Instruction for Dental Treatment.

For (Name) who requires dental treatment and artificial teeth.

(1) Within eight days after arrival at his home he is to report to the appointed dental surgeon at ...........................................

(2) This dentist is to furnish an exact estimate as to cost of the necessary work, using the cheapest material and quoting the lowest rates shown in circular of May 15th, 1896, for contract dental work. If the man desires to have more expensive work put in he must pay the difference himself. This estimate, together with this instruction leaflet, is to be transmitted immediately to the headquarters of the colonial troops in Berlin.

(3) The dental treatment is to be undertaken as soon as permission has been given from headquarters, and should be finished in as short a time as possible. The bill is to be sent by the dentist to the Imperial Colonial Office.

(4) The dentist must give a guarantee that the work has been properly done.

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Travel.

THE NORTH-WEST FRONTIER OF INDIA.

By Major R. J. BLACKHAM.

Royal Army Medical Corps.

The north-west corner of the Indian Empire is a part of the world to which most of the officers of the Corps find their way at one time or other during their service; some to obtain medals and honours, others to merely bear the heat and burden of the day.

In many ways it is the most important area in our great overseas Empire, yet although information with regard to several Indian cantonments has been published from time to time, no account of the frontier has yet appeared in these pages.

As the Travel Section of the Journal and the proposal to prepare a Corps Gazetteer have always been attractive to the present writer, he ventures to offer a brief description of that portion of the Indian border, which is occupied by the premier division of the Indian Army, in the hope that it may not be without interest. He is
The North-West Frontier of India

indebted to the Imperial Gazetteer of India, and the Official Gazetteer of the Peshawar District, for most of his facts and not a few of his phrases.

Geographical Position.—The First Division is located in the Peshawar Valley and its vicinity, between north latitude 33° 40' and 34° 31', and east longitude 71° 25', and 72° 47'. There are only four stations of importance, Peshawar, Nowshera, Mardan and Cherat. The last named is closed from the end of November till the beginning of May.

Peshawar, Nowshera, and Cherat are the only cantonments with European garrisons. There are ten important land forts on the strength of the Division, including the far-off outposts at Drosh and Chitral.

The Division guards the extreme north-west of the Indian Empire and has the military control of the territory between the Indus and the Khyber mountains. Except on the south-east side, where flows the Indus, its cantonments and forts are encircled by mountains occupied by independent Pathans.

History.—Peshawar has passed through many vicissitudes in history, and has been the scene of the exploits of many dynasties.

It was included in the Mogul Empire during the reigns of Akbar, Jahangir, and Shah Jahan; but under Aurangzeb a national insurrection was successful in freeing the Pathan tribes from the Mogul supremacy.

In 1738 the district fell into the hands of Nadir Shah, and under his successors Peshawar was often the seat of the Durrani Court. On the death of the Timur Shah, in 1793, Peshawar shared the general disorganisation of the Afghan kingdom, and the Sikhs, who were then in the first fierce outburst of revenge upon their Mohammedan enemies, advanced into the valley in 1818, and overran the whole country to the foot of the hills. In 1823, Azim Khan made a last desperate attempt to turn the tide of Sikh victories, and marched upon Peshawar from Kabul; but he was utterly defeated by Ranjit Singh, and the whole district lay at the mercy of the conquerors. The Sikhs, however, did not take actual possession of the land, contenting themselves with the exaction of a tribute, whose punctual payment they insured or accelerated by frequent devastating raids. After a period of renewed struggle and intrigue, Peshawar was reoccupied in 1834 by the Sikhs, who appointed General Avitabile as Governor and ruled with their usual fiscal severity.

In 1848 the Peshawar Valley came into possession of the British
and was occupied almost without opposition from either within or without the border. During the Mutiny the Hindustani regiments stationed at Peshawar showed signs of disaffection and were accordingly disarmed with some little difficulty in May, 1857. But the 55th Native Infantry, stationed at Nowshera and Hoti Mardan, rose in open rebellion, and on a force being dispatched against them marched off towards the Swat hills across the frontier. Nicholson was soon in pursuit and scattered the rebels with a loss of 120 killed and 150 prisoners. The remainder sought refuge in the hills and defiles across the border, but were hunted down by the clans, till they perished of hunger or exposure, or were brought in as prisoners, and hanged or blown away from cannon. This stern but necessary example prevented any further act of rebellion in the district.

