in Kaithal were protected by the Nardak irrigation channel, constructed as a relief work in 1897; the tracts affected were chiefly the Naili and bangar tracts of Kaithal and parts of Thanesar. The highest daily average relieved was 14,075, and the expenditure was 2.6 lakhs.

The District is divided into the four tahstls of KARNAL, PANIPAT, THANESAR, and KAITHAL, each under a tahsildar and a naib-tahsildar. In the last the sub-tahsil of Gula is also in charge of a naib-tahsildar. The tahsil of Kaithal forms The Deputy-Commissioner holds executive a subdivision. 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 rejustice and sponsible 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.

Land revenue administration.

The tract which passed to the British in 1803, and formed part of the old Panipat 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 bangar 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 settle-

District subdivisions and staff.

ment. 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. 1-14to 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 *tahstls* 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	8,88	12,68	13,45

The District contains six municipalities : KARNĀL, PĀNĪPAT, Local and KAITHAL, SHĀHĀBĀD, THĀNESAR, and LĀDWA. Outside these, municipal. local affairs are managed by the District board, whose income amounted to nearly  $1\frac{1}{4}$  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 Police and 147 municipal police, under a Superintendent, assisted by jails. 4 inspectors. Village watchmen number 1,540. The District contains 22 police stations, 1 outpost, and 5 road-posts. The Sānsis, Balochs, and Tagās 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 headquarters has accommodation for 155 prisoners.

Karnāl is the most backward District in the Province in the Education. 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 in the whole Province. The number of pupils under instruction was : 1,961 in 1880-1, 2,242 in 1890-1, 5,902 in 1900-r, 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 Pānīpat, 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 Karnal 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.

Hospitals and dispensaries. Besides the Karnāl civil hospital the District has 9 dispensaries, one at Karnāl and 8 at out-stations, at which 117,370 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.

Vaccination. 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 tahsil); J. M. Douie, District Gazetteer (1890), Settlement Report of Karnāl-Ambāla (1891), and Riwāj-i-ām of Tahsīl 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  $29^{\circ}$  26' and  $30^{\circ}$  o' N. and  $76^{\circ}$  40' and  $77^{\circ}$  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 amounted in 1903–4 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 *tahsil* 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.

Thanesar Tahsil (Thaneswar) .--- Northern tahsil of Karnal District, Punjab, lying between  $29^{\circ}$  55' and  $30^{\circ}$  15' N. and  $76^{\circ}$  36' and  $77^{\circ}$  17' E., on the west bank of the Jumna, with an area of 559 square miles. The population in 1901 was 173,208, compared with 177,442 in 1891. It contains the towns of THANESAR (population, 5,066), the head-quarters, LADWA (3,518), and SHAHABAD (11,009); and 418 villages. The land revenue and cesses amounted in 1903-4 to 2.8 lakhs. Thanesar practically coincides with the old Pipli taksil of Ambāla District, from which it was transferred in 1897. On the east it has a narrow frontage along the Jumna. The fertile riverain lowlands average about 6 miles in width. western boundary of this tract is the old bank of the Jumna, and from the crest of this bank the country slopes away westwards. The uplands are intersected by several torrent-beds, and the soil, especially to the south, is for the most-part stiff and infertile. Dhak jungle abounds. The Markanda country on the north-west has the advantages, of a lighter soil and fertilizing floods.

**Pānīpat Tahsil.**—Southern tahsil of Karnāl District, Punjab, lying between  $29^{\circ}$  11' and  $29^{\circ}$  30' N. and  $76^{\circ}$  38' and 77° 10' E., on the west bank of the Jumna, with an area of 462 square miles. The population in 1901 was 196,284, compared with 184,856 in 1891. It contains the town of PāNīPAT (population, 26,914), the head-quarters, and 172 villages. The land revenue and cesses amounted in 1903-4 to 3.5 lakhs. On the east lie the Jumna lowlands, rich, picturesque, and unhealthy. West of the railway line the country lies at a higher level. The soil is in places saline, and considerable tracts are in consequence uncultivated, but the tahsil enjoys a high degree of prosperity. The uplands are irrigated by the Western Jumna Canal.

