The population has rapidly increased, and numbered 11,801 in 1901, compared with 6,579 in 1891. The town is chiefly noted as one of the centres of the Nāttukottai Chettis, an enterprising class of merchants and money-lenders; and the many handsome residences which these people have constructed within it have added greatly to its appearance.

Karajgaon.—Town in Amraoti District, Berār. *See* KARAJGAON.

Karajgi.—Eastern *tāluka* of Dhārwār District, Bombay, lying between 14° 44′ and 15° 5′ N. and 75° 17′ and 75° 44′ E., with an area of 441 square miles. It contains one town, HAVERI (population, 7,974), the head quarters: and 127 villages. The population in 1901 was 104,342, compared with 90,206 in 1891. The density, 237 persons per square mile, is slightly below the District average. The demand for land revenue in 1903–4 was 2.09 lakhs, and for cesses Rs. 16,000. Except in the south west, where it is broken by hills, the country is flat. It is crossed from east to west by the Varadā, a tributary of the Tungabhadra. In the north and east the soil is black and in the

south and west mostly red, with an occasional plot of black. The plain of Karajgi is broken at Deogiri, Kanvali, and Kabur by short ranges of hills. The annual rainfall averages 30 inches.

Karākat.—*Tahsīl* in Jaunpur District, United Provinces. *See* KIRĀKAT.

Karamnāsā (*Karamnāshā*, 'the destroyer of religious merit'; the *Kommenases* of Arrian).—River of Northern India, rising near Sārodāg in the Kaimur Hills (24° 32 N., 83° 26 E.), 18 miles west of Rohtāsgarh in Bengal. It first flows north-west, and near Darihārā begins to form the boundary between the Districts of Shāhābād (Bengal) and Mirzāpur (United Provinces). It then flows north for about 15 miles across Mirzāpur, after which it turns north-east and separates Shāhābād from Benares and Ghāzīpur, until it falls into the GANGES near Chausā, after a total course of about 146 miles. Its tributaries are the Durgautī and Dharmautī, two small streams on the right bank. In the hills, the bed of the Karamnāsā is rocky and its banks abrupt: but as it debouches upon the plains, it sinks deeply into a rich clay, very retentive of moisture. During the rains small boats can ply as high as the confluence of the Durgautī. There are two falls, called Deo Dharī and Chhanpathar, which attract attention from their height and beauty.

Two legends account for the ill repute of the river. One tells how Rājā Trisanka of the Solar race had killed a Brāhman and contracted an incestuous marriage. He was purged from these sins by a saint who collected water from all the sacred streams of the world and washed him. The bath took place at the spot where the river issues, and this bears for ever the taint of his guilt. The other legend makes Trisanka attempt to ascend into heaven by means of long austerities. Half-way he was suspended head downwards by the gods, and a poisonous moisture exudes from his mouth into the river. The real cause of its ill fame is probably the fact that the Karamnāsā was the boundary of the eastern kingdom of Magadha, which is treated with contempt in Sanskrit literature because its inhabitants were not Aryans. Hindus living on its banks, except those of the highest castes, are not defiled by it, and carry more scrupulous travellers over it for a consideration. There is no regular irrigation from the Karamnāsā.

Karamsad.—*Pātidār* village in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 33′ N. and 72° 54′ E., and one of the thirteen *kulin* villages of the District. Population (1901), 5,105. It contains a middle school with 38 pupils.

Kārāmūngi.—Crown *tāluk* in Bīdar District, Hyderābād State. The population in 1901, including *jāgīrs*, was 51,808, and the area was 362 square miles. In 1891 the population had been 60,341, the decrease being due to the famine of 1899-1900. The *tāluk* contains 130 villages, of which 19 are *jāgīr*; and Janwāda (population, 2,165)

is the head quarters Since 1905 the *taluk* has included the old *tal k* of Aurād, which had an area of 189 square miles, a population of 19,301, and 65 villages in 1901 The land revenue in 1901 was 1·7 lakhs The Mānjra river flows through the *tāluk* The *paṛgah taluk* of Nārāyankher (population, 42 972) lies south of this *taluk*, and consists of 106 villages Farther south again is the *paṛgah taluk* of Hasanabād (population, 21,563), with 45 villages

Karangarh. Hill, or more properly plateau, in the head quarter subdivision of Bhāgalpur District, Bengal, situated in 25° 15′ N and 86° 50′ E, near Bhagalpur town, and said to derive its name from Karṇ, a pious Hindu king The plateau, which is locally known as the *kila* or fort, is believed to be the site of one of the famous pre Buddhist forts in Bengal the lines of several bastions and the ditch in the west can still be traced In more modern times it contained the lines of the Hill Rangers, a body of troops raised in 1780 from among the hill people by Augustus Cleveland, Collector of the District, for the pacification of the lawless jungle tribes The corps was disbanded in 1863 on the reorganization of the Native army The only objects of interest are Saiva temples of some celebrity These consist of four buildings (*maths*), with square bases and the usual pointed pinnacles One is several hundred years old, the others being modern Numbers of Hindus, though not usually worshippers of Siva, pay their devotions here on the last day of the month of Kartik The temples contain several of the so called seats of Mahādeo or Siva, one of which is made of stone from the Narbada There are also two monuments erected to the memory of Cleveland one by Government, and the other by the landholders of the District The Bidyasāgar Memorial Sanskrit *tol* occupies a fine building in the fort compound.

Karanja. – Peninsula, village and petty division (*pattā*) in the Panvel *taluka* of Kolāba District, Bombay, situated in 18° 51′ N and 72° 57′ E, in the south east of Bombay harbour, and about 6 miles south east of the Carnac Bandar of Bombay. On a clear day the peninsula can be distinguished plainly, and apparently but a mile or two distant, from Bombay It is 8 miles long and 4 broad The peninsula consists of two rocky hills, between which stretch grass and rice lands, wooded with mango trees and palms The creek to the east is broken up into several salt pans, the officers connected with which are stationed at the town of URAN close by Besides its rice crop, which is of considerable value, the two special exports of Karanja Island are salt and honey made from the *mahua* or from the date palm The chief industry of the people, however, is fishing The great area of the salt works, about 3,000 acres, the shining white pans, regular boundaries, and heaps of glistening salt, produce a curious effect to the eye The salt pans are not of recent date reference

is made to them in 1638, and in 1820 they are noted as having produced 20,000 tons of salt. During the year 1903–4 the salt export was about 2,000,000 maunds, and the revenue therefrom 29 lakhs. There are 19 distilleries at Mora on the island of Uran, all owned by Pārsis. The *mahua* flowers distilled in these are brought through Bombay from the Pānch Mahāls, and the annual revenue is about 35 lakhs. The water-supply is good, being derived from reservoirs, and from many ponds and wells which hold water for several months after the rains.

Karanja has passed under every form of rule and suffered every species of vicissitude. Under the Silāhāras, in the twelfth century, the island was prosperous, with many villages and gardens. It formed part of Bassein province, under the Portuguese, from 1530 to 1740; was fortified with two strongholds, one at Uran, the other on the top of its southern peak; and 100 armed men were maintained as garrison. At the present day may still be seen the ruins of Portuguese hermitages and churches. In 1535 the island was in charge of the Franciscans. In 1613 it was the scene of a great riot. In 1670 it was plundered by a Marāthā freebooter. In 1737 the Marāthās finally occupied the place, and held it until 1774, when the English took possession.

The most noteworthy ruins are on the summit of Dronagiri, the southern of the two hill peaks, including the Portuguese fort, guard-house, church, rock-temple, and reservoir. On the east face of Kharavli (the north hill peak) is a Buddhist rock-cut chapel; at Uran town, the old Portuguese fort and churches; in the village of Sheva, a ruined church, of which the broken walls of the graveyard are the only trace.

Kāranja.—Town in the Murtazāpur *tāluk* of Akola District, Berār, situated in 20° 29′ N. and 77° 32′ E. Population (1901), 16,535. Kāranja is a place of some commercial importance. It is said to take its name from a Hindu saint, Karinj Rishi, who, being afflicted with a grievous disease, invoked the aid of the goddess Ambā. She created for him a tank, still existing opposite the temple of the goddess, in which he bathed and became clean. The town is surrounded by an old wall, now dilapidated. It is known as Kāranja Bibi, owing, it is said, to its having once formed part of the dowry of Daulat Shāh Begam (*see* BADNERA). The municipality was created in 1895. The receipts and expenditure during the ten years ending 1900–1 averaged Rs. 14,000 and Rs. 13,500. In 1903–4 the income was Rs. 18,000, mainly derived from taxes and cesses; and the expenditure was Rs. 15,000, chiefly devoted to conservancy and education. Kāranja is connected with Murtazāpur (20 miles) by a metalled road.

Karanjiā.—Village in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in 21° 44′ N. and 86° 6′ E. Population (1901), 732. Karanjiā is the head-quarters of the Pānchpīr sub-

division of the State, and is connected with Baripādā, the capital, by a metalled road.

Karasgaon.—Town in the Ellichpur *tāluk* of Amraotī District, Berār, situated in 21° 20′ N. and 77° 39′ E. Population (1901), 7,456. A fort of fine sandstone, now in ruins, was built here by Vithal Bhāg Deo, a *tālukdār* in the Ellichpur *jāgīr* in 1806.

Karatoyā.—Old river of Eastern Bengal and Assam, which rises in the Baikuntpur jungle in the extreme north-west of Jalpaigurī District in 26° 51′ N. and 88° 28′ E., and meanders through Rangpur, until, after a course of 214 miles, it joins the Halhāliā, in the south of Bogra District, in 24° 38′ N. and 89° 29′ E. The united stream is known as the PHULJHUR, and it eventually finds its way into the JAMUNA (3). The Karatoyā bore in ancient times, as we learn from the Purānas, a high character for sanctity; and its mermaid goddess, whose image has been found among the ruins of MAHASTHAN, was widely worshipped, and this place is even now a favourite place of pilgrimage. The river is mentioned in the *Jogini Tantra* as the western boundary of the ancient kingdom of Kāmarūpa, which it separated from Pundra or Paundravardhana, the country of the Pods, whose capital was at Mahāsthān. It was along its right bank that Muhammad-i-Bakhtyār Khiljī, the Muhammadan conqueror of Bengal, marched upon his ill fated invasion of Tibet in 1205, and in the narrative of that expedition the Karatoyā is described as being three times the width of the Ganges. It was no doubt the great river crossed by Hiuen Tsiang on his way to Kāmarūpa in the seventh century, and by Alā-ud-dīn Husain on his invasion of the same country in 1498.

The topography of the river is attended with numerous difficulties, changes of name are frequent, and its most recent bed, which ultimately joins the Atrai some 30 miles east of Pābna, is known indifferently as the Burhī ('old') Tīsta and the Karto or Karatoyā. It appears that at the end of the eighteenth century, when the GANGES and the BRAHMAPUTRA were still 150 miles apart, the TĪSTA united with the other Himālayan streams to form one great river. The elevated tract of stiff clay known as the BARIND, which spreads over a considerable part of the modern Districts of Rājshāhi, Dinājpur, Mālda, and Bogra, formed an obstacle which could not be so easily pierced as the more recent alluvium round it, and the outlet of the Himālayan streams was thus diverted to one side or the other. Sometimes when the trend of the rivers was eastwards, they flowed down the channel of the Karatoyā, which is shown in Van Den Broucke's map of Bengal (*circa* 1660) as flowing into the Ganges, and was, in fact, before the destructive floods of 1787, the main stream which brought down to the Ganges the great volume of Tīsta water. South of the Padmā there is now no trace of any river bearing this name; and, since the

main stream of the Tīsta broke away to the east in 1787, the Karatoyā has gradually silted up, and it is at the present day a river of minor importance, little used for navigation.

Karaudiā. -*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Karauli State.—State in the east of Rājputāna, lying between 26° 3′ and 26° 49′ N. and 76° 34′ and 77° 24′ E., with an area of 1,242 square miles. It is bounded on the north by Bharatpur; on the north-west and west by Jaipur; on the south and south-east by Gwalior; and on the east by Dholpur. Hills and broken ground characterize almost the whole territory, which lies within a tract locally termed the *Dāng*, a name given to the rugged region immediately above the narrow valley of the Chambal. The principal hills are on the northern border, where several ranges run along, or parallel to, the frontier line, forming somewhat formidable barriers. There is little beauty in these hills; but the military advantages they present caused the selection of one of their eminences, Tahangarh, 1,309 feet above the sea, as the seat of Jādon rule in early times. Along the valley of the Chambal an irregular and lofty wall of rock separates the lands on the river bank from the uplands, of which the southern part of the State consists. From the summits of the passes the view is often picturesque, the rocks standing out in striking contrast to the comparatively rich and undulating plain below. The highest peaks in the south are Bhairon and Utgir, respectively 1,565 and 1,479 feet above the sea. Farther to the north the country falls, the alluvial deposit is deeper, level ground becomes more frequent, and hills stand out more markedly, while in the neighbourhood of the capital the low ground is cut into a labyrinth of ravines.

Physical aspects.

The river CHAMBAL forms the southern boundary, separating the State from Gwalior. Sometimes deep and slow, sometimes too rocky and rapid to admit of the safe passage of a boat, it receives during the rains numerous contributions to its volume, but no considerable perennial stream flows into it within the boundaries of the State. The BANĀS and Morel rivers belong more properly to Jaipur than to Karauli; for the former merely marks for some 4 miles the boundary between these States, while the latter, just before it joins the Banās, is for only 6 miles a river of Karauli and for another 3 miles flows along its border. The Panchnad, so called from its being formed of five streams, all of which rise in Karauli and unite 2 miles north of the capital, usually contains water in the hot months, though often only a few inches in depth. It winds away to the north and eventually joins the Gambhīr in Jaipur territory.

In the western portion of the State a narrow strip of quartzites belonging to the Delhi system is exposed along the Jaipur border,

while Upper Vindhyan sandstones are faulted down against the quartzites to the south-east, and form a horizontal plateau extending to the Chamal river. To the north-west of the fault, some outliers of Lower Vindhyan rocks occur, consisting of limestone, siliceous breccias, and sandstone, which form two long synclinals extending south-west as far as Narŧoli.

In addition to the usual small game, tigers, leopards, bears, *nīlgai*, *sāmbar*, and other deer are fairly numerous, especially in the wooded glens near the Chambal in the south-west.

The climate is on the whole salubrious. The rainfall at the capital averages 29 inches a year, and is generally somewhat heavier in the north-east at Māchilpur and the south-east at Mandrael. Within the last twenty years the year of heaviest rainfall has been 1887 (45½ inches), while in 1896 only a little over 17 inches fell.

History.

The Mahārājā of Karauli is the head of the Jādon clan of Rājputs, who claim descent from Krishna. The Jādons, who have nearly always remained in or near the country of Braj round Muttra, are said to have at one time held half of Alwar and the whole of Bharatpur, Karauli, and Dholpur, besides the British Districts of Gurgaon and Muttra, the greater part of Agra west of the Jumna, and portions of Gwalior lying along the Chambal. In the eleventh century Bijai Pāl, said to have been eighty-eighth in descent from Krishna, established himself in Bayānā, now belonging to Bharatpur, and built the fort overlooking that town. His eldest son, Tahan Pāl, built the well-known fort of Tahangarh, still in Karauli territory, about 1058, and shortly afterwards possessed himself of almost all the country now comprising the Karauli State, as well as a good deal of land to the east as far as Dholpur. In 1196, in the time of Kunwar Pāl, Muhammad Ghorī and his general, Kutb-ud-dīn, captured first Bayānā and then Tahangarh; and on the whole of the Jādon territory falling into the hands of the invaders, Kunwar Pāl fled to a village in the Rewah State. One of his descendants, Arjun Pāl, determined to recover the territory of his ancestors, and about 1327 he started by capturing the fort of Mandrael, and gradually took possession of most of the country formerly held by Tahan Pāl. In 1348 he founded the present capital, Karauli town.

About a hundred years later Mahmūd I of Mālwā is said to have conquered the country, and to have entrusted the government to his son, Fidwi Khān. In the reign of Akbar (1556–1605) the State became incorporated in the Delhi empire, and Gopāl Dās, probably the most famous of the chiefs of Karauli, appears to have been in considerable favour with the emperor. He is mentioned as a commander of 2,000, and is said to have laid the foundations of the Agra fort at Akbar's request. On the decline of the Mughal power the

State was so far subjugated by the Marāthās that they exacted from it a tribute of Rs. 25,000, which, after a time, was commuted for a grant of Māchilpur and its dependencies. By the treaty of November 9, 1817, with the East India Company, Karauli was relieved of the exactions of the Marāthās and taken under British protection; no tribute was levied, but the Mahārājā was to furnish troops according to his means on the requisition of the British Government. In 1825, when the Burmese War was proceeding, and Bharatpur was preparing for resistance under the usurpation of Dūrjan Sāl, Karauli undoubtedly sent troops to the aid of the latter; but on the fall of that fortress in 1826 the Mahārājā made humble professions of submission, and it was deemed unnecessary to take serious notice of his conduct.

The next event of any importance was the celebrated Karauli adoption case. Narsingh Pāl, a minor, became chief in 1850, and died in 1852, having adopted a day before his death a distant kinsman, named Bharat Pāl. It was first proposed to enforce the doctrine of 'lapse,' but finally the adoption of Bharat Pāl was recognized. In the meantime a strong party had been formed in favour of Madan Pāl, a nearer relative, whose claim was supported by the opinions of several chiefs in Rājputāna. An inquiry was ordered; and it was ascertained that the adoption of Bharat Pāl was informal, by reason of the minority of Narsingh Pāl and the omission of certain necessary ceremonies. As Madan Pāl was nearer of kin than Bharat Pāl and was accepted by the Rānīs, by nine of the most influential Thākurs, and by the general feeling of the country, he was recognized as chief in 1854. During the Mutiny of 1857 he evinced a loyal spirit and sent a body of troops against the Kotah mutineers; and for these services he was created a G.C.S.I., a debt of 1·2 lakhs due by him to the British Government was remitted, a dress of honour conferred, and the salute of the Mahārājās of Karauli was permanently increased from 15 to 17 guns. The usual *sanad* guaranteeing the privilege of adoption to the rulers of this State was granted in 1862, and it is remarkable that the last seven chiefs have all succeeded by adoption.

Mahārājā Bhanwar Pāl, the present ruler, was born in 1864, was installed in 1886, obtained full powers in 1889, and, after receiving a K.C.I.E. in 1894, was made a G.C.I.E. in 1897. The nobles are all Jādon Rājputs connected with the ruling house, and, though for the most part illiterate, are a powerful body in the State, and until quite recently frequently defied the authority of the Darbār. The chief among them are Hadoti, Amargarh, Inaiti, Raontra, and Barthūn, and they are called *Thekānadārs*. The Rao of Hadoti is looked upon as the heir to the Karauli *gaddi*, when the ruling chief is without sons.

The only places of archaeological interest are Tahangarh, already

mentioned, and Bahādurpur, 8 miles south of the capital, both are now deserted and in ruins.

Population.

