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THACKER'S

GUIDE BOOK

TO

DARJEELING

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CALCUTTA.

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Sketch Map
OF
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Scale 2 Inches = 1 Mile

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THACKER'S GUIDE BOOK

TO

DARJEELING

AND ITS NEIGHBOURHOOD

BY

EDMUND MITCHELL, M.A.

With Two Maps.

Calcutta:
THACKER, SPINK & CO.
BOMBAY: THACKER & Co., Ld. LONDON: W. THACKER & Co.

1891.

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CHAPTER I.

HISTORICAL.

Our first connection with Sikkim—Cession of the Darjeeling Hill Station—A Sanitarium Established—Progress of the Station—Quarrel with Sikkim—Dr. Campbell and Dr. Hooker made Captive—Their Release—Annexation of Territory—Opening of Railways--Growth of the Tea Industry—Cinchona Cultivation—Trade with Nepaul, Sikkim, and Tibet—The recent Sikkim Expedition—Himalayan Hill Tribes.

3-4-9-1913

The history of Darjeeling constitutes a recent chapter in the extension of British rule. Up to 1815 the land was practically a *terra incognita*. In that year the Nepaulese, or Goorkhas as they are more frequently termed, raided the territory of the Rajah of Sikkim, and by the next year had driven him from his throne. His cause was espoused by the East India Company, and eventually, in 1817, the deposed Prince was restored to power, and the aggressive Nepaulese were compelled to withdraw within their own borders. A treaty was entered into between the Company and the Rajah, by which the sovereign rights of the latter were guaranteed on the understanding that Sikkim should become a Protected State, the ally of Great Britain, and owning no allegiance to any other Government. The object of this treaty was to retain Sikkim as a buffer state between Nepaul and Bhutan, as otherwise the probabilities

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were that the whole strip of Himalayan country would be overrun and occupied by the war-like Goorkhas. In 1828 Sikkim again attracted notice, when a frontier dispute arose with Nepaul. According to the treaty, the question at issue was referred to the British Government, and through its agency the matter was amicably settled. To conduct these negotiations, a gentleman of high scientific attainments, Mr. J. W. Grant, together with an officer of the Bengal Army, Captain Lloyd, visited the country, and it was they who first conceived the idea of establishing a sanitarium at Darjeeling. They brought the proposal under the notice of Lord William Bentinck, then Governor-General, pointing out the eligibility of the site, the favourable nature of the climate, the proximity to Calcutta and the accessibility of the place, its central position between Nepaul, Tibet, Bhutan, and British India, and the good example a peaceably-conducted and well-governed station would be to the turbulent hill tribes in the neighbourhood. The suggestion was well received, and, as a first step towards acting upon it, an officer was sent to make a survey of the Sikkim Hills. This was completed in 1830, and negotiations were thereupon entered into with the Rajah for the cession, in return for a money equivalent, of a tract of country which should include Darjeeling. His first demand was unreasonable; but on further consideration he agreed to hand over all the land, 138 square miles in extent, south of the Great Rungeet river, east of the Balasan, Kakail, and Little Rungeet rivers, and west of the Rangmi and Mahanada rivers, for a sum of Rs. 3,000, afterwards increased to Rs. 6,000 per annum. This tract was formally ceded to the British in 1835. Darjeeling soon became a favourite summer retreat for the officials of Lower Bengal and their families, and it was also established as a sanitarium for invalided European soldiers.

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In 1840 Dr. Campbell was removed from Nepaul, to be superintendent of the new station, and was entrusted with the political relations between the British and Sikkim Governments. When Dr. Campbell took charge there were only twenty families in the whole tract, but under his energetic management, extended over a period of twenty-two years, the settlement made rapid progress. He constructed roads and bridged torrents; built a bazar, a cutchery (or court-house), and a church; established a convalescent depôt for soldiers at Senchal, afterwards removed to Jalapahar; introduced English flowers and fruits; experimented on the cultivation of the tea plant; encouraged commerce; and created a revenue. Meanwhile, allotments of land were purchased by Europeans for building dwelling-houses, and a few official residents, civil and military, formed the nucleus of a community which was increased by retired officers and their families and by temporary visitors in search of health, or the luxury of a cold climate.

All went well for some years, but at last a new Prime Minister, or Dewan, a Tibetan, becam . the adviser of the Rajah of Sikkim. This man Dr. Hooker, in his "Himalayan Journals," describes as being unsurpassed for insolence and avarice, his chief aim being to monopolize the trade of the country, and to enrich himself at its expense. He made it his business to throw every obstacle in the way of a good understanding between the Rajah and the British Government. British subjects were excluded from Sikkim; every liberal offer for free-trade and intercourse was rejected, generally with insolence; merchandize was taxed; notorious offenders, refugees from the British territories, were harboured; despatches were detained; and the Rajah's representatives were chosen for their overbearing manners and incapacity. Dr. Campbell was compelled to proceed

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on the plan of simply offering a passive resistance to this aggressiveness and insolence, as the Calcutta authorities showed no intention of meeting the Dewan's policy by firm retaliatory measures. This attitude was, of course, in true native fashion, construed as weakness, and the arrogance and high-handedness of the Tibetan Prime Minister and his following in Sikkim grew still more pronounced. The origin of this dispute early in the '30 s, and of the recent Sikkim war towards the close of the '80 s, is wonderfully similar. In both cases the Tibetan faction was at the bottom of the mischief. Forbearance on our part was considered to be due to timidity, and petty insults grew to insolent defiance.

Darjeeling, however, prospered despite these political differences, and native families continued to pour into the station to place themselves under British protection. In a period of twelve to fifteen years from the cession of the district, the population had grown from under a hundred to over four thousand. A considerable trade had sprung up with the surrounding states in musk, salt, gold-dust, borax, soda, woollen cloths, and especially in ponies. The Tibetan pony, it may be explained, though born and bred 10,000 to 14,000 feet above the level of the sea, is one of the most active and useful animals in the plains of Bengal, powerful and hardy, and when well trained early, docile, although by nature inclined to be vicious and obstinate. With a view to stimulate trade, Dr. Campbell had established an annual fair at Titalya at the foot of the hills, which soon became the resort of thousands of natives from all quarters, and which at once exercised a beneficial influence throughout the neighbouring territories, prizes in medals, money, and kind for agricultural implements, produce, stock, &c., greatly stimulating both the dwellers on the plains and the

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hill-men to emulation and progress. In 1849, however, the trouble with Sikkim reached a climax. Dr. Campbell and Dr. Hooker were travelling unarmed and without an escort in Sikkim territory on a botanical and geographical expedition. They had express permission from the Rajah to make this tour, and were peaceably moving through the country, when they were seized and imprisoned by the officials of the Rajah, acting at the direct instigation of the Tibetan faction at Court. Dr. Campbell was most roughly treated, being knocked down and bound hand and foot ; he was also tortured by having the cords round his wrists twisted by a bamboo wrench. The object of the Sikkim Government in making this treacherous seizure was, admittedly, for the purpose of extorting from the Government of India a more favourable treaty than that then existing, the plan of seizing the representative of a neighbouring power, and confining him until he should become amenable to terms being in those days commonly practised along the Tibet, Sikkim, and Bhutan frontiers. The harsh treatment meted out to Dr. Campbell, however, was more especially due to the fact that the persons deputed to effect his capture were men whom he had formerly punished for crimes against the Nepaulese and the British Governments, and who took this opportunity of gratifying their vengeful feelings. Dr. Hooker was treated quite differently, and indeed he was informed that he was free to continue his botanizing expedition. But he would not desert his friend, and the two prisoners were marched to Tumloong, the capital of Independent Sikkim. The moment the news reached Calcutta, a military expedition was despatched to rescue the prisoners and avenge the insult. When the Dewan heard the news of large bodies of troops concentrating at Darjeeling, he became thoroughly alarmed. The Rajah, moreover,

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now feigned to repudiate his Prime Minister's action, declaring that he was very angry at the seizure and detention of the Englishmen. In the result the captives were marched to within twenty miles of Darjeeling, and were then provided with ponies and allowed to go their way. They reached Darjeeling without further adventure, Dr. Hooker relating that when he arrived one night at eight o'clock at the house of his friend Mr. Hodgson, the great oriental scholar and ethnologist, he was at first taken for a ghost, but afterwards received with shouts of welcome. It cannot be said that the British authorities acted with much decision after the release of the prisoners. The Rajah was ordered to give up the most notorious offenders, and come himself to Darjeeling, on pain of an army marching to Tumloong to enforce the demand. He, however, pleaded his inability to fulfil these demands; but announced that he had forbidden the culprits his court, had disgraced and turned the Dewan out of office, reducing him to poverty, and really had not it in his power to do more. Our threats were then modified into a seizure of the Terai lands of the state, the whole southern part of Sikkim also being annexed, between the Great Rungeet river and the plains of India, and from Nepaul on the west to the Bhutan frontiers and the Teesta river on the east. In all about 640 square miles were acquired on this occasion. The Rajah's allowance was also discontinued, but afterwards, on friendly assurances, restored, and increased to Rs. 12,000 a year. Finally, in 1864, the Darjeeling District was further augmented by the cession of a hilly tract, 486 square miles in area, east of the Teesta, which had become British territory as the result of the Bhutan campaign of that year. The total area of Darjeeling thus became extended to 1,234 square miles.

From 1850 up to quite recent times nothing occurred to

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interrupt the prosperity of Darjeeling. Its popularity as a sanitarium steadily increased, despite the rival attraction of Simla and other hill stations in Northern India. The first regular tea-garden was opened in 1856, and the business extended with great rapidity, there being 39 gardens established in 1866, 121 in 1875, 165 in 1883, and 174 at the present time. The opening of the Northern Bengal State Railway in 1878 and of the Mountain Railway in 1880, and the resulting facilities for transporting the tea to Calcutta, gave an immense stimulus to this great industry. Cinchona cultivation, commenced in 1862 by Government, has likewise proved a success, and is now carried on also by private individuals, though as yet on a very small scale. The local trade has greatly increased, the growth of the tea plantations and the access of European inhabitants stimulating the demand. A great through trade is also carried on with Nepaul, Sikkim, Tibet, and Bhutan, details of which will be given in a subsequent chapter.

The races met with in the Darjeeling District are the Mechis and the Kochs or Rajbansis (the people of Cooch Behar) in the Terai; the Lepchas or aboriginal inhabitants of the hill country; the Limboes, the Bhuteas or Kumpus, the Moormis, the Magras, and other minor tribes from Sikkim and Nepaul; the Dhurma people or Bhutanese from Bhutan; the Nepaulese from Nepaul; and the Tibetans from Tibet. A separate chapter is devoted to these deeply interesting hill races of the Himalayas.

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CHAPTER II.

THE JOURNEY TO THE HILLS.

Hints for the Traveller—Naihati Junction—Crossing the Ganges—Jalpaiguri—Jute Cultivation—Big Game in the Neighbourhood — Siliguri — The Mountain Railway—The Terai—The Upward Ascent—A Marvellous Railroad—Magnificence of the Scenery—Kurseong—Darjeeling—Distance Traversed.

THE trip to Darjeeling is now-a-days accomplished with the greatest comfort and ease, under circumstances very different from those ruling in the early years of the popularity of the station, when the long winding ascent had to be made by dâk palkees, hill ponies, or tonga carriages. Twenty-four hours' easy railway travelling transports the traveller from Calcutta to Darjeeling, from the sea-level to cloud-land, the total distance traversed being 369 miles, and the actual perpendicular height gained 7,300 feet, or not far off 1½ miles. The traveller should journey by the mail train, which leaves Sealdah Station, the Calcutta terminus of the Eastern Bengal State Railway, in the afternoon, between four and five o'clock—for the exact hour the periodically issued railway time-tables should be consulted. It may be noted that there are two scales of charges for return tickets, the tariff being a fare and one-third when the return journey is made within a period of eleven days; the other return ticket issued at a fare and one-half, holds good for four months. An excellent plan is to send all heavy luggage forward a day before. The railway companies

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make special arrangements for this, charging only half rate for excess baggage thus despatched, namely, Rs. 3-5 instead of Rs. 6-10 per maund. No free allowance, however, is made in the case of such forward booking, so the traveller should keep with him, the amount he is allowed to take free of charge, namely, two maunds first class, or one maund second class, half this allowance being made for a child's ticket of the respective classes. If this system be adopted, all anxiety *en route* will be avoided, and the luggage will be awaiting the visitor on his arrival at Darjeeling station. Another point worthy of mention is that an invalid carriage with spring couch is provided on the Mountain Railway, and an invalid chair on the steamer crossing the Ganges if notice is given beforehand. It may further be added in connection with the start from Sealdah that Madras time is kept on all the railways, this being 33 minutes behind Calcutta local time.

The first portion of the railway journey is comparatively uninteresting. Barrackpur is passed, and then for mile after mile the traveller speeds through a monotonous country, level as a billiard table, where rice is the staple production. This vast plain, however, is not without its beauties; occasional clumps of palm and other trees, with most likely a native *bustee* or hamlet peeping out from their midst, break the view, and in the rainy season the sea of vivid green stretching far as the eye can reach, is decidedly impressive. After a run of three-quarters of an hour Naihati is reached, the place being of importance from the fact that here is the junction between the Eastern Bengal State Railway and the East India Railway, the latter making the connection with its main system by means of the new bridge spanning the Hughli at the village of the same name. The construction of this bridge by Sir Bradford Leslie was a great engineering feat, and has

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effected a railway link of first importance. After a little over an hour from Naihati, a few minutes' stoppage is made at Bogoola, where a cup of tea may be procured, and will be found an excellent stay till dinner, which is obtained some two and a half hours later on board the river steamer. Damukdia Ghât, where the boat lies, is reached after about four and a half hours from Calcutta, the dinner hour being thus a most convenient one. The Ganges here is from 2½ miles to 3 miles broad, and the current is very powerful. Add to this the fact that the banks are ever being eroded at places, and that shifting sand-banks are constantly being formed, and it will be understood that the difficulties of navigation are by no means slight. In this connection it may be mentioned that the point where the steamer now lies was formerly dry land, in fact the embarking jetty itself; but the river swept it away, with its embankments, buildings, and railway sidings. The point to be made for by the steamer, Sara Ghât, is exactly opposite, a group of twinkling lights marking it to the eye. But a wide sweeping curve has to be made, owing to the force of the current, and when the start is effected, the steamer heads up stream. The navigation has to be very cautious, men heaving the lead constantly on both sides of the vessel. At this ferry across the Ganges five passenger trips are made daily, and in the intervals the steamers are employed towing across flats laden with produce from up-country and manufactured goods of all kinds from Calcutta. The dinner on board is well-served, and if the night be a moonlight one, the scene on the river is a strikingly beautiful one.

At Sara Ghât the Northern Bengal State Railway, completed in 1878, commences. The line is on the metre gauge, and the carriages are consequently less spacious than on the Eastern Bengal system, but by no means incommodious.

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The traveller will at once make preparations for sleep, a *rizai*, or cotton-stuffed quilt, and pillows, being, it is taken for granted, among his baggage. About seven o'clock in the morning the traveller will have reached Jalpaiguri, where he will find *chota hazree* prepared, the cup of tea being most acceptable after the night's journey. During the hours of darkness he has passed through the great jute-producing district of Bengal. Jalpaiguri is an important centre of this industry, and in the rainy season the fibre may be seen in process of being steeped in the pools of water along the sides of the railway. At this time of year also the traveller will notice the platforms and other contrivances used by the natives for catching fish, and he will also see rod and line in the hands of many dusky urchins. Jalpaiguri is the railway station for the district known as the Dooars, where there are over 130 tea gardens, which send their produce to this place for transport to Calcutta. A steam tramway is in process of construction, which will tap this important neighbourhood. Between Jalpaiguri and Siliguri a good deal of tiger shooting is got every year. Away to the right, towards Assam, stretches a vast and dense jungle, in which big game of every kind, including elephants, is to be met with in abundance. At Jalpaiguri there are sales two or three times a year of elephants captured in the vicinity. At this point the southern spurs of the Himalayan range are in view, towering aloft, tree-clad to the summits, and furrowed with sinuous river gorges, among which that of the Teesta is plainly distinguishable. Siliguri, which is only 300 feet above sea-level, is reached at a comfortable hour for breakfast, and here the Mountain Railway begins.

The Darjeeling-Himalayan Railway undoubtedly ranks as one of the marvels of engineering work throughout the world. The gauge is two feet, and the line is laid with

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heavy steel rails (40lbs. to the yard) in the most substantial manner. The splendid hill cart-road—itself a magnificent work that had cost £6,000 per mile to construct — was adopted as the line of route, but since the railway was originally opened, several parts have been relaid, frequent deviations being made from the roadway with a view to increase the radii of the curves. Thus at times the traveller loses sight of the road, but it is always soon picked up again. The speed of the trains is not allowed to exceed 7 miles an hour, though more than double that rate has on occasion been easily obtained. The ascent is about 1,000 feet every hour, and the air gets gradually cooler and cooler, till in the afternoon top-coats and wraps are gladly resorted to. The journey occupies about seven hours, Darjeeling being reached between four and five o'clock. This railway, it may be mentioned, was constructed in 1879-81, the initial cost being only £3,000 per mile—a wonderfully small sum when all the engineering difficulties are considered, though, of course, the fact of there being already a strong and well consolidated roadway greatly reduced the expense. With the subsequent expenditure on the line the total cost per mile, up to 31st December 1886, amounted to Rs. 52,702. The whole of the capital of the company, close on 27 lakhs of rupees, including debentures, has been taken up in India, the railway being the first great public work built by money subscribed in the country.

To resume the thread of the journey at Siliguri. After breakfast, the traveller will inspect the curious little train he is to travel by. It strikes one at first sight as if it were nothing more nor less than a toy railway, and it seems incredible that the tiny little engine will ever drag its load up to the summit of the mountains towering overhead. However, the sturdy piece of mechanism gives proof of its

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capabilities, as it skims along the 7 miles of level tract known as the Terai. This is low-lying swampy ground, a breeding place of malarious fever, but much improved of late years by the laying out of well-drained tea-gardens. "Terai" is a Persian word meaning "damp." Geographically the belt belongs to the plains of India; politically, it appertains to the hill-states beyond; geologically, it is a sort of neutral country, being composed neither of the alluvium of the plains, nor of the rocks of the hills, but for the most part of alternating beds of sand, gravel, and boulders brought down from the mountains, the soil being generally light, dry, and gravelly; botanically, it may be described as a region of forest-trees, amongst which the sâl, the most valuable of Indian timber, is conspicuous in most parts, though not in British Sikkim (through which the railway runs), where it has been used up or destroyed. The Terai belt extends from the Sutlej to Brahma-koond in Upper Assam, skirting the base of the Himalayas, and varying in breadth from ten miles on the Sikkim frontier to thirty or more on the Nepaulese. It is inhabited by a race called the Mechis, who stand the malarious climate with impunity, and are indeed healthier here than when they wander up into the hill-country. Soon after Siliguri is left behind, the Mahanadi river is crossed, flowing in a shallow valley, over a pebbly bottom; the current is very rapid at all seasons of the year, the water is limpid as crystal, and the banks are fringed with a continuous line of bushes. Tea-plantations are passed to right and left of the railway, the bungalows of the planters being a pretty feature of the scene. After seven miles from Siliguri the ascent commences, a sharp rise of about three miles leading to a short flat, or spur, from which the Himalayas rise abruptly, clothed in forest from their base. The incline now becomes sudden and steep, and the track begins to wind about and double

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and zigzag in a manner that is bewildering and amazing. No words can adequately describe the first sensation of travelling by this railway. The little engine pants and puffs, and the carriages wind after it round the sickle-shaped curves like a sinuous serpent. Seated about the centre of the train, you find the engine now to right of you, and a moment afterwards it is on the left. Onwards and upwards you mount; at times you can see the track hundreds of feet beneath you, and can only wonder how you ever got from that point to this. Occasionally the train darts under a bridge, and a minute afterwards, describing an almost perfect circle, crosses over it. When a spur is reached that forbids the possibility of a curve, the figure Z is described, the train running along a siding, and the engine, after a momentary halt, backing the carriages up the central bar of the figure. The operation hardly takes two minutes, and in a trice the train is speeding along again, parallel to the old track, but twenty or thirty feet higher up the mountain side. But all this must be seen for its marvellous ingenuity to be appreciated. Meanwhile, the traveller will also be struck with admiration for the superbly magnificent scenery above, around, and beneath him. No spectacle in the world is more grand. Lofty peaks tower overhead, usually with fleecy clouds dotting out the green with white, and here and there some taller summit disappearing quite into cloud-land. To right and left of your level, dense deep-green forests everywhere meet the eye, clothing continuously the steep slopes, and ever and anon dipping into some gorge, down which rushes an impetuous stream, a cascade, perhaps, with an overhanging cloud of spray adding to the beauty of the spectacle. Away below lies the vast plain stretching like a great sea as far as the eye can reach, with spurs of lofty mountains forming a serrated edge, and the innumerable rivulets

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from the hills uniting into streams whose devious courses glisten like silver threads. A mighty and glorious panorama, which, once seen, can never fade from the memory.

With every turn and bend of the railway, a new scene bursts on the view, and as hour succeeds hour the endless variety keeps the eye from tiring. The vast expanse of foliage is broken here and there by tea-gardens, whose pretty little bungalows nestle on the hill sides. Meanwhile, the air grows more rarified and more bracing, and the change from the clammy atmosphere of Lower Bengal is complete When Kurseong is reached about two o'clock, a sharp appe tite will have been developed for tiffin ; this is served in excellent style at the Clarendon Hotel, opposite which the train pulls up. It is now twenty miles to Darjeeling, and the elevation is 4,860 feet above sea-level. The journey is resumed through the most magnificent scenery. The forest-clad valleys beneath the railway descend thousands of feet, the slope at times being almost precipitous. If it is a clear day the snowy range of the Himalayas is also in view, the first sight of which, with clear cut peaks of dazzling white, towering in silent stupendous majesty into the sky, cannot but create a profound impression. Four miles from Darjeeling is Ghoom, 7,372 feet high, the most elevated railway station in the Old World. From this point the line descends a few hundred feet towards its terminus at Darjeeling.

The following are the distances that have been traversed in the four stages from Calcutta :—

Calcutta to Damukdia Ghât	...	120	*miles.*
Across the Ganges	...	2¼	,,
Sara Ghât to Siliguri	...	196	,,
Siliguri to Darjeeling	...	50¾	,,
Total	...	369	,,

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CHAPTER III.

THE ABORIGINAL TRIBES OF SIKKIM.

The Mongol Type of Countenance—Heterogeneous Nature of the Population — The Mechis of the Terai — Physique, Manners, and Customs—A Curious Marriage Ceremony—The Kochs or Rajbansis—Hill Tribes—The Lepchas—Their Physical and Mental Qualities, Mode of Life, Clothing, Ornaments, Religious Beliefs, &c.—Anecdote of a Lepcha Bay—The Limboes—The Bhuteas—The Nepaulese—The Tibetan Abroad—Dr. Hooker on the Himalayan Aborigines—The Languages of Darjeeling—A Polyglot Community.

On arrival at Siliguri nothing strikes the traveller more than the marked change in the cast of feature of the natives. The Mongolian type of countenance, with broad face and flattened nose, at once arrests attention. As the hills are ascended men of the different Mongolian races become more numerous, Lepchas, Limboes, Nepaulese, Bhuteas, and Tibetans, and the traveller finds himself among a population wholly different in appearance and in customs from the people of the Bengal plains.

The first special tribe met with are the Mechis, who are found solely in the Terai, or sub-montane strip of territory, and have strongly-marked Mongolian features. They are divided into two clans, the Bodas and the Dhimals, who are alike in every respect except that they occupy different

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villages and live apart. They are a mild inoffensive people, industrious for Orientals, living by cultivating cleared spots in the forests and by collecting jungle products for sale. They are nomadic in their habits, seldom occupying the same field beyond a year, and frequently burning down patches of jungle for the purpose of cultivating the soil thus cleared. This latter practice, however, is gradually being put a stop to, and the people are becoming more settled in their habits, the establishment of the great tea industry in the Terai partly conducing to this result. The Mechis seem to be the only race that can stand the malarious climate of the Terai with impunity. They have sometimes been described as a squalid, unhealthy tribe, typical of the region they inhabit; but the fact is otherwise, for, though stunted in stature, they are a robust people, their disagreeably sallow complexion being deceptive as indicating a sickly constitution. A curious fact is, that when Mechis migrate to the hills for a season of labour in the tea-gardens there, they die off rapidly, but in their own swampy jungles they are rarely victims to fever. They cultivate cotton, oil-seeds, &c., and rear for their own food goats, pigs, poultry, and pigeons. They also possess a few cows, but have neither sheep nor buffaloes. They barter with the surrounding tribes for the few earthen or iron pots they require for cooking, agricultural implements, &c. They have no special handicraftsmen or shop-keepers amongst them, each family building its own house, fashioning its own rough furniture, making its own garments, cultivating its own patch, and generally supplying all its own wants. Their dwelling-places are neatly constructed of jungle grass and bamboo. The women spin, weave, and dye the family garments, the dress being a shawl and loin-cloth of cotton, white or dyed. They also brew a sort of light beer from

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millet-seed, called *murwah*, which they drink in large quantities. It is a refreshing drink taken warm, and tasting something like sherry negus, rather sour; it is not intoxicating, unless a person regelarly fuddles himself with it. The women wear small silver rings in their noses and ears, and heavy bracelets of mixed metal, for which they barter their oil-seeds, &c., in the Cooch Behar markets. Rice is their staple food, which they cook with oil, salt, chillies, &c. They are an omnivorous race, however, and nothing comes amiss, whether it be the flesh of wild hog, wild buffalo, rhinoceros, civet cat, porcupine, or mongoose They also eat fish, showing a preference for this article of diet when it is in a putrid state. They are hospitable both among themselves and to strangers, but, living in sequestered and isolated spots, are shy of intrusion, though they rather court than avoid intercourse with those whites whom they know to be kindly disposed.