Kaithal Tahsil.—Western *tahsil* and subdivision of Karnal District, Punjab, lying between  $29^{\circ} 22'$  and  $30^{\circ} 12'$  N. and  $76^{\circ}$ 11' and  $76^{\circ} 47'$  E., with an area of 1,289 square miles. The population in 1901 was 265,189, compared with 257,493 in 1891. It contains the towns of KAITHAL (population, 14,408), the head-quarters, and PUNDRI (5,834); and 413 villages, including PEHOWA, a place of religious importance. The land revenue and cesses amounted in 1903-4 to 2.7 lakhs. The *tahsil*  consists chiefly of the petty principality of Kaithal, which escheated in 1843. North of the Ghaggar, the country is undulating and the soil contains a considerable proportion of sand. The tract between the Ghaggar and the southern limits of the Saraswatī depression consists of vast prairies, flooded during the rains and interspersed with numerous trees and patches of cultivation. This tract, known as the Naili (Nāli), is notoriously unhealthy, but the pasture it affords is invaluable in dry years. The southern half of the *taksīl* is a level plain, now irrigated by the Western Jumna Canal. On the east is the Nardak. The people have not yet entirely abandoned their pastoral traditions, and large tracts are still used for grazing alone. Farther west, cultivation becomes more general, and in the extreme south-west the soil contains a large proportion of sand.

Gula.—Sub-tahsil of the Kaithal tahsil of Karnal District, Punjab. It has an area of 455 square miles, and contains 204 villages. The head-quarters are at the village of Gula. The land revenue and cesses amounted in 1903-4 to 1.2 lakhs.

Kunjpura ('the heron's nest') .-- An estate in the District and tahsil of Karnal. Punjab, founded by Najabat Khan, a Ghorgasht Pathan and soldier of fortune under the Mughal emperors. Najābat Khān built a stronghold in the marshes of the Jumna early in the eighteenth century, and then revolted against the imperial government. Siding with Nadir Shāh in 1730, Najābat Khān was recognized by him as chief of Kunjpura and held it till he was killed in 1760, when the Marāthās razed his stronghold to the ground. His son, Diler Khān, received large grants of territory from the Durrānis, but he and his successor were driven out of their lands west of the Jumna by the Rājā of Jīnd and other Sikh chiefs. In 1787, however, Sindhia expelled the Jind Rājā from Karnāl, and ten years later General Perron recognized Gulsher as Nawab of Kunjpura. His son, Rahmat Khān, allied himself to Lord Lake in 1801, and in 1811 was recognized as a protected chief by the British Government. In 1846 the Nawab of Kunjpura lost his sovereign powers, and the history of the family has since been one of incessant litigation. The present Nawab succeeded in 1886. He holds a jagtr of thirty-eight villages with a revenue of Rs. 31,000, besides which his estate yields an income of nearly Rs. 32,000.

Kaithal Town.—Head-quarters of the subdivision and tahsil of the same name in Karnal District, Punjab, situated in 29° 48' N. and 76° 24' E., 38 miles west of Karnal town, and the terminus of the Kaithal branch of the Southern Punjab

Railway. Population (1901), 14,408. Kaithal is picturesquely situated on an extensive tank, which partly surrounds it, with numerous bathing-places and flights of steps. It lies in KURUKSHETRA, and is said to have been founded by the hero Yudhishthira. It bore in Sanskrit the name of Kapisthala, or the 'abode of monkeys,' and possesses an asthan or temple of Anjni, mother of Hanuman, the monkey god. During the time of the earlier Muhammadan emperors it was a place of some importance, and Timūr, who says its inhabitants were fire-worshippers, halted here before he attacked Delhi in 1398. The tombs of several saints, the oldest of which is that of the Shaikh Salāh-ud-dīn of Balkh (A.D. 1246), show that it was a centre of Muhammadan religious life. The town was renovated, and a fort built, under Akbar. In 1767 it fell into the hands of the Sikh chief, Bhai Desu Singh, whose descendants, the Bhais of Kaithal, ranked among the most powerful of the Cis-Sutlej chiefs. Their territories lapsed to the British Government in 1843, when Kaithal became the head-quarters of a District; but in 1849 it was absorbed into Thanesar District, which was in turn included in that of Karnāl in 1862. The now somewhat dilapidated fort or palace of the Bhais stands' out prominently on the bank of the tank. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 19,900 and Rs. 20,400 respectively. The income in 1903-4 was Rs. 15,800, chiefly derived from octroi; and the expenditure was Rs. 17,400. It maintains a dispensary and an Anglo-vernacular middle school. Saltpetre is refined at Kaithal and it has a consider-able manufacture of lacquered wood, besides two cotton fac-tories, one for ginning and the other for ginning and pressing. The number of employés in the factories in 1904 was 103.