The number of towns and villages in the State is 437, and the population at each of the three enumerations was (1881) 148,670, (1891) 156,587, and (1901) 156,786. The smallness of the increase during the last decade is ascribed to famines in 1897 and 1899. The territory is divided into five *tahsīls* namely, Karauli (or *Sadr*), Jirota, Māchilpur, Mandrael, and Utgir, the head quarters of each being at the place from which it is named, except in the case of Jirota and Utgir, the head quarters of which are at Sapotra and Karanpur respectively. The only town in the State is the capital, a municipality.

The following table gives the chief statistics of population in 1901:

Tahsil	Number of Towns	Number of Villages	Population	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write
Karauli	1	128	67,581	+ 10·8	2,546
Jirota		80	32,646	+ 3·2	1,542
Māchilpur		84	24,015	− 3·8	184
Mandrael		58	19,665	− 15·2	227
Utgir		86	12,879	− 10·5	107
State total	1	436	156,786	+ 0·1	3,606

Nearly 94 per cent. of the total are Hindus, the worship of Vishnu under the name of Krishna being the prevalent form of religion; and more than 5 per cent. are Muhammadan. The language mostly spoken are dialects of Western Hindi, including Dangi and Dhundhari.

The principal tribe is the Minas, who number 32,000, or more than 20 per cent. of the population, and are the leading agriculturists of the country; next come the Chamārs (23,000), who, besides working in leather, assist in agriculture. Brahmans number 10,000 and are mostly petty traders, village money lenders, and cultivators; while the Gujars (16,000), formerly noted cattle lifters, are now very fair agriculturists.

Agriculture.

Agricultural conditions vary in different parts of the State. In the highlands of the *Dāng* the soil is clayey, and the slopes of the hills are embanked into successive steps or terraces, only a few yards broad, here rice is grown hopefully, and after it has been reaped barley or gram is sometimes sown. The fields are irrigated from tanks excavated on the tops of the hills. The lowlands of this tract are surrounded by hills on two or three sides and are called *ardu*. The soil is of two kinds: the first is composed of earth and sand washed down the hill sides by the rain

fall, and is of very fair quality, while the second is hard and stony and is called *kankrīlī*. The crops grown here are mostly *bājra* and *moth*, though the better of these two soils produces fair spring crops where irrigation from wells is possible. On the banks of the Chambal the soil is generally rich, and the bed of the river is cultivated to the water's edge in the cold season. The principal crops here are wheat, gram, and barley. Elsewhere, outside the *Dāng*, the soil is for the most part light and sandy, but in places is associated with marl. Excellent crops of *bājra*, *moth*, and *jowār* are produced in the autumn; and by means of irrigation, mostly from wells, good crops of wheat, barley, and gram in the spring.

No very reliable agricultural statistics are available, but the area ordinarily cultivated is about 260 square miles, or rather more than one-fifth of the total area of the State. The principal crops are *bājra* and gram, the areas under which are usually about 58 and 57 square miles respectively; *moth* occupies 36 square miles, wheat about 25, barley nearly 20, rice 18, and *jowār* about 14 square miles. Cotton, poppy, and sugar cane are cultivated to a certain extent, and *san*-hemp is extensively grown in the neighbourhood of the capital.

Karauli does not excel as a cattle breeding country; the animals are small though hardy, and attempts to introduce a larger kind have not succeeded as they do not thrive on the rock-grown grass. The goats alone are really good, and many are exported from the *Dāng* to Agra and other places.

Of the total area cultivated, 61 square miles, or about 23 per cent., are generally irrigated. Well irrigation is chiefly employed in the country surrounding the capital. The total number of wells is said to be 2,813, of which 1,615 are masonry; leathern buckets, drawn up with a rope and pulley by bullocks moving down an inclined plane, are universally used for lifting the water. Tanks are the principal means of irrigation in the rocky and hilly portions; there are said to be 379 tanks of sorts in the State, but only 81 of them have masonry dams. From tanks and streams water is raised by an apparatus termed *dhenkli*, consisting of a wooden pole with a small earthen pot at one end and a heavy weight at the other.

There are no real forests in the State and valuable timber trees are scarce. Above the Chambal valley the commonest tree is the *ahao* (*Anogeissus pendula*), but it is scarcely more than a shrub; other common trees are the *dhāk* (*Butea frondosa*), several kinds of acacia, the cotton tree (*Bombax malabaricum*), the *sal* (*Shorea robusta*), the *garjan* (*Dipterocarpus tūrbinatus*), and the *nim* (*Melia Azadirachta*). Near the Chambal in the Mandrael *tahsīl*, and again in a grass reserve 20 miles north-east of the capital, a number of *shisham* trees (*Dalbergia Sissoo*) are found together; but they are, it is believed, not of natural

growth. The so-called forest area comprises about 200 square miles, and is managed by a department called the Bāgar, whose principal duties are to supply grass for the State elephants and cattle, find and preserve game for the chief and his followers, and provide a revenue by exacting grazing dues. The forest revenue averages about Rs. 6,400 a year, derived mainly from grazing fees, and to a small extent from the sale of grass and firewood, while the annual expenditure is about Rs. 3,000.

Red sandstone abounds throughout the greater portion of the State, and in parts, especially near the capital, white sandstone blends with it. Other varieties of a bluish and yellow colour are also found, the former near Māchilpur, and the latter in the south and west. Iron ore occurs in the hills north east of Karauli; but the mines would not pay working expenses, and the iron manufactured in the State is smelted from imported material.

Manufactures are not of importance. There is a little weaving and dyeing; and a few wooden toys, boxes, and bed-legs painted with coloured lac, and some pewter and brass ornaments are turned out. The *tāt* or gunny cloth of Karauli is well-known in the neighbouring marts, and a good deal is exported; it is made from *san*-hemp grown near the capital.

Trade and communications.

The chief exports are cotton, *ghī*, opium, *zīra* (cumin seed), rice and other cereals, while the chief imports are piece-goods, sugar, *gur* (molasses), salt, and indigo. The trade is mainly with the neighbouring States of Jaipur and Gwalior and with Agra District.

There is no railway in the State, the nearest stations being Hindaun Road on the Rājputāna-Mālwā line, 52 miles north of the capital, and Dholpur on the Indian Midland section of the Great Indian Peninsula Railway, about 65 miles to the east. Apart from a few metalled streets in Karauli town, the only metalled road in the State is about 9 miles long. It runs north from the capital in the direction of Hindaun Road as far as the Jaipur border, and was completed in 1886 at a cost of Rs. 37,000. The rest of the roads are mere fair-weather tracks, some passable by bullock-carts, and others only by camels and pack-bullocks. The Chambal river is crossed by means of small boats maintained by the State, and the fare per passenger is usually about a quarter of an anna, the transit of merchandise being specially bargained for. There are five British post offices in the State (four having been opened in January, 1905), and that at the capital is also a telegraph office.

The State has been fairly free from famines, but has had its share of indifferent years. In 1868–9 the rains crops failed, and there was considerable distress; but the Mahārājā did his best to mitigate the sufferings of the poor by establishing kitchens and poorhouses and starting public works. A sum of 2 lakhs

Famine.

was borrowed from the British Government; the price of grain went up to 8 seers per rupee, and there was scarcity of fodder, especially in the highlands of the *Dāng*, where nine-tenths of the cattle are said to have perished. The years 1877–8, 1883–4, 1886–7, and 1896–8 were periods of scarcity and high prices. In 1897 locusts did much damage; and in the following year a pest called *kāta*, akin to the locust, almost entirely destroyed the autumn crops in parts of the State. In 1899–1900 distress was confined to a comparatively small area of 254 square miles, and never amounted to famine. Nevertheless, about 268,000 units were relieved on works; and the total expenditure, including loans (Rs. 23,800) and land revenue remitted (Rs. 46,000) and suspended (Rs. 28,600), exceeded a lakh.

Administration.

The State is governed by the Mahārājā, assisted by a Council of five members. His Highness is President of the Council and has exercised full powers since 1889. Each of the five *tahsīls* is under a *tahsīldār*, and over the latter is a Revenue Officer or Deputy Collector. In every village there is a State servant called a *tahsīlia*, who is subordinate to the *patwāri* of the circle in which the village is situated.

In the administration of justice the Karauli courts follow generally the British Indian enactments; but certain sections have been added to the Penal Code, including one declaring the killing of cows and peafowl to be offences. The lowest courts are those of *tahsīldārs*, who can try civil suits the value of which does not exceed Rs. 50, and on the criminal side can punish with imprisonment up to one month and with fine up to Rs. 20, or both. The court of the Judicial Officer, besides hearing appeals against the orders of *tahsīldārs*, can try any civil suit, and on the criminal side can sentence up to three years' imprisonment and fine up to Rs. 500, or both; it can also pass a sentence of whipping not exceeding 36 stripes. The Council is the highest court in the State; it hears appeals against the orders of the Judicial Officer, tries criminal cases beyond his powers, and, when presided over by the Mahārājā, can pass sentence of death.

The revenue courts are guided by a simple code of law, introduced in 1881–2, and amended by circulars issued from time to time by the Council to meet local requirements. Petty suits are decided by *tahsīldārs* subject to appeal to the Revenue Officer, who can also take up rent and revenue suits of any value or nature. As on the civil and criminal side, the highest revenue court is the Council.

The normal revenue of the State is about 5 lakhs, of which 2·8 lakhs is derived from land, one lakh from customs, and Rs. 23,000 as tribute from *jāgīrdārs*. The normal expenditure is about 4·4 lakhs, the main items being cost of army and police (1·3 lakhs), gifts and charities (Rs. 70,000), cost of stables (Rs. 33,000), allowance to relatives (Rs. 29,000),

and personal expenses of the chief (Rs. 28,000). The State, owing to a series of years of scarcity, is in debt to the extent of nearly 5 lakhs, which is being paid off by annual instalments of Rs. 55,000.

The State had till quite recently a silver and copper coinage of its own, and it is believed that coins were first struck by Mahārājā Mānak Pāl about 1780. The distinctive mint-marks are the *jhār* (spray) and the *katār* (dagger), and since the time of Madan Pāl (1854–69) each chief has placed on his silver coins the initial letter of his name. The Karauli rupee, which in 1870 was worth half an anna more than the British, subsequently fell slightly in exchange value, and the Darbār resolved to introduce British currency as the sole legal tender in the State. The conversion operations have just been completed.

There are two main kinds of tenure in Karauli: namely, *khālsa*, under which the State itself possesses all rights and privileges over the land; and *muāfi*, under which the State has, subject to certain conditions, conferred such rights and privileges on others. Of the 436 villages in the State, 204 are *khālsa* and 232 are *muāfi*. The latter tenure is of several kinds. The Thākurs or nobles pay as tribute (*khandi*) a fixed sum, which is nominally one-fourth of the produce of the soil, but really much less; and this tribute is in lieu of constant military service, which is not performed in Karauli, though, when military emergencies arise or State pageants occur, the Thākurs come in with their retainers, who on such occasions are maintained at the expense of the Darbār. No tax is ordinarily exacted in addition to the tribute, except in cases of disputed succession, when *nazarāna* is levied. This tenure is known as *bapoti*; and such estates are not permanently resumed except for treason or serious crime, though in the past they were frequently sequestrated for a time when the holders gave trouble. Another form of *muāfi* tenure is known as *panārth* or religious grant. Under it land is granted in perpetuity free of rent and taxes. Other lands are granted on the ordinary *jagīr* tenure, while lands are also set apart to meet *zamāna* expenses. In the *khālsa* area the cultivating tenures of the peasantry are numerous. In some villages a fixed sum is paid, varying according to the kind of crop and the nature of the soil, and village expenses may be either included or excluded; in other villages an annual assessment is made by the *tahsīldār*, and the land revenue is paid sometimes in cash and sometimes in kind; in other villages again the State merely takes a share, varying from one-fifth to one half, of the actual produce; and lastly, under the *thekadāri* or *lambardāri* system a village, or a part of one, is leased for a term of five or ten years to the headman or some individual for a fixed sum payable half-yearly. Land revenue is nowadays mostly paid in cash, and the assessment varies from Rs. 15 per acre of wheat, sugar-cane, or poppy, to 12 annas per acre of *moth* or *til*. There is no

complete revenue survey and settlement in Karauli, but one has been in progress since 1891.

No salt is manufactured in the State, nor is any tax of any kind levied on this commodity. By the agreement of 1882 the Mahārājā receives Rs. 5,000 annually from the British Government as compensation, as well as 50 maunds of Sāmbhar salt free of cost and duty. The liquor consumed is mostly made from the flowers of the *mahuā* (*Bassia latifolia*). The right to manufacture and sell country liquor is sold annually by auction, and brings in from Rs. 1,600 to Rs. 1,800; similarly the right to sell intoxicating drugs, such as *gānja*, *bhang*, &c., yields about Rs. 1,200. The revenue derived from the sale of court-fee stamps is about Rs. 6,000.

The only municipality is described in the article on KARAULI TOWN.

There is a Public Works department called *Kāmthānā*, but it is not now under professional supervision. A British officer was, however, usefully employed in 1885–6. The expenditure during recent years has averaged about Rs. 12,000; and the principal works have been the metalled road to the Jaipur border in the direction of Hindaun Road (Rs. 37,000), the Neniakī-Gwāri tank (about Rs. 23,000), a couple of bridges (costing respectively Rs. 17,000 and Rs. 30,000), and a building for a school (about Rs. 45,000).

The military force consists of 2,053 men. The cavalry number 260, of whom 171 are irregular; the infantry number 1,761 (1,421 irregular); and there are 32 artillerymen. Of the 56 guns, 10 are said to be serviceable.

The State is divided into seven police circles or *thānas*, besides the *kotwāli* at the capital. The police force consists of 358 men of all ranks, and there is in addition a *halai* in each village who performs duties similar to those of the *chaukīdār* in British India. The only jail is at the capital.

According to the Census of 1901, about 2·3 per cent. of the people were able to read and write: namely, 4 per cent. of the males and 0·2 per cent. of the females. The State maintains seven schools: namely, a high school and a girls' school at the capital, and primary schools at Mandrael, Karanpur, Sapotra, Kurgaon, and Māchilpur. These are attended by nearly 400 pupils. Education is free, the annual expenditure being about Rs. 4,000. In addition, several private schools are attended by about 200 boys.

The State possesses five hospitals: namely, two at the capital (one exclusively for females), and three in the districts, at Māchilpur, Mandrael, and Sapotra. They contain accommodation for 36 in-patients; and in 1904 the number of cases treated was 31,909, of whom 136 were in-patients, and 2,150 operations were performed.

Vaccination is nowhere compulsory. Three vaccinators under a

native Superintendent are employed; and in 1904–5 the number of persons successfully vaccinated was 5,865, or more than 37 per 1,000 of the population.

[P. W. Powlett, *Gazetteer of Karauli* (1874, under revision); H. E. Drake-Brockman, *Gazetteer of Eastern Rājputāna States* (Ajmer, 1905); *Administration Reports of Karauli* (annually from 1894–5).]

Karauli Town.— Capital of the State of the same name in Rājputāna, situated in 26° 30′ N. and 77° 2′ E., equidistant (about 75 miles) from Muttra, Gwalior, Agra, Alwar, Jaipur, and Tonk. It is also the head-quarters of the *Sadr tahsīl*. It was founded in 1348 by Rājā Arjun Pāl, and was originally called Kalyānpuri after the temple to Kalyānji built about the same time. It is connected with the Rājputāna-Mālwā Railway at Hindaun Road by a metalled road 52 miles long. The population in 1901 was 23,482, of whom 76 per cent. were Hindus and 22 per cent. Muhammadans.

Viewed from some points whence the palace is seen to advantage, the town has a striking appearance. It is surrounded by a wall of red sandstone, and is also protected on the north and east by a network of ravines. To the south and west the ground is comparatively level; but advantage has been taken of a conveniently situated watercourse to form a moat to the town wall, while an outer wall and ditch, defended by bastions, has been carried along the other bank, thus forming a double line of defence. These fortifications, though too strong for the desultory attacks of the Marāthās, would be far less formidable to regular troops than were the mud walls of Bharatpur. The town wall, in spite of its handsome appearance, is unsubstantially built, being composed of ill-cemented stones faced by thin slabs after the fashion which prevails throughout the State. The circumference of the town is somewhat less than $2\frac{1}{4}$ miles, and there are six gates and eleven posterns. The streets are rather narrow and irregular, but since 1884 most of them have been flagged with the local stone, and they can easily be cleansed as the natural drainage is excellent. There are several costly houses and a few handsome temples; of the latter the most beautiful is perhaps the Pratāp Saromān temple, built by Mahārājā Pratāp Pāl (1837–50) in the modern Muttra style. The palace is about 200 yards from the eastern wall of the town; it was founded by Arjun Pāl in the fourteenth century, but little or nothing of the original structure can now be traced. In its present state it was erected about the middle of the eighteenth century by Rājā Gopāl Singh, who adopted the Delhi style of architecture with which his residence in that city had made him familiar. The whole block of buildings is surrounded by a lofty bastioned wall in which there are two fine gates.

A municipality was constituted in 1884, and the committee has

successfully looked after the paving and lighting of the streets and the general conservancy of the town. Indeed, Karauli is one of the cleanest towns in Rājputāna. The income of the municipality varies from Rs. 7,000 to Rs. 9,000, derived mainly from a small octroi duty on cereals; and the expenditure is somewhat less. The jail has accommodation for 77 prisoners, who are employed on cotton cloth and carpet-weaving; attached to the jail is a small printing press, in which some of the prisoners occasionally work.

Besides a few private schools in which only plain ciphering and letter-writing are taught, and a girls' school, the town possesses a high school teaching up to the matriculation standard of the Allahābād University, with an Oriental department affiliated to the Punjab University, and a *patwāri* class. This institution costs the State about Rs. 3,000 a year and education is free; the daily average attendance in 1904 was 227. Since the high school was established in 1889, 6 students have passed the matriculation at the Allahābād University and 39 have passed various Oriental examinations of the Punjab University. There are two hospitals, a general and a female. The latter, which was opened as a dispensary for out patients in 1891, is maintained from municipal funds.

Karchanā.—The central of the three trans-Jumna *tahsīls* of Allahābād District, United Provinces, conterminous with the *pargana* of Arail, lying between 25° 9′ and 25° 26′ N. and 81° 44′ and 82° 5′ E., with an area of 257 square miles. Population fell from 134,818 in 1891 to 127,327 in 1901. There are 338 villages and one small town. The demand for land revenue in 1903-4 was Rs. 2,64,000, and for cesses Rs. 42,000; but the revised settlement has reduced the revenue to Rs. 2,39,000. The density of population, 495 persons per square mile, is below the District average. The *tahsīl* is bounded on the north-east by the Ganges, on the north-west by the Jumna, and on the south and east by the Tons. Bordering on the rivers are tracts of high sandy soil much cut up by ravines, except towards the Ganges. The central portion consists of a fertile loam, which changes in the west to clay, where coarse rice is the staple crop. Though situated south of the Jumna, the country resembles the Doāb, but facilities for irrigation are not good. In 1903–4 the area under cultivation was 174 square miles, of which 28 were irrigated. Wells supply about two-thirds of the irrigated area, and *jhīls* the remainder.