Their religion consists chiefly in the worship of the sun, moon, stars, and terrestrial elements; of these last the rivers, whose benefits they are fully sensible of, being chiefly held in reverence. They have a few household gods, to whom they make offerings of milk, honey, parched rice, eggs, flowers, and fruits, while they also occasionally sacrifice a pig, a goat, or a fowl. They pray to their gods to avert disasters of all kinds, and they hold festivals of thanksgiving when their corps are safely housed. They have priests among them, one class of whom are paid to exorcise spirits. Marriage takes place only when the parties are adults, the man being from twenty to twenty-five years and the woman from fifteen to twenty. The bride has to be paid for, the parents receiving from Rs. 10 to Rs. 45 from the suitor, who, if he does not possess the wherewithal to at once complete the purchase, has to make up the amount in labour for his

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father-in-law elect. The chief part of the marriage ceremony is the sacrifice of a cock and a hen, the bridegroom holding the former in his hands, and the bride the latter. With one stroke of a knife the priest severs the heads of both fowls, and the direction in which the blood spurts out serves as an omen as to the happiness or unhappiness of the match. The Mechis are reputed to be kind husbands and fathers, and also to show a good deal of filial affection. They evince a simple and devout reverence for the dead, inter the bodies amidst solemn silence, mark the graves by piles of large stones and boulders, and place upon them food and drink for the deceased. After the funeral ceremony they hold a feast, and eat, drink, and make merry. Altogether, the Mechis, though a primitive people, are very far from being at the foot of the scale of civilization among the aboriginal races of India.

The Kochs or Rajbansis, properly the people of Cooch Behar, are very numerous in the Terai Sub-division. This semi-aboriginal tribe first rose into power about the close of the fifteenth or beginning of the sixteenth century, Cooch Behar becoming their metropolis. Brahmanism was introduced among the higher ranks, but the lower orders of the race being refused a decent status in the Hindoo caste system, became Mahomedans. By the 1881 census, there were over 30,000 Rajbansis in the Darjeeling Terai. They are cultivators, fishermen, and labourers.

Ascending now to the hill-country, we find a tribe called the Lepchas, who are the primitive inhabitants of Sikkim, which, of course, in its wider application also includes British Sikkim or Darjeeling. Their physiogonomy is markedly Tibetan in its character; their language is radically identical with Tibetan, though there are important points of

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difference; they wear their hais Tibetan fashion, plaited into pig-tails; they have many customs in common with the Tibetan race; and their religion, such as it is, is a modified form of Buddhism. All these facts point conclusively to the trans-Himalayan origin of the Lepchas, though they differ in many respects from their Tibetan prototypes. Still this race, so long as its historical traditions go back,—a period of three hundred years,—has been hemmed into the Sikkim tract of mountain country, barely sixty miles in breadth. The Lepchas have a language of their own with wriiten characters. They possess a tradition of the Flood, during which a couple escaped to the top of the Mountain Tendong, near Darjeeling. The Lepcha, unlike most mountaineers, is timid, peaceful, and no brawler, qualities which contrats strongly with those possessed by his immediate neighbours to the east and west, of whom the Goorkhas are proverbially brave and warlike, and the Bhutanese notoriously cruel and quarrelsome. He is of short stature, four feet eight inches to five feet, broad across the chest, and with muscular arms, but small hands and slender wrists. The face is broad, flat, and of eminently Tartar character, flat-nosed and oblique-eyed, with no beard and little moustache. The complexion is sallow, or often a clear olive. The hair is plaited, the women wearing two long pig-tails and the men only one, this being the most readily distinguishable mark between the sexes, as the similarity of garments and the hairless faces of the men are apt to mislead the stranger The lower limbs are powerfully developed, befitting genuine mountaineers. The feet, like the hands, are small. The Lepcha, though very womanish in the cast of his countenance, has invariably a mild, frank, and even engaging expression. The young girls are particularly pleasant to look upon, not from any beauty of features, but

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from their smiling faces and evident good nature. The children also are bright, lively, laughing urchins. The old women, however, are not so pleasing in appearance. The Lepchas as a race show a particular aversion to cold water, and neither their persons nor their garments can be described as clean. If they come to a river, however, they readily take the opportunity of bathing, being very expert swimmers. In disposition they are amiable and obliging, frank, humorous, and polite; in their address free and unrestrained, and without a trace of the servility of the Hindus They may be seen scampering about and playing like children, the women often dealing out tremendous thumps to the men in a good-humoured way. Their worst faults are indolence and a *penchant* for gambling. They are honest folk, and receive pay or a present with a brusque bow and thanks, and without the grumbling look the Bengal coolie, handsomely remunerated, is accustomed to put on in the hope of extracting more money. The Lepchas invariably carry a long, heavy, straight knife, called a *bân*, which serves them equally for plough, tooth-pick, table-knife, hatchet, hammer, and sword, though to the last use it is never known to be applied.

The Lepchas have a code of morals far above those possessed by their Tibetan and Bhutanese neighbours, polyandry being unknown among them, and polygamy rare. Considering the rigorous nature of the Sikkim climate, their dress is very scanty. A cotton garment, with red and blue stripes, wound round the body and reaching to the knee, with a loose-sleeved woollen upper garment in the coldest season of the year, being all they wear. The dress of the women is very similar to that of the men, a small sleeveless woollen cloak being added. Both sexes wear ornamental girdles round the waist, and their costume altogether

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is quite unique and decidedly picturesque. The Lepchas seldom wear hats; when they do, they are clumsy affairs made out of platted strips of bamboo, extravagantly broad-brimmed for rainy weather and conical in shape for the dry season. They also construct a curious and ingenious sort of umbrella out of a mat of plaited bamboo, doubled across and sewn at one corner of the fold; into this corner the head is thrust, and the body is then admirably protected right down to the thighs, while both hands are left quite free. The women wear a profusion of ornaments, silver hoops in their ears, necklaces of cornelian, amber, and turquoise brought from Tibet, pearls and corals from the south, with curious silver and golden charm boxes or amulets attached to their necks or arms. These last are of Tibetan workmanship, often of great beauty and highly ornamented, and of considerable intrinsic value; they contain little idols, charms of written prayers, or the bones, hair, or nail-pairings of a Lama. When a Lepcha woman puts on full dress, her upper cloak is of gay pattern, usually covered with crosses, and fastened in front by a girdle of silver chains; her neck is loaded with silver chains, amber necklaces, &c., and her head adorned with a coronet of scarlet cloth, studded with seed-pearls, jewels, glass-beads, &c. This costume is extremely ornamental and picturesque.

The Lepchas are gross feeders; they eat anything and everything, whatever they can find, animal or vegetable, snails, caterpillars, fungi, and leaves being included in their dietary. A coarse pink-coloured rice, grown without irrigation and gelatinous when cooked, is their chief sustenance. Pork they are inordinately fond of, and they do not scorn the carcases of cattle which have died of disease. Their cooking is coarse and dirty: spices, oils, salt, &c., are added as relishes. They drink out of little wooden

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cups, turned from knots of mapel or other woods; these are curious and very pretty, often polished, and mounted with silver. Their intoxicating drink is made from partially fermented *murwah* grain. They are very fond of tea, and drink it in the English fashion with milk and sugar when these commodities are procurable. They also use large quantities of the brick tea manufactured in China for the Tibet market, this being made into a semi-solid liquid with butter, soda, and salt added. The only musical instrument they possess is a rude flute made of the bamboo, with which, however, they play tunes that are by no means inharmonious. When travelling, or after the fatigues of the day, the Lepcha will sit for hours chatting, telling stories, singing in a monotonous tone, or making music with his flute. Their marriages are contracted in childhood, the wife being purchased by money or by labour rendered to the future father-in-law. The marriage tie is strictly kept. All the labours of the house, the field, the march, devolve on the women and children, and the men may frequently be seen rocking the tiny bamboo cradle, while the women are hoeing, digging, delving, tending the live-stock, &c. Among these people vaccination is eagerly sought after, as they have a horror of small-pox, cruelly shunning persons who may chance to become infected with the disease. Disease of any kind, however, is rare among the Lepchas, though they are subject to rheumatism and to intermittent fevers, with ague, caused by sleeping in the hot valleys at the beginning and the end of the rains. They have a particular dread of death. Their dead are burned or buried, sometimes both, much depending on custom and rank. In religion the Lepchas are marvellously mixed up, and may be described as Buddhist-Hindu-Demonolators. Each tribe has a priest-doctor, or exorcist, who by prayers

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and invocations drives out the devils, which are supposed to be the originators of all bodily ailments. These priests profess mendicancy, and sing, dance, beg, bless, curse, and, masked and draped like harlequins, often play the part of merry mountebanks. Those that affect more of the Lama Buddhist carry the "Mani," or revolving praying-machine, and wear rosaries and amulets; others again are all tatters and rags. Good and evil spirits are devoutly believed in, and the latter, who are supposed to dwell in every mountain, rock and grove, are conciliated by prayers. Altogether the Lepchas may be summed up as a race conspicuous for their honesty, their power as carriers and mountaineers, their skill as woodsmen, and their unfailing cheerfulness of disposition. Numerically weak, it is well that they are not of a pugnacious character, otherwise they would have been long since exterminated by their turbulent neighbours in Nepaul and Bhutan. The women, it may be added, make excellent children's servants, and the men are not averse to turn their hands to any indoor work.

Dr. Hooker pays the following high tribute of praise to the Lepchas:—"A more interesting and attractive companion than the Lepcha I never lived with: cheerful, kind and patient with the master to whom he is attached; rude but not savage, ignorant, and yet intelligent. With the simple resource of a plain knife he makes his house and furnishes yours, with a speed, alacrity, and ingenuity that wile away that well-known long hour when the weary pilgrim frets for his couch. In all my dealings with these people, they proved scrupulously honest. Except for drunkenness and carelessness, I never had to complain of any of the merry troop; some of whom, bare-headed and bare-legged, possessing little or nothing save a cotton garment and a long knife, followed me for many months, from the scorching

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plains to the everlasting snows. Ever foremost in the forest or on the bleak mountain, and ever ready to help to carry, to encamp, collect, or cook, they cheer on the traveller by their unostentatious zeal in his service, and are spurs to his progress." The great traveller also tells the following touching anecdote of one of his Lepcha boys:—"I here found that I had lost a thermometer for high temperatures, owing to a hole in the bag in which my attendant carried those of my instruments which were in constant use. It had been last used at the hot springs of the Kinchinjhow glacier; and the poor lad was so concerned at the mishap, that he came to me soon afterwards, with his blanket on his back and a few handfuls of rice in a bag, to make his *salaam* before setting out to search for it. There was not a single inhabitant between Lachoong and that dreary spot, and strongly against my wish he started, without a companion. Three days afterwards he overtook us at Keadom, radiant with joy at having found the instrument: he had gone up to the hot springs, and vainly sought around them that evening; then rather than lose the chance of a daylight search on his way back, he had spent the cold October night *in the hot water*, without fire or shelter, at 16,000 feet above the sea. Next morning his search was again fruitless; and he was returning disconsolate, when he descried the brass case glistening between two planks of the bridge crossing the river at Momay, over which torrent the instrument was suspended. The Lepchas are generally considered timorous of evil spirits, and especially averse to travelling at night, even in company. However little this gallant lad may have been given to superstition, he was nevertheless a Lepcha, born in a warm region, and had never faced the cold till he became my servant; and it required a stout heart and an honest one

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to spend a night in so awful a solitude as that which reigns around the foot of the Kinchinjhow glacier."

Resembling the Lepchas in many respects, the Limboes have several well-marked distinctive characteristics. They are more sinuey and slender, and neither plait their hair nor wear ornaments; instead of the *bân*, they wear in their belts the *kukeri*, or Nepaul curved knife, while for the stripped kirtle of the Lepcha is substituted loose cotton trousers and a tight jacket; a sash is worn round the middle, and on the head a small cotton cap. Their complexion also is more yellow, and their eyes are smaller and more oblique than in the case of the Lepchas. The Limboes formerly ruled over East Nepaul, and were driven from their strongholds by the Goorkhas. They are a brave and warlike race, reputed also to be very cruel, putting the old and the weak, women and children indiscriminately to the sword. Many of them are to be found in our Goorkha regiments. Their customs resemble those of the Lepchas, with whom they intermarry. They mourn for, burn, and bury their dead, raising a mound over the corpse, erecting a head-stone, and surrounding the grave with a little paling of sticks; they then scatter eggs and pebbles over the ground. The Limboes are Buddhists, and they have priests of a higher order than those of the Lepchas. Their marriage ceremony is similar to that of the Mechis of the Terai, a cock and a hen being decapitated by the priest, and omens read from the blood. Like most hill tribes they practise polyandry. The Limboo language is different to the Lepcha, and unlike the latter, has no written characters.

Another aboriginal tribe named the Bhuteas are found in considerable number throughout Darjeeling. They are the hewers of wood and drawers of water, taking service

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as porters, dandy-bearers, &c. It is to be observed that the term "Bhuteas" does not mean the natives of Bhutan; the latter are called Bhutanese, or Dhurma people, in allusion to their spiritual chief, the Dhurma Rajah, or sovereign pontiff of Bhutan, and spiritual head of the red-capped sect of Lama Buddhist. The Bhuteas are of several classes, some coming from Tibet and others from Bhutan, a third clan beingindigenous to Sikkim (though undoubtedly former emigrants from Tibet); and a fourth being a cross between the Tibetan-Bhutea and the Lepcha. The Tibetan-Bhutea is the best of the lot, but he is turbulent and cruel, and of his morals the less said the better. The Bhutan or Dhurma Bhuteas are most commonly seen at Darjeeling. They are the coolies and drudges, doing most of the real hard work of the place. The Sikkim Bhuteas, also called Arrats, are a turbulent and drunken lot, a remark which also applies to the mongrel class, who are known as Sharpa Bhuteas. To take all the varieties together, it may be said generally that the Bhuteas are a most filthy race. Their sole attire is a long loose woollen robe, confined at the waist by a belt or a rag of unknown hue. The upper part of this garment forms a receptacle, into which they cram all sorts of incongruous articles, including often putrid fish or meat, which they use as a relish with their food. They carry long knives in their belts. Both men and women wear silver rings set with turquoises and square amulets of gold and silver upon their necks, and on their arms above the elbow; in their ears large round earrings, often of solid gold, and so heavy that they drag down the lobe of the ear in a very ugly manner. The women also load their necks with strings of coral and glass-beads, also pieces of amber, glass, and agate. These ornaments simply represent the savings and worldly wealth

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of the individuals who wear them. The Bhuteas of both sexes are tall and of large frame, and their capacity for carrying heavy loads is marvellous. They usually carry their burdens by means of a strap fastened across the forehead, a practice which is said to conduce to the prevalence of goitre among them. They are a most industrious race. The women spend most of their time, when not carrying loads, in spinning wool; from this they weave a particularly thick woollen cloth, of which they manufacture their own garments. The Bhuteas keep large herds of cattle in the Forest Reserves, and they bring into Darjeeling supplies of milk and butter. Polyandry is a recognized institution among them. As a race they are devoid of delicacy and modesty, and the marriage tie, where it exists at all, has but scanty respect paid to it. They are greatly given to drunkerness, and distil all manner of alcoholic poisnos from rice, wheat, and millet. Their religion is a sort of depraved Buddhism; they are followers of the red-capped sect of Lamas, and believe in the efficacy of the praying-machine; but they offer all sorts of propitiatory gifts to evil spirits, and surround their houses with tall bamboo flag-staffs, from which fly cotton streamers covered over with block-type prayers for preservation against the "evil one." Some of the Bhuteas are nomadic in their habits, migrating with the seasons with their herds of cattle. They are the medium of a large portion of the trade in salt, wood, musk, cattle, &c., with the Tibetans. They bury their dead on the mountains, raising cairns over them. Their language is a dialect of the Tibetan, and has no written characters. There are several Bhutea villages within a radius of six or seven miles from Darjeeling station, where the race may be seen amidst their evidently congenial surroundings of mud and filth.

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Within recent years Nepaulese have come into Darjeeling in great numbers, their services being eagerly sought for on the tea-plantations, and they now form nearly 70 per cent. of the total population. They are a pushing thriving race, very prolific, and great colonizers. The Nepaulese are excellent agriculturists, as well as carpenters, blacksmiths, tailors, &c.; they accordingly find ready and well-paid employment, being also engaged as domestic servants, syces, leaf-cutters, &c. Those who enter Darjeeling usually settle down in the district, some of them being fugitives from Nepaul on account of minor crimes for which no extradition trerty exists, or because of their having been head-over-ears in debt. Moreover, on returning to their country they are mulcted in considerable sums, a payment which they are naturally reluctant to incur. The Nepaulese will live in the same village with the Lepchas, but they occupy a separate quarter to themselves. They are divided into almost innumerable tribes or clans, erroneously called castes. In physique they are wiry, light, and agile, short and slim, wonderfully active and hardy, and warlike and brave to a degree. The Goorkhas, who form the ruling clan, make soldiers second to none all the world over, and the British Goorkha regiments are one of the great elements of strength in our native army. They are, however, by no means a quarrelsome race, which is well, for every Nepaulese carries a deadly-looking curved knife, called a *kukeri*, and can use it with great effect when occasion demands. Their religion is a strange mixture of Hinduism, Brahmanism, and Buddhism, with traces of Paganism pure and simple.

The Lepchas, Limboes, Bhuteas, and Nepaulese by no means exhaust the hill tribes to be met with in Darjeeling. However they constitute the most important part of the

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aboriginal Himalayan inhabitants, and minor races need not be dealt with in detail. Mention may just be made of the Magras, who inhabit the lower levels of Nepaul, and have overflowed in considerabel numbers into British Sikkim; and of the Moormis, who dwell on the lands on the Sikkim-Nepaul frontier, and may be said to belong to both countries. Fuller particulars, however, may be given in regard to the Tibetans proper, who in the cold season come into Darjeeling to trade, bringing with them ponies, yaks, sheep, goats, rock-salt, musk, and other commodities. They take back with them tobacco, broadcloth, piece-goods, and other articles. When in the district these people usually camp out in small light tents on the Lebong Spur, 1,000 feet below Darjeeling. They are polyandrous, it not being uncommon to find one woman occupying a tent with six or seven men. Their features are truly Mongolian, and the men are an uncouth wild-looking lot, middle-sized, squarely built, and evidently strong and hardy. They do not wear beard, whiskers or moustache, removing every hair from their faces by means of tweezers. The men wear their hair either in pig-tails or flowing, as fancy dictates. Their dress consists of a long thick blanket robe, fastened round their waists by a leather belt, in which they stick their iron or brass pipes, and to which they suspend their long knives, chop-sticks, tobacco pouch, tweezers, tinder box, wooden cup, and a miscellaneous assortment of other useful articles. The dress of the women is somewhat similar, but they wear in addition a short sleeveless coat over the long robe, drawn round the waist by a girdle of broad brass or silver links. Their hair is braided into two tails, and they have a peculiar habit, when travelling, of smearing their faces with a black sticky mess of coal-tar consistency.

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This pigment of grease is not intended to conceal their charms, as some travellers have supposed, but to protect the skin against the biting mountain winds. Both sexes wear silver rings and earrings, set with turquoises, and square amulets upon their necks and arms, which are boxes of gold and silver, containing small idols, or the nail-parings, teeth, or other reliques of some sainted Lama, accompanied with musk, written prayers, and charms. The Tibetan method of salute is to loll out the tongue, grin, nod, and scratch the ear; but this procedure entails so much ridicule in the low countries that they do not practise it to strangers.

Dr. Hooker's description of Tibetans on the march is very vivid:—"These groups of Tibetans," he writes, "are singularly picturesque, from the variety of their parti-coloured dresses, and their odd appearance. First comes a middle-aged man or woman, driving a little silky black yak, grunting under his load of 260 lbs. of salt, besides pots, pans, and kettles, stools, churn, and bamboo vessels, keeping up a constant rattle; and, perhaps, buried amongst all, a rosy-cheeked and lipped baby, sucking a lump of cheese-curd. The main body follow in due order, and you are soon entangled amidst sheep and goats, each with its two little bags of salt: besides these stalks, the huge, grave, bull-headed mastiff, loaded like the rest, his glorious bushy tail thrown over his back in a majestic sweet, and a thick collar of scarlet wool round his neck and shoulders, setting off his long, silken coat to the best advantage; he is decidedly the noblest looking of the party, especially if a fine and pure black one, for they are often very ragged, dun-coloured, sorry beasts. He seems rather out of place, neither guarding nor keeping the party together, but he knows that neither yaks, sheep, nor goats require his attention, all are perfectly tame, so he takes his share of work as salt-carrier

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by day, and watches by night as well. The children bring up the rear, laughing and chatting together ; they, too, have their loads, even to the youngest that can walk alone."

Such are the chief hill races that go to constitute the heterogeneous population of the Darjeeling District. We shall make yet another extract from Dr. Hooker's fascinating and deeply interesting volumes. Writing on the mixed nature of the community, he remarks :—"That six or seven different tribes, without any feudal system or coercive head, with different langauges and customs, should dwell in close proximity and in peace and unity, within the confined territory of Sikkim, even for a limited period, is an anomaly ; the more so especially when it is considered that with the exception of a tincture of the Buddhist religion among some few of the people, they are all but savages, as low in the scale of intellect as the New Zealander or the Tibetan, and beneath those races in ingenuity and skill as craftsmen. Wars have been waged among them, but they have been neither sanguinary nor destructive, and the fact remains no less remarkable, that at the period of our occupying Darjeeling, friendship and unanimity reigned amongst all these tribes, from the Tibetan at 14,000 feet to the Mechi of the plains, under a sovereign whose temporal power was wholly unsupported by even the semblance of arms, and whose spiritual supremacy was acknowledged by very few."

It will thus be seen that Darjeeling is one of the most polyglot places on the face of the earth. The vernaculars spoken are Lepcha, Bhutea, Nepauli, Tibetan, Hindi, Bengali, and Hindustani. There is further a hill *patois* called Pahari, written in Hindi or Devanagri ("Language of the Gods"), and used in all official police reports. Sanskrit is also understood and written by the Lamas.

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CHAPTER IV.

BOTANICAL FEATURES.

Belts of Vegetation—Plant Life of the Terai—Commencement of the Hill Forests—Tropical Trees—The Temperate Zone—Magnificent Forest Scenery—Dearth of Fruits—Successful Cultivation of European Vegetables—English Flowers—Rhododendrons and Magnolias—Plant Life on the Peaks—The Region of Perpetual Snow.

THE zones of vegetation through which the traveller passes in ascending the Himalayas are well-marked, and on a clear day, standing upon one of the lofty spurs, the observer can easily distinguish these well-defined belts of varied plant life. From the Terai to the limit of perpetual snow a dozen climates are passed through, each possessing its own distinctive flora.

The Darjeeling Terai is covered with stunted and bushy timber. The valuable sâl tree has been wholly destroyed, though it is met with in abundance in the Nepaulese Terai, this latter district being called the Morung. In the sub-montane country the grass is very rich, partly owing to the moisture of the climate, and partly to the retiring waters of the rivers. Large herds of cattle from the plains of the Ganges are driven to these feeding grounds. There are also many kinds of great coarse grasses, sometimes twenty feet in height, which are burnt down by the Mechis so as to afford them cultivable patches. The vegetation of the

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Terai differs entirely from that of the Indian plains, and is distinctly Himalayan. The trees chiefly met with are the acacia, dalbergia sissoo, and a scarlet-fruited sterculia. There are numerous climbers—among them convolvulus, vines, and bignonias. Terrestrial orchids appear, with ferns and weeds of hot, damp regions.

From the plains to a height of 1,000 feet a giant forest replaces the stunted trees of the Terai. The gulleys are choked with vegetation, the trunks of the trees are richly clothed with epiphytal orchids, pendulous lycopodia, many ferns, and similar types of the hottest and dampest climates. The white or lilac blossoms of the convolvulus, like thunbergia and other acanthaceæ, are also predominant and very handsome features of the shrubby vegetation. A succulent character pervades the bushes and herbs, occasioned by the prevalence of the nettle tribe. Large bamboos rather crest the hills than court the deeper shade. The characteristic vegetation of this zone is as follows:—Figs of five kinds, date trees (phœnia), Wallichia caryotoides, cycas pectinata, twelve kinds of bamboo, phylanthus emblica, acacia, grislea, marlea, sterculia, dillenia, cassia, trophis sissen, butea, mimosa, catechu, soapworts, terebenthaceæ, symplocus, climbing leguminosæ, cucurbitaceæ, wild mulberry, three kinds of nettle, boehmeria euphorbia, turmeric, ginger, ferns in great variety, acanthaceæ, bondellata, lycopodia, randia, and oak.

As the ascent continues, between 1,000 and 4,000 feet, the prevalent timber becomes more gigantic, and is festooned by climbing leguminosæ, which sometimes sheath the trunks, or span the forest with huge cables, binding tree to tree. Their trunks are also clothed with orchids, climbing pothos, peppers, vines, convolvulus, and bignonias.

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The beauty of the drapery of the pothos leaves is pre-eminent, whether for the graceful folds the foliage assumes, or for the liveliness of its colour. Among the smaller trees, the wild banana is conspicuous and abundant, its crown of very beautiful foliage contrasting with the smaller-leaved plants amongst which it nestles; next comes a screw-pine (*Pandanus*) with a straight stem and a tuft of leaves, each eight or ten feet long, waving on all sides. Bamboo abounds everywhere: its dense tufts of culms, 100 feet and upwards high, are as thick at the base as a man's thigh. Twenty or thirty species of ferns, including a tree-fern, are met with, luxuriant and handsome; while foliaceous lichens and a few mosses appear at 2,000 feet. Among the other vegetation are gordonia, pandanus, sâl, toon, bombax or cotton tree, banian and others of the genus ficus, orange, peach, lemon, and wormwood. Such is the plant-life of the tropical forests of the outer Himalayas.

