



dwáni by Bhím Tál to Almora, and by the cart-road to Naini Tál ; (3) the roads to Káládhúngi and by Khairna and Rámgarh to Almora from Naini Tál ; (4) the cart-road from Rámgarh by Ránikhet to Almora ; (5) the road by Bhainskhet to Garhwál ; (6) the road by the Someswar valley and Baijnáth to Gwaldam and the Pindar valley ; (7) the road by Bagesar to the Milam Pass ; (8) the road by Dhol to Lohughát, and thence to Pithoragarh ; (9) the road by Panuwa Naula to Pithoragarh, and thence by Kela Syálapanth to the Byáns Passes ; and (10) the road by Barmdeo and Champháwat to Lohughát. All these roads are interconnected by village roads, and are well made, bridged, and kept in good repair.

9. The zoology of Kumaun is as varied as the botany, and would take much more space than I have at my disposal to do it even moderate justice. *Wild animals.* Elephants are found in the Bhábar and forests on to the Siwálik of the Dehra Dún. They are now protected by the orders of Government, and are occasionally captured by means of *kheddas* organised by the Nawáb of Rámpur and the Rájá of Balrámpur with the permission of Government. Tigers are becoming more and more scarce every year, and deaths resulting from their attacks have decreased fully sixty per cent. Occasionally a man-eater survives for a few years and desolates the tracts he haunts ; to one of this class, who occupied the jungle near Rámgarh, upwards of a hundred deaths of human beings were debited during the years 1875-76. He was destroyed by a party of Gúrkhas in 1876.

10. Leopards (*baghera*) are very numerous and destructive to sheep, goats, dogs, and even ponies. Hyenas (*lakarbagha*), black bears (*bhalú*, *U. tibetanus*), and brown bears (*bhurji*, *U. isabellinus*) are found in the hills, and a species of black bear in the Bhábar.

fully

somewhat less for cubs, according to sex and age. In one year 45 tigers, 124 leopards, and 240 bears were destroyed in the Kumaun district at a cost of Rs. 1,460. On an average of five years, 58 persons perished yearly in the same district from the attacks of wild animals and snakebites. Of the deer tribe, the *jarau* (*Rusa aristolelis*), *chítal* or spotted deer (*Axis maculatus*), *pára* or hog-deer (*Axis porcinus*), *kákar* or barking deer (*Cervulus aureus*), *máha* or swamp deer (*R. Duvaucelii*), *gúral* or chamois (*Nemorhædus goral*), *kastúra* or musk-deer (*Moschus moschiferus*), and the *nílgai* or blue cow (*Portax pictus*) are found in the hills or Bhá-bar. The *thár* or wild goat (*Hemitragus jemlaicus*) is found in the ranges beyond the Katyúr valley, and the *sarau* or forest goat (*Nemorhædus bubalina*) in the higher ranges. Further north among the snows are found the *banchaur* or wild yak (*Bos gruniens*), the *bharal* or wild sheep (*Ovis nahura*), and the *hyan* or *Ovis ammon*. There is no trade of any importance in the skins of wild animals, though persons occasionally employ shikáris to procure skins for sale to visitors and for the European markets. The skins of the hill pheasants are, however, largely preserved for sale during the summer, and this practice has increased so much of late as to seriously diminish their number, the hillman not being particular as to the season during which he shoots. During the years 1875-76 several thousand pheasants of both sexes and all conditions were shot by some European adventurers for the sake of their skins, with the result that the birds have nearly disappeared from Upper Garhwál, and although pheasant-shooting has now been strictly prohibited, it will take many years of rest and strict preserving before the coverts can be re-stocked.

11. Snakes are numerous, though less so than in the plains.

Snakes.

Strange to say, the harmless species are less numerous both in species and

individuals than the poisonous species, whilst in the plains the harmless species are far more common than the poisonous ones. In the forests above 10,000 feet the poisonous species *Halys Himalayanus* predominates; about Almora, *Simotes Russellii*, a harmless species, is far the most common, and next to it *Ptyas mucosus*, and then the cobra. *Tropidonotus platyceps*, a woodland snake, is common at Naini Tál, and three species of *Trimesurus* are frequently found in the neighbourhood. Immense boas measuring up to thirty feet in length are found in the Bhábar, and lizards, scorpions, frogs and toads abound. A small kind of leech is very common and troublesome; it does not exceed an inch in length, has a smooth glossy skin of a brown colour, and in a state of rest is exceedingly minute, resembling a mere speck. During the rains it fastens firmly on either man or beast, and, in addition to pain and loss of blood, causes distressing itching and irritable ulcers of tedious duration. In some instances it makes its way into the nostrils or mouth, and, fastening on the internal passages, causes very painful, and in some cases fatal, effects. Though thus active and annoying when spontaneously attacking, they have invariably refused to draw blood when tried to be used for medicinal purposes.