Karenni.- The country of the Red Karens, Burma, lying on both banks of the Salween, between 18° 50′ and 19° 55′ N. and 97° 10′ and 97° 50′ E. It is bounded on the north by the Shan States, on the south by Salween District, on the east by Siam, and on the west by Toungoo District. At Loikaw, a village of 2,042 inhabitants towards the north of the tract, an Assistant Superintendent of the Shan States

is posted as Agent of the British Government, with a military police guard under an assistant commandant, and control is exercised by him and the Superintendent at Taunggyi over the chiefs. The tract is divided in a general way into eastern and western Karenni, the former consisting of the single State of Gantarawadi (2,500 square miles), the latter of the four small States of Kyebogyi (350 square miles), Bawlake (200 square miles), Nammekon (50 square miles), and Naungpale (30 square miles). The north-western portion is an open, fairly level plain, well watered and in some parts swampy. It lies in the basin of the Nam Pilu or Balu stream, which drains the Inle Lake, and, after flowing past Loikaw, sinks into the ground to the south-east of that village before joining the Nam Pawn. The rest of the Karenni country is mountainous, with occasional fertile valleys, but for the most part arid. It is watered by the Salween and its tributary the Nam Pawn, which are separated by a ridge 5,000 feet in height.

Nothing definite is known of the history of the Karenni States prior to the middle of the nineteenth century. During the latter part of that century they were the scene of constant hostilities, occasioned by incursions from the Shan States and by intestinal disputes. Certain features of their history since the annexation of Upper Burma are given in the article on the SOUTHERN SHAN STATES. Gantarawadi was heavily fined for the disturbances which Sawlapaw had occasioned in 1888, and Sawlawi undertook to pay a tribute of Rs. 5,000 to the British Government. This chief was raised to the dignity of Sawbwa in 1901. The other four chiefs were formally recognized as feudatories in 1892, and appointed Myozas. Kyebogyi, Bawlake, and Nammekon pay a tribute of Rs. 100 each, and Naungpale Rs. 50. The population of Karenni was estimated in 1901 at 45,975, distributed as follows over the different States: Gantarawadi, 26,333; Kyebogyi, 9,867; Bawlake, 5,701; Nammekon, 2,629; and Naungpale, 1,265. The inhabitants are said to have decreased considerably of late, owing to the diminution of water in the Nam Pilu valley, the most cultivated part of the country. More than half are Red Karens, who are at a low stage of civilization, and very far from clean in their persons and habits. Other people represented are Shans, Taungthus, Bres, Padaungs, and White and other Karens. The chief wealth of the country is teak timber, rich forests lying on the left bank of the Salween, on both banks of the Nam Pawn, and in the north-western States. The total revenue of the States in 1893-4 was Rs. 37,000.

Karens.—A collection of Indo-Chinese tribes, the representatives in Burma of one of the smaller immigration waves that entered the country from the direction of South-Western China during prehistoric times. The arrival of the Karens in the country in all probability preceded that of the Tai (Shans), and may possibly have been earlier than

that of the Burmans. It is more probable, however, that they appeared after the latter, and in any case there is reason to believe that they were later comers than the representatives of the Mon-Anam races. The Karens may be divided into three main divisions: the Sgaw, the Pwo, and the Bghai. The Sgaw and Pwo are generally looked upon as the Karens proper. They are found down the whole of the eastern border of Lower Burma, from Toungoo to Mergui, in the delta of the Irrawaddy, and in the Pegu Yoma; in fact it is only in the Arakan Division, in Rangoon, and in the Districts of Prome and Thayetmyo that they do not form an important section of the community in the Lower province. They are most numerous in the Districts of Thaton, Myaungmya, and Toungoo. In 1901, 86,434 persons were returned as Sgaw-Karens, and 174,070 as Pwo Karens, a total of 457,355 having been shown as Karens with no division specified. These last were practically all either Sgaw or Pwo, probably more of the former than of the latter.

The Karens are for the most part hill-dwellers, but a very considerable proportion of them are now permanently settled in the plains. The Sgaw plain-dwellers are often known as Burmese Karens, and the Pwo as Talaing Karens. In physique there is no great difference between the Karens of Lower Burma and their Burman and Talaing neighbours; they are not exceptionally flat-faced, and sharp features are frequently met with. Their eyes are not oblique, like those of the Chinese. In dress they have to some extent adopted the style of the people in whose neighbourhood they live. The typical Karen garment, where the national dress is still worn, is the *thindaing* or smock, a long, sleeveless or almost sleeveless garment, which is slipped over the head and falls away from the neck, leaving a V-shaped opening in front and behind. Where this is worn it forms the sole upper garment of the men, boys, and unmarried girls. In the case of married women the *thindaing* is shorter, is often highly decorated, and is worn over a skirt. Clan distinctions were, and to a certain extent still are, indicated by differences in dress, as for instance in the embroidery on the hem of the men's smocks. The typical hill Karen house, like that of the Kachin, is far longer and larger than that built by the people of the plains. The Karens practise agriculture, their cultivation, when resident in the hills, being of the ordinary *taungya* description. They are excellent foresters, and ever since the annexation of Pegu their relations with the Forest department have been intimate. The original religion of the Karens was spirit worship, and a considerable number still hold by their old faith; but some have embraced Buddhism and a large proportion of them have become Christians. In their spontaneous readiness to accept Christianity they are probably unique among the more backward races of Asia. The Karens have been enlisted to some extent in the Burma military police. At one time a battalion was

recruited entirely from the Karens; but a riot that occurred in its ranks in 1899 led to its abolition as a separate unit, and to the distribution of the companies of which it was composed over other battalions. The two main divisions of the Karens proper have dialects of their own which differ very considerably. It is probable that the Sgaw dialect will in time supersede the Pwo for educational purposes. The language is tonal, and belongs to the Siamese-Chinese sub-family of the Indo-Chinese family.

Of the Bghai division of the Karen race, the Red Karens of Karenni have hitherto been the best known. Other representatives of this division are called Padaungs, Bres, Zayeins, Sawngtung Karens, Loilong Karens, White Karens, and the like. The Bghai inhabit the south-western corner of the Shan States, between 18° 30′ and 20° 30′ N. They were found mostly in the 'estimated' areas in 1901, and the precise strength of the different tribes is not exactly known. The total of Red Karens would appear, however, to be above 29,000, that of the Padaungs between 9,000 and 10,000, and that of the Bres about 3,500. Most of the Zayeins live in territory that was regularly enumerated, they aggregated 4,440. The Bghai tribes vary considerably in language, customs, and dress. The male costume consists as a rule of short trousers and a jacket or blanket, the female costume, of a short kilt with either a short smock or, in the case of the Red Karen women, of a single piece of cloth, draped over the upper portion of the body. Leg and neck ornaments are common among the women, the former being specially noticeable in Karenni in the shape of beaded garters, the latter in the Padaung country, where the women lengthen their necks artificially by means of a succession of brass rings which is added to year by year. All the Bghai are spirit worshippers, and the majority of them are at a lower stage of civilization than the Karens of Lower Burma. The Bghai dialects, though differing, are probably all variants of a common speech.

Karhal Tahsīl. Central southern *tahsīl* of Mainpuri District, United Provinces, comprising the *parganas* of Karhal and Barnāhal, and lying between 26° 56′ and 27° 9′ N. and 78° 46′ and 79° 10′ E., with an area of 218 square miles. Population fell from 100,297 in 1891 to 98,398 in 1901. There are 189 villages and one town, KARHAL (population, 6,268), the *tahsīl* head quarters. The demand for land revenue in 1903-4 was Rs. 1,75,000, and for cesses Rs. 28,000. The density of population, 451 persons per square mile, is the lowest in the District, and this is the only *tahsīl* which lost in population between 1891 and 1901. The Sengar, flowing from north-west to south east, divides the *tahsīl* into two parts. The eastern portion forms part of the great central loam tract; and its fertility is interrupted only by patches of barren land called *usar*, and great swamps from which are formed

the Puraha and Ahneya streams, flowing into Etāwah. Although the west is more sandy it contains no *ūsar*; this tract suffered during the scarcity of 1896 7. In 1901–2 the area under cultivation was 110 square miles, of which 101 were irrigated. The Etāwah branch of the Lower Ganges Canal serves the tract east of the Sengar, supplying about half of the irrigated area; and wells irrigate most of the remainder.

Karhal Town.—Head-quarters of the *tahsīl* of the same name in Mainpurī District, United Provinces, situated in 27° N. and 78° 57′ E., on the road from Mainpurī town to Etāwah. Population (1901), 6,268. The town contains a bazar of poor shops, but has some substantial brick-built houses. A Saiyid family, some of the members of which are reputed to possess miraculous powers, resides here. The *tahsīlī* and dispensary are the chief public buildings. Karhal is administered under Act XX of 1856, with an income of about Rs. 1,400. Trade is local. The *tahsīlī* school has about 90 pupils.

Kariāna.—Petty State in KĀTHIĀWĀR, Bombay.

Kārikāl (*Kāraikkāl*, 'fish pass'; the *Carical Cariukalla* of Bartolomeo).—French Settlement and town on the Coromandel coast, lying between the *tāluks* of Māyavaram, Nannilam, and Negapatam in the Tanjore District of Madras and the Bay of Bengal. The town is situated in 10° 55′ N. and 79° 50′ E. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles, and is governed by an Administrator subordinate to the Governor at Pondicherry. The population has been rapidly decreasing. In 1883 it was 93,055; in 1891, 70,526; and in 1901, 56,595; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only *tāluk* in Tanjore District which has a higher density. Each of the three communes—namely, Kārikāl, La Grande Aldée, and Nedungādu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Kārikāl half the number of seats is reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery: namely, the Nandalār, Nāttār, Arasalār, Tirumalarājanār, Mudikondānār, Vānjiār, and Nūlār, besides many smaller channels.

The capital of the Settlement is situated on the north bank of the Arasalār, about 1½ miles from its mouth. It has a brisk trade in rice with Ceylon and to a less extent with the Straits Settlements. In 1904 it had no commerce whatever with France, and very little with other French colonies. The total imports amounted to £49,000, of which £1,600 came from the French colonies. The total exports were valued at £106,000, out of which only £600 went to the French colonies. The port is merely an open roadstead, provided with a lighthouse

142 feet high, the light in which has a range of from 8 to 10 miles. Indian labourers emigrate from Kārikāl to the French colonies in large numbers. Inland customs are governed by a convention with the Madras Government, and all salt consumed in French territory is by treaty purchased from the British on payment of an annual indemnity of Rs. 20,748. In 1899 Kārikāl was connected with Peralam on the Tanjore District Board Railway. The line is $14\frac{2}{3}$ miles long and is owned by the French Government, but worked by the South Indian Railway.

Kārikāl was promised to the French in 1738, in return for their assistance, by Sayājī, the exiled Rājā of Tanjore. He did not, however, keep his promise; and it was only by the assistance of Chanda Sāhib, then at war with Sayājī, that a grant of the town was obtained in the following year. An additional cession of 81 villages was obtained in 1749 under a like pressure and with the same assistance, when the French and Chanda Sāhib were besieging Tanjore. The latter grant was confirmed by treaty in 1754. The town and fort were besieged by an English force under Major Monson in 1760, and, after a gallant defence of ten days, surrendered on April 15. They came into British possession again on three subsequent occasions (*see* FRENCH POSSESSIONS), and were finally restored to the French on January 14, 1817.

Karimganj Subdivision.—Subdivision in the south-east of Sylhet District, Eastern Bengal and Assam, lying between 24° 15′ and 25° N. and 92° 2′ and 92° 36′ E., with an area of 1,048 square miles. It contains one town, KARĪMGANJ (population, 5,692), the head quarters: and 924 villages. The northern portion of the subdivision is a level plain, but to the south it is much broken by hills. The Saraspur and Pāthārkāndi ranges project into the valley from the Lushai-Tippera system; and a third range of low hills, which intervenes between them, separates the valleys of the Langai and Singlā rivers. The lower hills have been largely taken up for tea, but the upper valleys of these two rivers are still, to a great extent, covered with jungle. Attempts have been made to colonize this tract; but they have only met with a qualified measure of success, as it is very inaccessible, and much of the land is not well adapted for cultivation. At the extreme end of this valley are located the only forest Reserves in the District, which cover an area of 103 square miles. The population of Karimganj in 1891 was 384,638, and by 1901 had risen to 410,460, an increase of nearly 7 per cent. Like the rest of Sylhet, the subdivision is densely peopled; and, in spite of the large tracts of waste land in the south, the density in 1901 was 392 persons per square mile, which is but little below the figure for the District as a whole. The rainfall at Karimganj town is as much as 160 inches in the year, but in the Langai valley it is about 50 inches less. The staple food-crop is *sail* or transplanted winter rice, and the

dense groves of areca palms surrounding the villages are a special feature in the landscape The cultivation of tea is an important industry, in 1904 there were 35 gardens with 21,413 acres under plant, which gave employment to 51 Europeans and 24,126 natives. Karīmganj is almost invariably in charge of a European magistrate, and for administrative purposes is divided into the two *thanas* of Karimganj and Jaldhub The demand on account of land revenue and cesses in 1903–4 was Rs. 2,24,000

Karīmganj Town.—Head quarters of the subdivision of the same name in Sylhet District, Eastern Bengal and Assam, situated in 24° 52′ N and 92° 22′ E on the left bank of the Kusiyara river The town is favourably situated for trade, as it is a port of call for the river steamers, and has a station on the Assam Bengal Railway Population (1901), 5,692 The public buildings include the Magistrate's and Munsif's courts, a subsidiary jail with accommodation for 35 persons, a hospital with 6 beds, and a high school with an average attendance of 176 boys The Subdivisional Officer is almost invariably a European and there is a branch of the Welsh Presbyterian Mission in the town Most of the offices are located on low hills which command a fine view across the dense groves of areca palm, with which the neighbourhood abounds, to the hills of North Cachar There is a considerable export trade to Bengal in unhusked rice mustard, linseed, bamboo mats, and timber The principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, salt, sugar, and spices The majority of the merchants are natives of the District but there are a few Mārwaris from Rajputana

Karīmganj Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 28′ N and 90° 52′ E, 3 miles east of Kishorganj Population (1901), 136 It is a large boat-building and jute mart and has given its name to a well-known variety of jute

Karīmnagar District. District in the Warangal Division of the Hyderabad State, formerly known as ELGANDAL It is bounded on the north by Nizamabad, on the east by the Bastar state of the Central Provinces, on the south by Warangal, and on the west by Medak and Nizamabad In consequence of the changes made in 1905, its area has been reduced to 5,660 square miles, including *jāgīrs* A range of hills extends in a north-easterly direction between Gurrapalli and Jagtial, terminating at Vemulkurtti on the Godāvari A second range, running parallel to the former stretches from Sunigram to Mallangur A third range starts in the south-western corner of the District from the valley of the Manair river, runs in a north-easterly direction, and, after intersecting the Sunigram range, passes beyond Rāmgiri and terminates near the Godāvari The principal river is the Godāvari, which flows through the northern portion, forming the northern and eastern boundary, and

partially separating the District from Adilābād in the north and from Bastar in the east. The next important river is the Māner, a tributary of the Godāvari, which traverses the District from west to east as far as Kārlagunta, and thence flows due north, till it falls into the Godāvari in the Mahādeopur *tāluk*. The Peddavāgu and Chelluvāgu are minor tributaries of the Godāvari.

The geological formations are the Archaean gneiss, and the Cuddapah, Sullavai, and Gondwāna series. Gneiss occupies most of the District, the remaining formations occurring in the east.

The flora of the District includes teak, mango, custard apple, tamarind, ebony, black-wood, satin-wood, *tarvar* (*Cassia auriculata*), *babūl* (*Acacia arabica*), *nallāmaddi* (*Terminalia tomentosa*), and *eppa* (*Hardwickia binata*).

Karīmnagar is covered with a large extent of jungle and forest, which give cover to tigers, leopards, bears, hyenas, wolves, wild hog, and wild dogs, while in the plains *sāmbar*, spotted deer, and *nīlgai* are met with everywhere.

With the exception of Mahādeopur and parts of Sirsilla and Jagtial, the District is healthy. The temperature at Karīmnagar and Jamikunta in May rises to 110°, and in the remaining *tāluks* it ranges between 100° and 105°. In December it falls to 60°. The annual rainfall averages about 33 inches.

The population of the area of the present District in 1901 was 861,833. It comprises seven *tāluks*: KARĪMNAGAR, JAMIKUNTA, SULTĀNĀBĀD, JAGTIAL, SIRSILLA, MAHĀDEOPUR, and PARKĀL. The chief towns are JAGTIAL, MANTHANI, KORATLA, KARĪMNAGAR, and VEMALWĀDĀ. About 96 per cent. of the population are Hindus, 90 per cent. speak Telugu, and 6 per cent. Urdū.

The land revenue demand of the District as at present constituted is about 22·6 lakhs.

Karīmnagar Tāluk.—*Tāluk* in Karimnagar District, Hyderābād State, with an area of 1,012 square miles. The population in 1901, including *jāgīrs*, was 138,591, compared with 170,676 in 1891, the decrease being due to famine and cholera. The *tāluk* contains one town, KARĪMNAGAR (population, 5,752), the District and *tāluk* head-quarters; and 186 villages, of which 26 are *jāgīr*. The land revenue in 1901 amounted to 4·3 lakhs. Rice is largely raised with irrigation from tanks and wells. The Māner river flows through the *tāluk* from west to east.

Karīmnagar Town.—Head-quarters of the District and *tāluk* of Karīmnagar, Hyderābād State, situated in 18° 26′ N. and 79° 8′ E., on the Māner river, 6 miles east of Elgandal. Population (1901), 5,752. Besides the District and *tāluk* offices, it contains the District civil court, two dispensaries, one of which provides *yūnānī* treatment, a post

office, local board and municipal offices, several State schools, a mission school, a female mission hospital, a District jail, and a tannery. The town is noted for its fine filigree work.

Karjat (1).—Southern *tāluka* of Ahmadnagar District, Bombay, lying between 18° 20′ and 18° 50′ N. and 74° 43′ and 75° 13′ E., with an area of 565 square miles. It contains 81 villages, including Karjat, the head-quarters. The population in 1901 was 35,619, compared with 48,828 in 1891. The decrease, which is greater than in any other *tāluka*, is primarily due to emigration to the Nizām's Dominions and other regions, consequent upon famine. It is the most thinly populated in the District, with a density of only 63 persons per square mile. The demand for land revenue in 1903–4 was Rs. 80,000 and for cesses Rs. 6,000. A chain of low hills with flat summits traverses the *tāluka* from north-west to south-east, dividing it into two equal parts. The streams from the eastern slope flow into the Sīna river, and from the western into the Bhīma. The country presents a dismal appearance, owing to the large proportion of rocky and unprofitable ground, almost destitute of vegetation. There are a few level tracts, some of considerable extent, where the soil is deep and rich. In the neighbourhood of the hills the soil is of the poorest description. The rainfall is extremely uncertain, and good harvests are rare. It suffered severely in the famines of 1876–7 and 1899–1901, when many villages were deserted. The cultivators, owing to a succession of bad harvests, are nearly all in debt.