At about 4,000 feet a great change takes place in the vegetation, marked first by the appearance of an English-looking bramble, with a very good yellow fruit. It is known locally as the "yellow raspberry." Scattered oaks of a noble species, with lamellated cups and magnificent foliage, succeed; and along the ridge of the mountain to Kurseong, 4,860 feet above sea-level, the change in the flora is complete. Here now the birch and maple trees are found, and there are quite a number of plants reminding one of the temperate climate of England—the violet, stellaria, arum, viccinium, wild strawberry, and geranium. Mosses and lichens carpet the roadsides and banks; the birds and insects are very different from those below; the wind blows colder; and everything proclaims a marked change in climatic conditions. Mingled with these English-like flowers are tree-ferns, pothos, bananas, palms, figs, peppers

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numbers of epiphytal orchids, and similar genuine tropical genera, the uniform temperature and humidity of the climate favouring the extension of tropical plant-life into a temperate region, exactly as the same conditons cause similar forms to attain higher latitudes in the southern hemisphere (as in New Zealand, Tasmania, and Chili) than they do in the northern. This mixture of temperate and tropical vegetation continues for 2,000 feet above Kurseong.

Ascending from Kurseong, the traveller zigzags along the face of mountains clothed with magnificent forests of chestnut, walnut, oaks, and laurels. Dr. Hooker vividly describes this glorious wealth of plant-life. "It is difficult to conceive," he writes, "a grander mass of vegetation; the straight shafts of the timber-tree shooting aloft, some naked and clean, with grey, pale, or brown bark; others literally clothed for yards with a continuous garment of epiphytes, one mass of blossoms, especially the white orchids, which bloom in a profuse manner, whitening their trunks like snow. More bulky trunks were masses of interlacing climbers, enclosing a hollow, once filled by the strangled tree, which had long ago decayed away. From the sides and summit of these, supple branches hung forth, either leafy or naked; the latter resembling cables flung from one tree to another, swinging in the breeze, their rocking motion increased by the weight of great bunches of ferns or orchids, which were perched aloft in the loops. Perpetual moisture nourishes this dripping forest; and pendulous mosses and lichens are met with in profusion."

Up to 6,000 feet the funereal cypress grows well, being planted in the vicinity of Buddhist temples. It is not indigenous to Sikkim, but is imported from Tibet and Bhutan.

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At 7,500 feet English-looking plants continue to be met with in abundance. Here also the noble white rhododendron, with enormous and delicious lemon-scented blossoms strewing the ground, flourishes in all its glory. The trees are one-half oaks, one-quarter magnolias, and nearly another quarter laurels, among which grow Himalayan kinds of birch, alder, maple, holly, bird-cherry, common cherry, weeping willow, and apple. In this zone over sixty species of ferns may be collected, chiefly of temperate genera. The absence of leguminous plants is a remarkable feature, it being too high for the tropical tribes of the warmer elevations, too low for the Alpines, and too moist for those of temperate regions; cool, equable, humid climates being generally unfavourable to these plants. There is also a marked absence (in the usual proportion at any rate) of such common orders as compositæ, cruciferæ, ranunculaceæ, and grasses. The plants that predominate are the rarer and more local families, as those of rhododendron, camelia, magnolia, ivy, cornel, honeysuckle, hydrangea, begonia, and epiphytal orchids. Among the varieties of rhododendrons—which, it may be parenthetically remarked, flower in the months of April and May—are the magnificent white rhododendron with lemon-scented leaves, already mentioned; the scarlet rhododendron, vying with it in beauty, the rhododendron argentum, a tree growing as high as forty feet, perhaps most glorious of all, with splendid mass of flowers and leaves twelve to fifteen inches long, wrinkled and deep green above, silvery below; and the rhododendron dalhousiæ, a slender shrub which grows as an epiphyte, and bears from three to six white lemon-scented bells, four-and-a-half inches long and as many broad, at the end of each branch.

Darjeeling is not a good fruit-growing district. This is

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caused by a singular and almost total absence of the direct rays of the sun during the ripening season, a bright sky being as essential to the maturing of fruit as a warm autumnal atmosphere. The winter of the plains in India being more analogous in its distribution of moisture and heat to a European summer, such fruits as the peach, vine, and even plum, fig, strawberry, &c., may be brought to bear well there in March, April, and May; but none of these fruits thrive on the Sikkim Himalayas, though its temperature nearly approaches that of England, on account of the rain and fogs, which are so prevalent. There is in this respect a great difference between the climates of the Eastern and Western Himalayas, at equal elevations. At Simla, for example, the winters are colder, but the summers are warmer and less humid, the rainy season is shorter, and the sun shines much more frequently between the heavy showers; the conditions are thus much more favourable for the cultivation of English fruits, and they are there brought to a state of considerable perfection. In Darjeeling the European apple will scarcely ripen, and the pear not at all. Vines, figs, pomegranates, plums, apricots, &c., will hardly succeed even as trees. Peach trees grow at Leebong, but the fruit falls from the branch when scarce reddened and still hard. Currants and gooseberries show no disposition to thrive. The strawberry is the only fruit that really ripens, which it does in great abundance. Of the wild fruits, almost the only eatable kinds are the native walnut and some brambles (of which the "yellow" and "ground" raspberries are the best), some insipid figs, and a very sour crab apple. Of tropical fruits cultivated below 4,000 feet, oranges and indifferent bananas alone are frequent. Lemons of various kinds are also grown, but the season for these is very short. Oranges abound in winter, and are excellent.

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Naspatis, a kind of pear, which is fairly nice when stewed, grow freely on the lower slopes of the hills; and the passion flower fruit, or grenadilla, is obtainable in the Darjeeling bazar in the months of August and September. Mangoes are brought from the plains, for though wild in Sikkim, the cultivated kinds do not thrive. The pine-apple plant may be seen occasionally, but it does not bear fruit in these regions. Unlike European fruits, English vegetables, on the other hand, thrive remarkably well throughout the summer at Darjeeling, and the produce is very fair, sweet and good, but inferior in flavour to the English. Splendid potatoes are grown in abundance. English flowers also flourish splendidly in and around Darjeeling station, almost all our familiar home kinds being grown. Among many others geraniums, calceolarias, pinks. roses of the most charming varieties, mignonette, violets, fuchsias, white and pink daisies, and dahlias of the most brilliant colours and every variety of size.

Above Darjeeling the deep humid forests of oaks and magnolias, with laurels interspersed, continue, with also a species of cinnamon; this style of vegetation ascending up to 8,500 feet. The magnolias are magnificent. Like the rhododendrons they flower in the months of April and May. The white-flowered variety predominates from 7,000 to 8,000 feet. It blossoms so profusely that when it sheds its flowers, the mountain sides often appear as if sprinkled with snow. The purple-flowered kind hardly occurs below 8,000 feet. It forms an immense, but rather ugly tree, black-barked and sparingly branched, leafless in winter and also during the flowering season, when it puts forth from the ends of its branches rose-purple, cup-shaped flowers, whose fleshy petals strew the ground. On its branches grows the beautiful epiphytal rhododendron dalhousiæ

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already described. At this elevation a large number of scandent or climbing trees are found, which twist around the trunks of others and strangle them; the latter gradually decay, leaving the sheath of climbers as one of the most remarkable botanical phenomena of these mountains. Rhododendrons are met with in abundance and great variety, with superb foliage and beautiful flowers. A kind of mountain ash and the common English yew now appear. The trunks of the last-named are often eighteen feet in circumference; the red bark is used as a dye, and for staining the foreheads of the Brahmins in Nepaul. An erect white-flowered rose (Rosa Sericea, the only species occurring wild in Southern Sikkim) grows in great profusion; its numerous inodorous flowers are pendent, apparently as a protection from the rain, and it is further remarkable as being the only variety of rose with four petals instead of five. A currant, sometimes growing epiphytically on the trunks of large trees, is also common. Amongst the herbs are many of great interest, as a rhubarb and an aconite, the latter yielding a deadly poison. Of European genera are to be found thalictrum, anemone, fumaria, violets, stellaria, hypericum, geraniums, balsams, epilobium, potentilla, paris, and convallariæ, the root of the last-named also giving a very virulent poison. The rarity of pines is a most curious feature in the botany of the region, for between the level of 2,500 feet (the upper limit of the long-lived pine) and 1,000 feet (the upper limit of the yew), there is no coniferous tree whatever on the outer ranges of Southern Sikkim. The general prevalence of figs, and of their allies the nettles, up to nearly 10,000 feet, is another remarkable point in the botany of the Sikkim Himalayas. The bramble does not grow above this level, notwithstanding that it flourishes in such profusion below it. The entire absence of whortle-ber-

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ries and cranberries in the Alpine Himalayas is likewise very remarkable, and they are not replaced by any substitute.

As the ascent continues, larches and firs, and bushes of dark juniper, scarlet berberry, and yellow rose are found. Silver-firs, which attain 35 feet in girth with a trunk unbranched for 40 feet, are met with, but are gradually replaced by evergreen rhododendrons, which grow in inconceivable profusion, especially on the slopes facing the south-east. At 12,000 feet this is the only form of tree vegetation, besides scattered bushes of rose spiræa, dwarf juniper, stunted birch, creeping willow, honey-suckle, berberry, and mountain ash. Dwarf rhododendrons, with strongly-scented leaves, and abundance of a little andromeda, with woody stems and tufted branches, give a heathery appearance to the hill-sides, the prevalence of lichens, which colour the rocks, adding an additional feature to the resemblance to Scotch Highland scenery. Here are also found, most curious to tell, two of the commonest of all British weeds, a grass (*Poa annua*) and the shepherd's purse. At 13,000 feet the ground becomes everywhere hard and frozen, and now only such plants as compositæ, grass, and arenaria are found. One curious mountain plant, *Saussurea gossypina*, forms great clubs of the softest white wool, six inches to a foot high, its flowers and leaves seeming clothed with the warmest fur that nature can devise. But generally speaking, the Alpine plants of the Himalayas are quite unprovided with any special protection of this kind. At these great elevations also are found, lurking in nooks, such plants as tufted alsinaceous, saussurea, parnassia, minute primroses, draba, wormwoods, saxifrages, gentian, forget-me-nots, white clover, dock, the Alpine larkspur, chick-weed, *Delphinium glaciale*, a groundsel, a ranunculus, artemesia, astragali, androsace, grasses, sedges, lichens, and mosses

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Ponies ascending to these heights, 15,000 to 19,000 feet, will scratch away the snow, and nibble at the scanty herbage. The line of everlasting snow varies greatly, as much as 5,000 feet, the range may be taken as 15,000 to 20,000 feet, on different mountains, according to exposure. Vegetation, therefore, ceases sooner on some peaks than on others. At 19,000 feet Dr. Hooker found an Arctic European lichen (*Lecidea oreina*), so faintly discolouring the rocks as hardly to be detected without a magnifying glass At 22,000 feet he met with a yellow lichen (*Borrera*), but this was only a visitor, migrating over the lofty slopes of Tibet, blown about by violent winds. This is the highest point at which plant-life has ever been discovered. Of course these immense elevations do not occur in the Darjeeling District, but we have strayed beyond to the lofty mountains on the Tibetan frontier so as to make this synopsis of Himalayan botany complete.

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CHAPTER V.

NATURAL HISTORY AND GEOLOGY.

Bird Life in the Terai—Its Feræ—Animals on the Hills—Leeches—Insect Scourges—Moths and Butterflies—Birds—Fish—Domestic Animals—Geological Features—Mineral Products—Moraines.

THE animal life of the Darjeeling District presents no such grand and unique features as the plant-life. In the Terai, birds are a conspicuous feature of the natural history, being of many species interesting either from their habits, beauty, or extensive distribution. During one journey Dr. Hooker noted no fewer than sixteen kinds of swimming birds, several of them migratory and English. These included the shoveller; white-eyed and common ducks; the merganser, the Brahmini, and the Indian goose; common and Gargany teal; two kinds of gull; one of Shearwater, three of tern, and one of cormorant. Besides these he met with three kinds of egret, the large crane, stork, green heron, and the demoiselle; the English sand-martin, king-fisher, peregrine falcon, sparrow-hawk, kestrel, and the European vulture, the wild peacock, and jungle fowl. In addition to all these varieties, the Terai has at least 100 peculiarly Indian birds, of which the more remarkable are several kinds of mina, starling, vulture, kingfisher, magpie, quail, snipe, wood-cock, green-pigeon, partridge, florican, and lapwing. Of larger animals, tigers, rhinoceros,

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deer, wild hog, and a distinct species of dwarf hog are pretty numerous, while a few elephants and wolves are also found. The hare abounds, and with the teal, is the best game in this part of India. In the hill-districts there is a decided scarcity of animal life. Sambur deer are found on the lower ranges, and here elephants and tigers are occasionally encountered. Bears, leopards, and musk deer are to be met with in the upper ranges, the bears descending the hills when the maize crops are approaching ripeness. Tigers are very occasionally seen and still more rarely shot, but leopards are somewhat more common. Big game, however, have been practically extirminated in the lower hills by the extension of the tea-planting industry.

The last time a bear was shot within five miles of Darjeeling station was about 1884, and sportsmen have to go far afield if they are to get a shot at anything. The musk deer is a pretty grey animal, the size of a roebuck, and something resembling it, with coarse fur, short horns, and two projecting teeth from the upper jaw. The musk, which hangs in a pouch near the navel of the male, is the well-known object of traffic throughout India. The female and the young male are very good eating. The musk deer ranges between 8,000 and 13,000 feet on the Himalayas, often scenting the air for many hundred yards. In the wooded valleys barking deer are tolerably plentiful, and an occasional wild hog may be encountered. The inevitable jackal and the pariah dog abound in every district. Packs of wild dogs are sometimes met with, and occasionally cause considerable injury to cattle even in the neighbourhood of Darjeeling. On the skirts of the pine forests large monkeys are found, and a curious long-tailed animal, *Ailurus ochraceus*, peculiar to the Himalaya, something between a diminutive bear and a squirrel. Marmots and

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tailless rats (Goomcher) are to be found at high altitudes, these migrating into Sikkim from Tibet. The last remark also applies to the wild sheep, a huge animal of whose dimensions the term sheep gives no idea; they are very long-legged, stand as high as a calf, and have enormous horns, a trophy much coveted but rarely secured by the sportsman.

Snakes are comparatively rare in the Himalayas, and as a rule very shy. The large cobra does not inhabit the mountain regions. The venomous black cobra, however, is met with occasionally, and about a dozen species of viper have been identified. Harmless green snakes are common enough, likewise the beautiful whip-snakes which, with tail coiled round twigs of trees, dart an unerring aim at their insect prey. Lizards are very numerous, as also is the common Bengal toad in the marshes, a remarkable instance of wide geographical distribution, the same Batrachian being common at the level of the sea under the tropics. In many districts tree frogs create a great disturbance during the night with their peculiar metallic clack. Leeches literally swarm up to 8,000 feet, and are most troublesome during the rains both to man and beast. They lurk in the grass jungle and the leaves of trees, and boots and gaiters are unavailing to keep them out. Dr. Hooker says that he had often 50 or 60 at one time on his ankles. Their bite is painless, but is followed by considerable effusion of blood. The punctures should not be scratched, otherwise sores may result, especially in the case of those whose constitutions happen to be low.

Hornets and scorpions are occasionally met with, and both sometimes inflict very painful stings on travellers. Bees are widely distributed. They build pendulous nests,

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which are so large sometimes as to be conspicuous features in the landscape. In the Teesta Valley, honey-seekers scale the precipitous rocks by means of cane ladders; this pursuit appearing an extremely perilous one, the long thread-like canes in many places affording the only footing over many yards of cliff. Great ants' nests are also found in the forests. Mosquitoes and midges perform their irritating functions in the lower and medium levels. Sand-flies are numerous at high elevations. Another pest is the dipterous insect called the Peepsa, which swarms on the banks of the streams; it is very small and black, floating like a speck before the eye; but its bite is very irritating, and leaves a spot of extravasated blood under the cuticle. Animals are almost driven mad, and rush into any water near at hand to rid themselves of this pest. Yet another insect plague is a large tick which infests the small bamboo, and which the traveller through the jungle cannot prevent from coming on his person. They get inside his dress, and insert the proboscis deeply, without causing hurt, This proboscis is barbed, and the tick, buried head and shoulders in the flesh, can be extracted only by force, the operation being a very painful one. In the woods tropical cicadas make a deafening noise during the heat of the day and towards evening, and glow-worms fly about at night. At an elevation of 17,000 feet bees, may-flies, and gnats abound, and there are also many varieties of Arctic insects in these high regions. Darjeeling boasts a profusion of beautiful butterflies and moths; the varieties of the former number about 2,000, and of the latter about 3,000. There are some superb varieties of large tropical swallow-tails, black, with blue, scarlet or yellow patches on their wings. In the valleys these may be seen in their thousands; they especially love to settle during the heat of the day on the damp sand

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of a river-edge, where they sit balancing themselves with a rocking motion, resembling a fleet of yachts on a calm day. The moths are also most beautiful, and there is in Darjeeling a splendid field for the collection of these and of butterflies. Beetles likewise abound, the number of varieties being no less than 5,000 in rough figures.

We have already described the birds of the Terai. In the hill-country among the varieties met with are larks, finches, sparrows, with occasionally the hoopoe; cormorants, waders, geese and ducks, these being in course of migrating; grouse, Alpine pigeons, and horned pheasants; swallows, ravens, and red-legged crows. All these are to be found at high elevations. Lower down, the horn-bill, the mina, the jungle fowl, and the green pigeon are met with. The nightingale is a hardy bird, its song being heard when the thermometer is the freezing point. It migrates to the Himalayan valleys in October and November till the cold of early spring drives it further south to the plains of India, whence they return north in March and April. In and around Darjeeling station there is a remarkable paucity of bird life. The so-called "ubiquitous crow" for example is here conspicuous by his absence. A few of the tribe are found at Jalalapar; these were imported by the Maharajah of Burdwan, but their number, about a dozen to a score all told, shows no sign of increasing. The cuckoo, however, is fairly common and is constantly heard in April and May.

There are few lakes in the Himalayan mountain region, only two of any size being found in the Darjeeling District. Fish are consequently not very abundant. About a dozen different kinds, however, are found in the rivers, and the sportsman will get excellent mahseer fishing in the Teesta

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One of the most remarkable facts in the zoology of Asia is that no trout or salmon inhabit any of the rivers that flow south from the Himalayan range into India, the so-called Himalayan trout being merely a species of carp; but this widely-distributed natural order of fish is found in the Oxus, and in all the waters of Central Asia that flow north and west.

The domestic animals of Darjeeling merit a few words of mention. The hardy Tibetan ponies we have already referred to, and may just add that for sure-footed carriers along the most dangerous-looking paths they can hardly be surpassed. The distances they will travel, the heights they will ascend to, and the weights they will carry during a working day, are also remarkable. The cows of the district, though generally resembling the English in form, stature, and colour, have humps, and grunt rather than low. The yak comes from Tibet, and is a very tame, domestic animal, often handsome, and a true bison in appearance. It is invaluable from its strength and hardiness, accomplishing, at a slow pace, twenty miles a day, bearing either two bags of salt or rice, or four to six planks of pinewood slung along both flanks. Their ears are generally pierced, and ornamented with a tuft of scarlet worsted; they have large and beautiful eyes, spreading horns, long silky hair, and grand bushy tails; black is their prevailing colour, but red, dun, parti-coloured, and white are common. In winter, the flocks graze below 8,000 feet, in consequence of the great quantity of snow above that height; in summer they find pasturage as high as 17,000 feet, consisting of grass and small tufted sedges, on which they browse with avidity. The yak is chiefly used as a beast of burden; and much of the wealth of its owner is derived from its rich milk and curd, which are eaten either fresh or dried, or powdered

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into a kind of meal. It is also ridden, especially by the Lamas, who find its shaggy coat warm and its pace easy; under such circumstances it is always led. The yak cannot bear damp heat, for which reason it will not live in summer below 7,000 feet, where liver disease carries it off in a very few years. The wild yak or bison of Central Asia, the progenitor of the tame variety, is immensely greater in size, it being, indeed, the largest animal found in Tibet. A good, though not an unusually large, specimen, stuffed, may be seen in the Mammal Gallery of the Indian Museum, Calcutta, and may be compared with the diminutive domesticated yak, the contrast being a striking one. Sheep are used as beasts of burden throughout the hill-country. They are very tame, patient creatures, travelling twelve miles a day with great ease, and being indifferent to rocky ground. They carry a load of 40 lbs. Goats and dogs are utilized in the same way. Pigs are kept and thrive, while geese, ducks, and fowls are also reared in large numbers. The Sikkim cock does not wake the morning with the shrill crow of the English chanticleer; his note is more a prolonged, howling screech. This is one case out of several where we meet in India animals resembling our own varieties at home to the eye, but not to the ear.

Turning now to the geological features of the region, we find that the Terai is composed of alternate beds of sand, gravel, and boulders brought down from the mountains. These deposits contain no fossils. The general appearance and mineral constituents favour the theory that the base of the Sikkim Himalayas was once washed by a great ocean, which received the contents of its rivers, and wore away its bluff spurs, the alluvium of the Gangetic Valley being no doubt deposited in deep water, whilst the coarser matter was accumulating at the foot of the mountains. Ascending

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from the Terai, we have soft massive sand-stone and clunch beds ; these make up the Tertiaries, which occur as a narrow band fringing the base of the hills. North of these is a narrow band of Damuda rocks in a more or less altered condition, and including various alternations of quartzite, shales, slate, and beds of friable anthacrite coal. Overlying these are some thousand feet of slates, mostly of grey and green tints, and including here and there a band of quartzite. As the hills are ascended, these slates are found to pass, more or less gradually, through mica-schist into gneiss. From Kurseong to Darjeeling the gneiss is continuous, verging in some places towards mica-schist. Dolomite occurs at a still higher altitude, and within British territory. There is no granite in the Darjeeling District proper, but further north, at loftier ranges, it penetrates the gneiss in the form of numerous veins, the intrusive rock being sometimes fine-grained, in other cases largely crystallized and composed of pearly white prisms of felspar, glassy quartz, and milk-white flat plates of mica, with occasional large crystals of tourmaline.

The mountainous district of Darjeeling has been carefully investigated for minerals by the officers of the Geological Survey. Coal measures exist at several points, which are easily exposed, and give a good chemical analysis. The difficulty, however, in working them remuneratively would be very great ; moreover, the friable nature of the coal, the high inclination of the seams, their rapid variations in thickness, and the shattered condition of the rocks, are conditions against coal-mining ever becoming a remunerative industry in Darjeeling. It is said, however, that the experiment is about to be tried. Both iron and copper are worked in several places by the Nepaulese, but the character and accessibility of the mines are not such as to attract

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European capital. Lime can be procured in abundance from dolomite, tertiary limestone, and calcareous tufa. The last-named is now largely burnt in kilns. Gems or crystals of any size or beauty are not found in the country. A characteristic feature of the region is a large number of ancient moraines, these being present in every valley at or about 7,000 to 8,000 feet elevation. These prove that at one time the glaciers descended fully so much below the position they now occupy. This can only be explained by a change of climate, or by a depression of the mountain mass equal to 8,000 feet since the formation of these moraines. Another striking point is the existence of a number of old lake beds, which are strewn with great boulders. These are quite dry in the cold weather, but marshy during the rainy season. Many of the valleys are terraced pebble beds, rising, in some cases, eighty feet above the river; these could only have been deposited when the streams debouched into deep water. Along the gorges are also to be found numerous huge boulders and rocks rounded by glacial action. In conclusion, mention may be made of one or two natural phenomena, namely, caverns in the hills (one of them near the Cutcherry Hill in Darjeeling station being superstitiously believed by the natives to extend all the way to Lhassa); a natural bridge of stone across the Ramman between the junction of the Ratho and the Sri with that river; a hot-spring at the Mangphu copper mine on the Teesta, and a 'chalybeate spring about three miles east of Darjeeling station.

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CHAPTER VI.

RIVERS AND MOUNTAINS.

The Teesta; its Tributaries—The Great Rungeet—The Mahanada—The Balasan—The Mechi—Loftiest Peaks in British Territory—Table of Heights and Distances—Religious Monasteries—Heights of Passes into Tibet—The Range of Everlasting Snow—Magnificence of the Spectacle—Gorgeous Sunset Effects.

THE District of Darjeeling naturally divides itself into two geographical divisions—the Terai or sub-montane marshy strip immediately beneath the hills, and the ridges and deep valleys of the lower Himalayas. The principal rivers are the Teesta, the Mahanada, and the Balasan, all possessing numerous affluents. The main lines of drainage are the Teesta and the Mahanada and their tributaries, except in the extreme east, where the superfluous water is carried off by the Jaldhaka. The great water-shed of the district is the Singli La Range, reaching from Kinchinjunga, in Independent Sikkim, to the plains of Bengal. At its northern extremity this range suddenly all but terminates in a huge precipice; it is joined to Kinchinjunga by a narrow saddle-back-shaped ridge. The Goom Range, which joins the Singli La Range below Tonglo, forms a subsidiary water-shed line. The waters on the south and west of this line all drain eventually into the Mahanada, whilst those to the north and east find their way into the Teesta.