Karnāl Town.—Head-quarters of the District and tahstl 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 Shah by Nadir 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 Bhag Singh lost it to the Marāthās in 1787, and it was subsequently made over by them to George Thomas. It then fell into the hands of Gurdit Singh of Ladwa, 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. Karnal 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. It possesses a civil hospital, with a branch in the town. The Society for the Propagation of the Gospel also maintains a female hospital and dispensary.

Lādwa.—Town in the Thānesar tahsil of Karnāl District, Punjab, situated in  $29^{\circ} 59'$  N. and  $77^{\circ} 3'$  E. Population (1901), 3,518. The town and neighbourhood belonged to a Sikh family, and were confiscated in 1846 in consequence of their conduct in the first Sikh War. The place is of no commercial importance. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 5,300. The income in 1903-4 was Rs. 4,500, chiefly derived from octroi; and the expenditure was Rs. 4,900. The town has a vernacular middle school and a dispensary.

**Pänipat Town.**—Head-quarters of the *taksi* of the same name in Karnäl District, Punjab, situated in  $29^{\circ} 24'$  N. and  $76^{\circ} 59'$  E., on the Delhi-Umballa-Kälka Railway; 1,000 miles by rail from Calcutta, 1,035 from Bombay, and 916 from Karächi. Population (1901), 26,914. The town is of high antiquity, and is mentioned in the Mahābhārata as one of the five places demanded by Yudhishthira from Duryodhana as the price of peace. In Muhammadan times it would appear to have been of considerably greater importance than it is now.

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It was from Pānīpat that prince Humāyun plundered Delhi in 1390, and he was defeated in the neighbourhood by Abu Bakr. Pänīpat was seven years later held for Tātār Khān and taken by Ikbal Khan, and in the next year deserted on Timur's approach. During the reign of Bahlol Lodi his son Nizam Khān, afterwards Sikandar Lodī, seized Pānīpat and made it his head-quarters. But its chief title to fame lies in that it was the scene of the three most decisive battles of Northern India : the defeat of Ibrahim Lodi by Babar in 1526, the defeat by Akbar of Hīmū, the Hindu general of Adil Shāh in 1556, and Ahmad Shāh's victory over the Marāthās in 1761. An indecisive battle was also fought at Pänipat between the Sikhs and the Delhi emperor in 1767. The pargana of Pānīpat was made over to General Perron by the Marathas, and passed to the British in 1803. The chief monument of antiquity is the tomb of the Muhammadan saint Kalandar (also said to be buried at Karnal), erected by the sons of Ala-ud-din of Ghor. Pānīpat was the head-quarters of the District until 1854. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 26,400, and the expenditure. Rs. 26,200. The income in 1903-4 was Rs. 27,400, chiefly derived from octroi; and the expenditure was Rs. 28,000. Local manufactures include brass vessels, cutlery, and silvered glass; and the town has a cotton press and a combined ginning and pressing factory. The number of operatives employed in 1904 was 500. The Muhammadan community maintains an Arabic school, and the municipality an Anglovernacular middle school. The town contains a dispensary,