Karjat (2).—North-eastern *tāluka* of Kolāba District, Bombay, lying between 18° 45′ and 19° 8′ N. and 73° 11′ and 73° 33′ E., with an area of 359 square miles, including the petty subdivision (*petha*) of Khālāpur. There are 270 villages, the head-quarters being at Karjat. The population in 1901 was 87,415, compared with 85,288 in 1891. The density, 243 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was Rs. 1,61,000, and for cesses Rs. 10,000. Karjat may be described as a rough hilly tract, lying between the Western Ghāts and the hills of Mātherān. On its northern side dales and valleys diversify the surface; the lowlands are divided into rice-fields, while the higher grounds are clothed with teak, *ain*, and black-wood. In the east the woodlands become a forest. The Ulhās and other streams which rise in the Western Ghāts flow through the *tāluka*, but become dry channels in the hot season. The rainfall is fairly plentiful, and failure of the rice crop rare. Drinking-water is scarce. The rice soil is black, and the upland soil reddish. The climate varies greatly with the season. In January and February the nights are extremely cold. The rainfall during the ten years ending 1903 averaged 130 inches.

Kārkala.—Village in the Udipi *tāluk* of South Kanara District,

Madras, situated in 13° 13′ N. and 74° 59′ E. Population (1901), 5,364. It was once a populous Jain town and the seat of the Bhairarasa Wodeyars, a powerful Jain family of which no representatives are now left. In the neighbourhood are many Jain remains. The most remarkable is the monolithic statue of Gomata Rāya, erected by the ruling prince in A.D. 1431. It stands in an enclosure on the summit of a rocky hill south of the town overlooking a picturesque lake, and is 41 feet 5 inches high, with the traditional form and lineaments of Buddha. Once in sixty years Jains from all parts gather and bathe the statue with coco-nut milk. To the north, on the summit of a smaller hill, stands a square temple with projecting porticoes facing each of the four quarters, its columns, pediments, and friezes being alike richly carved and ornamented. Within, facing each entrance, stand groups of three life-sized figures in burnished copper, counterparts of the great statue above. At Halearigadi, close by, is the finest Jain *stambha* (pillar) in the District. It has a monolithic shaft 33 feet high in eight segments, each beautifully and variously ornamented, supporting an elegant capital and topped by a stone shrine containing a statue. The total height is about 50 feet. Kārkala is situated on one of the principal roads leading to Mysore, in the centre of a fertile tract containing many fine areca gardens. It has a considerable trade in rice and other local produce, and is the head-quarters of a deputy *tahsīldār*.

Karkamb.—Town in the Pandharpur *tāluka* of Sholāpur District, Bombay, situated in 17° 52′ N. and 75° 18′ E., 13 miles north of Pandharpur town. Population (1901), 5,571. Karkamb has a large weaving and thread dyeing industry, with about 500 looms, chiefly producing cheap cloth for women's robes. About 1,500 persons are employed in the weaving industry, which has an output of the annual value of $1\frac{3}{4}$ lakhs. The establishments for thread-dyeing number 11. The betel-vine is largely grown. Weekly markets are held on Mondays, when cattle, grain, and cloth are sold. The town contains two schools, one of which is for girls.

Kārli (*Kārla*).—Village in the Maval *tāluka* of Poona District, Bombay, situated in 18° 45′ N. and 73° 29′ E., on the road between Bombay and Poona. Population (1901), 903. Some celebrated caves are $2\frac{1}{2}$ miles from the Karli and 5 from the Lonauli station on the Poona section of the Great Indian Peninsula Railway. The principal cave is thus described by Mr. J. Fergusson in his *History of Eastern and Indian Architecture*: —

'It is certainly the largest as well as the most complete *chaitya* cave hitherto discovered in India, and was excavated at a time when the style was in its greatest purity. In it, all the architectural defects of the previous examples are removed; the pillars of the nave are quite perpendicular. The screen is ornamented with sculpture—its first

appearance apparently in such a position and the style had reached a perfection never afterwards surpassed.

'In the cave there is an inscription on the side of the porch, and another on the lion-pillar in front, which are certainly integral, and ascribe its excavation to the Mahārājā Bhūti or Deva Bhūti, who, according to the Purānas, reigned 78 B.C.; and if this is so, they fix the age of this typical example beyond all cavil.

'The building resembles, to a very great extent, an early Christian church in its arrangements, consisting of a nave and side aisles, terminating in an apse or semi-dome, round which the aisle is carried. The general dimensions of the interior are 126 feet from the entrance to the back wall, by 45 feet 7 inches in width. The side aisles, however, are very much narrower than in Christian churches, the central one being 25 feet 7 inches, so that the others are only 10 feet wide, including the thickness of the pillars. As a scale for comparison, it may be mentioned that its arrangement and dimensions are very similar to those of the choir of Norwich Cathedral, or of the Abbaye aux Hommes at Caen, omitting the outer aisles in the latter building. The thickness of the piers at Norwich and Caen nearly corresponds to the breadth of the aisles in the Indian temple. In height, however, Kārli is very inferior, being only 42 feet, or perhaps 45 feet from the floor to the apex, as nearly as can be ascertained.

'Fifteen pillars on each side separate the nave from the aisles; each pillar has a tall base, an octagonal shaft, and a richly ornamented capital, on which kneel two elephants, each bearing two figures, generally a man and a woman, but sometimes two females, all very much better executed than such ornaments usually are. The seven pillars behind the "altar" are plain octagonal piers, without either base or capital, and the four under the entrance gallery differ considerably from those at the sides. The sculptures on the capitals supply the place usually occupied by frieze and cornice in Grecian architecture; and in other examples plain painted surfaces occupy the same space. Above this springs the roof, semicircular in general section but somewhat stilted at the sides, so as to make its height greater than the semi-diameter. It is ornamented even at this day by a series of wooden ribs, probably coeval with the excavation, which prove beyond the shadow of a doubt that the roof is not a copy of a masonry arch, but of some sort of timber construction which we cannot now very well understand.

'Immediately under the semi-dome of the apse, and nearly where the altar stands in Christian churches, is placed the *dāgoba*, in this instance a plain dome slightly stilted on a circular drum. As there are no ornaments on it now, and no mortices for woodwork, it probably was originally plastered and painted, or may have been adorned with hangings, which some of the sculptured representations would lead us to suppose was the usual mode of ornamenting these altars. It is surmounted by a Tee, and on this still stand the remains of an umbrella in wood, very much decayed and distorted by age.

'Opposite this is the entrance, consisting of three doorways, under a gallery exactly corresponding with our rood-loft, one leading to the centre and one to each of the side aisles; and over the gallery the

whole end of the hall is open, as in all these *chaitya* halls, forming one great window, through which all the light is admitted. This great window is formed in the shape of a horseshoe, and exactly resembles those used as ornaments on the façade of this cave, as well as on those of Bhāja, Bedsa, and at Nāsik. Within the arch is a framework or centring of work standing free. This, so far as we can judge, is, like the ribs of the interior, coeval with the building; at all events, if it has been renewed, it is an exact copy of the original form, for it is found repeated in stone in all the niches of the façade, over the doorways, and generally as an ornament everywhere, and with the Buddhist "rail," copied from Sānchi, forms the most usual ornament of the style.

'The outer porch is considerably wider than the body of the building, being 52 feet wide, and is closed in front by a screen composed of two stout octagonal pillars, without either base or capital, supporting what is now a plain mass of rock, but once ornamented by a wooden gallery forming the principal ornament of the façade. Above this, a dwarf colonnade or attic of four columns between pilasters admitted light to the great window; and this again was surmounted by a wooden cornice or ornament of some sort, though we cannot now restore it, since only the mortices remain that attached it to the rock.

'In advance of this screen stands the lion-pillar, in this instance a plain shaft with thirty-two flutes, or rather faces, surmounted by a capital not unlike that at Kesariyā, but at Kārli supporting four lions instead of one; they seem almost certainly to have supported a *chakra*, or Buddhist wheel. A similar pillar probably stood on the opposite side, but it has either fallen or been taken down to make way for the little [Hindu] temple that now occupies its place.

'The absence of the wooden ornaments of the external porch, as well as our ignorance of the mode in which this temple was finished laterally, and the porch joined to the main temple, prevent us from judging what the effect of the front would have been if belonging to a free-standing building. But the proportions of such parts as remain are so good, and the effect of the whole so pleasing, that there can be little hesitation in ascribing to such a design a tolerably high rank among architectural compositions.

'Of the interior we can judge perfectly, and it certainly is as solemn and grand as any interior can well be, and the mode of lighting the most perfect—one undivided volume of light coming through a single opening overhead at a very favourable angle and falling directly on the "altar" or principal object in the building, leaving the rest in comparative obscurity. The effect is considerably heightened by the closely-set thick columns that divide the three aisles from one another, as they suffice to prevent the boundary walls from ever being seen; and as there are no openings in the walls, the view between the pillars is practically unlimited.

'These peculiarities are found more or less developed in all the other caves of the same class in India, varying only with the age and the gradual change that took place from the more purely wooden forms of these caves to the lithic or stone architecture of the more modern ones. This is the principal test by which their relative ages can be determined, and it proves incontestably that the Kārli cave was

excavated not very long after stone came to be used as a building material in India.'

Karmad.—Petty State in KĀTHIĀWĀR, Bombay.

Karmāla Tāluka.—*Tāluka* of Sholāpur District, Bombay, lying between 17° 58′ and 18° 33′ N. and 74° 48′ and 75° 26′ E., with an area of 772 square miles. It contains one town, KARMĀLA (population, 7,301), the head-quarters; and 123 villages. The population in 1901 was 67,558, compared with 93,353 in 1891. The great decrease is due to mortality and emigration during the famine of 1899–1901. The *tāluka* is one of the most thinly populated in the District, with a density of only 88 persons per square mile. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 11,000. Karmāla is in the north of the District, between the Bhīma on the west and the Sīna on the east. Except the hills near Kem and the dividing ridge, forming the watershed between the two rivers, the country is flat; towards the north it is rough and broken, crossed by many streams. About half consists of rich black soil, and the rest is red and gravelly. The seasons are uncertain—a really good one, as a rule, not occurring oftener than once in three or four years, when, however, the harvest is exceedingly abundant. The annual rainfall averages 23 inches. Weekly fairs are held at eight towns and villages; and at Sonāri an annual fair in April is attended by about 6,000 persons.

Karmāla Town.—Head-quarters of the *tāluka* of the same name in Sholāpur District, Bombay, situated in 18° 24′ N. and 75° 12′ E., 11 miles north of the Jeur station on the south-east section of the Great Indian Peninsula Railway. Population (1901), 7,301. Karmāla was originally the seat of a branch of the Nimbālkar family. The founder began and his son finished a fort, which still exists and is used for the *tāluka* offices. This fort, one of the largest in the Deccan, extends over a quarter of a square mile, and contains about a hundred houses. Karmāla grew and became a large trade centre, being a crossing station for the traffic from Bālāghāt through Bārsi to Poona, and between Ahmadnagar and Sholāpur. Most of this traffic has now passed to the railway, but Karmāla is still a large mart for cattle, grain, oil, and piece-goods. A weekly market is held on Friday, and the town has a small weaving industry. The water-supply is derived from wells three-quarters of a mile to the south, the water being carried through an earthenware conduit to dipping wells in the town. An annual fair is held here, lasting four days. The town possesses a large temple of Ambā Bai. The municipality, established in 1867, had an average income during the decade ending 1901 of Rs. 8,800. In 1903–4 the income was Rs. 9,100. Karmāla contains a Subordinate Judge's court, three schools, including one maintained by the American Congregational Mission, and a dispensary.

Karmgarh.—A *nizāmat* or administrative district of the Patiāla State, Punjab, lying between 29° 23′ and 30° 27′ N. and 75° 40′ and 76° 36′ E., with an area of 1,834 square miles. It had a population in 1901 of 500,635, compared with 500,225 in 1891, dwelling in four towns—PATIĀLA, SAMĀNA, SUNĀM, and SANAUR—and 665 villages. The head-quarters are at Bhawānigarh or Dhodān, a village in the Bhawānigarh *tahsīl*. The land revenue and cesses in 1903–4 amounted to 9·5 lakhs. The *nizāmat* consists of a fairly compact area in the south-east of the main portion of the State, and is divided into four *tahsīls*—PATIĀLA, BHAWANIGARH, SUNĀM, and NARWĀNA—of which the first three lie in that order from east to west, partly in the Pawādh and partly in the Jangal tract, on the north of the Ghaggar river, while the fourth *tahsīl*, Narwāna, lies on its south bank in the Bāngar.

Karnāl District.—District in the Delhi Division of the Punjab, lying between 29° 11′ and 30° 15′ N. and 76° 11′ and 77° 17′ E., with an area of 3,153 square miles, including 36 outlying villages scattered throughout the eastern part of the State of Patiāla. The District is bounded on the north by Patiāla State and Ambāla District; on the east by the Jumna, which separates it from the Districts of Sahāranpur, Muzaffarnagar, and Meerut in the United Provinces, on the south by the Punjab Districts of Delhi and Rohtak; and on the west by the States of Patiāla and Jīnd. It is divided into two parts by the low ridge which forms the watershed between the Indian Ocean and the Bay of Bengal. To the east of this ridge along the Jumna lies the *khādar*, a strip of low lying land from 5 to 10 miles wide; though it is not so thickly wooded as the rest of the District, date-palms abound, and in places a thick jungle skirts the river bank. West of the ridge lies the *bāngar*, an upland plain watered throughout by the Western Jumna Canal, and stretching parallel to the *khadar* for the whole length of the District. These two tracts fill up practically the whole of the southern *tahsīl* of Pānipat: but in Karnāl and Kaithal, the central *tahsīls*, the *bāngar* rises with a perceptible step into the Nardak[1], a high and once arid country, now traversed by the Sirsa branch of the Western Jumna Canal. In the north of the District nearly the whole of Thānesar and the northern part of the Kaithal *tahsīl* are intersected by mountain torrents which drain the Lower Himālayas, and include large tracts of wild country covered with forests of *dhāk* (*Butea frondosa*).

Physical aspects.

The Jumna forms the entire eastern boundary for a distance of 81 miles. Its bed varies from half a mile to a mile in width, of which the stream occupies only a few hundred yards in the cold season. The most important of the torrents which traverse the northern portion are

[1] The Nardak is properly another name for KURUKSHETRA, but it is extended to include all the high tract

the GHAGGAR, with its tributaries the Umla and SARASWATĪ, the CHAUTANG, and the Mārkanda and Purān, the last an old bed of the Ghaggar. Minor drainage channels are the Nai or 'new' Nadi, the Būrhi or 'old' Nadi, and the Rākshi.

Karnāl District offers nothing of geological interest, as it is situated entirely on the alluvium. The flora of the upper Gangetic plain is well represented in the eastern portion; in the west there is an approach to the desert vegetation; while the Jumna valley produces a few temperate types, e. g. a rose, a kind of scurvy grass (*Cochlearia*), both of which are found again in Lower Bengal, and a crowfoot (*Ranunculus pennsylvanicus*), which extends to Ludhiāna, but is absent from the Himālayas. Relics of a former Deccan flora, of which a wild cotton is the most interesting, survive, especially in the neighbourhood of Thānesar. Indigenous trees, except the *dhāk*, are uncommon; in the Jumna *khādar* a low palm abounds, which is often taken for a wild form of the date-palm, but is almost certainly a distinct species.

The Nardak was a favourite hunting-ground of the Mughal emperors, and as late as 1827 Archer says that lions were sometimes seen within 20 miles of Karnāl, while tigers were exceedingly common. Now, however, even the leopard is found only rarely, but wolves are still common. Antelope, *nīlgai*, 'ravine deer' (Indian gazelle), and hog deer are fairly plentiful where there is suitable cover. Small game is abundant.

Fever is particularly prevalent in the Naili (Nāli) tract, flooded by the Saraswatī, and in the canal-irrigated portions of the District. Owing to the faulty alignment of the canal and the swamping caused thereby, fever used to be terribly prevalent, and in consequence the cantonments were removed from Karnāl town; but recent improvements have greatly diminished the evil. The climate of Kaithal resembles that of the plains of the Punjab proper, but the Jumna *tahsīls* are not subject to the same extremes of heat and cold.

The annual rainfall averages 30 inches at Karnāl, 23 at Pānīpat, and 18 at Kaithal, rapidly decreasing as one goes west or south. The *khādar* receives the most plentiful and frequent rain, as many local showers follow the bed of the river. Of the rainfall at Karnāl, 27·4 inches fall in the summer months and 2·4 in the winter.

History.

The early legendary history of the District will be found in the account of KURUKSHETRA or the holy plain of the Hindus, which occupies its north western portion. The number of Indo-Scythian coins found at Polar on the Saraswatī would seem to show that about the beginning of the Christian era the District was included in the Indo-Scythian empire. In or about A. D. 400 it was traversed by the Chinese pilgrim Fa Hian and in 639 by Hiuen Tsiang, the latter finding a flourishing kingdom with its capital at Thānesar. Though Thānesar was sacked by Mahmūd of Ghazni in

1014, the country remained under Hindu rule until the defeat of Prithwī Rāj at Tirāwari in 1192. Thereafter it was more or less firmly attached to Delhi till after the invasion of Tīmūr, who marched through it on his way to the capital. It then belonged, first to the ruler of Sāmāna, and then to the Lodī kings of the Punjab, and during the century and a half that separated Akbar from Tīmūr was the scene of numerous battles, of which the most important were two fought at PĀNĪPAT. For two centuries Karnāl enjoyed peace under the Mughals, broken only by the raid of Ibrāhīm Husain Mirza in 1573, the flight of prince Khusrū through the District in 1606, and the incursion of Banda Bairāgi in 1709. During this period a canal was constructed from the Jumna and the imperial road put in repair. In 1738 Nādir Shāh defeated Muhammad Shāh near Karnāl, and in 1761 occurred the third great battle of PĀNĪPAT, in which the Marāthās were routed by the Afghān army. A terrible period of anarchy followed, during which the tract formed a sort of no man's-land between the Sikh and Marāthā powers, coveted by both but protected by neither, and the prey of every freebooter that chanced to come that way. On annexation, in 1803, the greater part of the country was held by Sikh chiefs or by confederacies of Sikh horsemen; and the District was gradually formed out of their territories as they escheated. The most important were the petty principalities of Kaithal, Thānesar, and Lādwa, of which the first two lapsed between 1832 and 1850, while Lādwa was confiscated owing to the conduct of its chief during the first Sikh War. In 1849 the District of Thānesar was formed, but in 1862 it was broken up into the two Districts of Ambāla and Karnāl. During the Mutiny there was a good deal of disorder, but no serious outbreak occurred. Great assistance was given by the Rājās of Patiāla and Jīnd in preserving order. The Pehowa *thāna* was transferred from Ambāla to the Kaithal *tahsīl* of the District in 1888, and the rest of the Pipli *tahsīl* (now Thānesar) was added to it in 1897.

The chief relics of antiquity are to be found at KARNĀL, PĀNĪPAT, THĀNESAR, and PEHOWA. At the village of Sītā Mai in the Nardak is a very ancient shrine of Sītā, and several of the great *sarais* built along the old imperial road still remain.

Population.

The District contains 7 towns and 1,383 villages. Its population at the last three enumerations was: (1881) 820,041, (1891) 861,160, and (1901) 883,225. It increased by 2·6 per cent. during the last decade, the increase being greatest in the Pānīpat *tahsīl* and least in Karnāl. In the Thānesar *tahsīl* the population decreased 0·9 per cent. in the twenty years ending 1901, owing to the unhealthiness of the tract; while Kaithal increased by 20 per cent. in the same period, owing to the development of canal-irrigation. The District is divided into the four *tahsīls* of KARNĀL, PĀNĪPAT, KAITHAL,

and THĀNESAR, the head-quarters of each being at the place from which it is named. The chief towns are the municipalities of KARNĀL (the District head-quarters), PĀNĪPAT, KAITHAL, SHĀHĀBĀD, THĀNESAR, and LĀDWA.