Population.—The civil population of the Peshawar district of the North-West Frontier Province was, according to the census of 1901, constituted as follows: Males, 401,515; females, 251,922; making a total of 753,437.

This district covers the entire area in the military jurisdiction of the 1st (Peshawar) Division, with the exception of the forts at Dargai, Malakand, Chakdara, Drosh and Chitral, which are military outposts surrounded by territory occupied by frontier tribes within the political supervision of the Agent to the Governor-General.

The average civil death-rate of the district is 37·4.

The military population of the Division is composed as follows: British troops, 4,157; Native troops, 13,451.

The general average of sick was, according to official returns dated August 1st, 1909: British troops, 8·46 per cent.; and Native troops, 2·23 per cent.

The bulk of the population of Peshawar is formed by Pathans, an interesting race who also form the bulk of the trans-frontier foes which the Indian Army has to deal with from Jamrud to Cabul. They are a race of agriculturists of the Biblical type, who till their land with the ploughshare in one hand and the sword, symbolised in their case by a modern small-bore rifle, in the other. They are a cheery race and generally abstemious, the use of opium and spirits being regarded as disreputable outside the towns.

Hospitality is a characteristic of the Pathan, and every village has its guest-house, maintained by the headman or a few of the leading villages. An unlimited supply of beds, blankets, and food is the mark of a true Pathan headsman, and to a great extent his influence depends on his extravagance in entertaining. An ordinary
The North-West Frontier of India

guest receives bread and some condiments, but for an honoured guest a fowl, and for a powerful chief a sheep or goat is killed. The guest-house is also used as a village club where residents and villagers assemble to smoke and talk, and the bachelors of the village sleep there, as Pathan custom does not allow them to sleep at home after reaching man’s estate.

Most Pathans are fond of field sports, such as hawking, hunting with dogs, and shooting. Frequently they combine with these the more exciting pleasures of highway robbery, cattle-lifting, and burglary. In parts of Kohat a favourite pastime is to beat the low jungles at night with blazing torches, so that hares or partridges that may be disturbed are dazzled and secured. In the north fighting rams and quails afford great amusement, and young men play a wrestling game rather like cock-fighting. Farther south tent-pegging is the national game, and on every occasion of rejoicing all who own horses assemble for the sport. In default of a wooden peg an old grass sandal will serve. Everybody is fond of music, singing and dancing, and the half Gregorian style of music affected by the minstrels is not unpleasing. It is claimed for them that they distinguish intervals too subtle for the European ear to appreciate, though they know nothing of harmony, and consider European music mere noise. The recitations of the minstrels are sometimes epic in character, but love-songs and burlesques are favourite subjects also. Some of the latter are witty and do not spare British officials. Often, however, both recitation and gesture are obscene.

Topography.—The surface configuration of the tract of country in which the Premier Division of the Indian Army is located is very uneven and dissimilar.

To the north-west it includes the low-lying riverain tract, situated between the branches of the Kabul River, down to their junction with the Swat. This is often swampy and is intersected by a complicated system of interlacing cuts from the different branches of the river.

To the south and west of the Budni, as the most southerly branch of the Kabul River is called, the country rises rapidly to the Afridi Hills. To the north of the Kabul River is a small riverain tract in which Mardan is situated, but the rest of the area consists of high unirrigated land which ends at the marble rocks in Nowshera Kalan.

South of the Kabul the hills extend close to the river, and this tract includes the montanic region known as the Khattak Hills, in which Cherat is situated.
Peshawar cantonment and city occupy positions in the southwest of the Civil District, the most swampy portion of the tract. The country immediately to the north of Peshawar is as bad as any in the district, which, according to the Official Gazetteer, probably accounts, in part, for the notorious unhealthiness of the city and cantonment.