Pehowa.-Ancient town and place of pilgrimage in the Kaithal tahstl of Karnal District, Punjab, situated in 29° 59' N. and 76° 35' E., on the sacred Saraswati river, 16 miles west of Thanesar. It lies in KURUKSHETRA, and its name is a corruption of the Sanskrit Prithūdaka, the 'pool of Prithu,' the son of Rājā Vena. Two inscriptions dating from the end of the ninth century A.D., found at Pehowa, show that it was then included in the dominions of Bhoja and his son Mahendrapäla, kings of Kanauj. The more important inscription records the erection of a triple temple to Vishnu by a Tomar family, but no traces of ancient buildings remain, the modern shrines having been erected within the last century. After the rise of the Sikhs to power Pehowa came into the possession of the Bhais of Kaithal, whose palace is now used as a resthouse; but with Kaithal it lapsed to the British Government, and has since lost its importance, the population having decreased from

3,408 in 1881 to 2,080 in 1901. It is still, however, a place of pilgrimage; and close to it are the temples of Pirthūdakeshwar or Pirthūveshwar, built by the Marāthās during their supremacy in honour of the goddess Saraswatī (Sarsūti), and of Swāmi Kārtik. The latter is said to have been founded before the war of the Mahābhārata in honour of the war-god Kartaya. The town has a dispensary.

**Pündri.**—Town in the Kaithal *taksil* of Karnāl District, Punjab, situated in 29° 46' N. and 76° 34' E., on the bank of a great tank called the Pundrak tank. Population (1901), 5,834. It was formerly one of the strongholds of the Pündirs, a Rājput tribe who held Thānesar and the Nardak. It has a vernacular middle school.

Shāhābād.—Town in the Thānesar tahsil of Karnāl District, Punjab, situated in  $30^{\circ}$  10' N. and  $76^{\circ}$  52' E., on the Delhi-Umballa-Kālka Railway, 16 miles south of Ambāla. Population (1901), 11,009. The town was founded by one of the followers of Muhammad of Ghor at the end of the twelfth century. It is of no commercial importance. The municipality was created in 1867–8. The income during the ten years ending 1902–3 averaged Rs. 10,900, and the expenditure Rs. 10,200. The income in 1903–4 was Rs. 12,300, chiefly derived from octroi; and the expenditure was Rs. 11,200. The town has a vernacular middle school and a dispensary.

Tirāwari (or Azamābād-i-Talāwari, the Tarain of the earlier Muhammadan historians) .--- Village in the District and taksil of Karnal, Punjab, situated in 29° 48' N. and 76° 59' E., 14 miles south of Thanesar and 84 north of Delhi, on the Delhi-Umballa-Kälka Railway. Tirāwari is identified as he scene of Muhammad of Ghor's defeat by Prithwi Raj (Rai Pithora), the Chauhān king of Ajmer, in 1191, and of the former's victory over that king in 1192. In 1216 Tāj-ud-dīn Yalduz, who had made himself master of the Punjab, advanced against Shams-ud-din Altamsh, but was defeated by the latter near Tarain. It derives its modern name of Azamābād from Azam Shāh, son of Aurangzeb, who was born in the town. In 1739 Nādir Shāh occupied the place, then a fortified town, after battering its walls, and marched to encounter Muhammad A great rabāt or fortified sarai still exists at Tirāwari, Shāh. and the walls round the village are in excellent preservation.

Thānesar Town (*Thānesavar*).—Head-quarters of the *tahsīl* of the same name in Karnāl District, Punjab, situated in 29° 59' N. and 76° 50' E., on the banks of the Saraswatī, and

occupy the true site, while the modern name is obviously a corruption of the old Hindu name. Indraprastha is commonly , believed to have been founded by the earliest Aryan colonists of India; and the Mahābhārata relates how the five Pāndavas, Yudhishthira and his brethren, leading a body of settlers from Hastinapur on the Ganges, expelled the savage Nagas, and built their capital upon this spot. For later details see DELHI Сіту.