The following table gives the chief statistics of population in 1901:—

Tahsil	Area in square miles.	Number of Towns	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Karnāl . .	836	1	380	248,544	297·3	+ 2·9	6,117
Thānesar . .	559	3	418	173,208	309·8	− 2·4	4,361
Pānīpat . .	462	1	172	196,284	424·9	+ 6·2	6,377
Kaithal . .	1,288	2	413	265,189	205·9	+ 3·0	4,340
District total	3,153	7	1,383	883,225	280·1	+ 2·6	21,195

NOTE.—The figures for the areas of *tahsils* are taken from revenue returns. The total District area is that given in the *Census Report*.

Hindus number 623,597, or over 70 per cent. of the total. Monastic communities of Bairāgīs own a good deal of land and exercise considerable influence in the District. Muhammadans (241,412) form 27 per cent. of the population. The Saiyids of the District belong to the Shiah organization known as the Bārā Sādāt, which was founded by Saiyid Abdul Farsh Wasīti, a follower of Mahmūd of Ghazni. Sikhs number 12,294. Hindī is spoken by 96 per cent. of the population, and Punjābi in the scattered villages surrounded by Patiāla territory.

The Jāts or Jats are the most numerous tribe, numbering 120,000, or 14 per cent. of the total. They own 15½ per cent. of the land, and are mostly Hindus, only 8,000 being Sikhs and 3,000 Muhammadans. Their principal clans are the Ghatwāl, Deswāl, Sindhu, Pawānia, Mān, Katkhar, and Jaglān. The Rājputs (83,000) own 32 per cent. of the land; 67,000 are Muhammadans, known as Ranghars. Their principal clans are the Chauhān, Mandhār, Ghorewāha, and Tonwar. The Rors (42,000) own 17½ per cent. and are almost all Hindus; they seem originally to have held their lands as dependants of the Rājputs. Gūjars (30,000) are mostly Hindus, though 8,000 are Muhammadans. Their reputation is no better here than in other parts of the Division. The Tagās (4,000) claim to be a Brāhman race, which has abandoned the priestly profession and taken to agriculture; half of them in this District are Muhammadans. Of Brāhmans (71,000), the Biās or Gujrātī and the Dakaut are important and interesting clans. The Saiyids (6,000) trace their descent from settlers left by Mahmūd, Tīmūr, and other Muhammadan invaders. Of the Shaikhs (19,000),

besides the few properly so called and the large number of converts who have taken that name, there are in many villages one or two families of a menial tribe from which the village watchmen are drawn, who are said to be the relics of the old policy of the emperors of settling one or two Muhammadans in every village. The Mālis (26,000) have of late years immigrated in considerable numbers into the District, especially the irrigable tracts of the Thānesar *tahsīl*, where they have purchased estates. Kambohs number 14,000. Of the commercial classes, the chief are the Baniās (52,000). Among the menial classes may be mentioned the Chamārs (leather-workers, 79,000), Chūhrās (scavengers, 45,000), Jhīnwars (water-carriers, 44,000), Kumhārs (potters, 19,000), and Tarkhāns (carpenters, 20,000). About 58 per cent. of the population are supported by agriculture, 19 are industrial, 3 commercial, and 2 professional.

There is a curious division of the non-Rājput tribes into the Dehia and Haulānia factions, apparently dating from a time when the Haulānias under the leadership of the Ghatwāl Jāts were called in by one of the emperors to help to coerce the Mandhār Rājputs, and were opposed by the Dehia Jāts, who from jealousy of the Ghatwāl supremacy joined the Mandhārs. The leading families of the District are those of the Nawāb of Kunjpura, the Mandals of Karnāl, and the Bhais of Arnauli and Siddhuwāl.

The Society for the Propagation of the Gospel carries on mission work at Karnāl, Kaithal, and Pānīpat. Its operations include *zanāna* teaching, girls' schools, and a hospital and dispensary for women and children. There are also Methodist Episcopal missions at Karnāl and Pānīpat, and a Presbyterian Mission at Thānesar (founded in 1895) and Kaithal, to which the village of Santokh Mājra has been leased for a Christian colony. In 1901 the District contained 225 native Christians.

Agriculture.

The soil of the *khādar* is light, and water lies close to the surface. The Jumna floods are, however, not fertilizing, and the best lands are those which lie beyond their reach. The eastern *bāngar* is almost entirely watered by the Western Jumna Canal; the soil is a fertile and easily worked loam, and the tract forms for the most part a sheet of cultivation. The soil of the Kaithal *bāngar* is a strong intractable loam, chiefly irrigated by the new Sirsa branch of the Western Jumna Canal, which also supplies most of the Kaithal Nardak. The Thānesar *tahsīl* is a rich alluvial tract watered by the Mārkanda and Umla, but in the flooded tracts crops are very precarious, owing to the uncertainty of the floods. On the Saraswatī two-thirds of the crops belong to the spring harvest, chiefly gram; on the Umla coarse rice is often the only crop.

The District is held almost entirely by small peasant proprietors,

large estates covering only about 160 square miles and lands leased from Government 4,000 acres.

The area for which details are available from the revenue record of 1903–4 is 3,147 square miles, as shown in the following table:—

Tahsil.	Total	Cultivated.	Irrigated.	Cultivable waste
Karnāl . .	838	450	164	263
Thānesar .	559	335	37	151
Pānīpat . .	461	288	192	74
Kaithal . .	1,289	724	208	416
Total	3,147	1,797	601	904

The staple products of the spring harvest are wheat and gram, sown on 338 and 265 square miles respectively in 1903–4. Barley covered only 19 square miles. In the autumn harvest great millet covered 256 square miles, and rice and spiked millet 97 and 94 square miles respectively. Cotton covered 66 square miles, maize 72, and sugar-cane 30.

During the thirteen years ending 1904, the cultivated area rose from 1,637 square miles to more than 1,797, or by 10 per cent., the increase being chiefly due to the extension of canal-irrigation. This has been accompanied by an extended cultivation of maize, cotton, and sugar-cane, as well as of the more valuable spring crops; and the use of manure is said to be increasing. Loans for the construction of wells are fairly popular. In the five years ending 1903–4, Rs. 57,000 was advanced under the Land Improvement Loans Act, and 2 lakhs for the purchase of bullocks and seed.

Cattle raising used to play an important part in the economy of the Nardak before the construction of the Sirsa canal, and the cattle of the District are still noted for their excellence. The local breed of horses is of no particular importance. A remount dépôt, established at Karnāl in 1889, was abolished in 1902, and its lands are now used as a military grass farm. The District board maintains three horse and five donkey stallions. Large flocks of goats and sheep are kept in parts, the sheep being all of the small black-tailed breed. There is a fine breed of pigs at Karnāl, dating from the time of the old cantonment.

Of the total area cultivated in 1903–4, 601 square miles, or 33 per cent., were classed as irrigated. Of this area, 230 square miles were irrigated from wells, 364 square miles from canals, 32 acres from wells and canals, and 4,581 acres from streams and tanks. The District possessed 10,931 masonry wells, besides 229 unbricked wells, lever wells, and water-lifts. In the *khādar*, although little irrigation is

necessary, wells worked by Persian wheels are numerous. The new main line of the WESTERN JUMNA CANAL enters the Thānesar *tahsīl*, and within this District gives off the Sirsa, Hānsi, and New Delhi branches, which irrigate the greater portion of the Nardak and *bāngar*, except in Thānesar, where the percolation from the main canal and the stoppage of the natural drainage keep the land so moist that it suffers from excess of water rather than from drought. The total area irrigated from the Western Jumna Canal is 2,493 acres. The *bāngar* in the Kaithal *tahsīl* is also supplied by the Saraswatī canal (an inundation canal made and worked by the District board), and some of the Nardak villages are also watered by floods from the Chautang. The few wells in these tracts are on the rope-and-bucket system. The northern part of the District is irrigated by floods from the hill torrents, and for the most part suffers from capricious water-supply, being waterlogged one year and parched the next. Except in the more favoured tracts, wells are liable to be destroyed by floods and are little used. The villages scattered through Patiāla territory are irrigated from the Sirhind Canal.

The District contains 17 tracts of unclassed forest, with a total area of 24 square miles, in charge of the Deputy-Commissioner; but these are not true forests, being covered only with scrub and small trees. About 2·6 square miles of 'reserved' forest are under the Military department.

Sal-ammoniac has from ancient times been manufactured by the potters of the Kaithal *tahsīl*. About 84 tons, valued at Rs. 3,400, are produced annually, and sold to merchants, who mostly export it. It is prepared by burning bricks made of the dirty clay found in certain ponds, and subjecting the substance that exudes from them to sublimation in closed vessels. The District has four saltpetre refineries. The only other mineral product is *kankar*, or nodular limestone.

Karnāl town used to have a name for shoe-making, but the industry is said to be declining from want of capital. Pānīpat is famous for glass-blowing, the chief product being silvered globes which, when broken up, are used for mirror-covered walls, or sewn on *phūlkāris*; the glass retorts used in the manufacture of sal-ammoniac are also made. The town is noted for its manufacture of brass vessels, small fancy wares in various metals, and silver beads. The District possesses three cotton-ginning factories, at Pānīpat, Kaithal, and Dhātrat; a cotton press at Pānīpat; and two combined ginning and pressing factories, at Pānīpat and Kaithal. The total number of employés in 1904 was 702. Silver-work and musical instruments are made at Shāhābād. Some good lacquered woodwork is also produced.

Trade and communications.

The chief exports are wheat, cotton, gram, fine rice, *ghī*, brass

vessels, glass, sal-ammoniac, and saltpetre; and the chief imports are salt, oil and oilseeds, iron, and piece-goods. Cotton and wheat go chiefly to Delhi and Ambāla; *ghī* and hides to Delhi; oil and oilseeds come from the Punjab and the Doāb; timber from Ambāla; iron and piece-goods from Delhi; and salt from Bhiwāni, Delhi, and Ambāla. Kārnal town and Pānīpat on the Delhi-Umballa-Kālka Railway are the chief marts, and a good deal of trade goes through Kaithal, which is on a branch of the Southern Punjab Railway. The local trade is principally conducted through the village dealers; but a very considerable traffic is carried on by the cultivators themselves, especially by Jāts from Rohtak, who in the hot season earn a good deal by plying their carts for hire.

The Delhi-Umballa-Kālka Railway runs through the District side by side with the grand trunk road, and Kaithal is the terminus of a branch of the Southern Punjab Railway. The new main line and the Delhi and Hānsi branches of the Western Jumna Canal are navigable, as is also the Jumna during the rains. The District has 145 miles of metalled roads, and 684 miles of unmetalled roads, of which 129 miles of metalled and 67 of unmetalled roads are under the Public Works department, the rest being maintained by the District board. Metalled roads connect Karnāl town and Kaithal, Thānesar and Lādwa, and the grand trunk road traverses the District from north to south; but the unmetalled roads are bad, especially in the Nardak, and in the flooded tract bordering on the Saraswatī and Ghaggar the tracks are often impassable for weeks together during the rains.

Famine.

Including the *chālīsa* famine of 1783, the District has been visited by famine thirteen times in 120 years, one of the most terrible perhaps being that of 1833. Relief works seem first to have been established in the famine of 1861, when 22,237 persons were relieved in one month. In 1869 the famine was more severe in Karnāl than in any other part of the Punjab, and hundreds of people were reduced to semi-starvation. The expenditure was 1·7 lakhs, and the highest daily average of persons relieved was 13,934. Cattle to the number of 65,000 died. From 1875 to 1877 there was not a single good harvest, and, though the scarcity hardly deepened into famine, the cattle suffered terribly. There was another grass famine in 1883-4. In 1896-7 the highest daily average relieved was 12,361, and the expenditure barely 2 lakhs. The areas affected were the Nardak tracts of Karnāl and Kaithal and the Naili tract of Kaithal. In 1899-1900 the Nardak in Karnāl and part of that in Kaithal were protected by the Nardak irrigation channel, constructed as a relief work in 1897; the tracts affected were chiefly the Naili and *bīngar* tracts of Kaithal and parts of Thānesar. The highest daily average relieved was 14,075, and the expenditure was 2·6 lakhs.

Administration.

The District is divided into the four *tahsīls* of KARNĀL, PANĪPAT, THĀNESAR, and KAITHAL, each under a *tahsīldār* and a *naib-tahsīldār*. In the last, the sub-*tahsīl* of Gula is also in charge of a *naib-tahsīldār*. The *tahsīl* of Kaithal forms a subdivision. The Deputy-Commissioner holds executive charge of the District, aided by three Assistant or Extra-Assistant Commissioners, of whom one is subdivisional officer in charge of Kaithal and one in charge of the District treasury.

The Deputy-Commissioner as District Magistrate is responsible for the criminal justice of the District, and civil judicial work is under a District Judge. Both officers are supervised by the Divisional and Sessions Judge of the Delhi Civil Division. There is one Munsif, who sits at head-quarters. There are also six honorary magistrates. Cattle-stealing, the normal crime of the District, is now less prevalent than formerly, owing to the increase of cultivation made possible by the development of the canals. Formerly heads of families of respectable birth would demur to giving a daughter in marriage to a man who had not proved his ability to support a family by cattle lifting.

The tract which passed to the British in 1803, and formed part of the old Pānipat District, was summarily assessed in the years 1817–24, with the exception of the estates assigned to the Mandal family in exchange for the lands they held in the United Provinces. In accordance with the spirit of the time, the summary settlement was oppressive, and the methods of assessment and collection were vexatious and extortionate; a revision of assessments was necessitated by the famine of 1824, and by degrees a more reasonable system was evolved. The regular settlement, made in 1842, was both moderate and fairly distributed. In the *khādar* the assessment on the whole worked well; in the *bāngar* the deterioration of soil caused by the canal brought absolute ruin to many villages, and in 1859–60 large reductions of revenue were made and principles laid down for annual relief to be afforded when necessary. Meanwhile, in the Mandal estate, the assignees struggled to realize their revenue in kind from a lawless and independent Rājput peasantry till 1847, when their oppression and mismanagement necessitated the tract being brought under settlement. The assessment was revised in 1852 and again in 1856. The revised settlement of 1872–80 comprised both these tracts; the revenue rate for irrigated land varied from Rs. 1 14 to Rs. 2–14, and for unirrigated land from 8 annas to Rs. 1-12; pasture was rated at 8 pies an acre; and canal lands were assessed at 'dry' rates varying from Rs. 1–5 to Rs. 1–13.

The rest of the District, comprising the *tahsīls* of Kaithal, Thānesar, and the Indri tract of Karnāl, formed part of the territories of the Cis-Sutlej chiefs, who were taken under protection by the proclamation

of 1809. These territories as they escheated were summarily assessed. Thānesar and Indri were regularly settled in 1848–56 and Kaithal in 1853–6. The whole of this portion of the District came under the Karnāl-Ambāla revision in 1882–9. The average assessment on 'dry' land is R. 0–14-3 (maximum Rs. 1–6, minimum R. 0-6–6), and on 'wet' land Rs. 2–14 (maximum Rs. 3–12, minimum Rs. 2). The total demand for 1903–4, including cesses, was 12 lakhs. The average size of a holding cultivated by the owner is 5·3 acres. The whole District came under settlement in 1904, the present assessment expiring in 1908.

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees:—

	1880–1	1890–1.	1900–1.	1903–4.
Land revenue . .	6,36	6,95	8,20	8,29
Total revenue . .	7,65	8,85	12,68	13,45

The District contains six municipalities: KARNAL, PANIPAT, KAITHAL, SHAHABAD, THANESAR, and LADWA. Outside these, local affairs are managed by the District board, whose income amounted to nearly 1¼ lakhs in 1903-4. The expenditure in the same year was 1·2 lakhs, education forming the largest item.

The regular police force consists of 683 of all ranks, including 147 municipal police, under a Superintendent, assisted by 4 inspectors. Village watchmen number 1,540. The District contains 22 police stations, 1 outpost, and 5 road posts. The Sānsis, Balochs, and Tagas are proclaimed under the Criminal Tribes Act; and 55 Sānsis, 447 Balochs, and 237 Tagās were registered in 1903 under the Act. The District jail at head-quarters has accommodation for 155 prisoners.

Karnāl is the most backward District in the Province in the matter of education, and in 1901 the proportion of literate persons was only 2·4 per cent. (4·3 males and 0·1 females), as compared with 3·6 for the whole Province. The number of pupils under instruction was: 1,961 in 1880-1, 2,242 in 1890–1, 5,902 in 1900–1, and 5,365 in 1903-4. In the last year the District contained 9 secondary and 90 primary (public) schools, besides 12 advanced and 62 elementary (private) schools, with 53 girls in the public and 72 in the private schools. The only high school is at Karnāl. The indigenous Arabic school at Pānipat, supported by the voluntary contributions of wealthy Muhammadans, is attended by about 50 boys, chiefly from the middle-class Muhammadan families of the town. The District has three primary schools for girls, and the ladies of the Karnāl branch of the Zanāna Mission teach women and children in the town. The total

expenditure on education in 1903–4 was Rs. 47,000, the greater part of which was met from Local funds, though Government contributed nearly Rs. 1,600, and fees brought in Rs. 10,000.

Besides the Karnāl civil hospital the District has 9 dispensaries, one at Karnāl and 8 at out-stations, at which 17,370 out-patients and 1,626 in-patients were treated in 1904, and 6,849 operations performed. The income and expenditure amounted to Rs. 21,000, Local and municipal funds contributing Rs. 11,000 and Rs. 9,000 respectively. The Society for the Propagation of the Gospel also maintains a female hospital at Karnāl.

The number of successful vaccinations in 1903 4 was 20,090, representing 23 per 1,000 of population.

[A. Kensington, *Customary Law of Ambāla District* (1893) (for the Thānesar *tahsīl*), J. M. Douie, *District Gazetteer* (1890), *Settlement Report of Karnāl Ambāla* (1891), and *Riwāj-i-ām of Tahsil Kaithal and Pargana Indri, District Karnāl* (1892); D. C. J. Ibbetson, *Settlement Report of the Pānīpat Tahsīl and Karnāl Pargana* (1883).]

Karnāl Tahsīl.—Central *tahsīl* of Karnāl District, Punjab, lying between 29° 26′ and 30° 0′ N. and 76° 40′ and 77° 13′ E., on the west bank of the Jumna, with an area of 838 square miles. The population in 1901 was 248,544, compared with 241,369 in 1891. It contains the town of KARNĀL (population, 23,559), the head-quarters; and 380 villages. The land revenue and cesses in 1903-4 amounted to 3·2 lakhs. On the east lie the Jumna lowlands, fertile but unhealthy, and varying in width from 5 to 10 miles. The western boundary of this tract is the old high bank of the Jumna, and from the crest of this bank the country slopes imperceptibly away into the Nardak. The upland portion of the *tahsīl* is irrigated by the Western Jumna Canal; but in the Nardak the people have not entirely abandoned their pastoral traditions, and still retain ample grazing-grounds for their cattle.