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The Teesta, like many others of the great rivers in Northern India, rises on the further side of the Himalayas, its source being the Chalamu Lake in Tibet, though it is also said to have another head water in Kinchinjunga, in Independent Sikkim. It bursts through a great mountain barrier before it reaches British territory. For some distance it forms the northern boundary between Sikkim and Darjeeling, till it receives the waters of the Great Rungeet, when it turns to the south into British territory, and after flowing through the hill portion of the district, passes through Jalpaiguri and Rangpur Districts, finally falling into the Brahmaputra below Bagwa in Rangpur. Its course is about 90 miles, through some of the most magnificent scenery in the world. Among the hills its banks are precipitous and lofty, and clothed to their summits with dense forests. The Teesta is not fordable within the Darjeeling District at any period of the year; but a little below its confluence with the Great Rungeet, a fine suspension bridge has been thrown across the stream, which keeps open throughout the whole year the great trade route through the Jeylep La Pass into Tibet. At the point where the Teesta debouches on the plains, through a gorge known as the Sivak Gola Pass, it is fifty yards broad; its volume is very considerable, and it becomes at once navigable for boats of two tons burthen, although navigation is very difficult and precarious owing to rapids and numerous rocks and large stones in the bed of the river. Its tributaries include the Ranchu and Roli, on the left bank; and on the right, the Great Rungeet, Ranjo, Rayeng and Sivak. The Great Rungeet is an important stream. It rises amongst the glaciers of Kinchinjunga and its sister peaks. It enters the Darjeeling District from the west, and forms a part of the northern boundary, flowing from west to east until it joins the Teesta. The valley of the Rungeet is a narrow

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gorge, through which the troubled river, about eighty yards wide, rushes along over a gravelly bed. The banks are shelving, and covered with forest or jungle. Its principal affluents are the Rungmo, Little Rungeet, and the Ramman. These last-named rivers also have tributaries, but they are litte more than mountain streams. The Ramman, it may be mentioned, is not fordable at any time of the year.

The Mahanada, while passing through Darjeeling, is comparatively a small stream, and for a portion of its course during the cold season it loses itself altogether in the sands of the Terai. Its chief tributaries join it below the Darjeeling District boundary, after leaving which it becomes an important river, passing through Purniah and Maldah, and falling into the Ganges at Godagari, just within the borders of the Rajshahai District. The source of the Mahanada is near Mahaldiram Hill; its banks are covered with trees and jungle, and it is fordable during the dry season.

The Balasan takes its rise a few miles south-west of Darjeeling station, and after a southerly course enters the Terai, when it divides into two steams, one of which, the New Balasan, branches off and joins the Mahanada, while the parent stream continues its southerly course till it enters Purniah District. The new channel is said to have been formed by the Mechis damming up the stream for the purpose of fishing. The river has many tributaries both in the hills and in the plains. It can be forded at several places in the cold and dry months.

The Mechi river is in the Darjeeling Terai, and marks its western boundary. It takes its rise in the Lingallah Range, on the Nepaul frontier, flowing in a southerly direction till it passes into the Purniah District. The river is fordable throughout the year, except immediately after heavy rains.

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There are very few lakes in Darjeeling, only two being of any importance, and these small. The one is a few miles east of the Teesta, and is 550 yards long by 200 yards broad; the other lies about six miles south-west of Hope Town.

The great mass of mountains which constitute Darjeeling and stretch beyond it to the north almost baffle description, The loftiest peaks are situated outside British territory; but within it, on the Singli La Range, marching with Nepaul, are several mountains above 10,000 feet in height. The highest of these are—Phalut, height 11,811 feet; Saburkum, 11,636 feet; and Tanglo, 10,074 feet. Situng is another bold peak in the district, of conical form, situated south-east of Darjeeling station. The two great points near Darjeeling station from which to view the snowy ranges are Observatory Hill and Tiger Hill, the range of sight from the latter being more extensive—Mount Everest, distant 107 miles, being in view from it on a clear day. Mount Everest lies north-west from Darjeeling; and Kinchinjunga. 45 miles distant, almost due north; between these mountains, the two loftiest in the world, stretches the great range of perpetual snow. It is impossible, by written description, to localize the position of each individual peak. The following table, however, giving names, heights, and distances in miles on a direct line from Darjeeling, will be found useful. By aid of a good map the position of the mountains may be determined; or, better still, some one acquainted with the locality may point them out to the visitor.

Name.	*Height.*	*Distance.*
Everest (from Tiger Hill) ...	29,002 ...	... 107
Kinchinjunga ...	... 28,156 ...	.. 45
Janu (in Nepaul) ...	... 25.304 ...	... 46
Kabru ...	... 24,015 ...	... 40

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Name.	*Height.*	*Distance.*
Chumala Rhi	23.944	82
Pauhan Rhi	23,186	—
Donkia Rhi	23,136	72
Kangchenjhau	22.509	69
Chomiumo	22,300	70
Pandim	22,017	36
Takcham	19,200	49
Narsing	18,145	32
Narim	17,572	—
Dependikang or Chumanago ...	17,325	43
Kabur Peak	15,827	—
Gipmochi	14,518	42
Tagula	13,348	85
Lampheram	12,827	23
Lingtu	12,612	36
Kirsong	12,258	28
Singli La	12,126	20
Sundukphu	11,929	17
Phalut	11,811	19
Saburkum	11,636	17
Menan (in Bhutan) ...	10,637	21
Richila (in Bhutan) ...	10,500	30
Tonglo	10,074	11
Tendong	8,676	14
Senchal Hill	8,600	$4\frac{1}{2}$
Tiger Hill	8,514	$3\frac{4}{5}$
Chumsering	6,945	21
Pemayangtse	6,922	18
Senon	6,614	21
Rangiun	6,305	2
Songchonglo	6,266	18
Rinchinpung	6,191	—
Neor	6,005	—
Deolo	5,590	15

On many of the peaks are religious monasteries occupied by Lamas. These are usually barn-like structures erected on a rude stone platform.

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The following are the heights of the chief Passes into Tibet, in their order from south to north :—

Jelep La Pass	...	...	14,388 feet.
Tankra La Pass	...	...	16,000 ,,
Doukia Pass	...	...	18,400 ,,
Kongralama La Pass	...	...	16,000 ,,

The Jelep La Pass is the chief channel of trade, being open all the year round.

No word-painting can adequately depict the grandeur of the spectacle presented by the snowy range of Himalayan mountains. When the clouds clear away and the magnificent sight bursts upon the spectator's gaze, the stupendous height of the peaks comes upon him as a great surprise. The line of everlasting snow can be traced from east to west almost as far as the eye can reach, the mighty Everest and the almost as grand Kinchinjunga forming what we may call the Pillars of Hercules at either extremity. Between these two giant mountains, the highest known peaks in the world, runs a jagged line of dazzling white. Betwixt this line and the spectator intervene imposing mountain ranges, snow-capped and broken by almost perpendicular gorges. Nearer still is a sea of wooded hills, with rivers deep down threading dense tropical forests like silver lines, the whole forming what is beyond all question the most sublime mountain landscape in the world.

When tinged by the rays of the rising or the setting sun, the snowy range is seen in its grandest aspect. The delicate tints of pink, amber, and gold baffle description. Probably no man ever beheld the glorious scene under more favourable conditions or from more numerous points of view than Dr. Hooker. The following is a vivid description of the spectacle :—"The firmament appeared of

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a pale steel blue, and a broad low arch spanned the horizon, bounded by a line of the little fleecy clouds ; below this the sky was of a golden yellow, while in successively deeper strata, many belts or ribbons of vapour appeared to press upon the plains, the lowest of which was of a dark leaden hue, the upper more purple, and vanishing into the pale yellow above. Gradually the golden lines grew dim, and the blues and purples gained depth of colour ; till the sun set behind the dark blue-peaked mountains in a flood of crimson and purple, sending broad beams of gray shade and purple light up to the zenith and all around. As evening advanced, mists rapidly formed below me in little isolated clouds, which coalesced and spread out like a heaving sea, leaving nothing above their surface but the ridges and spurs of the adjacent mountains. This rose like capes, promontories, and islands, of the darkest leaden hue, bristling with pines, and advancing boldly into the snowy ocean, or starting from its bed in the strongest relief. As darkness came on, and the stars arose, a light fog gathered round me, and I quitted with reluctance one of the most impressive and magic scenes I had ever beheld." Here is another sunset effect, painted as graphically as words can paint such a display of nature :—" As the sun declined, the snow at our feet reflected the most delicate peach-bloom hue ; and looking west from the top of the Pass, the scenery was gorgeous beyond description, for the sun was just plunging into a sea of mist, in a blaze of the ruddiest coppery hue. As it sank, the Nepaul peaks to the right assumed more definite, darker, and gigantic forms, and floods of light shot across the misty ocean, bathing the landscape in the most wonderful and indescribable changing tints. While the luminary was vanishing, the whole horizon glowed like copper from a smelting furnace, and

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when it had disappeared, the little inequalities of the rugged edges of the mist were lighted up like a row of volcanos in the distance. I have never before or since seen anything which for sublimity, beauty, and marvellous effects, could compare with what I gazed on that evening from Choonjerna Pass. In some of Turner's pictures I have recognized similar effects, caught and fixed by a marvellous effort of genius; such are the fleeting hues over the ice, in his 'Wheelers,' and the ruddy fire in his 'Wind, Storm, and Rain,' which one almost fears to touch. Dissolving views give some idea of the magic creation and dispersion of the colours, but any combination of science and art can no more recall the scene, than it can the feelings of awe that crept over me, during the hour I spent in solitude amongst these stupendous mountains." In another passage Dr. Hooker awards the palm of beauty to the Swiss Alps, though characterising these as inferior in sublimity, extent, and height to the Himalayas. He adds:—"In either case the observer is struck with the precision and sharpness of their outlines, and still more with the wonderful play of colours on their snowy flanks, from the glowing hues reflected in orange, gold, and ruby, from clouds illumined by the sinking or rising sun, to the ghastly pallor that succeeds with twilight, when the red seems to give place to its complimentary colour, green. Such dissolving views elude all attempt at description, they are far too aërial to be chained to the memory, and fade from it so fast as to be gazed upon day by day, with undiminished admiration and pleasure, long after the mountains themselves have lost their sublimity and apparent height."

To those who have not beheld the everlasting snows of the Himalayas, these passages, from the pen of a master hand, may serve to convey some idea of the majestic

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grandeur of the "cloud-capp'd towers, the gorgeous palaces," that stand forth against the horizon, calm, cold, stately, sublime in their immutability, awe-inspiring in their loneliness. But it is impossible to express in words the impressions and sensations that are given rise to by the contemplation of these stupendous mountains. The most eloquent descriptions cannot but fail to convey to the mind's eye the magnificence of the panorama. It must be gazed upon to be appreciated. Once witnessed, the scene will remain for ever ineffacble from the memory.

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CHAPTER VII.

THE STATION OF DARJEELING.

General Lie of the Town—Observatory Hill—Chaurusta—The Mall—The Shrubbery—Town Hall—Station Amusement Club—St. Andrew's Church—Secretariat—The Cemetery—Lloyd Botanic Garden—The old Rungaroon Garden—The Scotch Mission—The Jail—The Bazar—An Animated Scene—Some Strange Curios—The Darjeeling Club—Jalapahar Military Depôt—Hotels—Boarding-houses—Contemplated Improvements in the Station.

THE TOWN of Darjeeling occupies a mountain ridge, stretching from south to north, which, at a point called the Chaurusta, about the centre of the station, gives off two spurs, one to the right and the other to the left, known respectively as Lebong and Birch Hill. The ridge on which the station is situated is very narrow at the top; along it most of the European houses are perched, while others occupy positions on the flanks. The Eden and Jubilee Sanitariums, the Police Lines, the Bazar, and the Railway Station are built on the lower portion of the western slope of the ridge, and below these lie the Jail, the Botanic Garden, and the native town, chiefly occupied by the poorer classes of natives, and consisting of huts built without method or regularity. Almost all the houses in the town are built of bricks or stone, and roofed with corrugated or plain iron sheets—some of the buildings, such as The

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Shrubbery (the residence of His Honor the Lieutenant-Governor of Bengal), the new Government Offices, the Eden Sanitarium, the Deputy Commissioner's house, and the villas belonging to His Highness the Maharajah of Cooch Behar and other residents, being exceedingly picturesque. The effect which the sight of the station produces upon the newcomer as the train gradually wends its way down the incline from Ghoom is charming. The town is a pretty grouping of bungalows set in scenery, which for grandeur and sublimity cannot be surpassed.

Observatory Hill is the most prominent height in the town, and may be taken as a convenient point from which to make a survey of the public buildings. The hill, it may be mentioned, is no longer an observatory station, this having been transferred to St. Paul's School, of which more hereafter. At the foot of the steep incline is the Chaurusta, or "meeting of four roads." Here there is a Band stand, where the Volunteer Band plays of an evening, and Calcutta society is wont to congregate during the after-work ride or walk. The Mall runs round Observatory Hill, and commands fine views of the valleys far below covered with tea-gardens, the Lebong Spur, and the snowy range in the distance, with Kinchinjunga, king of all, towering aloft, its height and double-peaked summit distinguishing it from all the other mountains. Round the Mall are a number of fine bungalows, including The Shrubbery, the Darjeeling home of the Lieutenant-Governor of Bengal, and the Hermitage, the residence of the Maharajah of Cooch Behar. The former is a commodious mansion, situated in extensive and prettily laid out grounds. On a lower level to The Mall, running round the same spur, is Birch Hill Road, a beautiful winding pathway shaded by fine foliage, amidst which that of the tree fern is conspicuous. The glimpses

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of scenery along this pathway are magnificent, every bend disclosing new beauties.

Near Government House is the Cricket Ground; also the Town Hall, and St. Andrew's Church. The Town Hall is, from a social point of view, the most important public building in Darjeeling. It is a plain but commodious structure, and capitally suited for the purposes for which it is used. Here are the head-quarters of the Station Amusement Club. Well laid out Tennis Courts adjoin the building, and Balls, Concerts, and Theatrical Entertainments are also held under the auspices of the Club. The Doorgah Poojah holidays, at the end of September and beginning of October, when "all Calcutta" comes up for a few days to the hills, is especially the season of festivity, the Club organizing for the occasion Theatricals, a Saturday "Pop," Rifle Shooting Competitions, Cricket Matches, Sports, Subscription Balls, a Fancy Dress Ball, and a Fancy Fair. During these ten days Darjeeling is at its gayest. When the Ball Room is not required for other purposes, the Club uses it as a Skating Rink, this amusement being one of the most popular and fashionable in the station. To become a member of the Amusement Club, an introduction by a member is necessary. The subscription is Rs. 8 per month for a single person who plays Tennis, Rs. 6 without use of Tennis courts; for a family Rs. 12. The Rink subscription is separate, being Re. 1 per month, with Rs. 4 entrance fee. The Town Hall also contains reading and other rooms, the former being supplied by the Amusement Club with the leading newspapers and periodicals of the day.

Adjoining the Town Hall is St. Andrew's Church, a plain barn-like structure occupying the summit of a little knoll. The Old Church, on the same site, was founded in 1843.

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The foundation-stone of the present edifice was laid by Bishop Milman in 1870. The Church seats about 360 people. The east window is rather pretty, and there are about a dozen tablets in memory of former residents, planters in the neighbourhood, and visitors who have chanced to die a Darjeeling. The most notable is that to Lieutenant-General Lloyd, who took part in the founding of Darjeeling as a British Sanitarium (*vide* Historical Chapter), and who died in the station in 1865, aged 76 years. The Chaplain of St. Andrew's Church also ministers to the soldiers at Jalapahar.

On the western slope of the hill, below The Shrubbery, is the new Secretariat, a very handsome building completed in 1887. It contains the offices of the Deputy Commissioner, and of the other Government officials of the district, and also the Law Courts. Not far off is the cemetery, finely laid out on the hill-side in several terraces with steps communicating. Many of the gravestones are of great interest. One dated 11th August 1886, and erected by the Asiatic Society of Bengal, is to the memory of H. J. Alexander Csona de Korosie, a native of Hungary, and an eminent philologist. He compiled a dictionary and grammar of the Tibetan language, and died at Darjeeling on his way to Lhassa. A number of distinguished soldiers and explorers (several of these latter of foreign nationality) are buried here; likewise many children, doubtless brought up from the plains too late for the bracing hill air to restore them to health. On the same slope, but higher up, are the Loretto Convent School for Girls and St. Joseph's School for Boys, both managed by the Jesuit community; and also a small Roman Catholic Chapel.

Beneath St. Andrew's Church and the Town Hall, with the Eden Sanitarium midway between, is the Lloyd Botanic

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Garden, named after the townsman of that name, founder of the local Bank, who made a gift of the site. The Botanic Garden of Darjeeling was originally situated at Rungaroon, six miles from the station, at the lower edge of the great forest which clothes the Senchal mountain. This garden was established by Sir Richard Temple, then Lieutenant-Governor of Bengal. It was recognized that rich as are the hills around Darjeeling in many beautiful sorts of trees, they are yet destitute of the most remarkable orders of the Himalayan region, namely, the coniferæ—the cedars, firs, pines, larches, spruces, cypresses, and others, which are such usual and striking objects in other parts of the mountainous country. The cultivation of many species of the rhododendron genus, which are found in such magnificence in the higher parts of Darjeeling District, and of the neighbouring state of Sikkim, also offered an interesting field for research. There were, further, many flowering trees and shrubs growing in other quarters, which by careful study might be acclimatized at the Darjeeling Station, a locality so favored by nature for botanical experiments. Moreover, the growth of a large tea industry in the surrounding districts, the approach of the railway, the proximity of the cinchona plantations, the presence of head-quarters of the Forest Department of Bengal during several months in each year, and other material causes combined to afford encouragement for an undertaking of this description on the part of Government, and to promise the successful issue of such efforts as might be made for the advancement of practical science and for the public benefit. Accordingly, the Rungaroon Botanic Garden was founded in 1875. The elevation of the site (6,000 feet, and therefore considerably lower than that of eeling), its convenient distance (six miles) from the station, the excellent soil, and the

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abundance of water for most months of the year caused Rungaroon to be selected, an additional reason being that the land was Government property. The choice, however, as we shall see, proved to be an unfortunate one. Rungaroon soon grew to be a garden of great beauty —which it indeed is to this day, being a favourite place for pic-nic parties (see chapter on "Excursions"). Plants of all kinds —epiphytes, orchids. gingers, &c., that would grow at the elevation of Rungaroon, were collected and attached to the trees, and a representative piece of virgin forest was constructed. The vacant spaces were filled up with species of plants indigenous to Nepaul, Sikkim, and Bhutan. A third section was reserved for exotic plants of botanical interest and suited to the climate and elevation. More attention, however, was from the first given to the growth of indigenous plants than to that of exotics, and every flowering plant growing naturally in these districts between 8,000 feet and 9,000 feet, was considered worthy of being tried, either in the cleared or forest portions of the garden. However disaster fell upon the garden. The position proved to be a most exposed one at certain seasons of the year, and it was swept by periodical hail-storms, these completely destroying the young plants, and severely damaging even the older trees. The conclusion was reluctantly come to in 1875 that the experiment would have to be abandoned. At this juncture Mr. Lloyd, of Lloyd's Bank, Darjeeling, came forward with the handsome offer of the site on which the present Botanic Garden stands on the slope below the bazar. The offer was accepted by Government, and the situation has been found to be a most suitable one, being within the station and well sheltered. Rungaroon, it may be added, is still used by Government as a forest nursery. The Lloyd Garden is tastefully laid out, and

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contains a number of conservatories. The flowers chiefly cultivated are English varieties, there being few flowering plants at this elevation indigenous to the neighbourhood, and those from a lower level dying off during the cold season. The one great drawback to the garden is the prevalence of huge grubs, some of them five inches long and over an inch in circumference, which literally infest the place; this is supposed to be due to the fact that close by was the old municipal "tip" for town refuse. Careful experiments are also made in the garden in naturalising English potatoes. At first these succeeded splendidly in and around Darjeeling station, but latterly there has been a falling off, due to the fact that altered climatic conditions deteriorate the tubers and render them more liable to disease. The garden works at a profit, the net gain in the year 1887-88 being close on Rs. 1,000.

Near the Lloyd Botanic Garden is Lochnagar, where the Scotch Mission is located. It has a church, also used as a school-room, an Anglo-Vernacular school, a Vernacular school, a printing press, a bazar preaching-house, and a book depôt. Attached to the Mission are four catechists, for the Nepaulese, Lepchas, Bhuteas, and plainsmen respectively. The people are preached to in the bazar on Sundays, and visited at their houses and on the tea-gardens on week days. The Mission has also twenty Vernacular schools scattered all over the division, with an attendance of over 800 pupils, of whom about 100 are girls. Work in translating the Gospels into the various Vernaculars is also performed by the Mission.

Further down the slope, immediately beneath the Botanic Garden, is the jail, an establishment of unpretentious appearance, consisting of several barracks surrounded by a

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high brick wall. It usually contains about 100 prisoners. All long sentence convicts are sent to the Presidency Jail, Calcutta. The industries followed in the prison are the baking of bread and the making of cane chairs, some of the prisoners also work outside in charge of a warder; their distinctive marks are the prison costume, a wooden tally, with number inscribed, round the neck, and an iron ring round the left ankle. The jail used to supply the whole station with bread, but it has now competitors in the shape of four private bakeries in the town.

The bazar is in the hollow below the main ridge of the station. The Eden Sanitarium overlooks it from a rising knoll at the northern end; this establishment is fully described in a subsequent chapter. Near here is a Hindoo temple, surmounted with rather an elegant cupola, and a tiny church-like building, the meeting-place of the Brahmo Somaj community. The Municipal Office, an unattractive looking building, is also at the foot of the Sanitarium Hill, overlooking the Boatanic Garden. The bazar itself is not up to the requirements of the town. The weekly market is held on Sunday, when hillmen from considerable distances and labourers from the surrounding plantations come in in large numbers. The scene on these occasions is varied, curious—almost unique. There will be seen Lepchas, Limboos, Bhuteas, and Nepaulese, mixed up with the Hindoo, Mahomedan, and Eurasian servants of European gentlemen. Every conceivable article is on sale—from praying-wheels and local curios down to much-advertised English hair-dyes and soothing syrups for infants. Sheep, goats, pigs, poultry, eggs, butter, vegetables, and tea, together with European pickles, jams, sardines, tinned meats, and other stores, are the chief edible constituents of the heterogeneous assortment of articles offered for purchase.

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The vending and purchasing proceed amidst much noise, the light-hearted hill people, men and women, laughing, singing, shouting, playing practical jokes on each other, every broad face shining with good temper and mirth. The rosy-cheeked women, some of them with really handsome faces, are quite unlike their Hindoo sisters in the plains; they enjoy the most perfect freedom, and laugh and romp about like veritable children. Many of them have their youngest-born strapped to their back in the inevitable bamboo basket, little yellow chubby morsels of humanity, pretty enough, though we cannot endorse the opinion of the Hon'ble Emily Eden, as expressed in her diary, that "little native babies are much prettier than little English ditto." Altogether, this bright and merry Sunday morning scene should on no account be missed by the visitor to Darjeeling.

When in the bazar, the visitor should not fail to pay a visit to the depôt of Mr. Paul Möwis, which forms the only museum, so to speak, in the locality. It always contains a large assortment of curios, such as praying-wheels of various kinds, tom-toms made of human skulls, and trumpets made of human thigh-bones, these being used in the Buddhist temples, lamps, censers, bells, brass cups, and other furnishings of temples, metal figures of Buddha, and weapons used by all kinds of hill races. It may here be explained that nearly all the curiosities for sale in Darjeeling are made simply for the dealers, it being very difficult to get a genuine article that has been in actual use in the temples or the houses of the people. The hand praying-wheels are most curious; they are revolved from left to right, to the monotonous dirge of "Om Mani Padmi Om," meaning, "Hail to him of the Lotus and the Jewel." The prayers are inside the cylinder, printed from wood on bands

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of paper a yard long, each band having inscribed upon it four prayers. These are in Sanscrit, the language in which the Lamas keep all their records. The double-headed tom-tom, or small drum, is formed of two crowns of human skulls cemented together back to back; each face is then covered with parchment, and encloses some pebbles. The human thighbone fashioned into a trumpet is also very remarkable. It is often that of a Lama, and is valuable according to its length. A Darjeeling tradition tells that one of the first Europeans buried at the station, a tall man, was disinterred by resurrectionist Bhuteas for his "trumpet-bones." Among the other curios, may be mentioned the Bhutea locks, made of brass, a most ingenious piece of mechanism; they serve their purpose admirably, and are an amusing puzzle as well. Mr. Möwis is also an enthusiastic entomologist, holding diplomas from the Universities of Berlin and Leipsic. He has always on show and for sale beautiful moths, butterflies, and beetles, of which, taken together, there are some 10,000 varieties to be found in the District of Darjeeling.

Beneath the bazar is the Lowis Sanitarium for natives described hereafter. Still further down is Fernie Cottage, the Bhutea-Lepcha boarding school. A few hundred yards to the south of the bazar is the Railway Station, a very plain erection. On the slope above the bazar and the railway are the Police Lines, the public Dispensary, the Post and Telegraph Office, the Union Chapel, the office of the *Darjeeling News*, and the Darjeeling Club House. The three first named call for no special mention. The Union Chapel is a plain edifice, belonging to the Dissenting community. The *Darjeeling News*, the only newspaper in the district, is an old-established journal. It is published weekly, on Saturdays, and contains lists of visitors and

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residents. It also serves as a guide to the amusements and doings of the day. The Darjeeling Club has for its home a very handsome and well-situated bungalow. It admits two classes of members, permanent and temporary. Admission to permanent membership is by ballot, the entrance fee being Rs. 70, and the monthly subscription Rs. 7 to Rs. 3, according to distance from the station. Visitors to Darjeeling may, if considered eligible, be made temporary members by the Committee for any period not exceeding three months; they have to be proposed and seconded by permanent members, and pay a monthly subscription of one gold mohur, or Rs. 16. The Club contains sleeping accommodation for resident members, or members temporarily visiting the station. It also has a library, from which books may be taken by ladies residing in the town without any gentleman of their families, on payment of a monthly subscription of Rs. 4.

Two and-a-half miles south of the Chaurusta is the military depôt of Jalapahar. It is reached by the Auckland and Western Jalapahar roads. On the slopes above these highways are many fine bungalows, among them being Little Chevremont, the hill home of the Lord Bishop of Calcutta. Further along is Colinton, the residence of the Ezra family of Calcutta, quite the "show" bungalow of the station, the large glass-houses attached being filled with a grand display of flowers. The hill is crowned by the extensive estate of St. Paul's School, dealt with fully in a chapter to follow. Here also is the Observatory, of which more anon. At Jalapahar there are a parade ground and barracks accommodating 150 soldiers. There are also quarters for a mounted battery of artillery. In connection with the depôt are a Protestant Church and a Catholic Chapel, where services are held by the Pastor of St. Andrew's Church,

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and by the Jesuit Fathers from Loretto College respectively. The sanitarium for soldiers used to be still further along the spur of hills, at Senchal, over 8,000 feet high; but the situation was found to be too cold and exposed, and the site was changed to the present one.