Sonepat Town (Sonpat; Sanskrit Suvarnaprastha).-Head-quarters of the taksil of the same name in Delhi District, Punjab, situated in 29° N. and 77° 1' E., on the Delhi-Ambāla-Kālka Railway, 28 miles north of Delhi. Population (1901), 12,990. One popular tradition avers that this is one of the five towns mentioned in the Mahābhārata which Yudhishthira demanded from Duryodhana as the price of peace. Another ascribes its foundation to Rājā Soni, thirteenth in descent from Arjuna, a brother of Yudhishthira. It is of no commercial importance. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 14,300. The income in 1903-4 was Rs. 16,000, chiefly derived from octroi; and the expenditure was Rs. 16,400. The town possesses an Anglovernacular middle school, a Government dispensary, and a cotton-ginning and pressing factory which in 1904 employed 130 hands.

Karnāl District.-District in the Delhi Division of the Boun-Punjab, lying between 29° 11' and 30° 15' N. and 76° 11' and daries, con-figuration, 77° 17' E., with an area of 3,153 square miles, including and hill 36 outlying villages, scattered throughout the eastern part of and river the State of Patiala. The District is bounded on the north by Patiāla State and Ambāla District; on the east by the river 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 Jind. 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 bangar, an upland plain watered throughout by the Western Jumna Canal, and stretching parallel to the khādar 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<sup>1</sup>, 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*).

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 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 Rākshi.

Geology and botany.

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 pennsyl*vanicus), 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.

Fauna.

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 only found rarely, but wolves are still common. Antelope, *milgai*, 'ravine deer' (Indian gazelle), and hog deer are fairly plentiful where there is suitable cover. Small game is abundant.

Climate and temperature. Fever is particularly prevalent in the Naili (Nāli) tract, flooded by the Saraswatī, and in the canal-irrigated portions of

<sup>1</sup> The Nardak is properly another name for KURUKSHETRA, but it is extended to include all the high tract.

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; but recent improvements have greatly diminished the evil. The climate of Kaithal resembles that of the plains of the Punjab proper, but the Jumna *tahsils* are not subject to the same extremes of heat and cold.

The annual rainfall averages 30 inches at Karnāl, 23 at Rainfall. 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.

The early legendary history of the District will be found in History the account of KURUKSHETRA or the holy plain of the Hindus, and archaeowhich occupies its north-western portion. The number of logy. Indo-Scythian coins found at Polar on the Saraswati 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 Thanesar. Though Thanesar was sacked by Mahmud of Ghazni in 1014, the country remained under Hindu rule until the defeat of Prithwil Rāj at Tirāwari in 1192. Thereafter it was more or less firmly attached to Delhi till after the invasion of Timur, 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 kTimur was the scene of numerous battles, of which the  $most_{i}^{i,j}$ important were two fought at PANIPAT. 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 Nädir Shäh defeated Muhammad Shah near Karnal, and in 1761 occurred the third great battle of PANIPAT, 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 *taksīl* of the District in 1888, and the rest of the Pipli *taksīl* (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.

The District contains 7 towns and 1,383 villages. Its population at the last three enumerations was: (1881) 820,041(1891) 861,160, (1901) 883,225. It increased by 2.6 per centiduring the last decade, the increase being greatest in the Pānīpat *taksīl* and least in Karnāl. In the Thānesar *taksīl* the population dečreased 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 *taksils* 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 table on the next page gives the chief statistics of population in 1901.

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 people.

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		luare	Number of		ġ	2.0	85	2
	Taksil.	Area in so miles.	Towns.	Villagea.	Population	Population 1 square mil	Percentage variation i population between 18 and 1001.	Number o Pone able read and write.
_ 1	Karnāl Thānesar Pānīpat Kaithal	836 589 462 1,288	1 3 1 2	380 418 172 413	248,544 173,208 196,284 265,189		+ 2.9 - 2.4 + 6.2 + 3.0	6,117 4,361 6,377 4,342
1	District total	3,153	7	1,383	883,225	280.1	+ 2.6	21,195