A curious feature of the neighbourhood is that the people, though willing to spend money and labour freely on the construction of watercourses, have practically to be compelled to dig the most necessary drains; and without actual compulsion it is almost impossible to get them to combine for such work, although without it the land becomes so waterlogged that it cannot produce anything, and is useless for agricultural purposes.

**Geology and Flora.**—There are many points of remarkable interest in the geological formation of the valley of Peshawar. Even to cursory observation it presents the appearance of having been, remote centuries ago, the bed of a vast lake, whose banks were formed by the surrounding Himalayas and whose waters were fed by the rivers which now flow through a vast and uneven plain.

The whole surface of the district exhibits marked evidence of mechanical effects of currents, waves, springs, streams, and rivers which at one time were pent up, but which, in course of time, have created outlets through the weakest range of the surrounding hills.

The hills which hem in the valley are abrupt, irregular and barren, and consist of metamorphic, clay slate, and mica schist; whilst those beyond the frontier rising to the plateaux of Jellahabad and Cabul present every variety of geological formation, becoming, as they recede towards Central Asia, magnificent pine-covered mountains enclosing temperate and fertile valleys.

The Peshawar Plain belongs to the Post-tertiary, or recent, system, covered by accumulation of alluvial deposits consisting entirely of clay silts, sand, gravel and boulders.

Throughout its entire extent the valley is studded with worn shingle or boulders, and fresh-water shells are everywhere found belonging to the genus *Planorbis* or *Helix*.

The valley has passed through slow and successive changes. At first it was probably a large lake; then, as the water-level decreased in consequence of an outlet being found in the Khattack Hills, it became a vast tropical marsh, rank with weeds and tropical vegetation, and a favourite haunt of wild game, as we have historical evidence in the memoirs of the Emperor Babar, dated...
A.D. 1519, that rhinoceros was hunted in the neighbourhood of Malakand in the sixteenth century. This great jungle in its turn gave place to the valley as we now know it, fertile, beautiful, and alas! feverish.

The distribution of trees varies in different parts of the valley. Many varieties are plentiful in the irrigated districts such as the vicinity of Peshawar and Mardan, whilst few are to be found in the vicinity of unirrigated districts such as Nowshera. The hills are covered with a few wild olives and scrub, and, in consequence, present a singularly uninviting appearance.

There are numerous fruit gardens and orchards in the western suburbs of Peshawar City where the vine, fig, plum, apricot, peach, and quince grow luxuriantly, whilst melons and all the ordinary vegetables of Northern India are produced in great plenty in all parts of the district where water is plentiful.

Watercourses. — The Indus River forms the south-eastern boundary of the district and receives at Attock the Cabul River, which has previously collected almost the entire drainage of the Peshawar Valley.

Of the Cabul the principal affluents are the Swat from the north-west, the Bara from the south-west, and the Kalmi from the north.

The Cabul, Swat, and Bara unite with the Budi at Nisatta, 14 miles north of Peshawar, to form the Landai, or lower section, which, after a course of 36 miles, falls into the Indus near Attock. The Cabul River provides most of the irrigation in the neighbourhood of Peshawar and Nowshera, fertilising by its canals some 70,000 acres.

The Swat irrigates a large area far from the vicinity of the chief cantonments, but the Bara River is of enormous interest to the military population of Peshawar, as it furnishes the water supply and irrigation water for the “Garden of Northern India.” As it enters the Peshawar District the Bara is a diminutive stream, but it is fed by some clear and copious streams in the neighbourhood of the fort to which it gives its name.

These springs are celebrated for their salubrity, and many of the Sikh Sirdars caused supplies of water from them to be brought to Peshawar in closed vessels. The area dependent on the Bara amounts to 38,782 acres, and includes some of the richest and most fertile land in the province. The irrigation water from Mardan and its vicinity is obtained from the Kalmi River. This river also indirectly furnishes the water supply for Nowshera Cavalry Cantonment through wells sunk near its banks.
R. J. Blackham

Irrigation was originally an absolute necessity throughout the Peshawar district, as the depth of water from the surface is so great that it is impossible to work wells for purposes of cultivation except in the low lands which fringe the rivers, such as the neighbourhood of Nowshera.