Karnāl Town.—Head-quarters of the District and *tahsīl* of Karnāl, Punjab, situated in 29° 41′ N. and 76° 59′ E., on the old bank of the Jumna, about 7 miles from the present course of that river, and on the Delhi-Umballa-Kālka Railway; distant 1,030 miles by rail from Calcutta, 1,056 from Bombay, and 895 from Karāchi. Population (1901), 23,559. Its name is derived from Karna, the rival of Arjuna in the epic of the Mahābhārata, by whom it is said to have been founded. It would seem to have been a place of little importance in early historical times, as no mention of it occurs until towards the end of the Pathān period. Karnāl was plundered in 1573 by Ibrāhīm Husain Mirza in his revolt against Akbar, and its neighbourhood laid waste by Banda Bairāgi in 1709. In 1739 it was the scene of the defeat of Muhammad Shāh by Nādir Shāh. After the fall of Sirhind in 1763 the town was seized by Gajpat

Singh, Rājā of Jīnd, but in 1775 it was recovered by Najaf Khān, governor of Delhi. It again fell into the hands of Gajpat Singh, but his son Bhāg Singh lost it to the Marāthās in 1787, and it was subsequently made over by them to George Thomas. It then came into the hands of Gurdit Singh of Lādwa, from whom the British took it in 1805. A cantonment was formed at Karnāl, which was abandoned in 1841 owing to the unhealthiness of the station. The place is still unhealthy, though drainage and sanitation have done much to improve its condition. There is a fine marble tomb, built by the emperor Ghiyās-ud-dīn to the memory of the saint Bū Alī Kalandar. The Society for the Propagation of the Gospel has a mission at Karnāl. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 32,500 and Rs. 32,100 respectively. The income in 1903-4 was Rs. 33,800, mainly derived from octroi; and the expenditure was Rs. 33,500. The chief manufactures are country cloth for local consumption, and shoes. The principal educational institution is the Anglo-vernacular high school, managed by the Educational department. There is a civil hospital, with a branch in the town. The Society for the Propagation of the Gospel also maintains a female hospital and dispensary.

Karnāla (or Funnel Hill). Fort and hill in the Panvel *tāluka* of Kolāba District, Bombay, situated in 18° 53′ N. and 73° 7′ E., a few miles north-west of the Vegavati river, and 8 miles south of Panvel: elevation 1,560 feet above sea-level. Population (1901), 1,227. Karnāla commands the high road between the Bor pass and the Panvel and Apta rivers. The hill has an upper and lower fort. In the centre of the upper fort is the 'funnel,' an almost inaccessible basalt pillar about 325 feet high, locally known as the Pāndu's tower. From the south-west of the hill can be seen the island studded harbour of Bombay.

The fort was often taken and retaken during the turbulent period of Indian history. Under the Muhammadans, Karnāla was garrisoned to overawe the North Konkan. Troops from Ahmadnagar took it in 1540. The Portuguese captured it soon after, but gave it up on receiving a ransom of Rs. 17,500 a year. Sivaji, the Maratha leader, seized it in 1670, driving out the Mughals. On the death of Sivaji, Karnāla was recaptured by Aurangzeb's generals, and was held by the Mughals till at least 1735. Shortly afterwards it must have again come into the hands of the Marāthās, for in 1740 the Peshwa's power was established over the whole of the Deccan. In 1818 the fort was captured, and passed into British possession, together with the whole remaining territory held by the Peshwa. It is now in ruins.

Karnāli. River of Nepāl and the United Provinces. *See* KAURIALA.

Karnāli. Village in the Baroda *prānt*, Baroda State, situated in

21° 59′ N. and 73° 28′ E., on the right bank of the Narbadā at its junction with the Orsang river. Population (1901), 1,126. Thousands of pilgrims repair annually to this holy place in order to perform their ablutions in the Narbadā.

Karnaphuli.—River of Eastern Bengal and Assam. It rises in a lofty range of hills beyond the border of the Chittagong Hill Tracts, in 22° 53′ N. and 92° 27′ E., and, after following a generally south-westerly course of 121 miles, falls into the Bay of Bengal in 22° 12′ N. and 91° 47′ E., 12 miles below the town and port of Chittagong, which is situated on its right bank. As far up as Chittagong it is navigable by sea-going vessels, and by shallow-draught steamers as high as RĀNGĀMĀTI, the head quarters of the Chittagong Hill Tracts. Large native boats go up as high as Kāsālang, while small craft ply 14 miles farther up to the Barkal rapids. In the Hill Tracts it is known as the Kynsa Khyoung. The chief tributaries are the Kāsālang, Chingri, Kāptai, and Kankhiang rivers in the Hill Tracts, and the Haldā in Chittagong District, the latter empties itself into the main river from the north, and is navigable by native boats for 24 miles throughout the year. Besides those already mentioned, the principal river-side villages are Chandraghonā and Rangonia. The Karnaphuli is largely used for floating cotton and forest produce from the Hill Tracts to Chittagong. The approaches to the mouth are lit by lighthouses at Kutubdiā and Norman's Point, and the channels are buoyed by the Port Commissioners of Chittagong.

Karnaprayāg.—One of the five sacred confluences of the Alaknandā, where this river is joined by the Pindar (see PINDARĪ) in Garhwāl District, United Provinces. The village is situated at a height of 2,300 feet above the sea, in 30° 16′ N. and 79° 15′ E. Population (1901), 243. It contains a number of temples and also a dispensary, and during the summer a police station.

Karna Suvarna.—Ancient kingdom in Bengal, which lay west of the Bhāgīrathi river, and comprised the modern Districts of Burdwān, Bānkurā, Western Murshidābād, and Hooghly. The best-known king was Sasānka or Narendra, the last of the Guptas, who was a fanatical worshipper of Siva. He invaded Magadha, and cut down the sacred *bodhi* tree, early in the seventh century. The capital of this kingdom was probably at RĀNGĀMĀTI in Murshidābād District.

Karnātak.—Tract in Peninsular India. *See* CARNATIC.

Karnūl.—District, subdivision, and town in Madras. *See* KURNOOL.

Kārol.—Petty State in KĀTHIAWĀR, Bombay.

Karond.—Native State in Bengal. *See* KĀLĀHANDĪ.

Karor.—Former name of the *pargana* and *tahsīl*, now called Bareilly. *See* BAREILLY TAHSĪL.

Karor.—Town in Multān District, Punjab. *See* KAHROR.

Karor Lāl Isa (*Kahror*).—Town in the Leiah *tahsīl* of Miānwāli District, Punjab, situated in 31° 13′ N. and 70° 57′ E., on the high bank of the Indus east of that river. Population (1901), 3,243. Founded by Makhdūm Lāl Isa, Kureshi, a descendant of Bahāwal Hakk, the saint of Multān, in the fifteenth century, the town still preserves the massive tomb of its founder, and a large fair is held yearly in his honour. It is first mentioned in history as included in the government of Multān under Sultān Husain in 1469. The municipality was created in 1887. The income during the ten years ending 1902–3 averaged Rs. 3,600, and the expenditure Rs. 3,900. The income in 1903 4 was Rs. 3,400, chiefly derived from octroi, and the expenditure was Rs. 3,600. The town contains a dispensary, a municipal board school (primary), a private Anglo vernacular middle school, and two municipal girls' schools.

Karsiāng.—Subdivision and town in Darjeeling District, Bengal. *See* KURSEONG.

Kartārpur.—Town in the District and *tahsīl* of Jullundur, Punjab, situated in 31° 26′ N. and 75° 30′ E., on the North Western Railway and grand trunk road, 9 miles from Jullundur town. Population (1901), 10,840. Founded by Arjun, the fifth Sikh Gurū, it is a place of great sanctity, as the seat of the line of Gurūs descended from him, and as possessing his original Adi Granth or scripture. It was burnt by Ahmad Shāh in 1756. Kartārpur is a flourishing grain mart, with a market outside octroi limits. Chairs, boxes, tables, and native flutes are made; also cotton twill (*susī*). The cantonment established here after the first Sikh War was abolished in 1854. The municipality was created in 1867. The income during the ten years ending 1902 3 averaged Rs. 7,500, and the expenditure Rs. 6,900. In 1903–4 the income was Rs. 7,300, mainly from octroi; and the expenditure was Rs. 10,600. The town has an Anglo-vernacular middle school, maintained by the municipality, and a Government dispensary.

Karunguli.—Village in the Madurāntakam *tāluk* of Chingleput District, Madras, situated in 12° 32′ N. and 79° 54′ E., on the South Indian Railway and on the southern trunk road, 48 miles from Madras city. Population (1901), 4,065. It was the head-quarters of the District from 1795 to 1825, and subsequently continued for some years to be the head-quarters of a *tāluk*. Karunguli fort was occupied as a strategic point during the wars between the English and the French, being regarded as an outpost of Chingleput, from which it is 15 miles distant to the south-west. These two places, with Wandiwāsh and Uttaramerūr, formed a sort of quadrilateral on the line of attack between the seats of the two Governments of Madras and Pondicherry. As early as 1755 it was a point of dispute. In 1757 it was evacuated by the English in the face of advancing French troops. The following year the English attempted

to recover it by surprise, but were repulsed with loss, a failure which was repeated in 1759. But some months later Colonel Coote, after a few days' bombardment, captured the fort. This was the first decisive action in the successful campaign of 1759-60, which led to the victory at Wandiwāsh. The circumference of the fort is 1,500 yards, enclosing the remains of what were apparently huge granaries for the storage of grain, the tribute to the Muhammadan government out of the produce of the neighbourhood. The Karunguli tank, which is fed from the overflow of the Madurāntakam tank, usually receives a plentiful supply of water. A travellers' bungalow stands in the village, a handsome old building in a grove of fine mango-trees.

Karūr Tāluk.—South eastern *tāluk* of Coimbatore District, Madras, lying between 10° 38′ and 11° 6′ N. and 77° 45′ and 78° 14′ E., with an area of 681 square miles. It is an open and undulating plain, with no hills or forests of note, bounded on the north by the Cauvery river and traversed by the Amarāvati. It is poorly wooded and suffers from an unusually trying hot season. It has one town, the municipality of KARŪR (population, 12,769), the head-quarters: and 95 villages. The population in 1901 was 220,843, compared with 211,794 in 1891, the increase having been slower than elsewhere in the District. The demand for land revenue and cesses in 1903-4 amounted to Rs. 3,49,000. The soil is mostly of an inferior red or grey variety, and is generally lightly assessed. The area irrigated by channels is larger than in any *tāluk* except Satyamangalam. These lead from the Amarāvati and the Cauvery, and this is the first *tāluk* in the Presidency in which the water of the latter is used to any considerable extent. The rainfall (averaging 26 inches annually) is fairly plentiful and regular, and the crops are generally good. *Cambu* is by far the most common cereal.

Karūr Town.—Head-quarters of the *taluk* of the same name in Coimbatore District, Madras, situated in 10° 58′ N. and 78° 6′ E., on the South Indian Railway, 48 miles from Trichinopoly, and on the Amarāvati river not far from its junction with the Cauvery. Population (1901), 12,769. The town is called Tiruvānilai or Pasupati ('the place of the sacred cow') in vernacular writings. The name Karūr means 'embryo town,' and is said to have been given because Brahmā began his work of creation here. For the same reason it is often called Brahmapurī in legendary records. It was apparently a place of some importance as far back as the early centuries of the Christian era, for coins of the emperors Augustus, Tiberius, and Claudius were found near by in 1806. Situated near the point where the territories of the rival Chera, Chola, and Pāndya dynasties met, it probably played a part in their ancient struggles. On the dissolution of the Vijayanagar empire in 1565, Karūr fell under the Naiks of Madura; but it was frequently attacked and occupied by the Mysore armies, and towards

the end of the seventeenth century it was finally annexed to the latter kingdom and became its most important frontier post. In 1639 the Jesuits established a mission here. In later years the place constantly changed hands. In 1736 Chanda Sāhib besieged it unsuccessfully. In 1760 it was captured by the British, in revenge for the assistance given by Haidar to the French. Orme describes the siege in detail. Karur was held by them till 1768, when it was retaken by Haidar, whose possession was confirmed by treaty in the following year. In 1783 Colonel Lang took and held the fort for a few months. There is a monument on the south bank of the river to the British troops who fell in this siege. It was a third time captured in 1790 by General Medows, and restored at the peace of 1792. It was garrisoned by the Company as a military station until 1801, and portions of the old fort still remain.

Karūr was formerly the head quarters of the Sub-Collector. Besides the *tahsīldār*, a District Munsif and a stationary sub-magistrate are now stationed here. Being on the railway and at the junction of several roads, it possesses a considerable trade. Its chief drawback is its crowded site, which is surrounded entirely by rice fields and the river. The only industry worth mention is the manufacture of brassware on a small scale. There are, however, two tanneries in the neighbourhood. The principal temple is a considerable edifice of some antiquity, containing numerous inscriptions on stone.

Karur was constituted a municipality in 1874. During the ten years ending 1903 the annual income and expenditure averaged about Rs. 20,000. In 1903–4 the receipts and expenditure were Rs. 29,000 and 28,000 respectively, the former being chiefly derived from school fees, the house and land taxes, and tolls. It is a station of the Wesleyan Mission, which maintains two industrial schools here, one for boys and the other for girls. A drainage scheme estimated to cost Rs. 95,850 has been framed for this municipality; but its execution has been postponed pending the introduction of a proper water-supply plans for which are still under preparation.

Kārvan.—Village in the Baroda *prant*, Baroda State, situated in 22° 5′ N. and 73° 15′ E., with a station on the Dabhoi-Miyāgām State Railway. In olden times it was probably very important as a place of pilgrimage. The local tradition is that the sage Vishvāmitra, in consequence of a dispute with Vasishta, desired to create another Benares in this village. He therefore fashioned a thousand *lingams* and then wrestled to bring the Ganges here, till Vishnu was weary of his importunities. The god was forced to make himself visible to the saint, who then ceased from vexing him, and in return Vishnu promised that the village should be as holy as Benares. Many temples, some old, some in ruins, are to be seen at this sacred spot.

Kārvetnagar Zamīndāri.— Ancient *zamindari* in the north-east of North Arcot District, Madras, lying between 13° 2′ and 13° 35′ N and 79° 14′ and 79° 49′ E Area, 943 square miles, number of villages, 667 population (1901), 341,240 It is held on permanent tenure under a *sanad* (grant) issued by the British Government in 1802 The whole of the *zamindāri* is hilly except the south east, penetrating the hills run numerous picturesque ravines or *konas*, which are well wooded and fairly stocked with game One of the most charming of these is the Sadasiva *kona*, about 10 miles north east of the Puttur station on the Madras Railway Here a perennial stream flows eastwards by a succession of cascades, by the sides of which tree ferns and other species of water loving plants grow in profusion The principal streams which drain the *zamindari* are named after the towns of Narāyanavanam, Nagari, and Uruttani, by which they flow They are dry except during the rains, but have excellent underground springs, the water of which is tapped by means of channels and irrigates considerable areas on both banks The soil of the estate is fertile, but much of it is covered with hill and jungle, and three fourths of the area is uncultivable, only about 130,000 acres being under the plough Indigo is still largely cultivated, but of late years the market for the dye has been depressed owing to the competition of its new chemical rival From the forests of the *zamindari* much fuel is exported to Madras by rail The total *peshkash* (or permanent revenue paid to Government) is 1 7 lakhs, and the cesses in 1903 4 were an additional Rs 50 000 The gross income of the whole estate averages between 6 and 7 lakhs, but it is heavily encumbered Some of the villages have been sold in satisfaction of decrees of the Civil Courts and now form separate properties, and the estate is so involved in debt that it was taken under the management of the Court of Wards for a time It has now been handed back to the proprietor Karvetnagar, 7 miles from Puttur railway station is the chief town and the residence of the *zamindar*, who has the hereditary title of Raja Puttur, Narayanavanam, Nagari, and Uruttani are other important places

Kārwār Tāluka North westernmost *taluka* of North Kanara District Bombay, lying between 14° 44′ and 15° 4′ N and 74° 4′ and 74° 32′ E, with an area of 281 square miles It contains one town, KARWAR (population, 16,847), the *taluka* and District head quarters, and 54 villages The population in 1901 was 58,460, compared with 53,278 in 1891 The density, 208 persons per square mile, is much above the District average The demand for land revenue in 1903–4 was 1 09 lakhs, and for cesses Rs 7,000. The Kālinadi flows from east to west through the centre, and as it enters the sea throws up a bar of sand impassable to any but small craft Along both banks

of the river broad belts of rice land, broken by groves of palms and other fruit trees, stretch east to near the Western Ghāts. The soil on the plains is sandy, and near the hills is much mixed with granite. On the banks of the Kālīnadī, and along the seashore, are large tracts covered with a black alluvial deposit, charged with salt and liable to be flooded at high tides. To bring such land under tillage, a strong and costly wall must be built to keep out the sea. A heavy rainfall is required to sweeten the land, and then, without much manure and with due care, rich crops can be raised. Throughout the *tāluka* the houses are not gathered into villages, but are scattered along narrow lanes, standing in shady coco-palm gardens, some tiled and some thatched, each with its well, bathing-place, and cattle-shed. The annual rainfall is heavy, amounting at Kārwār town to nearly 119 inches.

Kārwār Town (*Kadvād*).—Head-quarters of the *tāluka* of the same name and of North Kanara District, Bombay, situated in 14° 49′ N. and 74° 8′ E., 50 miles south-east of Goa and 295 miles south-east of Bombay. Population (1901), 16,847, including suburbs. The municipality, established in 1864, had an average income during the decade ending 1901 of Rs. 13,000. In 1903-4 the income was Rs. 12,000.

Old Kārwār, on the banks of the Kālinadī, 3 miles to the east of the new town, was once an important place of commerce. It is first mentioned in 1510 as Cambal, on the opposite side of the river to Cintacora or Chitakul. During the first half of the seventeenth century the Karwar revenue superintendent, or *desai*, was one of the chief officers of the Bijapur kingdom, of which it formed a part. In 1638 the fame of the pepper of Sonda induced Sir William Courten's Company to open a factory at Karwār. In 1660 the factory was prosperous, exporting the finest muslins in Western India; the weaving country was inland to the east, at Hubli and other centres, where as many as 50,000 weavers were employed. Besides the great export of muslin, Kārwār provided pepper, cardamoms, cassia, and coarse blue cotton cloth (*dungari*). In 1665 Sivaji, the founder of the Marāthā power, exacted a contribution of Rs. 1,120 from the English. In 1673 the *faujdar*, or military governor of Kārwār, laid siege to the factory. In 1674 Sivaji burnt Kārwār town; but the English were treated civilly, and no harm was done to the factory. In 1676 the factory suffered from the exactions of local chiefs, and the establishment was withdrawn in 1679. It was restored in 1682 on a larger scale than before. In 1684 the English were nearly driven out of Kārwār, the crew of a small vessel having stolen and killed a cow. In 1685 the Portuguese stirred the *desais* of Kārwār and Sonda to revolt. During the last ten years of the seventeenth century the Dutch made every attempt to depress the English pepper trade, and in 1697 the Marathās laid Kārwār waste.