The hotels in Darjeeling are two in number, Woodlands and Drum-Druid, being the names of the establishments. Both are well-conducted. The hotel charges are Rs. 7 per diem, or Rs 6 per diem when the stay made is for a month. Ponies cost Rs. 3 per diem, or Rs. 4 when the ride extends beyond the limits of the station. It may here also be mentioned that "dandies," or palanquins, are paid for at the rate of 4 annas each carrier for the first hour, and 2 pice an hour afterwards, or 8 annas a day; two carriers suffice for a child, and three or four for an adult.

There are a number of excellent boardinghouses in Darjeeling, the principal being Rockville, Rosebank (formerly the residence of the Maharajah of Burdwan), Gresham House, Step-a-side, Ada Villa, and Meadow Bank, the last-named being in connection with Drum-Druid Hotel. The charges average Rs. 6 per diem.

A number of improvements are contemplated in the station. The bazar, for example, has been found to be inconveniently small, and to serve its purpose there should be much more covered space. At present it is nearly all open, there being only two roofed sheds of any dimensions, one being a general market, and the other the meat market. We believe the Municipality intend to remedy this gradually, by spending a sum of Rs. 10,000 annually for five years. This expenditure, it is calculated, will provide the town with a spacious bazar, with roofing over its whole area. A further improvement would be the holding of markets

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more frequently than once a week. Darjeeling is increasing rapidly, and this system is found to be quite behind the age, often causing perplexity to householders as to the procuring of supplies towards the end of the week. Another Municipal scheme in embryo is to convert the old Town Hall in the bazar, a small portion of which is at present occupied by the Government Printing Press, into a place of recreation for the middle-class Europeans who now resort in such numbers to the station. The Amusement Club, which has its quarters at the new Town Hall, is rather exclusive—inevitably so, it must be admitted, by everyone who knows Indian society; the carrying out of this proposal would, accordingly, meet a very proper demand, the facilities for recreation being thus equalized in the case of both classes. We understand also that a private company has taken up one of the roads above the bazar, and intends to build there some fifteen small double-storeyed houses for Europeans containing four or five rooms, and at rentals not exceeding Rs. 50 per month. This scheme, when carried out, will bring up to the station a still larger contingent of middle-class European visitors, so that the providing of a special Amusement Club for them becomes all the more desirable.

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CHAPTER VIII.

THE EUROPEAN AND NATIVE SANITARIUMS.

Establishment of the Eden Sanitarium—Its Aims and Objects—Medical Staff—Scale of Charges—Initial Cost—The Lowis Jubilee Sanitarium—Departments and Rates—Success of the Institution.

THE Eden Sanitarium is a handsome building occupying a commanding situation on a small detached hill almost in the centre of the station. It is undoubtedly one of the most useful institutions in the whole of Bengal. The want of a European hospital in Darjeeling to meet the requirements of patients and convalescents coming up from the plains had for long been apparent to the Civil Surgeons in charge of the station. The matter was represented to the late Lieutenant-Governor, Sir Ashley Eden, and he warmly supported the idea of establishing a good and well-organized paying European hospital. This was in 1881, and it was resolved at first to open a temporary hospital giving private accommodation to seven patients, and a building near the Municipal dispensary was adapted and equipped, partly at the cost of Government and partly from funds raised by private subscription and from the proceeds of a bazar held during the Doorgah Poojahs in 1880. The temporary hospital was inaugurated in May 1881, and closed in April 1883, when the Eden Sanitarium was opened for the reception of patients. During that time a considerable

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number of patients had been treated in the temporary hospital, paying one rupee daily only as a hospital charge and providing their own diet, fuel, and lighting. The success of the temporary hospital was encouraging to the prospects of the larger and permanent one, and the hopes then entertained have been more than realized.

The building of the Eden Sanitarium was actually commenced in November 1881, and it should have been handed over by the contractors to Government in August 1882. Delays, however, occurred, more particularly in the finishing work, and the Committee of Management did not obtain possession of the building till April 1883. As, however, the arrangements of the Committee had been complete for months past, it was at once possible to open the institution and admit patients. The invalids occupying the temporary hospital were transferred to the new Sanitarium, and within the first week several patients who had been waiting for the opening of the institution came up from Calcutta. The Committee from the first recognized the fact that in a large number of cases it will always be necessary to admit a relative or attendant in addition to the patient. The Sanitarium, as an institution where only paying patients are received, is materially different from an ordinary hospital, where a patient is admitted and maintained at the cost of the hospital funds, in many cases charitable, and in India usually provided by Government. At the Sanitarium the patients are on a totally different footing, and have a right to expect, in return for what they pay, quite different treatment and rules to those existing in ordinary hospitals. It constantly happens that a wife wishes to be admitted with a sick husband, or *vice versâ*, a mother accompanies her sick child, or a sick lady is sent to the hills with her children, or a daughter is in attendance on

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a sick father, or even a special nurse accompanies a patient to the Sanitarium. The institution might as well not exist if admission were to be refused to these attendants or dependents. From the first, among those who applied for and received admission were many persons recovering from sickness in the plains who were not of a class to be found in the wards of an ordinary hospital, but rather in general medical practice. This precisely accords with the aims of the institution, which offers a change to a convalescent home and careful medical treatment to invalids pulled down by severe sickness or suffering from obstinate disease, who are unable to take the sea voyage which richer people could afford. It is also recognized by Government that it is cheaper in the long run to send up its servants to Darjeeling when they are out of sorts, for a few weeks' treatment in a European climate instead of their having to take leave, or linger on in a condition of inefficiency from illness at stations in the plains. It has been found that patients come to the Sanitarium not only from all parts of the Lower Provinces of Bengal, but also from great and unexpected distances. It is important to mention that an invalid carriage, fitted with a spring couch, can be secured for the journey up the mountain railway, the special charge being an extra first-class fare (Rs. 16-0-6). There is also an invalid chair at the ferry over the Ganges, so that every chance is given to patients whose strength may be greatly reduced. The staff of the Sanitarium consists of a resident medical officer, a steward, and two sisters from the St. John the Baptist (Clewer) community, by arrangement with the Sister Superior of the Lady Canning Home, Calcutta. The Sisters superintend the nursing and other domestic arrangements in place of a matron. Under-nurses are engaged to attend to cases that may require special attention, and patients

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may also bring their own nurses. The Civil Surgeon of the District is Manager and Medical Superintendent, and visits the Sanitarium daily. An influential working Committee supervises the affairs of the establishment.

The building is a striking feature in the landscape, both from its position and its ornate style of architecture. It is two-storeyed, in the form of three sides of a square, the main block running nearly north and south, the front being towards the south. The internal arrangements are admirably adapted to the purposes for which the institution was intended. The rooms and wards are all well warmed, ventilated, and lighted, and replete with modern conveniences and comforts. The centre or front block is for the accommodation of first-class and intermediate patients, and the two wings for second and third class respectively. For the first-class and intermediate there are, on the upper floor, eight sets of rooms, consisting each of bed, dressing and bath room, and common sitting and dining rooms. These rooms are reserved for ladies and married couples, with or without children. On the ground floor are eight similar sets of rooms, with common dining and sitting rooms, for gentlemen. The charge for first-class accommodation is Rs. 8/- per diem, and for intermediate Rs. 6/- per diem, which covers rent of rooms, attendance, diet, lighting, fuel, as well as medical attendance and medicine. A relative, accompanying with a view to secure constant attendance on a patient, or any other person in charge of a patient, is permitted to reside in the Sanitarium on the payment of Rs. 6/- per diem first-class, and Rs. 5/- intermediate, provided the presence of such relative or attendant does not prevent the admission of other patients. For children under 12 years and over 3 years of age, accompanying their parents, the charge is Rs. 3/- daily for first-class, and Re. 1/8 for

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intermediate. For infants under 3 years of age the charge is Re. 1/8 first-class, and Re. 1 intermediate. The charge for second-class accommodation is Rs. 4/- per diem. There are five small rooms, each containing two beds on the upper floor for ladies or married couples, and the same number on the ground floor for gentlemen. The verandahs in this wing are enclosed and form public sitting-rooms, besides which there are dining-rooms on each floor. The patients in the second-class have the use of an English bath-room and of a common lavatory on each floor. Relatives or other persons accompanying patients are admitted on the same conditions as in the first-class, but there is no reduction in the rates. The charge for children is the same as in the intermediate. The charge for third-class accommodation is Re. 1/12 per diem. There is a large ward containing beds for women and children on the upper floor and a similar ward for men on the ground floor. Besides this there are common sitting and dining rooms on each floor. On each floor also are bath-rooms and lavatories on the English plan. Relatives accompanying patients pay the full rates, and are only accommodated in the Sanitarium provided the beds they occupy are not required for patients, and are given up if required. Children between 12 years and 3 years of age pay Re. 1/- daily, and under three years As. 12. All patients pay for their personal washing. Patients wishing to come to the Sanitarium must previously communicate with the Superintendent, either forwarding to him a medical certificate from their ordinary attendant, or furnishing him with sufficient information regarding their health to enable him to sanction their admission. Urgent cases, however, are admitted at any time without previous notice. Ladies are admitted for their confinement into the first and second class, subject to certain extra charges in addition

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to the ordinary rates. These extra charges may be ascertained on application to the Superintendent. A reduction in the charges for first and intermediate class patients is made in the case of Managers and Assistants of Firms, Tea-Gardens, Indigo and Silk Concerns, Public Companies, Banks, and generally of large institutions employing Europeans, who subscribe annually to the maintainence of the Sanitarium according to a fixed scale set forth in the Rules and Regulations. No persons suffering from infectious or contagious disease, fits, or insanity, are admitted as patients. Visitors are allowed between the hours of 7 A M. and 9 P.M.

The cost of the construction of the Eden Sanitarium was borne by the Bengal Government, the total, with certain necessary changes and additions, being Rs. 1,72,339. In this amount is included the cost of the Doulton Pottery Stoves throughout the building, which burn coal and effect a great saving in the consumption of fuel. The Government also provided the institution with surgical instruments and a free supply of medicines for the first two years of its existence. The furnishing and equipment of the hospital were carried out by public subscription, the total sum collected being Rs. 23,750, of which the Maharajah of Burdwan contributed the handsome sum of Rs. 10,000. The popularity of the Institution has steadily grown as its advantages and able management have become more widely known. At almost every season of the year it is now occupied to its utmost capacity, the accommodation being for about 100 patients.

The Lowis Jubilee Sanitarium, for Natives, established in 1887 under the auspices of Mr. E. E. Lowis, Commissioner of the Rajshye Division, stands below the railway station some distance down the hill. The founding of the

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institution was resolved upon at a public meeting, attended by Englishmen and by Natives, held in Darjeeling in May 1887, for the purpose of considering measures for erecting a permanent memorial in honour of the Jubilee of the Empress-Queen. The Maharajah of Cooch Behar made a free gift of his Bryn Gwine property extending to seven and-a-half acres and worth half-a-lakh of rupees, as a site for the Sanitarium, while a sum of Rs. 90,000 placed by Rajah Gobind Lal Roy at the disposal of the Commissioner of the Rajshye Division to be spent on any work of public utility was applied to the purposes of the institution. Government aid in the shape of the services of an Assistant Surgeon for two years was also accorded, and the Sanitarium was opened provisionally in September 1887, and permanently on April 1st, 1888. The result has been an undoubted and a somewhat unexpected success, the Native Medical Profession giving the institution every support. Every endeavour has been put forth to make the existence of the institution known to the Native community, and though at first subscriptions were slow in coming in, the persevering efforts of the Committee of Management have resulted in a large sum being collected. The Sanitarium has two departments, the Hindoo Orthodox Department and the General Department, there being three classes in each, at rates ranging from Rs. 4-8 to Re. 1 per diem. The charges include rent of rooms, diet, and medical attendance. In the General Department the patients dine together English fashion; in the Orthodox Department Native customs are strictly followed. It has been found that the admissions on each side are almost exactly equal. The popularity of the institution is steadily increasing. An excellent beginning was made, there being no fewer than 199 admissions in the first year of its existence, and an extension of the buildings

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had to be carried out. These patients came from 27 districts of the Lower Provinces of Bengal, Calcutta sending rather more than one-half. Provided for the amusement of the residents are a tennis-court, a billiard-room, and a library. The building is a handsome one, and any European visitor is made welcome by the Superintendent.

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CHAPTER IX.

EDUCATIONAL ESTABLISHMENTS FOR EUROPEANS.

Darjeeling as a School Centre—Its Advantages—St. Paul's School—St. Joseph's College—Loretto Convent—Darjeeling Girls' School—Private Boarding Schools.

THE climate of Darjeeling is so admirably adapted for children that it is not surprising to find a large number of European boarding-schools located in the station. Their tendency is to multiply still further, for now that parents find that the conditions of health in Darjeeling are quite equal to those of England and that provision is made in the different seminaries for giving their sons and daughters a high-class education on thoroughly English lines, the popularity of the place as a school centre is rapidly increasing. The depreciated rupee and the heavy school charges at home partly account for this result; and yet another consideration, perhaps most important of all, is that parents and children do not lose touch of each other,—the holidays are spent in the family circle, and a few hours' journey at any time brings the school-boy or school-girl home, or the father and mother up to the hills, on a visit equally pleasant and beneficial to all parties. That most dismal drawback to Anglo-Indian life, namely, the fact of children growing up with little or no knowledge of their parents, and parents passing into the vale of years ignorant of the character and disposition of their children, is thus avoided.

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The most important educational establishment for boys is St. Paul's School; it occupies a splendid site on the summit of the Jalapahar ridge, commanding the best views in Darjeeling. The Head-master's bungalow is no other than Mr. Hodgson's house, so frequently referred to by Dr. Hooker in his "Himalayan Journals." On this classic ground the Observatory is now very appropriately situated, the scientific observations being taken under the supervision of the head-master, Mr. R. Carter, B.A., Oxon. The school estate extends to 63 acres, and is finely laid out. The establishment was originally in Calcutta, whence it was removed to Darjeeling in 1864. In 1888 the old school-rooms were renovated and enlarged. The handsome new building, known as Bishop Johnson's Hall, was also completed in that year, the name being given in recognition of the fact that this addition to the premises was mainly due to the liberality and energy of that prelate. It may be mentioned also that to Bishop Johnson the school owes its Chapel. By these additions the accommodation of the school has been increased to 170. The number of pupils now in residence or attendance is over 100 boarders and about 20 day-scholars. The teaching staff comprises four masters, educated entirely in England, three of whom are graduates, two of Oxford, and one of Trinity College, Dublin, while the fourth holds a First Division Government Certificate. The other teachers are all highly efficient and experienced. Every attention is given to developing the physique of the boys, cricket and other manly sports being sedulously encouraged. The establishment contains a well-supplied library and reading-room, where Indian and home papers may be read, and chess or draughts played. St. Paul's School, it may be added, has achieved considerable success in the examinations of the Calcutta University, to

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which it is affiliated up to the B. A. degree; and pupils from it have passed into the Engineering Colleges at Sibpur (Calcutta) and Rurki. The fees, it remains to be stated, are Rs. 360 per annum, or Rs. 40 a month, for the school year of nine months (March to November).

St. Joseph's College stands on the slope beneath St. Andrew's Church and the Town Hall. It is a Catholic seminary, formerly conducted by the Capuchin Fathers, but now by the Jesuits. Pupils of other persuasions, however, are also admitted. The College at present teaches up to the Entrance Examination of the University, and is conducted on exactly the same principles as St. Xavier's College, Calcutta. A library of useful and interesting books is provided for the pupils. The school year is ten months, the vacation being from 20th December to 20th February. The terms are Rs. 500 per annum, payable Rs. 50 monthly for the 10 months of residence. The number of pupils is about 50 boarders and 40 day-scholars. There are 11 Jesuit Fathers on the teaching staff. A magnificent new building is being erected at North Point, a splendid site, the free gift of the Bengal Government. The new St. Joseph's College will have a façade of 300 feet and two wings of 300 feet each, and will be one of the handsomest educational institutions in the Presidency. The estimated cost is over two lakhs of rupees.

Just below St. Joseph's College is the Loretto Convent, an institution for the education of young ladies. It is a Catholic School, but Protestant pupils are also admitted, and allowed to attend their own place of worship, provided their guardians appoint a person to accompany them. The course of studies reaches the standard of the University Entrance Examination, and in addition such accomplish

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ments as music, drawing, painting, French, German, and Italian are taught. There is a well-furnished library in the seminary, and pleasant grounds surround it. Boys up to the age of 12 are also admitted. The number of pupils averages about 120 boarders (70 girls and 50 boys) and 40 day-scholars (20 girls and 20 boys). The terms are Rs. 40 per month, not including extra branches of study. There are about 24 Nuns in residence, from the far-famed Loretto Convent, Dublin. This is the oldest school in Darjeeling, having been established so far back as 1846.

Conducted on similar educational lines to the Loretto Convent School, but on Protestant principles, is the DARJEELING GIRLS' SCHOOL, finely situated just below the Mall, between it and the East Birch Hill road. It is under the management of a Board, the Bishop of Calcutta and the Lieutenant-Governor of Bengal being *ex-officio* trustees. The terms are Rs. 25 per month for boarders, and Rs. 10 to Rs. 16 for day-scholars. Beyond the ordinary course of study pupils may take up the usual branches of scholastic accomplishments. The pupils number over 60 boarders, and about a dozen day-scholars, a few of the latter being little boys under the age of twelve. The school was founded in 1875.

There is one private boarding school for young ladies and little boys in the station, Hampton Court, Pleasant Valley (Mrs. Sells). This school has the reputation of being the most select school in the station.

There is a scheme on foot for starting a Non-Conformist School on unsectarian principles, which may come into existence before long.

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CHAPTER X.

MUNICIPAL AND DISTRICT ADMINISTRATION.

Municipal Area, Population, and Revenue—Drainage—Disposal of Town Refuse—Water-supply—District Area—Population—Religious Classification—Towns and Villages—Civil and Criminal Justice—Police—Education for the Natives—The Zillah School—Bhutea-Lepcha Boarding Establishment.

THE Municipal area of Darjeeling station covers an area of 5½ square miles, and contains an ordinary population of about 7,018 according to the Census of 1881; but being the great summer resort in Bengal from the heat of the plains, the population necessarily fluctuates considerably according to the season of the year. It is estimated that in the summer months the number of inhabitants is about 12,000. The income of the Municipality for the year 1888-89 amounted to Rs. 1,19,199, excluding an opening balance of Rs. 26,520. The expenditure amounted to Rs. 1,39,616. The year thus closed with a balance in hand of Rs. 6,103. Among the duties of the Municipality is to provide for the maintenance of a conservancy, a police establishment, and the roads of the station. The body was constituted in 1850, and its crest is the appropriate one of two crossed *kukeris*, or Nepaulese knives, so commonly seen in the district. The Municipal business has been guided by a succession of able and energetic Commissioners, who have had the

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advantage, in many instances, of valuable advice and suggestions from some of the cleverest and most experienced officers of Government, who have resided in the town for a few months of every year. It is not to be wondered at, therefore, that the sanitary arrangements of the station, which are also assisted by the natural lie of the land, a bracing climate, and a fairly large Municipal revenue, are everything that could be desired. The Sanitary Commissioner of Bengal (Dr. Gregg) pays the town this handsome compliment:—"Darjeeling is, without exception, the cleanest, most healthy, and best managed Municipality I have yet inspected, and the Municipal Commissioners deserve great praise for the efficient manner in which they have performed the duties of their trust."

The drainage of Darjeeling is very good, and is gradually being further improved year by year. Nearly all the drains are made of stone, and all those in the bazar and native town, as well as the important drains in the European quarter of the town, have been soled with Mirzapore stone or half-round glazed drain tiles, which makes it an easy matter to keep them clean. The arrangements in connection with public latrines, bathing places, markets, roads, registration of births and deaths, vaccination, and dispensaries are all excellent. The town refuse consists mainly of street-sweepings, stable manure, and cook-room garbage. It is collected in carts and conveyed to a spot below the compound of Beechwood Cottage in the native part of the town, north-west of the market, and is thence carried down to the wooden "shoot" by a wire tramway 1,000 feet in length, which is thrown obliquely across the Chandmara Jhora. The shoot is situated beyond the left bank of the Chandmara Jhora at the head of the stream, which is dry except in the rains. This stream enters the Jhora a long

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way down the hill near the junction of the stream with the Kag Jhora, a tributary of the Little Rungeet river. The shoot is 788 feet long, 5¾ feet wide, and 2 feet deep, and has an inclination of over 45°. *Mehters* are employed along the course of the shoot to keep its channel free from obstruction, and at the bottom to remove the rubbish to some distance and throw it further down the khud. To prevent the accumulation of rubbish which has hitherto not been put to any useful purpose, a large portion of it is burnt during the dry season.

The town has an excellent water-supply, brought from natural springs in the Senchal hill through a six-inch main pipe to the eastern foot of the Jalapahar hill near Jore Bungalow, and thence through a four-inch pipe to the collecting reservoir near Rockville boardinghouse. From this reservoir it is distributed to the town in pipes of various sizes as circumstances require. In the rains the water-supply is more than sufficient, but in the dry months slight scarcity is sometimes experienced.

The Administrative District of Darjeeling extends over an area of 1,234 square miles. Its population, according to the Census of 1881, was 155,179 persons, but this figure is now unquestionably considerably below the mark. The development of the tea industry and of the region generally has led to steady immigration, so that more than 50 per cent. of the population were born outside the limits of the District. Of these incomers, taking the returns of the 1881 Census, the only figures available, 55,000 are hill-men from beyond the British frontier, chiefly from Nepaul; nearly 5,000 are from the neighbouring District of Jalpaiguri, and more than 10,000 are from Purniah. The remainder are composed of representatives from almost every

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province of India. The general results of the Census of 1881 may be summarized as follows:—Number of towns and villages, 943; number of houses, 29,904; population, 155,179, namely, males 88,948, and females, 66,231; proportion of males in total population, 57·45 per cent.; average density, 125·7 persons per square mile; villages per square mile, ·76; persons per village, 163; houses per square mile, 24·2; persons per house, 5·3. Classified according to religious belief, the population was returned as follows:—Hindus, 126,717; Sikhs, 3; Mahomedans, 8,204; Christians, 842; Buddhists, 18,775; Brahmos, 14; aboriginal religions, 624. The great bulk of the population consists of aboriginal or semi-aboriginal tribes, among whom the Nepaulese are the most numerous. The Lepchas, who are considered the primitive inhabitants of Sikkim, are included among the Buddhists, but are few in number, and the race is said to be declining. The Nepaulese, includiug the Moormis, are divided among no fewer than 42 sub-tribes, and are returned among the Hindus. The Rajbansi Kochs number 30,801. The Bhuteas are not returned separately in the Census, but are included among the Buddhists. Of the Hindus proper, the two superior castes of Brahmin (numbering, including Babhans, 10,739) and Rajput (6,352) are the most numerously represented, very few of the other recognized Hindu castes exceeding 1,000 in number. The population of Darjeeling increased by more than one-half between 1872 and 1881, and is still growing at rapid rate. The Nepaulese are coming across the frontier in large numbers, and are eagerly welcomed by the tea-planters as their most valuable labourers; while Bengalis from the plains are gradually extending over the Terai. The Brahmo Somaj is represented by a few Bengali Government clerks at Darjeeling station. The population may be roughly

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divided into those connected with the tea industry, and the aboriginal agriculturists. There are no towns with the exception of Darjeeling station, and Kurseong, situated in the lower hills, twenty miles to the south, with a population in 1881 of 4,033. Of the 943 villages, 769 contain fewer than two hundred inhabitants; 114 between two hundred and five hundred; 46 between five hundred and a thousand; 11 between one thousand and two thousand; and 3 upwards of two thousand.

There are 3 covenanted officers stationed in the District, and 6 Magisterial and 4 Revenue and Civil Courts open, presided over by 6 stipendiary magistrates and 5 civil judges. The District Police and the Municipal Police are separate bodies. There is 1 policeman to about every 5 square miles of area, or to every 600 persons in the population. The number of annual convictions, mostly for petty offences, is about 1 to every 100 of the population. The district contains one Jail, at Darjeeling station, which is necessarily an expensive establishment to keep up by reason of the small number of prisoners confined. The jail population is usually about 100, this being in the proportion, approximately, of 1 to every 1,500 of the population. Long sentence prisoners are sent to the Presidency Jail in Calcutta.

Education has considerably advanced during recent years, despite the difficulties caused by an aboriginal population speaking various strange tongues, and dwelling in widely scattered huts among the mountains. Up to 1860, there was only one school in the District — the Government English School, attended by 33 pupils. In 1872, the number of schools had risen to 29, with 723 pupils. In 1874, the schools further increased to 46 and the pupils

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to 994. The Census of 1881 returned 1,610 boys and 179 girls under instruction, and 5,686 males and 269 females able to read and write, but not under instruction. The principal educational institution is St. Paul's School; and the other schools for European and Eurasian education are St. Joseph's Roman Catholic Seminary, the Darjeeling Convent School, and the Darjeeling Girls' School in Darjeeling station, and a Government boarding-school at Kurseong. A Government boarding school for aboriginal tribes has also been established in Darjeeling, at Fernie Cottage, just below the Native Sanitarium, and is attended by Bhuteas and a few Lepchas from Sikkim. The number of pupils averages about thirty, of whom rather more than half are boarders, the others being day-scholars. All the students are taught English and Tibetan, the purpose of the school being to train up a body of explorers, surveyors, and interpreters. In Darjeeling station there is also a zillah or district school, where English is taught, as well as Hindi. Well over 100 pupils attend, the majority being Nepaulese, Bhuteas, and Mahomedans from down country, comparatively few Lepcha children taking kindly to education. The Scotch Mission has also established a number of primary schools, chiefly for children of Nepaulese coolies working in the tea-gardens.