The system was introduced as far back as the time of Aurangzeb and the British engineer has done little but develop the existing system.

In the matter of utilising irrigation in agriculture the Pathan is so ingenious that at times he appears to be almost able to make water run uphill.

Unfortunately, as has been shown, he shows no enthusiasm in encouraging drainage, and the result is that the whole valley is now waterlogged throughout its entire extent, and the subsoil water is in some places in the neighbourhood of Peshawar within a few inches of the surface.

Climatology.—Four seasons are recognised in the Peshawar Valley:

Spring includes the months of February, March, and April. During this season there are occasional hail-storms, and rain falls to the extent of 3 or 4 inches. The air is cold and bracing, but the thermometer runs high (vide table).

Summer includes May, June, and July. During this season the air is densely hazy, dust-storms being of almost daily occurrence during the last two months of the period. Thunder-storms are of common occurrence on the bordering hills, and often the dust-storms are followed by considerable electric disturbance, but rain rarely falls in the plains. This is the hottest (vide table), and at the same time is regarded by the natives as the healthiest period in the plains.

Autumn includes the months August, September, and October. This season is ushered in by the hot-weather rains. These break over the valley in four or five violent storms at intervals of a few days. Two or three inches of rainfall are usually registered on each occasion. During the first half of this season the sky is more or less uniformly overcast with clouds, and the air is heavy and stagnant, except for a brief interval immediately succeeding a fall of rain, after which it becomes steamy and oppressive. These months constitute the true malarial season, as the still air and complete absence of breezes must be especially grateful to the mosquito and conducive to its vitality and comfort, as we know that it dislikes wind above all things.
Winter is included in the months of November, December, and January. During this season the weather is variable. The sky is at first hazy, then cloudy with sometimes slight rain, and finally becomes the clear, cloudless blue of the Indian winter. There is a remarkable absence of wind generally, and at Peshawar especially the air is still and stagnant. The days are sometimes hot, but the nights and early mornings are always cold. Owing to the large amount of moisture in the air, the cold of the Peshawar winter—although low temperatures are rarely registered—is very trying, even to Europeans accustomed to the rigors of a continental winter. The direction from which the wind generally blows in Peshawar is from the west, or down the Khyber Pass, but there is really no prevailing wind, a generally stagnant atmosphere being the characteristic of the valley. The main difference between the climate of Peshawar and that of the Punjab consists in the length and severity of the Peshawar winter. Its bracing character partly compensates for the extreme heat of the summer and the absence of a regular monsoon.

Sports and Amusements.—The fauna is meagre, yet notwithstanding this fact some of the best snipe-shooting out of Burmah is obtainable at Peshawar during the months of February and March. Markhor are found on the Pajja spurs, which jut out from the hills north of Mardan, and occasionally near Cherat, where urial are also seen. Wolves and hyenas are not numerous, but leopards are still met with, though rarely.

The Peshawar Vale Hunt maintains an excellent pack of hounds, the only one in Northern India, and affords capital sport to the large garrison of Peshawar. The meets take place at from 6.30 to 7.30 a.m., and as they are generally held from five to twelve miles from Peshawar, this means an early start and a shivering journey along dark roads in the intense cold of the frontier winter. Wrapped up in a poshtin or camel-skin coat of the country, one defies the cold, and the splendid runs of forty-five minutes over what is, perhaps, the best hunting ground in the Tropics are ample compensation for any discomfort involved.

The polo at Peshawar is as good as the hunting, and the polo grounds have to be seen to be appreciated. They are real grass grounds, always kept in the pink of condition.

There are several grass tennis-courts, a good grass cricket pitch, and last, but by no means least, first-rate golf links with real greens, instead of the "browns" with which the golfer in most Indian stations has to be content. There is also fishing in many of the streams near the hills.
So, taking it all round, there are many worse Commands in which to put in a foreign tour than the 1st Division of the Indian Army.

### TABLE

**MAXIMUM AND MINIMUM TEMPERATURES AT PESHAWAR DURING THE DECENNIUM 1899-1908.**

#### MAXIMUM TEMPERATURE.

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