In 1715 the old fort of Karwar was pulled down, and Sadashivgarh was built by the Sonda chief. The new fort seriously interfered with the safety of the English factory, and owing to the hostility of the Sonda chief, the factory was removed in 1720. The English, in spite of their efforts to regain the favour of the Sonda chiefs, were unable to obtain leave to reopen their factory at Karwar till 1750. The Portuguese in 1752 sent a fleet and took possession of Sadashivgarh. As the Portuguese claimed the monopoly of the Kārwar trade, and were in a position to enforce their claim, the English agent was withdrawn. In 1801 Old Karwar was in ruins. Very few traces of it remain.

The new town dates from after the transfer of North Kanara District to the Bombay Presidency, before which it was a mere fishing village. The present town and neighbouring offices and residences are in the lands of six villages, and within the municipal limits of the town are nine villages. A proposal was strenuously urged in Bombay to connect Karwār by a railway with the interior, so as to provide a seaport for the southern cotton Districts. Between 1867 and 1874 the hope that a railway from Karwār to Hubli would be sanctioned raised the value of building sites at Karwar, and led to the construction of many warehouses and dwellings. The scheme was finally abandoned in favour of the line through Portuguese territory to Marmagao. The trade of Karwar has markedly decreased since the opening of this railway.

Kārwar is the only safe harbour between Bombay and Cochin during all seasons of the year. In the bay is a cluster of islets called the Oyster Rocks on the largest of which, Devgad island, a lighthouse has been built. There are two smaller islands in the bay (138 and 120 feet above the level of the sea), which afford good shelter to native craft and small vessels during the strong north-west winds that prevail from February to April. From the Karwār port office, on a white flagstaff, 60 feet from the ground and 65 feet above high water, is displayed a red fixed ships light, visible three miles with the light bearing east south-east a vessel can anchor in 3 to 5 fathoms. About 5 miles south-west and 3 miles from the mainland, the island of Anjidiv rises steep from the sea, dotted with trees and the houses of its small Portuguese settlement. Coasting steamers belonging to the Bombay Steam Navigation Company call twice a week at Karwār throughout the fair-weather season. These steamers generally make the trip between Karwār and Bombay in thirty-six hours. The value of the trade at Karwar port during the year 1903-4 is returned as follows: imports 3·34 lakhs and exports Rs. 52,000. Karwār bay is remarkable for its beautiful scenery. It possesses a fine grove of casuarinas, beneath which the sea breaks picturesquely on the long stretch of white sand, from the mouth of the Kālinadi to the sheltered inlet of Baikal cove. Besides the chief revenue and judicial offices,

the town contains a Subordinate Judge's court, a jail, a hospital, a high school with 237 pupils, 2 middle schools, and 8 other schools

Karwī Subdivision.—Subdivision of Bandā District, United Provinces, consisting of the KAMASIN, KARWĪ, and MAU *tahsīls*

Karwī Tahsīl.—South-eastern *tahsīl* of Bandā District, United Provinces, conterminous with the *parganā* of Tarahuwān, lying between 24° 53′ and 25° 19′ N and 80° 45′ and 81° 16′ E., with an area of 567 square miles. Population fell from 84,687 in 1891 to 75,410 in 1901. There are 189 villages and two towns, including KARWĪ the *tahsīl* headquarters (population, 7,713). The demand for land revenue in 1903–4 was Rs. 7,000, and for cesses Rs. 15,000. The density of population, 138 persons per square mile, is the lowest in the District. Roughly speaking, about half the *tahsīl* lies in the plain, while the other half is situated on a plateau between the crest of the first range of the Vindhyas and the scarp beyond which extends to the still higher plateau of Rewah. The latter portion presents beautiful scenery and is clothed with forest. Near the west the Paisuni river forms part of the border and then strikes across the *tahsīl*. In 1903–4 the area under cultivation was 126 square miles, of which only 3 were irrigated.

Karwī Town. Head-quarters of the subdivision and *tahsīl* of the same name, in Bandā District, United Provinces, situated in 25° 12′ N. and 80° 54′ E., near the Paisuni river and on a branch of the Great Indian Peninsula Railway. Population (1901), 7,713. Karwī was a British cantonment from 1805 to 1816, and in 1820 it became the principal residence of a Maratha chieftain who lived in almost regal state, and built several beautiful temples and huge wells. Numerous traders from the Deccan were thus attracted to Karwī. During the Mutiny, Narayan Rao, after the murder at Bandā of the Joint Magistrate of Karwī, assumed the government, and retained his independence for eight months amid the subsequent anarchy. The accumulations of his family constituted the great treasure afterwards famous as 'the Kirwee and Banda Prize Money.' The Bīra, a large building which formed the palace of Nārāyan Rao's family, was confiscated, with most of the other property, and now serves as a *tahsīl*, police station, and school. The other public buildings are a jail and dispensary. A Joint-Magistrate and an Assistant District Superintendent of police are stationed at Karwī, which also contains branches of the Society for the Propagation of the Gospel and the American Methodist Mission. The town is administered, together with the adjacent village of Tarahuwān, under Act XX of 1856. Karwī declined for a time after the Mutiny, but the railway, opened in 1899, has caused it to become the most important trade centre in the District. Cotton, grain, *ghī*, and other produce are largely exported. A cotton gin, opened in 1900, employed 180 hands in 1903, and there is a small manufacture of

embroidered plush There are three schools, with 170 boys and 25 girls.

Kāsalpura.—Petty State in MAHĪ KĀNTHA, Bombay.

Kāsaragod Tāluk.—Southernmost *tāluk* of South Kanara District, Madras, lying between 12° 7′ and 12° 59′ N. and 74° 52′ and 75° 26′ E., with an area of 762 square miles It contains 114 villages The demand for land revenue and cesses in 1903–4 amounted to Rs 2 42,000 The population in 1901 was 231,280, compared with 210,323 in 1891, showing an increase of 10 per cent Much of the surface consists of a bare treeless plateau, but the valleys are deep, well watered and very fertile, and especially in the northern half of the *taluk*, admirably adapted for areca cultivation The chief products are rice, coco nuts, and areca nuts In the coast villages in the south a considerable amount of tobacco is raised by the Mappilla cultivators In eighteen survey villages adjoining Coorg and Malabar the shifting system of cultivation known as *kumri* is still carried on, the crop being usually a mixed one of hill rice, pulse, and cotton The jungle on selected spaces on the hill slopes is cut down, usually in December, and burned when dry three or four months later The seed is sown in the ashes, sometimes without ploughing, when the rains come, and in good years fine crops are secured with little further trouble A catch crop is sometimes raised for following season and the spot is then abandoned for a period of from seven to ten years till there is sufficient fresh growth when the process is repeated

Kāsārghāt. Pass in Thana District, Bombay. See THAL GHAT.

Kasauli Hill station and cantonment in the Punjab, situated in 30° 53′ N. and 76° 58′ E., entirely surrounded by Native States but attached for administrative purposes to the Khasrī Tahsīl of Ambala District. It stands on the summit of the long ridge overlooking Kalka at an elevation of 6,535 feet above the sea, and nearly 4000 feet above Kalka from which it is distant about 9 miles Population (1901), 2,102 Kasauli was founded in 1842 as a military station and now serves as a convalescent depot It has from the summer months a considerable civil population for whose accommodation hotels have been built Owing, however, to its nearness to the plains it is the least attractive in climate of the Punjab hill stations The management of the station is in the hands of a Cantonment Magistrate assisted by a cantonment committee the Cantonment Magistrate proceeds on tour for ten days in each month of the hot season, and is relieved of the charge of the treasury by the Assistant Commissioner in charge of the Rupar subdivision The Deputy Commissioner of Ambala also resides at Kasauli during part of the hot season There is an Anglo-vernacular middle school The Lawrence Military Asylum at Sanawar is 3 miles away, in a portion of territory attached to Simla District The income and

expenditure of cantonment funds during the ten years ending 1902–3 averaged Rs. 13,000.

The Pasteur Institute at Kasauli was established in 1901 for the treatment of persons bitten by rabid animals, and now treats patients from all parts of Northern India. In 1906 a central Research Institute was founded, which will provide means for the scientific study of the etiology and nature of disease in India, in addition to the preparation of curative sera for the diseases of man and the training of scientific workers. The institution is in charge of a Director, with a staff of assistants. Kasauli is also the head-quarters of the Punjab Nursing Association, and contains a dispensary. There is a brewery in the neighbourhood.

Kasbā.—Old name of JESSORE Town, Bengal.

Kasbā.—Village in the head quarters subdivision of Purnea District, Bengal, situated in 25° 51′ N. and 87° 32′ E., on the road from Purnea town to Arāriā, about 9 miles from the former. Population (1901), 7,600. Kasbā, which lies on the Eastern Bengal State Railway, is the chief centre of the rice trade in Purnea District, the paddy being collected from the north of the District and the submontane portions of Darjeeling for export to Calcutta. It has also become a large centre of the jute trade, the annual sales amounting to over 10 lakhs: and a European firm has an agency there.

Kāsegaon.—Village in the Vālva *taluka* of Sātāra District, Bombay, situated in 17° 8′ N. and 74° 14′ E., close to the Sātara-Kolhāpur road, 11 miles south of Karad and 4 miles north of Peth. Population (1901), 5,482. This is one of the most thriving places in the *taluka*. It is inhabited by well to do merchants, who traffic with the coast in local produce, chiefly tobacco, pepper, and sugar cane. The inhabitants have an unenviable character for crime and litigiousness—mischief to crops, cattle poisoning, and arson having been very frequent for many years.

Kāsganj Tahsīl. Northern *tahsīl* of Etah District, United Provinces, comprising the *parganas* of Ulai, Bilrām, Pachlana, Soron, Sidhpura, Sahāwar Karsena, and Jaizpur Badarā, and lying between 27° 33′ and 28° 2′ N. and 78° 29′ and 78° 59′ E., with an area of 492 square miles. Population increased from 191,625 in 1891 to 265,216 in 1901. There are 468 villages and six towns, the largest of which are KASGANJ (population, 19,686), the *tahsīl* head quarters, SORON (12,175), and SAHAWAR (5,079). The demand for land revenue in 1903–4 was Rs. 2,91,000, and for cesses Rs. 44,000. The new settlement will raise the demand for revenue to Rs. 3,26,000, and for cesses to Rs. 53,000. The density of population, 539 persons per square mile, is above the District average. Population increased by nearly 28 per cent. between 1891 and 1900, a higher rate of increase than in any other *tahsīl* in the

United Provinces. The *tahsil* is bounded on the north-east by the Ganges and on the south-west by the Kālī Nadi. It thus lies entirely in the *tarai* and in the central *doab*, which are the most precarious tracts in the District. Heavy rain in 1884-6 led to extensive water-logging, and the land which fell out of cultivation was overgrown with *kans* (*saccharum spontaneum*). Extensive reductions of revenue were made, and, to prevent further deterioration, the drainage was improved. The Burhiganga, which lies below the old high bank on the southern edge of the *tarai*, has been deepened and straightened. In 1898-9 the area under cultivation was 347 square miles, of which 108 were irrigated. The *tarai* is so moist that irrigation is not usually required, and the upland area is served by the Lower Ganges Canal and its Fatehgarh branch. Wells supply about half the irrigated area.

Kāsganj Town. Head-quarters of the *tahsil* of the same name in Etah District, United Provinces, situated in 27° 48′ N. and 78° 39′ E., on the Cawnpore-Achhnera Railway, and also on the road from Muttra to Bareilly. A short branch railway connects Kasganj with Soron near the Ganges, and an extension to Bareilly is under construction. This is the chief trade centre of the District, and population is increasing (1891) 16,050, (1901) 19,650. The town is said to have been founded by Yakut Khān, a eunuch in the service of Muhammad Khan, Nawab of Farrukhabad. It afterwards came into the hands of Colonel James Gardner, who was in the employ of the Marāthas, and later in British service. He raised a regiment, now known as Gardner's Horse, and acquired a huge property which was dissipated by his descendants. Part of the property fell into the hands of Dilsukh Rai, once an agent to the Gardner family, and one of his descendants has built a magnificent residence near the town. Kasganj stands on an elevated site, its drainage flowing towards the Kālī Nadi, which runs about a mile south-east of the town. A new drainage scheme has recently been completed. The town contains two fine *bazars* crossing each other at right angles. At the junction a fine octagonal building, consisting of shops, forms a suitable centre to the town. The chief public buildings are the town-hall, dispensary, *tahsili*, and *munsifi*. There are also branches of the Church Missionary Society and the American Methodist Mission. Close to the railway station is a considerable colony of railway employés. The town was constituted a municipality in 1865. During the ten years ending 1901 the income and expenditure averaged Rs. 15,000. In 1903-4 the income was Rs. 22,000, chiefly derived from octroi (Rs. 16,000), and the expenditure was Rs. 23,000. Kasganj is becoming an important centre for the collection and distribution of country produce, especially grain, sugar, and cotton. Sugar refining is a growing industry, and there were two cotton-gins and a cotton-press which employed 785 hands in 1903, while another ginning

factory was opened in 1904. The town school has about 190 pupils, and 16 other schools aided by the municipality have 430 pupils.

Kashīpur Tahsīl. South-western *tahsīl* and subdivision of Nainī Tāl District, United Provinces, coterminous with the *parganā* of the same name, lying between 28° 7′ and 29° 22′ N. and 78° 13′ and 79° 4′ E., with an area of 180 square miles. Population fell from 73,168 in 1891 to 55,632 in 1901, the rate of decrease being the highest in the District. There are 147 villages and two towns—Kāshīpur (population 12,023), the *tahsīl* head-quarters, and Jaspur (6,480). The demand for land revenue in 1903-4 was Rs. 93,000, and for cesses Rs. 11,000. The density of population, 304 persons per square mile, is also the highest in the District. The *tahsīl* resembles the adjoining parts of Kohilkhand. It lies entirely in the plains, and is not malarious, as the Tarai. In 1903-4 the area under cultivation was 60 square miles, of which 10 were irrigated almost entirely from canals.

Kāshīpur Town. Head-quarters of the Kāshīpur *tahsīl* of Nainī Tāl District, United Provinces, situated in 29° 13′ N. and 78° 58′ E., on a road from Moradābād to Rāmpur, from the same place a railway has been projected. Population (1901), 12,023. Near the town are extensive ruins of forts and temples, which were identified by General Cunningham with the capital of the kingdom of Govisana, visited by the Chinese pilgrim in the seventh century. There are several tanks in the neighbourhood, one of which is called after Drona, the tutor of the Pāndava brothers. A brick inscribed in characters of the third or fourth century A.D. was recently found here. The modern town is named after its founder, Kashi Nāth, the governor of the *parganā* in the sixteenth or seventeenth century. In the latter half of the eighteenth century Nand Rām, the governor, became practically independent of the Chand Rājas of Almorā, and his nephew, Sitāb Rāi, was in possession at the date of the cession to the British in 1801. Kāshīpur contains a fair-sized bazar with brick-built houses, but outside of this the houses are chiefly of mud. The largest building is the residence of the Rājā, who is descended from an illegitimate branch of the Chand Rājas of Almorā. Besides the usual courts there is a dispensary. Kāshīpur has been a municipality since 1872. During the ten years ending 1901 the income and expenditure averaged Rs. 11,000. In 1903-4 the income was Rs. 14,000, chiefly from tolls (Rs. 5,000) and a tax on circumstances and property (Rs. 3,000), and the expenditure was Rs. 12,000. There is a flourishing trade in cloth, metal vessels, and hill produce. The municipality supports a school with 75 pupils.

Kashkār. Capital of Chitrāl State, North-West Frontier Province. See CHITRAL.

Kashmīr and Jammu. The territories of the Mahārājā of Kashmīr and Jammu may be roughly described in the words of the

treaty of March 16, 1846, as 'situated to the eastward of the river Indus and westward of the river Rāvi.' This country, known to the English as Kashmīr and to the Indians as Jammu, covers an area of 80,900 square miles, extending from 32° 17′ to 36° 58′ N. and from 73° 26′ to 80° 30′ E. It may be likened to a house with many storeys.

Physical aspects.

The door is at Jammu, and the house faces south, looking out on the Punjab Districts of Jhelum, Gujrāt, Siālkot, and Gurdāspur. There is just a fringe of level land along the Punjab frontier, bordered by a plinth of low hilly country sparsely wooded, broken, and irregular. This is known as the *Kandi*, the home of the Chibs and the Dogrās. Then comes the first storey, to reach which a range of mountains, 8,000 feet high, must be climbed. This is a temperate country with forests of oak, rhododendron, and chestnut, and higher up of *deodār* and pine, a country of beautiful uplands, such as Bhadarwāh and Kishtwār, drained by the deep gorge of the Chenāb river. The steps of the Himālayan range known as the Pīr Panjāl lead to the second storey, on which rests the exquisite valley of Kashmīr, drained by the Jhelum river. Up steeper flights of the Himālayas we pass to Astor and Baltistān on the north and to Ladākh on the east, a tract drained by the river Indus. In the back premises, far away to the north-west, lies Gilgit, west and north of the Indus, the whole area shadowed by a wall of giant mountains which run east from the Kilik or Mintaka passes of the Hindu Kush, leading to the Pāmirs and the Chinese dominions past Rakaposhi (25,561 feet), along the Muztāgh range past K 2 (Godwin Austen, 28,265 feet), Gasherbrum and Masherbrum (28,100 and 25,660 feet respectively) to the Karakoram range which merges in the Kuenlun mountains. Westward of the northern angle above Hunza-Nagar the mighty maze of mountains and glaciers trends a little south of east along the Hindu Kush range bordering Chitrāl, and so on into the limits of Kāfiristān and Afghān territory.

At the Karakoram pass (18,317 feet) the wall zigzags, and to the north-east of the State is a high corner bastion of mountain plains at an elevation of over 17,000 feet, with salt lakes dotted about. Little is known of that bastion; and the administration of Jammu and Kashmīr has but scanty information about the eastern wall of the property, which is formed of mountains of an elevation of about 20,000 feet, and crosses lakes, like Pangkong, lying at a height of nearly 14,000 feet. The southern boundary repeats the same features—grand mountains running to peaks of over 20,000 feet; but farther west, where the wall dips down more rapidly to the south, the elevation is easier, and we come to Bhadarwāh (5,427 feet) and to the still easier heights of Basoli (2,270 feet) on the Rāvi river. From Mādhopur, the head-works of the Bāri Doāb Canal, the Rāvi river

ceases to be the boundary, and a line crossing the Ujh river and the watershed of the low Dogrā hills runs fairly straight to Jammu. A similar line, marked by a double row of trees, runs west from Jammu to the Jhelum river. From the south-west corner of the territories the Jhelum river forms an almost straight boundary on the west as far as its junction with the Kunhār river, 14 miles north of Kohāla. At that point the western boundary leaves the river and clings to the mountains, running in a fairly regular line to the grand snow scarp of Nanga Parbat (26,182 feet). Thence it runs almost due north to the crossing of the Indus at Rāmghāt under the Hattu Pīr, then north west, sweeping in Puniāl, Yāsīn, Ghizar, and Koh, the Mehtarjaos or chiefs of which claim the Tangir and Darel country, and linking on to the Hindu Kush and Muztāgh ranges which look north to Chinese territory and south to Hunza-Nagar and Gilgit.