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CHAPTER XI.

DARJEELING AS A HEALTH RESORT.

A Paradise for Children—Maladies benefited by a Stay in the Hills—Diseases in which the Change is Undesirable—General Character of Climate—Cause of the Humidity—The Seasons—Necessity for Warm Clothing—Barometric Pressure—Highest and Lowest Temperatures for each Month—The Mean Temperature—Equable Distribution of Diurnal Temperature—Boiling Point—Influence of Diminished Atmospheric Pressure on the Human Body—Rainfall—Monthly Distribution.

THE fame of Darjeeling as a health resort is now world-wide. It has not merely become the sanitarium of Bengal, but invalids from all parts of India repair to this Himalayan hill station; and "globe-trotters," so called, visiting the district as a show place, come to appreciate the bracing climate. Dr. Hooker described Darjeeling as a paradise for children, and his words hold good to this day; he wrote as follows:—"I believe that children's faces afford as good an index as any to the healthfulness of a climate, and in no part of the world is there a more active, rosy, and bright, young community, than at Darjeeling. It is incredible what a few weeks of that mountain air will do for the India-born children of European parents; they are taken there sickly, pallid or yellow, soft and flabby, to become transformed into models of rude health and energy." The benefit to

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their elders is no less remarkable, and there are few diseases common to Anglo-Indians which will not be cured or alleviated by a stay in this most delightful of health resorts. Those in a thoroughly debilitated condition must, of course, observe discretion; for after a long residence in the plains, the large organs of the body are generally debilitated, and in the hill climate the heart, the liver, the lungs, the stomach, and the kidneys all have their work increased,—the heart by the extra exertion of the hills, the lungs by the rarefied air making deeper and more frequent respirations necessary, the stomach by the additional quantity of solids taken, the liver by the change from heat to cold, and the kidneys from the action of the skin being diminished. In advanced stages of cardiac disease, it may be pointed out, the elevation is probably too great, and the heart is unable to bear the increased strain. However, no one seriously affected in any one of the five vital organs just named would be so foolish as to proceed to Darjeeling or any other health resort without skilled medical advice. It may just be mentioned that the climate, from its equable character, is simply invaluable in the case of consumptive persons. A trip to the hills is, of course, next to a sea voyage, the great specific for fevers. All minor maladies, caused by over-work, climatic influences, or indigestion, disappear like magic in Darjeeling, the dry season being especially adapted for nervous diseases. Asthma, as a rule, is not benefited, the extremely rarefied air being against the patient who is suffering from this painful complaint. The rains are not suitable for those subject to bowel complaints unless great care is exercised, cases of diarrhœa having sometimes to return to the plains to get relief. Hill-diarrhœa, a very imperfectly understood malady, is sometimes prevalent during the wet season, even those not

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specially predisposed being affected. But it may be truly said of Darjeeling that it suffers less from this cause than any hill station in India. Children do not seem to be prejudicially affected by the rains; they are bright, happy, and rosy-cheeked all the year round. Epidemics among them are extremely rare; measles, whooping-cough, and chicken-pox have now and again made their appearance, but in an extremely mild form. As we have pointed out in a previous chapter, the sanitation of Darjeeling may be described as excellent in every respect.

There is no disguising the fact that the climate of Darjeeling is a humid one. Dr. Hooker characterized it as the dampest region in the whole Himalayas, and explains the reason in words full of admiration for the mighty operations of Nature. "The breezes are south-easterly," he says, "bringing that vapour from the Indian Ocean which is rarefied and suspended aloft over the heated plains, but condensed into a drizzle when it strikes the cooler flanks of the hills, and heavy rain when it meets their still colder summits. Upon what a gigantic scale does Nature here operate! Vapours, raised from an ocean whose nearest shore is more than 400 miles distant, are safely transported without the loss of one drop of water, to support the rank luxuriance of this far distant region. This and other offices fulfilled, the waste waters are returned, by the Cosi and Teesta, to the ocean, and again exhaled, imported, expended, re-collected, and returned." Throughout the greater part of the year this south-easterly wind, laden with moisture from the Bay of Bengal, prevails. It rises at sunrise, and its vapours are early condensed on the forests at Senchal; billowy clouds rapidly succeed small patches of vapour, which rolling over to the north side of the mountain are carried north-west, over a broad intervening valley

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to Darjeeling. There they hank on the east side of the spur; and this being partially clear of wood, the accumulation is slow, and always first upon the clumps of trees. Very generally by 9 A.M. the whole eastern sky, from the top of the Darjeeling ridge, is enveloped in a dense fog, while the western exposure enjoys sunshine for an hour or two later. At 7 or 8 A.M. very small patches are seen to collect on Tonglo, which gradually dilate and coalesce, but do not shroud the mountain for some hours, generally not before 11 A.M. or noon. Before that time, however, masses of mist have been rolling over Darjeeling ridge to the westward, and gradually filling up the valleys, so that by noon, or 1 P.M., every object is in cloud. Towards sunset it falls calm, when the mist rises, first from Senchal, or if a south-east wind sets in, from Tonglo first.

The seasons in Darjeeling may be indicated as follows: Cloudy, misty weather is most prevalent in February, May, June, July, August, and September. The spring commences about the third week in February, and lasts till the end of May. The small rains begin in May, the proper rains setting in about the middle of June and lasting till about the 20th of October, with intervals of fine weather. Winter may be said to commence after the rains are over, and to last till the middle of February. The most enjoyable period of the year is unquestionably the latter part of October, November, and December, precisely the period when the season is "off" in Darjeeling, and Calcutta people have all flocked down to the plains. The closing days of December are frequently misty and damp, with some rain. The first part of January is often bright and clear, but towards the end of the month thick penetrating fogs occur, and it is very cold, usually followed by a fall of snow, then by bright weather again. July and August are the rainiest months of the

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year. Frosts set in in November and December, and the weather is very fine and bracing; and as the atmosphere is at its clearest, the views to be obtained with absolute certainty are magnificent.

From the above jottings and the subjoined tables of temperature, rainfall, &c., it will be obvious that warm clothing is necessary at Darjeeling. A waterproof is also an essential; and as the sun is powerful at mid-day, a sun helmet or hat should not be omitted from the hill kit. Strong boots for climbing are likewise necessary. Other hints that may prove useful are that no bad effects need result from a wetting if the clothes and socks are changed immediately on returning home, and that it is wiser to bathe in tepid water, cold bathing being in the vast majority of Anglo-Indian cases too great a shock to the liver.

The following is a table of Barometric Pressure and Temperature for the four years 1884—87, the records being made at the St. Paul's School Observatory. The letters H. B. R. stand for Highest Barometric Reading," H. T. for "Highest Temperature," and L. T. for Lowest Temperature :—

Month.		1884.	1885.	1886.	1887.
January ...	H. B. R. ...	23·178	23·168	23·198	23·094
	H. T. ...	54·5	52·1	55·2	45·6
	L. T. ...	32·0	31·0	31·5	22·2
February ...	H. B. R. ...	23·162	23·060	23·062	23·148
	H. T. ...	51·1	51·4	53·3	59·6
	L. T. ...	25·4	26·5	27·9	22·2
March ...	H. B. R. ...	23·162	23·196	23·174	23·104
	H. T. ...	64·1	64·2	63·9	60·3
	L. T. ...	38·1	35·5	37·3	39·4

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Month.			1884.	1885.	1886.	1887.
April	...	H. B. R. ...	23·122	23·138	23·162	23·190
		H. T. ...	68·8	68·5	68·9	66·2
		L. T. ...	42·6	34·9	38·9	41·1
May	...	H. B. R. ...	23·098	23·142	23·144	23·124
		H. T. ...	66·9	69·7	67·2	72·3
		L. T. ...	43·8	43·9	42·9	46·7
June	...	H. B. R. ...	23·020	23·112	23·046	23·000
		H. T. ...	69·2	72·4	72·5	68·9
		L. T. ...	48 6	52·1	46·5	52·1
July	...	H. B. R. ...	23·026	23·074	23·036	23·052
		H. T. ...	72·5	70·0	69·9	70·6
		L T. ...	54·6	55-6	56·4	54·3
August	...	H. B. R. ...	23·084	23 040	23·076	23·070
		H. T. ...	71·8	69·2	72·0	71·4
		L. T. ...	53·8	54·5	55·9	54·3
September	...	H. B. R. ...	23·164	23·176	23·164	23·130
		H. T. ...	70·5	69·1	69·1	71·0
		L. T. ...	53·1	48·0	53·0	53·2
October	...	H. B. R, ...	23·256	23·176	23·172	23·1918
		H. T. ...	64·7	68·5	65·1	58·6
		L. T. ...	42·3	42·7	42·8	43·4
November	...	H. B. R. ...	23·142	23·234	23·190	23·226
		H. T. ...	61·7	59·6	60·9	58·0
		L. T. ...	35·9	38·5	41·0	40·0
December	...	H. B. R. ...	23·202	23·172	23·164	23·144
		H. T. ...	56·6	54·4	60·2	57·2
		L. T. ...	32·9	33·1	31·4	34·3

The elevation of St. Paul's School Observatory, it may be mentioned, is 7,426 feet, about 500 feet higher than the station itself, the Chaurasta being 6,998 feet above sea-level.

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The mean temperature for the whole year may be taken as 56° Farenheit. A most notable point is the uniformity of temperature. There is a difference of only 22° between the hottest and the coldest months; London, with a lower mean temperature, varies 27°. The diurnal distribution of temperature is equally even, the difference between the maximum of the day and the minimum of the night being only

During the rains, about	...	... 8°
,, ,, winter, about	...	... 12°
,, ,, hot season, about	...	... 15°

It is this characteristic that renders the climate especially suited to consumptive patients. The greatest heat is about noon, owing to the prevalent cloud, especially in the rainy season, when the sun shines only in the early morning if at all, and the clouds accumulate as the day advances.

The mean barometric pressure is 23·010. It varies ·161, the barometer being lowest in July and highest in October. The following table of boiling-points, with elevations, will be found interesting and useful :—

Place.	Height above sea-level.	Boiling Point: Degrees Farenheit.
Sea-Level	Nil ...	212·
Observatory, St. Paul's School	7,426 ...	199·4
Senchal	8,600 ...	197·0
Tongu	12,751 ...	189·7
Doukia Pass	18,400 ...	181·2

A curious calculation has been made in regard to the difference in atmospheric pressure on the human body in the plains of Bengal and at Darjeeling. At the level of the sea, a man of ordinary bulk and stature is pressed upon by a superincumbent weight of 30,000 pounds, or 13½ tons. An inch rise of the barometer shows that this load is

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lightened, sometimes in a few hours, by nearly 1,000 pounds. At Darjeeling the load is reduced no less than 22,500 pounds, with no appreciable result on the frame, however suddenly it be transported to that elevation. People take pretty much the same amount of food, drink, sleep, exercise and work, not only without inconvenience, but without perceiving any greatly altered conditions. The visitor at first finds himself short of breath after every slight ascent, and sometimes experiences a painful feeling at the base of the lungs; but these sensations pass away after a few days. On ascending to 14,000 feet, owing to the greatly diminished supply of oxygen, exercise brings on vertigo and headache. When still higher elevations are reached, lassitude and tension across the forehead ensue, with retching, and a sense of weight dragging down the stomach, probably due to the dilatation of air contained in that organ. Such are the all but invariable effects of high elevations, though they vary with different individuals according to the suddenness and steepness of the ascent, the amount and duration of exertion, and the length of time previously passed at great heights. Dr. Hooker, for example, who may be considered as having become gradually and thoroughly acclimatised, found his organic functions wholly undisturbed at an elevation of 17,000 feet; and when his body was at rest, could detect no increased quickness of pulse or of respiration. It is a curious anomaly that the Tibetan, born of lofty elvaetions and from infancy inured to cold and diminished armospheric pressure, still suffers when he crosses passes 18,000 or 19,000 feet high, and apparently neither more nor less than the man from the plains. It can be shown that under ordinary circumstances the average man, who makes 18 respirations per minute, requires at 15,000 feet of elevation to make 8 additional inhalations in

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order to compensate for the deficiency of oxygen in the air at that height. It is obvious that this must have a subtle influence on health.

Next as to rainfall. It may just be pointed out that the rain-gauge takes no account of the enormous deposition from mists and fogs at Darjeeling. The average recorded rainfall for the five years 1882-83 to 1886-87 was 113·86 inches. In 1887-88 the fall was 116·44. To show the monthly distribution, we shall select three representative years :

Years.	1884. About the average.	1885. Exceptionally rainy.	1888. Exceptionally dry.
January ...	·23	·46	0·62
February ...	3·27	·10	0·90
March	·40	3·33	0·97
April	3·92	9·64	3·14
May	5·34	9·90	3·88
June	21·20	19·72	8·53
July	30·08	39·64	39·66
August	22·18	28·50	22·92
September ...	0·24	28·81	12·00
October	11·45	1·80	·08
November ...	·02	·00	·50
December ...	·18	·00	·00
	107·51	141·90	93·20

The rainfall records may be thus summarized :—In January and February, practically no rain ; in March, April, and May, not much ; in June, July, August, and September, nearly every day rainy ; second half of October, very little rain ; November and December, practically none.

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CHAPTER XII.

EXCURSIONS.

Walks or Rides around the Station—Jalapahar, Senchal, and Tiger Hill—Lie of the Peaks—View of Mount Everest—Rungaroon Botanic Garden—Ghoom Rock—Lebong Spur—The Bhutea Bustee—A Buddhist Temple—The Cane Bridge over the Rungeet—Junction of Great Rungeet and Teesta—The Iron Suspension Bridge—Down the Teesta to the Plains—Tonglo—Scene from the Summit—Sundukphu—Phalut—Synopsis of Itinerary—Journey to the Jelep La Pass—Itineraries to the Tibet and Nepaul Frontiers—Short Routes to the Sikkim Monasteries.

THE visitor will find a number of pleasant walks in and around Darjeeling station. Personal and health considerations will decide when a pony or a dandy is necessary. The Chaurasta is the fashionable promenade in the evening, and the walk or canter may be prolonged round the Mall. Birch Hill Road, lower down the spur, is four miles round, with a sharp incline at each end. Magnificent views of the snows are to be obtained on a clear day, and valleys dotted over by tea-plantations. Birch Hill Park, which is on the road just below The Shrubbery, is very pretty, with little nooks and comfortable seats, and occasional glimpses of the snows.

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The climb from the Mall to the summit of Observatory Hill is a moderately stiff one; there are seats at the top, and the view is superb. The Botanic Garden is reached by a very steep descent; it is a pleasant place to spend an hour in, there being seats amidst shading trees and bright blooming flowers. The Victoria Waterfall, on the road from the Bazar to Rosebank, is also easy of access. During the rains the cascade is a fine one. All these little expeditions may be made on foot; but most persons, gentlemen as well as ladies, unaccustomed to the hills, find it wiser to take a pony or a dandy, for there is a good deal of climbing involved, especially in the case of the return journey from the Botanic Garden.

When excursions come to be made further a field, perhaps the very best to take first is that to Tiger Hill, *viâ* Jalapahar and Mount Senchal. This is a most enjoyable ride, the path gradually ascending as it winds along the ridge of the mountains. The banks on either side abound in rare and beautiful plants, and magnificent forests of oak, magnolia, and rhododendron are traversed. In April and May, when the magnolias and rhododendrons are in bloom, the scene is simply gorgeous. Among the other trees seen around are the laurel, mapel, birch, chestnut, hydrangea, and fig. In spring immense broad-leaved arums spring up, with green or purple-striped hoods that end in tail-like threads, 18 inches long, which lie along the ground; and there are various kinds of Convallaria, Paris, Begonia, and other beautiful flowering herbs. At least 30 ferns may be gathered on this excursion, but the tree-fern does not ascend so high. *En route* are passed Jalapahar Barracks and Ghoom Village, 7,372 feet high. Mount Senchal itself is 8,163 feet high, and Tiger Hill 8,514. Midway between the two latter are the old dismantled barracks, the site having been aban-

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doned owing to its being so exposed and so far from the station. At Senchal is a bungalow, where tiffin may be partaken of. Once for all it may be pointed out that permission to use the Government bungalows must be obtained beforehand by application to the Deputy Commissioner's Office, the Secretariat. No bungalow can be occupied without a pass. The houses are furnished, but in every case the excursionists must bring their own provisions.

Mount Senchal is the nearest point to Darjeeling station from which Mount Everest, the loftiest peak in the world, can be seen. The mountain appears over the intervening ranges just like the tip of the smaller end of an egg. The view is still more grand from Tiger Hill. From this height Everest on a clear day is distinctly visible. It lies on a line passing a little to the left of Phalut, and owing to its great distance (107 miles) appears less lofty than some of the nearer peaks. From both Tiger Hill and Mount Senchal a glorious view may be obtained of Kinchinjunga, and the group of lofty mountains clustering around it— Kabru, Kabur, Pandim, Janu, and Narsing. These appear to the eye all close together, though such is by no means the case. The Nepaul range is also in view, the prominent peaks from south to north being Tonglo, Sundukphu, Phalut, and Singli La. (For the heights and distances of all these mountains *vide* Table, Chapter VI. Their locality may be very easily determined by means of Map II, showing the lie of the principal peaks.) The plains of India are also commanded, with the courses of the Teesta, the Mahanada, and the Balasan. Beyond Tiger Hill, it may be pointed out, is Senchal, G. T. S. (Grand Trigonometrical Survey) Station, some 500 feet still higher, and not to be confounded with Mount Senchal previously mentioned. From Ob-

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servatory Hill to Tiger Hill is a distance of a little over 7 miles. But in all hill excursions it is best to reckon by time, not by mileage,—as the steepness and straightness of the roads are the great points that determine the duration of the journey. This journey may be made comfortably within four hours to Tiger Hill and back.

Another favourite and interesting excursion of about the same duration is to the old Botanic Garden at Rungaroon. Jalapahar and Ghoom are passed as before, and then a descent is made into the valley to the left. There is here a Forest Bungalow, and the spot is a favourite one for pic-nics, the scene being one of great beauty. A full description of the garden has been given in a previous chapter.

Yet another excursion in this direction is to Ghoom Rock, about 3 miles due west of Ghoom Village, on the road to Phalut. The rock is a huge boulder, curiously propped up at the base by other masses of stone, and with a zig-zag path running round its face. At the top is a seat, and a fine view is commanded. This, again, is a frequent resort for pic-nic parties.

A trip which possesses great interest and involves the minimum of hard work is that to Kurseong. The forenoon train from Darjeeling should be taken, the twenty miles being comfortably accomplished by tiffin time. Here the up train is passed, and a goodly company usually meets in the Clarendon Hotel for the mid-day meal. The visitor should arrange to stay overnight at this comfortable hostelry. Around Kurseong are many beautiful walks, and, as we have seen in a previous chapter, the forest scenery is quite different to that of Darjeeling, plant life of the tropical and temperate zones being strangely mingled. From the

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hill behind the hotel a magnificent view can be obtained on a clear day, the snowy range, the Teesta, the Balasan, and the plains of India all being commanded. Kurseong possesses a club, a cutcherry, a large school, a church, and a sanitarium for Roman Catholic priests. The climate is considerably warmer than that of Darjeeling, the elevation being only 4,860 feet, and invalids often find it beneficial to make a stay at the lower level preparatory to ascending to the more rarefied and colder air above.

An easy journey is down to the wooded spur called Lebong, where, the temperature being some ten degrees warmer than at Darjeeling, peaches and other English fruit trees flourish, but do not produce fruit. It is a comparatively easy walk down, but most persons find the aid of a pony or of a dandy for the return journey necessary. Round here are a number of tea-gardens, the plant thriving admirably at this elevation, and one of these gardens should, if possible, be visited. Below the spur is the village of Ging, surrounded by steeps cultivated with rice, maize, and millet. In making this excursion, the descent is commenced from the Chaurasta. The Bhutea *bustee* (or village) is soon reached, and the visitor, either going or coming, should not fail to pay the Buddhist temple, or *gompa*, a visit. The building is easily distinguished by the long poles, with fluttering rags attached all around it. These rags, often inscribed with prayers, are votive offerings to evil spirits, and the Bhuteas tie them to wands near their houses, to forest trees, and to any other convenient projection. The temple is a fairly good example of the Buddhist place of worship. In the vestibule are a large number of praying cylinders. One is fully six feet high, is worked by a strap attached below, and rings a bell at every revolution. One of the attendant Lamas will readily start off

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with his prayers a the request of the visitor; the difficulty is to get him to stop again, the dreary reiteration of "Om Mani Padmi Om" being in no way improved by the periodical clink of the bell. Inside the temple proper, on the altar so to speak, are numerous idols, brass cups, lamps, trumpets, bells, &c. On either side of the altar are recesses, containing books and manuscripts carefully rolled up in cloths. The side walls are covered with paintings, but the interior is so dark that it is almost impossible to make them out. In the body of the temple are huge tom-toms and gongs. There is a room above the temple, to which access may sometimes be obtained, where more manuscripts and idols are kept. The Lamas will also, on request, produce a tom-tom made of a human skull, and a trumpet fashioned from a human thigh-bone. A little above the temple, and a prominent object from The Mall, is a *chait*, or monument erected to the memory of some Lama. The *chait* of Sikkim is borrowed from Tibet, and consists of a square pedestal, surmounted by a hemisphere, the convex end downwards; on this is placed a cone, with a crescent on the top. Such a monument is venerated by the people, who, when passing it, often repeat the invocation, "Om Mani Padmi Om."

A more ambitious trip is made by prolonging this last excursion to the Lebong Spur through Badamtan to the cane bridge over the Great Rungeet River, this bridge being on the road to Tumloong, capital of Independent Sikkim. The bridge is situated just below the junction of the Rungeet with the Rungmo, and is 6,000 feet lower than Darjeeling station. The road distance as the crow flies is eleven miles, and the path an excellent one. At ten miles distance from Darjeeling is the junction of the two streams. The Rungeet makes its way through a dense forest; in the

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opposite direction the Rungmo comes tearing down from the top of Senchal, 7,000 feet above. Its roar is heard and its course is visible, but its channel is so deep that the stream itself is nowhere seen. The descent to the river is exceedingly steep, and the banks are clothed with impenetrable jungle. The pines on the arid crests of the hills around form a remarkable feature; they grow like the Scotch fir, their tall red trunks springing from the steep and dry slopes. The cane bridge is situated at a most wild and beautiful spot. The structure is about eighty yards long, and oscillates over the boiling torrent forty feet below. It is not a bridge to be crossed by nervous people, more especially as it is now greatly out of repair. These curious Himalayan cane bridges have been thus technically described:—"The main chains supporting the bridge are composed of five rattan canes each; the sides are of split cane hanging from each main chain as loops, two feet apart and two feet deep. Into these loops the platform is laid, composed of three bamboos, the size of a man's arm, laid side by side, the section of the bridge resembling the letter V, in the angle or base of which the traveller finds footing. Outriggers, to prevent the main chains being brought together with the weight of the passenger, are placed at every ten or twelve feet in the following manner: under the platform and parallel to the stream strong bamboos are passed and from their extremities to the main chain (of cane) split rattan ropes are firmly tied. This prevents the hanging loop or bridge from shutting up and choking the passenger. The piers of these bridges (for there are several of them) are generally two convenient trees, through whose branches the main chains are passed, and pegged into the ground on the opposite side." A Lepcha, carrying 140lbs. on his back, will cross such a bridge without hesitation, slowly but

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steadily, and with perfect confidence. European visitors, however, find the achievement one of no small difficulty, and in the case of the Rungeet Cane bridge—sadly out of repair, as we have previously remarked — will prefer the dug-out ferry boat, which plies from bank to bank across a deep broad pool a little below the precarious looking structure. Under all circumstances the passage should certainly be made, as the tourist who crosses the river rests foot in the territories of the semi-independent Rajah of Sikkim.

The excursionist may return to Darjeeling by the way he came, or, if he has made arrangements as to ponies, coolies, bedding, provisions, &c., he may proceed along the right bank of the Rungeet to its junction with the Teesta, and thence to the new iron suspension bridge. In this latter case, all impedimenta should have been sent on to the Travellers' Bungalow at Pashok. From the cane bridge to the Teesta is a six or seven miles ride, along an excellent road, skirting the Rungeet the whole way. River, forest, and mountain combine to produce effects of scenery that are to be surpassed in few parts of the world. Orchids and ferns abound; beautiful whip-snakes, partly coiled round twigs of trees and bushes, gleam in the sun; butterflies of the most gorgeous hues sail majestically across the path; and in the crystal waters of the river large fish are seen darting about. The junction of the Rungeet and the Teesta is a spectacle not to be forgotten; it may simply be said that the spot presents what is undoubtedly one of the most magnificent scenes within easy access of Darjeeling. A most curious phenomenon is the marked difference in colour of the two streams—the Teesta being sea green and muddy, the Great Rungeet dark green and very clear. The waters preserve their distinctive colours for some hundred yards, the

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line separating the two being most distinctly drawn. The Teesta, or main stream, is much the broader, more rapid, and more deep. The rocks which skirt its bank are covered with a silt or mud deposit, owing to the vast number of glaciers it drains. This fact also makes its waters colder by several degrees than those of the Rungeet. The latter stream, though it rises amongst the glaciers of Kinchinjunga and its sister peaks, is chiefly supplied by the rainfall of the outer ranges of Senchal and Singli La, and hence its waters are clear except during the height of the rains.