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

The Jāts are the most numerous tribe, numbering 120,000, Castes and or 14 per cent. of the total. They own 151 per cent. of the occupaland, and are mostly Hindus, only 8,000 being Sikhs and tions. 3,000 Muhammadans. Their principal clans are the Ghatwal, Deswäl, Sindhu, Pawānia, Mān, Katkhar, and Jaglān. Rājputs (83,000) own 32 per cent. of the land; 67,000 are The Muhammadans, known as Ranghars. Their principal clans are the Chauhān, Mandhār, Ghorewāha, and Tonwar. Rors (42,000) own  $17\frac{1}{2}$  per cent. and are almost all Hindus; they seem originally to have held their lands as dependants of the Rajputs. Gujars (30,000) are mostly Hindus, though 8,000 are Muhammadans. Their reputation is no better here than in other parts of the Division. The Tagãs (4,000) claim to be a Brahman 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 Thanesar taksil, where they have purchased estates. Kambohs number 14,000. Of the commercial classes, the chief are the Baniãs (52,000). Among the menial classes may be mentioned the Chamars (leather-workers, 79,000), Chühräs (scavengers, 45,000), Jhinwars (water-carriers, 44,000), Kumhārs (potters, 19,000), and х

Tarkhans (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-Rajput tribes into the Dehia and Haulania factions, apparently dating from a time when the Haulānias under the leadership of the Ghatwal Jats were called in by one of the emperors to help to coerce the Mandhar Rajputs, and were opposed by the Dehia Jats, who from jealousy of the Ghatwal supremacy joined the Mandhars. The leading families of the District are those of the Nawab of Kunjpura, the Mandals of Karnäl, and the Bhais of Arnauli and Siddhuwāl.

Christian missions.

General

agricul-

tural conditions.

The Society for the Propagation of the Gospel carries, on mission work at Karnal, Kaithal, and Panipat. Its operations include sanāna teaching, girls' schools, and a hospital and dispensary for women and children. There are also Methodist Episcopal missions at Karnal and Panipat, and a Presbyterian mission at Thanesar (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.

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 bangar is almost entirely watered by the Western Jumna Canal; the soil is a fertile and easily worked loam, and the tract is for the most part a sheet of cultivation. The soil of the Kaithal bangar 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 Thanesar tahsil is a rich alluvial tract watered by the Markanda 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.

Chief agricultural pal crops.

The District is held almost entirely by small peasant proprietors, large estates covering only about 160 square miles and princi- 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 table on the next page.

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.

Tahsil.		Total.	Cultivated.	Irrigated.	Cultivable waste.	
Karnāl Th <b>ānesar</b> Pānīpat Kaithal		838 559 461 1,289	450 335 288 724	164 37 192 208	263 151 74 416	
	Total	3,147	1,797	бот	904	

During the thirteen years ending 1904, the cultivated area Improvements in 1,637 square miles to more than 1,797, or by 10 per agriculcent., the increase being chiefly due to the extensions of tural canal-irrigation. This has been accompanied by an extended practice. 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 a lakhs for the purchase of bullocks and seed.

Cattle-raising used to play an important part in the economy Cattle, of the Nardak before the construction of the Sirsa canal, and sheep. 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 Kamāl 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 Irrigation. 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 223 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*,

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except in Thanesar, 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 bangar in the Kaithal taksil is also supplied by the Saraswati 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.

Forests.

Minerals.~

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 tahsil. 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 L District has four saltpetre refineries. The only other mineral product is kankar.

Arts and manufactures.

Karnal 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 phulkaris; 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 Panipat; and two combined ginning and pressing factories, at Pānīpat and Kaithal. The total number of employes in 1904 was 702. Silver-work and musical instruments are made at Shāhābād. Some good lacquered wood-Commerce work is also produced.

and trade.

The chief exports are wheat, cotton, gram, fine rice, ghi,

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 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 Railways side by side with the grand trunk road, and Kaithal is the and roads. 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 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 Nardāk, and in the flooded tract bordering on the Saraswatī and Ghaggar the tracks are often impassable for weeks together during the rains.

Including the challsa famine of 1783 the District has been Famine. 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 Karnal and Kaithal and the Naili tract of Kaithal. In 1899-1900 the Nardak in Karnal and part of that