It is said of the first Mahārājā Gulāb Singh, the builder of the edifice just described, that when he surveyed his new purchase, the valley of Kashmīr, he grumbled and remarked that one third of the country was mountains, one third water, and the remainder alienated to privileged persons. Speaking of the whole of his dominions, he might without exaggeration have described them as nothing but mountains. There are valleys, and occasional oases in the deep cañons of the mighty rivers; but mountain is the predominating feature and has strongly affected the history, habits, and agriculture of the people. Journeying along the haphazard paths which skirt the river banks, till the sheer cliff bars the way and the track is forced thousands of feet over the mountain-top, one feels like a child wandering in the narrow and tortuous alleys which surround some old cathedral in England.

It is impossible within the limit of this article to deal in detail with the nooks and corners where men live their hard lives and raise their poor crops in the face of extraordinary difficulties. There are interesting tracts like Padar on the southern border, surrounded by perpetual snow, where the edible pine and the *deodār* flourish, and where the sunshine is scanty and the snow lies long. It was in Padar that were found the valuable sapphires, pronounced by experts the finest in the world. Farther east across the glaciers lies the inaccessible country of Zāskār, said to be rich in copper, where the people and cattle live indoors for six months out of the year, where trees are scarce and food is scarcer. Zāskār has a fine breed of ponies. Farther east is the lofty Rupshu, the lowest point of which is 13,500 feet; and even at this great height barley ripens, though it often fails in the higher places owing to early snowfall. In Rupshu live the nomad Champas, who are able to work in an air of extraordinary rarity, and complain bitterly of the heat of Leh (11,500 feet).

Everywhere on the mass of mountains are places worthy of mention,

but the reader will gain a better idea of the country if he follows one or more of the better known routes. A typical route will be that along which the troops sometimes march from Jammu, the winter capital, past the Summer Palace at Srīnagar in Kashmir to the distant outpost at Gilgit. The traveller will leave the railway terminus on the south bank of the Tawi, the picturesque river on which Jammu is built. From Jammu (1,200 feet) the road rises gently to Dansāl (1,840 feet), passing through a stony country of low hills covered with acacias, then over steeper hills of grey sandstone where vegetation is very scarce, over the Taru Lari pass (8,200 feet), dropping down again to 5,150 feet and lower still to Ramban (2,535 feet), where the Chenāb river is crossed, then steadily up till the Banihāl pass (9,230 feet) is gained and the valley of Kashmir lies below

So far the country has been broken, and the track devious, with interminable ridges, and for the most part, if we except the vale of the Bichlari, the pine woods of Chineni, and the slopes between Rāmban and Deogol (Banihāl), a mere series of flat uninteresting valleys, unrelieved by forests. It is a pleasure to pass from the scenery of the outer hills into the green fertile valley of Kashmir - the emerald set in pearls. The valley is surrounded by mountain ranges which rise to a height of 18,000 feet on the north east, and until the end of May and sometimes by the beginning of October there is a continuous ring of snow around the oval plain. Leaving the Banihāl pass and no experienced traveller cares to linger on that uncertain home of the winds –the track rapidly descends to Vernāg (6,000 feet), where a noble spring of deep-blue water issues from the base of a high scarp. This spring may be regarded as the source of Kashmīr's great river and waterway, commonly known as the JHELUM, the Hydaspes of the ancients, the Vitastā in Sanskrit, and spoken of by the Kashmiris as the Veth. Fifteen miles north the river becomes navigable; and the traveller, after a march of 110 miles, embarks at Khānabal in a flat bottomed boat and drops gently down to Srinagar, the capital of Kashmir.

Looking at a map of Kashmīr, one sees a white footprint set in a mass of black mountains. This is the celebrated valley, perched securely among the Himālayas at an average height of 6,000 feet above the sea. It is approximately 84 miles in length and 20 to 25 miles in breadth. North, east, and west, range after range of mountains guard the valley from the outer world, while in the south it is cut off from the Punjab by rocky barriers, 50 to 75 miles in width. The mountain snows feed the river and the streams, and it is calculated that the Jhelum in its course through the valley has a catchment area of nearly 4,000 square miles. The mountains which surround Kashmīr are infinitely varied in form and colour. To the north lies a veritable sea of mountains broken into white crested waves, hastening away in

wild confusion to the great promontory of Nanga Parbat (26,182 feet). To the east stands Harāmukh (16,903 feet), the grim mountain which guards the valley of the Sind. Farther south is Mahādeo, very sacred to the Hindus, which seems almost to look down upon Srinagar; and south again are the lofty range of Gwāsh Brāri (17,800 feet), and the peak of Amarnāth (17,321 feet), the mountain of the pilgrims and very beautiful in the evening sun. On the south-west is the Panjāl range with peaks of 15,000 feet, over which the old imperial road of the Mughals passes; farther north the great rolling downs of the Tosh Maidān (14,000 feet), over which men travel to the Pūnch country; and in the north-west corner rises the Kājināg (12,125 feet), the home of the *mārkhor*.

On the west, and wherever the mountain-sides are sheltered from the hot breezes of the Punjab plains, which blow across the intervening mountains, there are grand forests of pines and firs. Down the tree-clad slopes dash mountain streams white with foam, passing in their course through pools of the purest cobalt. When the great dark forests cease and the brighter woodland begins, the banks of the streams are ablaze with clematis, honeysuckle, jasmine, and wild roses which remind one of azaleas. The green smooth turf of the woodland glades is like a well-kept lawn, dotted with clumps of hawthorn and other beautiful trees and bushes. It would be difficult to describe the colours that are seen on the Kashmīr mountains. In early morning they are often a delicate semi-transparent violet relieved against a saffron sky, and with light vapours clinging round their crests. The rising sun deepens the shadows, and produces sharp outlines and strong passages of purple and indigo in the deep ravines. Later on it is nearly all blue and lavender, with white snow peaks and ridges under a vertical sun; and as the afternoon wears on these become richer violet and pale bronze, gradually changing to rose and pink with yellow or orange snow, till the last rays of the sun have gone, leaving the mountains dyed a ruddy crimson, with the snows showing a pale creamy green by contrast. Looking downward from the mountains the valley in the sunshine has the hues of the opal; the pale reds of the *karewas*, the vivid light greens of the young rice, and the darker shades of the groves of trees relieved by sunlight sheets, gleams of water, and soft blue haze give a combination of tints reminding one irresistibly of the changing hues of that gem. It is impossible in the scope of this article to do justice to the beauty and grandeur of the mountains of Kashmīr, or to enumerate the lovely glades and forests, visited by so few. Much has been written of the magnificent scenery of the Sind and Liddar valleys, and of the gentler charms of the Lolāb, but the equal beauties of the western side of Kashmir have hardly been described. Few countries can offer anything grander than the deep-green

mountain tarn, Konsanāg, in the Panjāl range, the waters of which make a wild entrance into the valley over the splendid cataract of Arabal, while the rolling grass mountain called Tosh Maidān, the springy downs of Raiyār looking over the Suknāg river as it twines, foaming down from the mountains, the long winding park known as Yusumarg, and lower down still the little hills which remind one of Surrey, and Nilnāg with its pretty lake screened by the dense forests, are worthy to be seen.

As one descends the mountains and leaves the woodland glades, cultivation commences immediately, and right up to the fringe of the forests maize is grown and walnut-trees abound. A little lower down, at an elevation of about 7,000 feet, rice of a hardy and stunted growth is found, and the shady plane tree appears. Lower still superior rices are grown, and the watercourses are edged with willows. The side valleys which lead off from the vale of Kashmīr, though possessing distinctive charms of their own, have certain features in common. At the mouth of the valley lies the wide delta of fertile soil on which the rice with its varying colours, the plane-trees, mulberries, and willows grow luxuriantly; a little higher up the land is terraced and rice still grows, and the slopes are ablaze with the wild indigo, till at about 6,000 feet the plane-tree gives place to the walnut, and rice to millets. On the left bank of the mountain river endless forests stretch from the bottom of the valley to the peaks, and on the right bank, wherever a nook or corner is sheltered from the sun and the hot breezes of India, the pines and firs establish themselves. Farther up the valley, the river, already a roaring torrent, becomes a veritable waterfall dashing down between lofty cliffs, whose bases are fringed with maples and horse-chestnuts, white and pink, and millets are replaced by buckwheat and Tibetan barley. Soon after this the useful birch-tree appears, and then come grass and glaciers, the country of the shepherds.

Where the mountains cease to be steep, fan-like projections with flat arid tops and bare of trees run out towards the valley. These are known as *karewas*. Sometimes they stand up isolated in the middle of the valley, but, whether isolated or attached to the mountains, the *karewas* present the same sterile appearance and offer the same abrupt walls to the valley. The *karewas* are pierced by mountain torrents and seamed with ravines. Bearing in mind that Kashmir was once a lake, which dried up when nature afforded an outlet at Bāramula, it is easy to recognize in the *karewas* the shelving shores of a great inland sea, and to realize that the inhabitants of the old cities, the traces of which can be seen on high bluffs and on the slope of the mountains, had no other choice of sites, since in those days the present fertile valley was buried beneath a waste of water.

Kashmīr abounds in mountain tarns, lovely lakes, and swampy lagoons. Of the lakes the WULAR, the DAL, and the Manasbal are the

most beautiful. It is also rich in springs, many of which are thermal. They are useful auxiliaries to the mountain streams in irrigation, and are sometimes the sole sources of water, as in the case of Achabal, Vernāg, and Kokārnāg on the south, and Arpal on the east. Islāmābād or Anantnāg, 'the place of the countless springs,' sends out numerous streams. One of these springs, the Maliknāg, is sulphurous, and its water is highly prized for garden cultivation. The Kashmīris are good judges of water. They regard Kokarnāg as the best source of drinking-water, while Chashma Shāhi above the Dal Lake stands high in order of merit.

It is time now for the traveller who has been resting in Srinagar to set out on the great northern road which leads to Gilgit. He will have admired the quaint, insanitary city lying along the banks of the Jhelum, with a length of 3 miles and an average breadth of $1\frac{1}{4}$ miles on either side of the river. The houses vary in size from the large and spacious brick palaces of the Pandit aristocrat and his 500 retainers, warmed in the winter by *hammāms*, to the doll house of three storeys, where the poor shawl weaver lives his cramped life, and shivers in the frosty weather behind lattice windows covered with paper. In the spring and summer the earthen roofs of the houses, resting on layers of birch-bark, are bright with green herbage and flowers. The canals with their curious stone bridges and shady waterway, and the great river with an average width of eighty yards, spanned by wooden bridges, crowded with boats of every description, and lined by bathing boxes, are well worth studying. The wooden bridges are cheap, effective, and picturesque, and their construction is ingenious, for in design they appear to have anticipated the modern cantilever principle. Old boats filled with stones were sunk at the sites chosen for pier foundations. Piles were then driven and more boats were sunk. When a height above the low-water level was reached, wooden trestles of *deodār* were constructed by placing rough-hewn logs at right angles. As the structure approached the requisite elevation to admit of *chakwāris* (house-boats) passing beneath, *deodār* logs were cantilevered. This reduced the span, and huge trees were made to serve as girders to support the roadway. The foundations of loose stones and piles have been protected on the upstream side by planking, and a rough but effective cut-water made. The secret of the stability of these old bridges may, perhaps, be attributed to the skeleton piers offering little or no resistance to the large volume of water brought down at flood-time. It is true that the heavy floods of 1893 swept away six out of the seven city bridges, and that the cumbrous piers tend to narrow the waterway, but it should be remembered that the old bridges had weathered many a serious flood. Not long ago two of the bridges, the Habba Kadal and the Zaina Kadal, had rows of shops on them reminding one of Old London Bridge; but these have now been cleared away.

The distance by road from Srinagar to Gilgit is 228 miles, and the traveller can reach Bandipura at the head of the Wular Lake by boat or by land. The Gilgit road, which cost the Kashmir State, in the first instance, 15 lakhs, is a remarkable achievement, and was one of the greatest boons ever conferred on the Kashmīri subjects of the Mahārajā. Previous to its construction supplies for the Gilgit garrison were carried by impressed labourers, many of whom perished on the passes, or returned crippled and maimed by frost-bite on the snow or accident on the goat paths that did duty for roads. The journey to Gilgit before 1890 has been aptly compared with the journey to Siberia. Now, supplies are carried on ponies and the name Gilgit is no longer a terror to the people of Kashmir.

From Bandipura a steep ascent leads to the Raj Diāngan pass (11,800 feet), a most dreaded place in the winter months, when the cold winds mean death to man and beast. Thence through a beautifully wooded and watered country, past the lovely valley of Gurais, down which the Kishangangā flows, the traveller has no difficulties till he reaches the Burzil pass (13,500 feet), below which the summer road to Skārdu across the dreary wastes of the Deosai plains branches off to the north east. This is a very easy pass in summer, but is very dangerous in a snowstorm or high wind.

Descending from the Burzil the whole scene changes. The forests and vegetation of Kashmir are left behind, the trees are few and of a strange appearance, and the very flowers look foreign. It is a bleak and rugged country, and when Astor (7,853 feet) is left the sense of desolation increases. Nothing can be more dreary than the steep descent from Doian down the side of the arid Hattu Pir into the sterile waste of the Indus valley. It is cool at Doian (8,720 feet), it is stifling at Rāmghāt (3,800 feet), where one passes over the Astor river by a suspension bridge. The old construction was a veritable bridge of sighs to the Kashmīri convicts who were forced across the river and left to their fate —starvation or capture by the slave hunters from Chilas. A little cultivation at Bunji relieves the eye, but there is nothing to cheer the traveller until the Indus has been crossed by a fine bridge, and 30 miles farther the pleasant oasis of Gilgit is reached.

The Indus valley is a barren dewless country. The very river with its black water looks hot, and the great mountains are destitute of vegetation. The only thing of beauty is the view of the snowy ranges, and Nanga Parbat in the rising sun seen from the crossing of the Indus river to Gilgit sweeps into oblivion the dreadful desert of sands and rock. Gilgit (4,890 feet) itself is fertile and well watered. The mountains fall back from the river, and leave room for cultivation on the alluvial land bordering the right bank of the Gilgit river, a rare feature in the northern parts of the Maharaja's dominion.

Another route giving a general idea of the country runs from west to east, from Kohāla on the Jhelum to Leh, about 5 miles beyond the Indus. A good road from Rāwalpindi brings the traveller to Kohāla, where he crosses the Jhelum by a bridge, and enters the territories of Jammu and Kashmīr. The cart-road passes from Kohāla to Srīnagar, a distance of 132 miles, by easy gradients. As far as Bāramūla the road is close to the river, but for the most part at a great height above it, and the scenery is beautiful. At Muzaffarābād the Kishangangā river joins the Jhelum, and here the road from Abbottābād and Garhi Habīb-ullah connects with the Kashmīr route. The road runs along the left bank of the Jhelum, through careful terraced cultivation, above which are pine forests and pastures. It carries a very heavy traffic, but owing to the formation of the country it is liable to constant breaches, and is expensive to keep in repair.

From Uri a road runs south to the country of the Rājā of Pūnch, the chief feudatory of the Mahārājā, crossing the Hāji pass (8,500 feet). At Bāramūla the road enters the valley of Kashmīr, and runs through a continuous avenue of poplars to Srinagar. In bygone days this route, known as the Jhelum valley road now the chief means of communication with India was little used. The Bambās and Khakhās, who still hold the country, were a restless and warlike people; and the numerous forts that command the narrow valley suggest that the neighbourhood was unsafe for the ordinary traveller. The construction of the road from Kohāla to Bāramūla cost the State nearly 22 lakhs.

From Srīnagar to Leh is 243 miles. The first part of the journey runs up the Sind valley, perhaps the most exquisite scenery in Kashmīr. Fitful efforts are made from time to time to improve this important route, but it still remains a mere fair-weather track. The Sind river thunders down the valley, and the steep mountains rise on either side, the northern slopes covered with pine forest, the southern bare and treeless. At Gagangīr the track climbs along the river torrent to Sonāmarg (8,650 feet), the last and highest village in the Sind valley, if we except the small hamlet of Nilagrar some 2 miles higher up. Sonāmarg is a beautiful mountain meadow surrounded by glaciers and forests. It is a miserable place in the winter time, but it is of great importance to encourage a resident population. The chief staples of cultivation are *grim*, or Tibetan barley, and buckwheat. It is good to turn loose the baggage ponies to graze on the meadow grasses; for in a few more marches one passes into a region like the country beyond the Burzil on the road to Gilgit, a land devoid of forests and pastures, 'a desert of bare crags and granite dust, a cloudless region always burning or freezing under the clear blue sky.' The Zoji La (11,300 feet) is the lowest depression in the great Western Himālayas which run from the Indus valley on the Chilās frontier. Over this high range the rains

from the south hardly penetrate, and the cultivation, scanty and difficult, depends entirely on artificial canals. The ascent to the Zoji La from Kashmīr is very steep, the descent to the elevated table-land of Tibet almost imperceptible. For five marches the route follows the course of the Drās river, through a desolate country of piled up rocks and loose gravel. At Chanagund the road to Skārdu crosses the Drās river by a cantilever bridge, 4 miles above the junction of the Drās and Suru rivers, and about 8 miles farther on the Indus receives their waters. But the steep cliffs of the Indus offer no path to the traveller, and the track leaves the Drās river, and turns in a southerly direction to Kargil, a delightful oasis. Then the road abandons the valleys and ascends the bare mountains. The dreary scenery is compensated by the cloudless pale blue sky and the dry bracing air so characteristic of Ladākh. Through gorges and defiles the valley of Shergol is reached, the first Buddhist village on the road. Thenceforward the country is Buddhist, and the road runs up and down over the Namika La (13,000 feet) and over the Fotu La (13,400 feet), the highest point on the Leh road. Along the road near the villages are Buddhist monasteries, *manis* (walls of praying stones) and *chortens*, where the ashes of the dead mixed with clay and moulded into a little idol are placed, and at Lamayaru there is a wilderness of monuments. Later, the Indus is crossed by a long cantilever bridge; and the road runs along the right bank through the fertile oasis of Khalsi, then through the usual desert with an occasional patch of vegetation to Leh (11,500 feet), the capital of Western Tibet and of Western Buddhism, and the trade terminus for caravans from India and from Central Asia. It is a long and difficult road from Leh to Yārkand, 482 miles, over the Khardung La, the Sasser La, and the Karakoram pass of between 17,000 and 19,000 feet altitude, where the useful yāk (*Bos grunniens*) relieves the ponies of their loads when fresh snow has fallen, or serves unladen to consolidate a path for the ponies.

A brief description may be given of one more of the many routes that follow the rivers and climb the mountains—the route from Leh through Baltistān to Astor on the Gilgit road. At Khalsi, where the Srīnagar-Leh road crosses the Indus, the track keeps to the right bank of the Indus, and passing down the deep gorge of the river comes to a point where the stupendous cliffs and the roaring torrent prevent farther progress. There the traveller strikes away from the Indus and ascends the mountains to the Chorbat pass (16,700 feet), covered with snow even in July. From the pass, across the valley of the Shyok river, the great Karakoram range, some 50 miles away, comes into view. An abrupt descent carries the traveller from winter into hot summer; and by a difficult track which in places is carried along the face of the cliff by frail scaffolding (*pari*), following the course of the Shyok river, smoothly flowing between white sands of granite, and passing many