The iron suspension bridge has replaced a cane structure near the same spot. Its importance to trade is great, as this road, open all the year round, is the main traffic route to Tibet through the Jelep La Pass. The bridge is handsome and substantial. Pashok Bungalow lies above the junction of the two rivers, about three miles distant, the ascent being a fairly stiff one. Here the excursionist may rest for the night, his distance from Darjeeling station being fifteen miles. The shortest route home is through the forest on the Tungbu Ridge and under Senchal; the road is good all the way, and the scenery striking. But we should advise, if time be available, that the traveller should follow the course of the Teesta right down to its exit from the mountains by the Sivok Gorge, whence, *viâ* Siliguri and the Mountain Railway, the return may be made to Darjeeling. This magnificent ride will well repay the time and the trouble expended. The thickly-wooded bank affords shelter from the heat; while the stream itself, now foaming in its rocky bed, now forming a still deep pool, together with the background of hill stretching beyond hill, makes up a grand picture of natural scenery not to be surpassed all the world over. There are several Government bungalows

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along the route, arrangements for occupying which must be made beforehand, and the journey will occupy about three days.

Another and still more ambitious trip than the last named, is to Phalut, on the Singli La Range, which, as we have previously explained, is an immense spur running from Kinchinjunga right down to the plains of India. The road is through the Goomphar Forest past Ghoom Rock,—already described. At the 13th mile from Darjeeling is Jore Pokri Bungalow, where breakfast should be partaken of. Tonglo is 23 miles out by the path, height 10,070 feet, with a bungalow for the first night's rest. The scene from this peak has been finely described by Dr. Hooker, and the passage will form the very best guide to the excursionist. "From the summit of Tonglo," he says, "I enjoyed the view I had so long desired of the Snowy Himalaya; Sikkim being on the right, Nepaul on the left, and the plains of India to the southward; and I procured a set of compass bearings, of the greatest use in mapping the country. In the early morning the transparency of the atmosphere rendered this view one of astonishing grandeur. Kinchinjunga bore nearly due north, a dazzling mass of snowy peaks, intersected by blue glaciers, which gleamed in the slanting rays of the rising sun, like aquamarines set in frosted silver. From this the sweep of snowed mountains to the eastward was almost continuous as far as Chola, following a curve of 150 miles, and enclosing the whole of the northern part of Sikkim, which appeared a billowy mass of forest-clad mountains. On the north-east horizon rose Donkia (23,176 feet), and Chumulari (23,929). Though both were much more distant than the snowy ranges, being respectively eighty and ninety miles off, they raised their gigantic heads above them, seeming what they really are,

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by far the loftiest peaks next to Kinchinjunga; and the perspective of snow is so deceptive, that though from forty to sixty miles beyond, they appeared as though in the same line with the ridges they overtopped. Of these mountains, Chumulari presents many attractions to the geographer, from its long disputed position, its sacred character, and the interest attached to it since Turner's mission to Tibet in 1783. It was seen and recognized by Dr. Campbell, and measured by Colonel Waugh, from Sinchul, and also from Tonglo, and was a conspicuous object in my subsequent journey to Tibet. Beyond Junnoo, one of the western peaks of Kinchinjunga, there was no continuous snowy chain; the Himalaya seemed suddenly to decline into black and rugged peaks, till in the far north-west it rose again in a white mountain mass of stupendous elevation at eighty miles distance, called, by my Nepal people, 'Tsungau.' From the bearings I took of it from several positions, this is probably on the west flank of the Arun valley and river, which latter, in its course from Tibet to the plains of India, receives the waters from the west flank of Kinchinjunga, and from the east flank of the mountain in question. It is perhaps one which has been seen and measured from the Tirhoot district by some of Colonel Waugh's party, and which has been reported as being upwards of 28,000 feet in elevation; and it is the only mountain of the first class in magnitude between Gosainthan (north-east of Katmandoo) and Kinchinjunga. To the west, the black ridge of Sakkiazung, bristling with silver-firs, cut off the view of Nepal; but south-west, the Myong valley could be traced to its junction with the Tambur about thirty miles off: beyond which to the south-west low hills rose on the distant horizon, seventy or eighty miles off; and of these the most conspicuous were the Mahavarati, which skirt the Nepal

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Terai. South and south-east, Sinchul and the Goong range intercepted the view of the plains of India, of which I had a distant peep to the south-west only."

From Tonglo to Sundukphu, height 11,975 feet, the distance by the path is about 15 miles over a road that is fairly good, though at times rather trying for nervous people. Here a glorious view of the snowy range is obtained. At Sundukphu is another rest-house. Thence to Phalut, height 11,811 feet, is 13 miles, the peak being distant only 19 miles from Darjeeling as the crow flies. Another travellers' bungalow is situated here, and the sunrise and sunset scenes viewed from this point are unsurpassable. This journey, it will be seen, is an arduous one; but the scenery is superb, and the expedition unequalled by any that can be made from Darjeeling. It goes without saying that careful arrangements beforehand are absolutely necessary. The best times for undertaking the journey are from the middle of October to the middle of November, and from the middle of March to the middle of May, as during these periods of the year the sky is almost cloudless. Towards the end of March and the beginning of April, the rhododendron forests at Tonglo and Sundukphu are one blaze of brilliant and variegated colours. The following is a summarized itinerary of the route :—

1st Stage.—Darjeeling to Tonglo (total distance 23 miles) —Past Ghoom Rock to Jore Pokri, 13 miles, where ponies are changed; Manay Bhunjan (Temple); 16th and 17th miles up, 18 zig-zags; 20th mile, 4 zig-zags, then through bamboos over undulating ground; 22nd and 23rd miles, 11 zig-zags to top.

2nd Stage.—Tonglo to Sundukphu (total distance 15 miles)—27th mile, bottom of descent; 29th mile up, 17 zig-

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zags; 32nd mile, Kala Pokri Bungalow, where tiffin should be taken; 35th mile, steep ascent, 26 zig-zags.

3rd Stage.—Sundukphu to Phalut (total distance 13 miles)—Undulating, through pines; about half-way, 4 steep zig-zags down; through pines and rhododendrons; rise to Suburkum, 11,684 feet; down sharp steep saddle, khud to left; rise, and zig-zag to Phalut, 11,811 feet.

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An itinerary of the route from Darjeeling to Phalut.

Mile-posts.	Time.	Darjeeling to Tonglo, 23 miles. About 6 hrs.	Height.	Mile-posts.	Time.	Tonglo to Sundukphu, 15 miles. About 6 hrs.	Height.	Time.	Sundukphu to Phalut, 13 miles. About 4½ hrs.
	50	Forest Bungalow	6,980			Descend			Undulating
					17	Saddle (ascend)	9,850	40	Pine Valley to right.
	25	Top of rise to Goom Rock	7.450	xxiv	5	Descend	9,750	5	Rocky Valley to right: descend slightly
	10	Goom Rock	7,675						Saddle
					18	.....	9,700	4	
ix	15	"To Lingla" (Rise)	7,575						Sundukphu to right: open ground in front.
					10	A pretty hollow	9,400	3	
	10	Top	7,800	xxvi	29	.....	9,500	8	Water to right: undulating
x	2	Turn to left and descend	...	xxvii	15	.....	9,050	10	Leave open ground: through pines
xi	11	.....	7.100		24	Bottom of Descent (Saddle)	8,525	5	Long Saddle.
	7	A pool ("pokri")	7,150	xxix	15	Up 17 zig-zags	9,050	5	Descend
xii	8	.....	7,450		14	Top	9,550	7	Saha undulating
xiii	6	JORE POKRI	7,615	xxx	8	.....	9,450	14	Pool to left: through pine
xiv	15	Simoona (descend to right)	7,650		3	Saddle	9,400	13	Saddle: then ascend
xv	11	.....	7,150	xxxi	20	Saddle	10,150	5	Juniper Trees: then descend to Bamboos (water)
	15	Manay Bhunjun (Temple)	6,500		10	Saddle	9,900		
xvi	8	Up 18 zig-zags (16 short ones)	...		8	Saddle	10,101	5	4 steep zig-zags down
xvii	23	Dead Trees	7,600	xxxii	7	.....	10,210	7	Saddle and descend
	14	Hut: top of zig-zag No. 17	7,930		5	Saddle		6	Bottom and then rise

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xviii	9	.....	8,150		5	KALA POKRI	10,130	10	Saddle and rise
	13	Fairly level	8,350	xxxiii	18	Ascend	10,325	6	Rhododendrons and pines and turn left. Saddle: fine pines to right
xix	7	Bamboos	8,450		11	Saddle	10,900	8	Rise to Suburkum
	10	Descend slightly	...		14	First Pines	10,910	11	SUBURKUM (T.S., 11,684)
	3	Turn to left	8,415			Descend		12	Down sharp steep saddle
xx	7	.....	8,776		13	Open ground	10,700	10	Bottom
	5	4 zig-zags (2 long ones)	8,900	xxxv	10	Saddle: begin steep ascent	10,475	10	Saddle
	5	Through Bamboos	9,000		25	26 zig-zags		11	Sharp Saddle
	10	Undulating	...	xxxvi	30	.....	11,400	17	Saddle: steep khud to left and rise
xxi	...	.....	9,100			SUNDUKPHU (T. S., 11,929)	11,975	7	Level (water)
	8	.....	9,400					6	Sharp to left
	6	Saddle	9,400					10	Water
	2	Zig-zags	9,400					7	Sharp to left: and zig-zag to PHALUT (T.S., 11,811)
	7	Begin 11 zig-zags to top (2 long ones)	9,400					18	
xxiii	14	TONGLOO (T. S. 10,074)	10,070						

Phallulang Pass

Obs. 1.—Time in minutes from point to point.
2.—Time given implies trotting on level ground from Darjeeling to Simoona. The rest only steady walk of pony.
3.—Change ponies at Jore Pokri.
4.—Heights taken with a Casella's Aneroid.
5.—Mile-posts as in January 1882.

Obs. 1.—Go afoot from Tongloo to lowest point.
2.—No good water along road above 10,000 ft.
3.—Tiffin at Kala Pokri.
4.—Sheep are muzzled above Kala Pokri to prevent them eating the Aconite plant.

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The last excursion we shall refer to is that up to the Jelep La Pass, a distance of about 86 miles. The road to the suspension bridge over the Teesta has already been described. Crossing the river, Kalimpong, an observation station for trade in transit is reached. From thence five easy marches bring the traveller to the foot of the Pass, the road nearly all the way being passable for ponies. The ascent to the summit (14,388 feet) is long and trying, but when the climb is accomplished a magnificent view of Tibet amply repays the journey. The town of Chumbi, in Tibet, where the Rajah of Sikkim used to spend a portion of every year, is about 20 miles distant. The Pass is at present occupied by British troops.

The subjoined synopsis of routes particularizes and amplifies the above information.

Routes to the Tibet and Nepaul Frontiers.

Darjeeling 7160	to	Badamtam * (*vid* Rungeet Valley).	2,500
	or		
Darjeeling	to	Pashak * (*vid* Rangyaroon.)	3,000
Badamtam or Pashak	to	Kalimpong *	4,000
Kalimpong	to and back	Rinkinpong or Deolo	4,700 / 5,580
Kalimpong	to	Rissoom * or Pedong†	6,410 / 4,760
Rissoom	to and back	Dumsong	6,310

Note.—At places marked * there are Government Bungalows, particulars regarding which can be obtained at the Deputy Commissioner's Office. No Bungalow can be occupied without a pass.

† Means there is a Hut at this place.

On return journeys down hill two marches can often be done in one day.

The figures give the approximate height of the places against which they are printed.

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Rissoom or Pedong	to	Dulapchin	3,200	
Dulapchin	to	Lingtam	4,630	
Lingtam	to	Jeyluk ‡ or Gnarik	9,060 10,000	
Jeyluk	to	Gnatong ‡	12,030	
Gnatong	to	Kophu ‡	12,700	Lake Bidangcho.
Kophu	to	Jeylep Pass	14,390	
	and back			
Kophu	to	Sharab	12,500	Lake Nemitzo.
(visiting Gnatui Pass *en route*)			14,400	
Sharab	to	Byutan	12,000	
(visiting Yakla Pass *en route*)			14,400	
Byutan	to	Barfonchen‡ to Chomnaga‡	11,000 12,000	
Barfonchen or Chomnaga	to	Chola Pass	14,550	
Barfonchen or Chomnaga	to	Phiungong	12,130	
Phiungong	to	Rangpo ‡	4,500	
Rangpo	to	Tumlong †	5,290	Residence of the Maharaja of Sikkim.
Tumlong	to	Rangpo		
Rangpo	to	Gantok †	5,800	
Gantok	to	Dikhiling†	5,000.	Copper Mines.
Dikhiling	to	Rissoom.		
Rissoom	to	Kalimpong.		
Kalimpong	to	Darjeelign.		

ALTERNATIVE ROUTES TO ABOVE.

Darjeeling	to	Sharab (as above.)	
Sharab	to	Gantok.	
Gantok	to	Darjeeling (as above.)	

† Means there are Huts at these places.
‡ Means there are Monasteries.
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Darjeeling	to	Tumlong (as above. by Passes.		
Tumlong	to	Silling.		
Silling	to	Lingmo.		
Lingmo	to	Yongong †.		
Yongong	to	Dulling † or Barpong.		Passing the Do Mani or "Rock of Prayer."
Dulling or Barpong	to	Tassiding †	4,600	
Tassiding	to	Pemiongtchi †	6,920	
Pemiongtchi *vid* Rubdenchi, Geysing and Changachelling† (7040)	to	Yangtheung.		
Yangtheung	to	Samdongden.		
Samdongden	to	Head of Kulhait stream.		
Kulhait stream	to	Phulloot * *vid* Singlila.	11,810	
Phulloot	to	Sundukphu *	11,930	
Sundukphu	to	Tongloo *	10,074	
Tongloo	to	Jor-pokhri *	7,555	
Jor-pokhri	to	Darjeeling. *		
Silling or Tumlong	to	Tingchum.		
Tingchum	to	Ringum.		
Tumlong	to *vid* Mafila.	Nampatam.		
Nampatam	to	Ringun.		
Ringun	to	Nangama.		
Nangama	to	Choonthang †	5,070	
Choonthang	to	Lachung ‡	8,790	
Lachung	to	Yeumthang	11,900.	Hot Springs.
Yeumthang	to	Momay Samdong ‡	15,300	

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Momay Samdong and back.	to	Donkia Pass	18,100	
Momay Samdong	to	Sibula Pass	17,580	Only practicable in very fine weather.
Sibula Pass	to	Phalung Pass	16,150	
Phalung Pass	to	Giagong	15,490	
Choonthang	to	Latong	6,950	
Latong	to	Lamteng †	8,880	
Lamteng	to	Tallum Samdong‡	11,500	
Tallum Samdong	to	Siphu Rocks near Tangu ‡	12,800	
Siphu	to	Sittong	14,000	
Sittong	to	Giagong.		
Giagong	to	Bhomtzo		
Bhomtzo	to	Cholamoo Lakes		
Cholamoo Lakes (*vid* Donkia Pass.)	to	Momay Samdong		
Darjeeling	to	Badamtam		
Badamtam	to	Namtehi †	5 580	
Namtchi	to	Temi	4,770	
Temi (and on as above.)	to	Lingmo		
Kalimpong	to	Lolegaon *	5 050	
Lolegaon	to	Songchongloo and back.	6,260	
Lolegaon	to	Rissoom (*vid* Labah)	6,600	
Lolegaon	to	Pemling		
Pemling (*vid* the Lakes.)	to	Nimja		
Nimja	to	Gurubatan	2,000	
Rissoom	to	Pasheteng	* 6,000	
Pasheteng	to	Ambiokh or Gurubatam *,	2,920	
Gurubatam	to	the Dooars.		

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SHORT ROUTES TO THE SIKKIM MONASTERIES.

Darjeeling	to	Phulloot (as above.)	
Phulloot	to	Barpong (as above.)	
Barpong	to	Namtchi.	
Namtchi	to	Badamtam.	
Badamtam	to	Darjeeling.	

Darjeeling	to	Mintugong †	5,240
(*vid* Tukvar and Goke.)			
Mintugong	to	Rinchingpong†	5,570
Rinchinpong	to	Pemiongtchi	

(*vid* Geysing and Robdenchi.)

OTHER EXCURSIONS.

Darjeeling	to	Rangbee.*
Rangbee	to	Serail * or Mongpoo.*
	or	
Serail	to	Mongpoo.
Mongpoo	to	Reaing.*
Reaing	to	Pashak.
	or	
Reaing	to	Kalimpong.
		vid the Rili.

Darjeeling	to	Badamtam.
Badamtam	to	Pashak
(*vid* Runjeet and Teesta Valleys.)		
Pashak	to	Darjeeling.

RIDES IN THE NEIGHBOURHOOD OF DARJEELING STATION.

Senchal* and Tiger Hill.
Sonada, Pachim and Rungbool.*
Rangaroon Botanical Gardens.
Ghoom Rock.
The Lebong Spur.
Birch Hill.
Tukvar.
Hope Town.

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TRAVELLERS' BUNGALOWS IN DARJEELING DISTRICT.

KURSEONG, PANKABARI AND SILIGURI.

Under the Deputy Commissioner.

PLACE.	Distance from Darjeeling. Miles.	Height. Feet.	PLACE.	Distance from Darjeeling. Miles.	Height. Feet.
1. Senchal	5	8,000	9. Dentam	64	4,500
2. Rangiroon	6½	5,700	10. Rimbik	43	6,200
3. Badamtam	7½	2,500	11. Merig	25	5,000
4. Jorpokri	12	7,400	12. Kalimpong	23	4,000
5. Tonglu	21	10,074	13. Rissisoom	34½	6,410
6. Sandakphu	35	11,929	14. Rangli	47½	2,590
7. Phalut	48	11,811	15. Sadongchen	56	6,500
8. Cheabhanjan	54	10,320	16. Gnatong	65½	12,300

Under the Executive Engineer, P. W. D., Darjeeling.

17. Pedong	35	4,760	20. Riang	23½	625
18. Pashok	17½	3,300	21. Kalijhora	30½	550
19. Teesta Bridge	18 *viâ* Rungeet	710			

Nos. 4 to 8 are on the Nepal Frontier Road, Nos. 14 to 17 on the road to the Jelap Pass, and Nos. 19 to 21 are on the Teesta Valley Road. From Phalut to Dentam the road is very rough. The Bungalow at Dentam is a converted Bhootia house. Rimbik is the apex of a triangle of which the road from Phalut to Sandakphu is the base. Merig is on the Nepal Frontier Road to the plains. Rissisoom is on the Daling road to the plains.

2. *Rate of fees.*—There is an uniform rate of Rupee 1 per night for each occupant.

For occupation by day only, the rate is 8 annas for each person, up to a maximum charge (except for the P. W. D. Bungalows) of Rs. 8 for a party.

In the case of Senchal, Rangiroon and Badamtam Bungalows, the rate for occupation by day only is 4 annas for each person, up to a maximum charge of Rs. 4 for a party.

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3. The Bungalows are available only for persons provided with passes from the office of the Deputy Commissioner or of the Executive Engineer. To this rule, whether for officers on duty or tourists, there is no exception. A separate pass must be obtained for each occupant for each Bungalow whether going or returning.

4. Refund of Bungalow fees is not allowed. All passes must be made over to the Chowkidar in charge.

5. The Bungalows (except Rimbik) are furnished with Beds, Tables, Chairs, Lamps with wicks, Candlesticks, Crockery and Glass and kitchen utensils. A party of five or six can be accommodated at Bungalows, 1—9 and 12 and 13. At the remaining Bungalows a party of two only can be accommodated. Visitors must take their own Bedding, Cutlery, Linen and provisions of every kind as well as candles or oil for lighting. There is no resident Khansamah at any Bungalow. Firewood is provided free on the Nepal Frontier Road Bungalows. At Kalimpong four annas a maund must be paid before delivery of the wood. Ordinary bazar supplies are obtainable at Jorpokri, Dentam, Kalimpong, Teesta Bridge and Pedong.

6. A permanent sweeper is maintained only at Rungiroon. At Kalimpong, Jorpokri, and Teesta Bridge, sweepers can be hired on the spot. Elsewhere travellers must take sweepers with them and no passes will be issued except on this condition.

7. Travellers wishing to return to Darjeeling from Chiabhanjan through Sikkim can do so in 4 marches stopping at Dentam, Rinchinpong and Chakang.

September 1891.

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CHAPTER XIII.

AGRICULTURE, MANUFACTURES, AND TRADE.

Products of the Terai—The Crops in the Hill Districts—Tea, the Staple Industry of Darjeeling—History of the Enterprise—Increase in the Number of Gardens and in the Outturn—Coolies and their Wages—Method of Tea Cultivation—Plucking and Manufacture—Scene on a Tea Estate—The Bhutea Carriers—Cinchona—Mongpo Garden and Factory—Experiments with Ipecacuanha—Forest Reserves—Jungle Products—Local Manufactures—Local Trade—Traffic with Nepaul, Sikkim, Tibet, and Bhutan.

Rice constitutes the staple product of the Terai district. Subordinate crops in the plains are cotton, jute, pulses, oil-seeds, mustard, tobacco, and sugarcane. As usual throughout Bengal, there are two rice harvests every year,—the one reaped in winter and the other in the Hindoo month Bhadra (August to September). Rice cultivation is rapidly extending through the Terai. Irrigation is industriously practised, and manure is applied, though not extensively; Bengali and Nepaulese cultivators use the plough, and plough cultivation is also extending among the aboriginal tribes, especially in the tract to the east of the Teesta. The nomadic method of agriculture known as *jum*, which consists in burning down a fresh patch of jungle land each

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successive year, is decreasing. The *dao* or hill knife is used for all rustic operations. The yield of rice per acre varies from 8¾ cwts., or 12 maunds, to 3½ cwts. per acre. The cultivation of tea has largely developed of late years in the Terai. The yield per acre is much greater than in the hills, but the quality is not of the same high standard of excellence. Cotton is somewhat extensively cultivated by the Mechis along and under the lower ranges of the mountains. In the hill-country the chief crops are Indian corn, millets (murwah, &c.), wheat, potatoes, two kinds of rice (not in large quantity), mustard, betel-leaf, tobacco, beans, cardamoms, and, most important of all, tea. Cardamoms is a valuable crop, and is chiefly grown in the lower valleys. The plant takes nearly three years to ripen, and is cultivated with great care and attention, principally by Nepaulese. In the lower valleys irrigation is resorted to for the cultivation of rice. Elsewhere the natural rainfall is sufficient. The hill agriculturists seldom or never apply manure to their fields.

The staple industry of Darjeeling is the cultivation and manufacture of tea. It has been established entirely by British enterprise and British capital, and is conducted under skilled European supervision. The discovery of tea in India dates from 1826; when a Mr. Bruce, who commanded a flotilla of gunboats in Upper Assam in the first Burmese war, found the plant growing wild, and brought down with him a number of plants and seeds. It was not till some time after tea cultivation had established itself in the Assam Valley, that any attempt was made to introduce it into Bengal proper. The first regular tea-garden in Darjeeling was opened in 1856; and after the natural mistakes of the first few years, the business took firm root in the district, and has continued to prosper with accelerating

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progress. The following table will show the growth of the industry :—

Years.	Number of gardens.	Acres under cultivation and taken up for tea.	Outturn in lbs.
1866	39	16,392	433,715
1868	44	10,067	851,549
1870	56	11,046	1,689,186
1872	74	14,503	2,938,626
1874	113	18,881	3,927,911
1875	121	22,162	4,600,758
1880	155	28,367	5,160,314
1882	154	25,105	6,596,456
1883	165	44,482	8,080,293
1887	169	54,235	9,944,356
1888	174	57,181	10,274,131

The following table shows the relative proportion of mature plants during the past two years :—

Years.	Acres under Mature Plants.	Acres under Immature Plants.	Acres taken up for cultivation.
1887-88	32,481	6,871	14,883
1888-89	35,755	9,170	12,256

In 1887-88 the yield per acre under mature cultivation showed an average of 306·1 lbs. In 1888-89 the figure was lower, namely, 287·3 lbs. The cost of cultivation (which includes rent) ranges from 26 shillings to 100 shillings per acre, and the cost of manufacture from 72 shillings to 78 shillings per acre. The plantations extend from the Terai at 200 feet above sea-level up to 7,000 feet of elevation. A great extent of forest land has been cleared in consequence of the extension of the industry. The plant

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grown is almost exclusively the Chinese or the hybrid kind; the indigenous variety is very rarely cultivated. The number of coolies employed on the various estates varies from 45 to 350; their wages are Rs. 5 to Rs 6-8 for men, Rs. 4-8 for women, and Rs. 2 to Rs. 4 for children. Labour is plentiful,—the light nature of the work attracting numerous immigrants from the surrounding hill states, especially Nepaul. The plantations often suffer severely from red spider, green fly, and mosquito blight. This last-named insect causes most apprehension in the lower ranges of the hills. The plague is said to be increasing, and to be more serious than the red spider; the bud being attacked and the plant not allowed to mature. The red spider proves a terrible scourge in some gardens, and baffles the energies of the most energetic planter. A white grub turning into a brown beetle attacks the roots, and wherever it makes its appearance is exceedingly destructive. Machinery has been introduced with marked success into all but the smallest gardens, and steam has taken the place of water-power on many estates. The processes of manufacture have also been greatly improved; greater regard is paid to the withering and manipulation of the leaf, and plucking is more carefully attended to than formerly. The opening of the North Bengal State Railway and of the Darjeeling and Himalayan Railway has immensely increased the facilities for the transport of the tea to Calcutta, whence it is shipped to London, the great tea mart of the world.

The following account of the *modus operandi* of tea cultivation and manufacture in the Darjeeling District originally appeared in *The Field* newspaper, and was reprinted in the *Bengal Statistical Reporter*. The writer states that his information is founded on personal observation and experience:—

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'Having selected an advantageous site as regards soil, facilities of procuring labour and means of transport, a good lay of land, jungle that can readily be got rid of, water, and a healthy situation; and having made arrangements for the tea seed required for the year's planting, a temporary bungalow is erected of bamboos and grass, and a number of sheds run up for the coolies. Operations usually commence in October at the close of the rainy season.

'Presuming that it is intended to make a plantation of 100 acres, some two or three hundred men, women, and children are set at work to cut down the jungle, probably composed of forest trees, and long, coarse tiger grass; the rushwood and undergrowth being cut first and the big grass later, so that when they fall they may lie on the underwood; the very heavy timber being ringed or barked, and left standing. After allowing sufficient time for the timber and grass to become thoroughly dry, the whole is set on fire, and any unconsumed logs of timber that are left are gathered together in a heap and fired again. Having burned the jungle, the coolies are set to work to dig out the small roots, and where that is done, the whole is dug some four or five inches deep. The land is then staked off with bamboo stakes at distances of four feet apart, showing where the tea plants are to be. Holes of 18 inches by 1 foot in diameter are next dug at each of the stakes, in which the surface soil is placed. This work is generally all completed by the end of November. Three or four seeds are now placed in the soft soil of the holes, and pushed down to the depth of an inch.

'The garden being thus planted, attention is paid to erecting more substantial buildings, which generally consist of a bungalow for the manager, with stables, cook-house, and

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all necessary out-buildings attached, and a number of comfortable houses for the coolies. All that now remains to be done is to keep the garden quite free from weeds, and to fill up any vacancies that may occur from time to time from a nursery that is made when the plantation is first commenced. On new plantations the soil is so rich that manure is unnecessary, and only attracts insects which are likely to destroy the plant while young.

'When the tree arrives at maturity, it is with tea as with all other cultivations. It has been proved in England, and all countries where really high cultivation is followed out, that the higher the system pursued, the greater the profit. Deep hoeing is necessary from time to time between the lines of trees as weeds appear, while around the trees themselves careful hand-weeding goes on. The third year all the plants should be from 4 to 5 feet in height; they are then pruned down to 20 inches, in order that the young leaves may be plucked readily, and also to promote the growth of new wood and tender shoots. Pruning has to be done in the cold weather, say between November and February, when the sap is down. The sooner after the sap goes down the better, for the sooner will the tree then "flush," or fling out new leaves in the spring. A month or six weeks after pruning, the new shoots are on an average from 6 to 8 inches high, and can now be picked; and from this period all through the rains, or for a space of eight months, successive "flushes" take place at intervals, varying from fifteen to twenty days, according to soil, degree of cultivation, moisture, and system of pruning adopted. The tea plant is said to "flush" when it throws out new shoots and leaves. A light cultivated garden should in its fifth or sixth year yield 500 lbs. of manufactured leaf per acre; and the outturn should increase yearly till the plant is in its

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twelfth year, when it has arrived at maturity, and should give 900 lbs. per acre. Although it reaches maturity in twelve years, the plant has been known to yield just as freely at thirty years of age.

'As soon as the "flush" is in a sufficiently advanced state, as many hands as can be spared (the preference being given to women and children, on account of their gentler touch) are sent, provided with large baskets, to pluck the leaves. Tea can be made of the young tender leaves only; the younger and more succulent the leaf, the better tea it makes. As a rule, it is found too expensive to pluck the leaves separately, although the principle in plucking is to leave the bud at the axis of the leaf down to which it is plucked intact, and not destroy it by plucking the whole stem. The leaves are named as follows, from the teas they would make, supposing that there are named six leaves on a shoot of the tree:—1, Flowery Pekoe; 2, Orange Pekoe; 3, Pekoe; 4, Souchong; 5, Congou; or mixed together—1, 2, 3, Pekoe; 1, 2, 3, 4, 5, Pekoe Souchong. If No. 6 be taken into account, it would make a coarse kind of Bohea.

'In the evening all the leaf-pluckers are called to the factory, where, after weighing the leaf in their respective baskets, it is spread lightly on bamboo mats or trays, tier, above tier, to allow the leaf to wither. There are several tests to show when the leaf is withered Fresh leaf gathered in the hand, and held near the ear, crackles, but no sound should be heard from withered leaf. The stalk of withered leaf will bend double without breaking; but fresh leaf stalks, if bent very little, will break. In dry weather, if there is any sun when it is brought in, the leaf is generally sufficiently withered by the morning; but should it not be ready, it is

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put out in the sun, or, if there is no sun, artificial withering is resorted to.

'When sufficiently withered to roll without breaking, a quantity of about 30lbs. is given to each man, who rolls it on a strong wooden table (unless this is done by a steam rolling machine lately invented) covered with a fine bamboo mat, the slightly rough surface of which enables the leaf to roll better. As much leaf as can be conveniently held in both hands is taken by the men from the heap, and this they roll with a backward and forward motion till the leaf gets in a soft state, and when in the act of rolling it gives out juice freely. When rolled sufficiently, it is formed into tight-compressed balls.

'The balls accumulated are allowed to stand until fermented. This is the most important point in the whole manufacture. The fermentation should be stopped in the ball just at the right time, which practice alone enables one to do. As a rule, the inside of the ball should be of a rusty red colour. The fermentation is stopped by breaking the ball and spreading the leaf out on mats, and without delay putting it out in the sun. When it has become blackish in colour, it is again collected and re-spread, so that the whole of it should be affected by the sun. With bright sunshine, an hour, or even less, suns it sufficiently. It is then placed on trays above charcoal fires, where it is shaken up and re-spread several times until it is quite dry and crisp. Any piece then taken between the fingers should break with the slightest attempt to bend it. The manufacture is now completed: the roll has become tea. The tea has now to be sifted, and the various qualities separated. For this purpose, sieves of different meshes are used, the highest quality tea falling through the finer sieves,

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and the coarser tea through the larger sieves. All the red, hard, unrolled leaf is now fanned and picked out of the tea, and mixed with the Bohea. All the black teas, with the exception of Flowery Pekoe, are made in this manner. The manufacture of the latter is simple enough. When the leaves from each shoot are collected, they are exposed to the sun, spread out on mats, until they have well shrivelled. They are then placed over small and slow charcoal fires, and so roasted very slowly. If the above is well done, the Pekoe tips come out a whitish orange colour. The whiter they are the better. Flowery Pekoe is quite a fancy tea, and very seldom made.

'To make green tea, the leaf must be brought in twice in the day. What comes in at one o'clock is partly made the same day. The evening leaf is left till the following morning, laying it so thick that it will *not* wither. The leaf is then placed in hot iron pans over a small furnace, at a temperature of, say, 160°, and stirred with sticks for about seven minutes, until it becomes moist and sticky. It is then too hot to hold long in the hand. It is next rolled for two or three minutes on a table until it gets a little twisted, after which it is laid out on mats in the sun for about three hours, and rolled twice during that time, always in the sun. It is then again placed in the pans at the same heat as before, and worked with sticks until it becomes too hot to hold. It is then stuffed as tight as can be into canvas bags; the mouth of the bag is tied up, and the bag beaten with a flat, heavy stick to consolidate the mass, and so it is left for the night. Next morning it is taken out of the bags and worked with sticks as before in the pans for nine hours without intermission. During this last process the green colour is produced, and the tea is made. The following are the kinds into which green tea is sorted:—1, Ends;

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2, young Hyson; 3, Hyson; 4, Gunpowder; 5, Dust; 6, Imperial. The indigenous or hybrid plant makes the best black tea, and the plant produced from seed originally imported from China the best green tea.

'The tea is now, after another drying over charcoal fires, packed in boxes lined with lead, containing from 80 lbs. to 100 lbs. each, and sent down to the Calcutta market, where, as a rule, it is disposed of by public auction, and fetches from (according to quality) 1*s.* to 2*s.* per lb.'

In the above extract, we have retained the paragraph relating to green tea, though this is now seldom or never made in the Darjeeling District. The visitor should on no account fail to inspect one of the numerous tea-gardens which are within easy access of the station. Such an expedition is interesting, not only from seeing the tea in all its stages, but also for the study it affords of the picturesque hill-people. The Nepaulese coolies are a happy-go-lucky lot, cheerful and in good condition, and, despite a liberal coating of dirt, by no means bad-looking. They are in every respect superior to the labourers from Bengal, and that they are better off on the tea-gardens than in their own country is proved by their immigrating in such large numbers, bringing their wives and children, and settling permanently in British territory. A tea-garden, despite the regular and unromantic way in which the stunted bushes are laid out acre beyond acre, is not devoid of picturesqueness. The planters' bungalows are almost invariably charmingly situated on some spur from the hill-side, and the stranger, even without any letter of introduction, is sure of that hospitable welcome which has come to be associated with the very name of planter. Every day around Darjeeling the visitor will not fail to observe the long strings of sturdy Bhutea

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coolies carrying up to the railway terminus the heavy chests of tea, supported on their backs in their peculiar manner, tough grass-bands crossing their foreheads. The immense weight these coolies, both men and women, can carry in this manner is truly wonderful.

Only less interesting than that of tea is the history of the cinchona industry in Darjeeling. The cultivation of cinchona was commenced by Government in 1862, Dr. Anderson, of the Botanic Garden, Calcutta, superintending the new enterprise. A case containing 249 plants and 580 seedlings was carefully despatched, and arrived with the loss of only eight plants, though the journey took fifteen days. After a period of doubt and disappointment, the prospects of the new enterprise began to look bright. By 1875, the plantation yielded 2,111,931 lbs. of dry bark, which produced 1,989 lbs. of quinine, valued at £3,182; the expenditure for the year had been £5,217. This was the first season when the young trees came into bearing. Soon the enterprise became not only self-supporting, but highly profitable. In 1882, the year's working resulted in a net gain of £13,000, equal to a dividend of 13 per cent. on the capital expended. The saving effected by Government that year by the substitution of cinchona febrifuge for quinine was £35,000. The number of cinchona plants including the nursery stock, at the Government plantation on 1st April 1888, was 5,335,504, of which 2,182,000 were of the kind known as *succirubra*, or red bark, which yields a mixture of quinine with cinchonodine and cinchonine, and 2,950,200 hybrid and *calisaya ledgeriana*, which yield only quinine. The policy of replacing the red bark plant by these latter varieties is being steadily adhered to, 375,092 trees of the former kind having in the year 1887-88 been uprooted for their bark, and 424,200 seedlings of the

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hybrid and *ledgeriana* kinds planted instead. The crop of the year 1888-89 was the largest ever harvested, amounting to 373,100 lbs. of dry bark, of which 207,460 lbs. were red, 128,770 *ledgeriana*, and 36,870 hybrid. The out turn of medicine at the factory, which is regulated by the demand, was 6,178 lbs. of ordinary cinchona febrifuge, 28¼ lbs. of crystalline febrifuge, and 1,283 lbs. of sulphate of quinine. This amount was issued to the Medical Depôts at Calcutta, Bombay, and Madras; to the Inspector-General of Civil Hospitals, Bengal; and to the Inspector-General of Jails, Bengal; while about one-third was sold to Government officers and to the general public. The balance sheet showed a net profit on the year's working of Rs. 27,844, a most satisfactory result considering the unprecedentedly low price of quinine products. The experiments which have been made to introduce the species of cinchona, which yield the hard Carthagena and Cuprea barks, have hitherto been unsuccessful; but three new varieties procured from South America in 1883 have been cultivated with success. The quality of the bark yielded by these plants is not generally inferior to that of the *calisaya ledgeriana*, and the introduction of these varieties is considered to be one of the most important and interesting experiments which have ever been made at the plantation. At the same time the fact has to be recorded that, within the last two years, a new chemical process for the manufacture of sulphate of quinine has been discovered. By this process quinine can be obtained in a form undistinguishable, either chemically or physically, from the best brands of European manufacture. The future of the cinchona plantations is therefore involved in some doubt, though it is as yet too soon to speak with certainty on the economic value of this chemical discovery. On the other

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hand, it may be mentioned that the cinchona industry in Ceylon is certainly coming to an end, the planters there cutting down their trees to replace them by tea. Through this, the quinine market has of late been greatly overstocked, and prices in consequence enormously depressed. But cinchona planting has now practically ceased in Ceylon, so that the Darjeeling garden will be soon rid of its most formidable rival. The Government cinchona garden and factory are at Mongpo, a beautiful Himalayan valley, seventeen miles from Darjeeling station, and are well worth a visit, the road being an admirable one through fine scenery. Here experiments in the cultivation of IPECACUANHA have also been tried, but not hitherto with much success.

The principal pasture grounds in Darjeeling are the reserved Government forests, and in the rains the highest mountains. The Forest Reserves, scattered all over the district, cover a total area of 439 square miles. The right of pasturage is rented by the Forest Department. Large herds of cows and buffaloes are depastured by Bhuteas, Lepchas, and Nepaulese, the station of Darjeeling being supplied by them with milk, which is brought into the town in curious buckets, long and narrow, made out of the thick stem of the bamboo. The Mechis in the plains, and the Nepaulese in the Hills Sub-division of the District, collect and trade in jungle products, but this is merely made a subsidiary occupation to that of agriculture. The principal JUNGLE PRODUCTS in the Terai are *lac*; adra, from the fibre of which ropes are made; *dar haldi*, from the roots of which a red dye is extracted. In the hill tracts are found rhubarb; aconitum, a deadly poison; palmatum or *bis*, the roots of which are also poisonous; *manjit*, which yields a red dye; india-rubber; *pangya*, a root with medicinal properties, used in cases of fever and of a bitter taste; *tarulbuk*,

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a yam of which three species are found in the district, these being used as a substitute for potatoes; *deh*, a plant from the bark of which paper is made by the Nepaulese cardamoms; beeswax; *punya*, a thistle which produces a strong silky fibre, from which a fabric can be manufactured equal, if not superior, to grass cloth; and *sisnu*, another thistle, from which excellent cloth can be made. Orchids and ferns may also be included among the wild vegetable productions of the district which possess a marketable value. The timber trees from which the Forest Department derive the maximum of revenue are oak and champ, but of course many other kinds are sold, such as bamboo, maple, laurel, &c. The total revenue derived from the Darjeeling Forest Reserves in the year 1887-88 was, in round figures, Rs. 1,05,000 and the expenditure Rs. 96,000.

The ordinary manufactures carried on by the natives of the district are of the most simple character. The strong cotton striped cloth, which forms the dress of the Lepchas, is of home manufacture, and is woven by the women of the tribe. The favourite colours are white, with blue and red stripes and borders. These Lepcha cloths are in some request among the residents and visitors to the station. The Nepaulese manufacture an excellent cotton cloth, called *batisa*. The Hindoo Nepaulese, according to their castes, are also workers in iron, pottery, and a coarse kind of matting. In their own country, but not in the Darjeeling District, the same race also manufacture a coarse kind of paper, made from the leaves of a jungle plant they call *deh*. In the Terai, ordinary coarse cloth, gunny-bags, and common pottery, form the only manufactures.

The local trade of Darjeeling is chiefly confined to the wants of the European inhabitants and of the tea-plantations.

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A considerable trade is carried on by the hill-men with residents and visitors in China cups, turquoise, coral, and amber ornaments, jade and agate cups and beads, praying-wheels, bells, amulets, and other curiosities illustrative of Buddhist monastic life, *kukeris*, Bhutea and Lepcha knives, &c. The Darjeeling shopkeepers deal mostly in European piece-goods, stores, glass, hardware, and crockery.

The through trade of Darjeeling with Nepaul, Sikkim, Tibet, and Bhutan is of great importance. The total value of the traffic with these external states registered during the past two years was as follows :—

		Imports into Bengal. Rs		Exports from Bengal. Rs.
1886-87	...	1,06,77,400	...	58,37,305
1887-88	...	1,17,28,403	...	77,83,231

The principal imports from Nepaul are cattle, sheep and goats, fibres, fresh fruits and vegetables, wheat, gram, and pulse, husked and unhusked rice, hides of cattle, skins of sheep, goats, and other small animals, opium, ghee or clarified butter, saltpetre, linseed, mustard seed, and rape seed, spices, tobacco, timber, and silver. In return we send chiefly raw cotton, cotton piece-goods, of both European and Indian manufacture, fresh fruits and vegetables, brass, copper, and iron, provisions, salt, betel-nuts and spices, sugar, drained and undrained tobacco, and manufactured woollen goods.

A recent decrease in the Tibetan trade is due to the difficulty on the frontier which culminated in the Sikkim expedition. The political troubles are not over yet, but the obstruction in the Jelep La Pass has been removed, and it is to be hoped that trade will soon be resumed through this channel of communication. The Pass is open all the year round, and the suspension bridge over the Teesta renders the road a practicable one at all seasons.

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These two facts combine to make the Jelep La Pass far and away the most important trade route through the Himalayas from India into Central Asia. During the last two years the traffic has been carried on by way of Nepaul, necessarily in diminished volume. The chief items of import from Tibet are yak tails (used as *chowries*, or "fly-flappers," all over the east), hides, raw wool, horses, ponies, and mules, musk, and brick tea. Our exports to the country, among other articles, comprise cotton piece-goods (European.), tobacco, indigo, horses, ponies, and mules, jewellery, manufactured wool (European), brass and copper, cotton twist and yarn (European), iron, manufactured silk (Indian), and Chinese and Japanese ware.

From Sikkim we receive vegetables, brass and copper, gram and pulse, spices other than betel-nuts, silver, hides of cattle, ghee, raw cotton, horses, ponies, and mules, cotton piece-goods (Indian), timber, yak tails, and cattle. In return we send similar commodities to those despatched to Tibet, besides also salt and husked rice.

As regards BHUTAN, the bulk of the trade with this state does not pass through Darjeeling, being conducted by way of Jalpaiguri, the railway station on the plains for the Dooars. Still, of the total trade between Bhutan and Bengal, a certain amount does filter through the district, ponies and madder or *manjit* especially. Other imports from Bhutan are yak-tails, caoutchouc, and musk. Our chief exports to the country are tobacco, betel-nuts, husked rice, cotton piece-goods (European), sugar, woollen stuffs (European), silk stuffs (Indian), brass and copper, and unhusked rice. We have three stations, namely, Runjit, Rhenok, and Kalimpong, for the registration of our trade with Tibet, Sikkim, and Bhutan.

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CHAPTER XIV.

THE LAMAS.

Mixture of Religions—Predominance of Buddhism—Occupations of the Lamas—Interior of the Temples—Praying-Wheels—Articles on the Altar—A Priest at his Devotions—Affability to Strangers.

THE population of Darjeeling, as we have seen, is a conglomerate of many races. It follows that the prevailing religions are also a good deal mixed. We find Buddhism mingled with worship of the Hindu goddess Kali, and with demonolatry pure and simple. The Bhuteas, of all the hill-tribes, come nearest to being pure Buddhists. The Nepaulese are most closely allied to the Hindoos of the plains. Still, the spirit of Buddhism prevails over the whole district, and tinges to greater or less degree every creed. Lamas from Tibet, moreover, are everywhere present, and we have seen that the Lepchas, whose religion, such as it is, is mostly demon-worship undisguised, have a deep reverence for these Buddhist priests. Monasteries are scattered all over Independent Sikkim, and their number in Tibet itself is simply incalculable. They are called *goompas*, and are perched on hill-tops, the building being usually a wooden barn-like structure erected at one end of a stone platform. A very fair specimen is the temple at the Bhutea *bustee* close to Darjeeling, fully described in a previous chapter Many of these monasteries contain

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manuscripts, Sanscrit, Tibetan, and Chinese, of immense value. The sole occupation of many Lamas is the printing and transcribing of books. Others make the flutes, whistles, cups, &c., used in their worship. A third class are doctors and conjurers, professing to cure disease by exorcising evil spirits and to bring on rain at seasons of drought by certain mysterious rites. Certain Lamas are also taught in the monasteries such handicrafts as the manufacture of clothes, boots, hats, &c. Others again are skilled in cooking, baking, and house-keeping generally. The ragged, dirty Lama mendicant is often enough seen in Darjeeling station. He wears a black mask, dances, sings, and perhaps plays on some oddly shaped musical instrument, while an equally dirty and ragged urchin collects the alms that are offered by the onlookers. The Lama carries with him the inevitable praying-wheel, and as he whirls it round he chants out in dreary reiteration the invocation, "Om Mani Padmi Om" ("Hail to him of the Lotus and Jewel").

The temples contain these praying-wheels, large and small, some simply twirled in the hand, others turned by ropes or straps, and a few at places actually rotated by water-power. Within each cylinder are deposited written prayers, and the turning of the wheel is a quick and ready means of getting through with these devotional exercises. On the wooden altar which faces the doorway, are placed bags of juniper, tufts of flowers, peacock's feathers, clay ornaments and offerings, brass cups full of water, conch-shells carved with the sacred lotus, human thigh-bones fashioned into trumpets, human skulls fashioned into rattles or drums, tambourines, bells, and other articles. To the right and left of the altar are shelves, with books and manuscripts, kept carefully swathed in cloths. Round

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the temple are numerous poles, with rags on which texts are inscribed, fluttering in the breeze. Similar poles adorn the villages. The custom is, when one of the inhabitants dies, if his relations can afford to pay for them, to set up two additional poles or flags in honour of his memory. It is also common to hang votive rags to trees, &c., to conciliate evil spirits; a goodly display of these is commonly seen on the top of Observatory Hill, Darjeeling.

The matutinal devotions of a Buddhist priest have been thus described by Dr. Hooker:—"We were awakened at daylight by the discordant orisons of the Lama; these commenced by the boys beating the great tambourine, then blowing the conch-shells, and finally the trumpets and thigh bones. Shortly afterwards the Lama entered, clad in scarlet, shorn and barefooted, wearing a small red mitre, a loose gown girt round the middle, and an under-garment of questionable colours, possibly once purple. He walked along, slowly muttering his prayers, to the end of the apartment, whence he took a brass bell and dorge, and sitting down cross-legged, commenced matins, counting his beads, ringing the bell, and uttering most dismal prayers. After various disposals of the cups, a larger bell was violently rung for some minutes, himself snapping his fingers and uttering most unearthly sounds. Finally, incense was brought of charcoal with juniper sprigs; it was swung about, and concluded the morning service; to our great relief, for the noises were quite intolerable." It may just be added that the Lamas have no prejudices against admitting strangers into their places of worship, being rather pleased than otherwise to show the sights, and quite ready on invitation to say their prayers in presence of the visitor, turning the praying cylinders—not always with a very grave

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face but often with an amused smile and a twinkle of the eye that imply acknowledgment of the sham—and industriously droning forth the never varying invocation, "Om Mani Padmi Om."

THE END.

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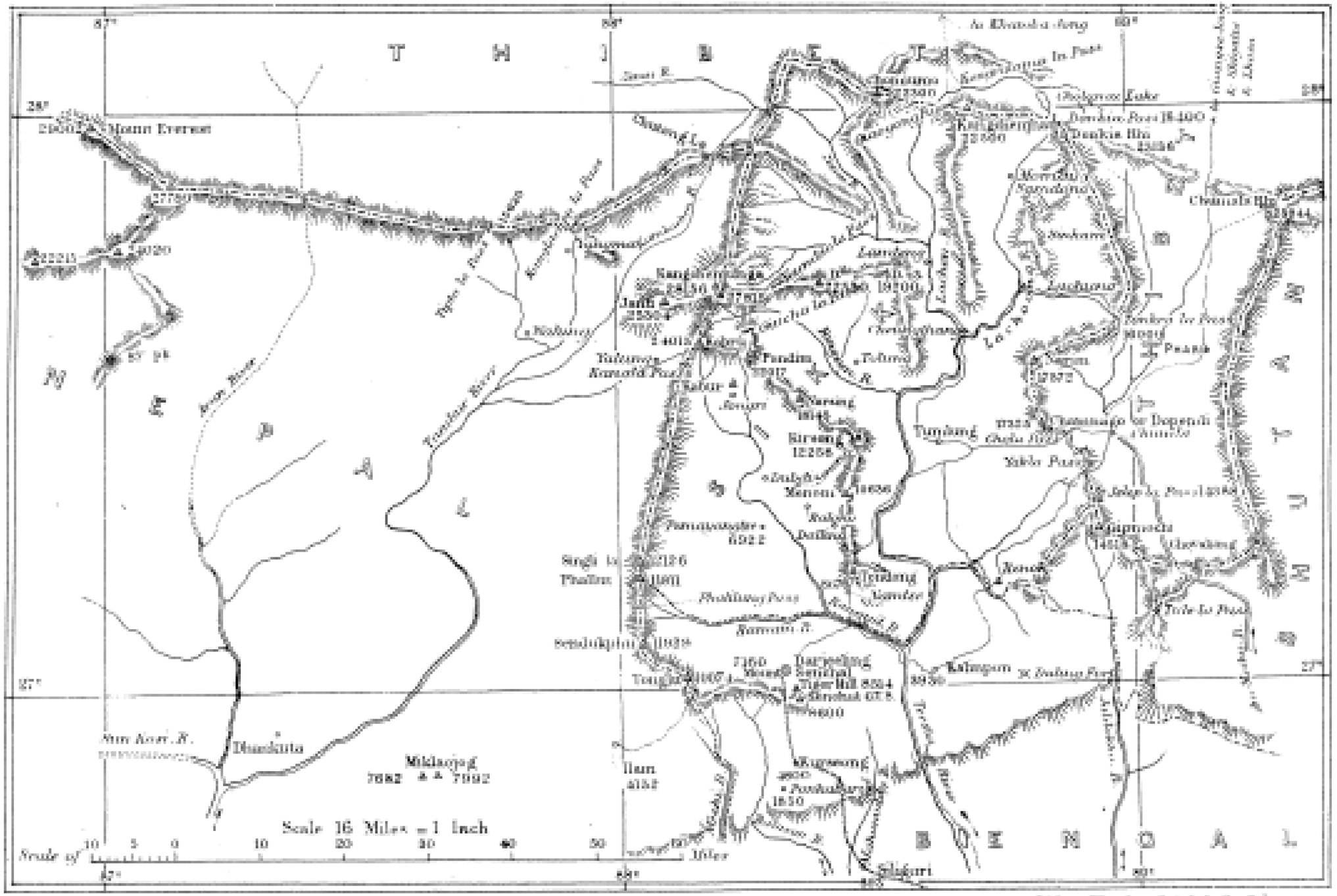

Map II. Lie of the Mountain Peaks

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