12. In the months of April and May the traveller in Garhwál is much annoyed by a species of small fly called by the natives *múra*. This insect hovers in the air for some time before alighting. It then settles, and remains attached to the skin for a considerable time. Its bite is at first painless, but after a short time a troublesome itching is felt, and a small round black spot of effused blood appears on the place where it has inflicted its bite. The black spot continues distinct for about a fortnight, and as these flies are innumerable, the traveller's face and hands, unless protected by a veil and gloves, are very soon spotted all over. This fly is also met with in Kumaun, especially in the Sarju valley, but it is not nearly so frequent there as in Garhwál. It is probably the same insect as the pipsa fly, described by Dr. Joseph Hooker as occurring in the neighbourhood of Darjiling.

13. The domestic animals are kine, buffaloes, sheep, goats, horses, or rather ponies, and in the Bhotia maháls, or villages north of the

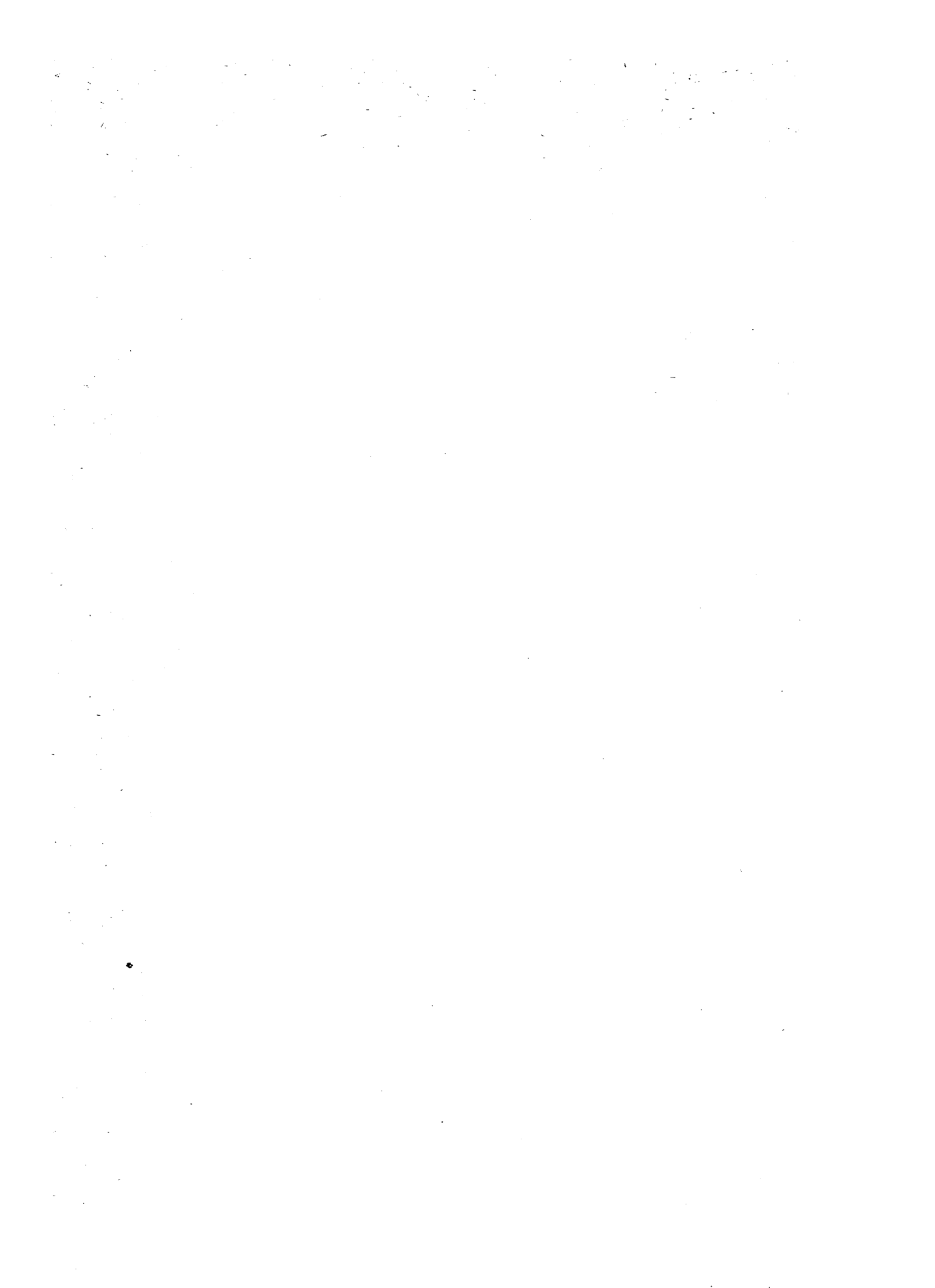
Domestic animals.

culminating range of the Himálaya, the sura gai or yak (*Bos grunniens*) imported from Tartary, and the hybrids between that animal and kine. When the sire is a yak and the dam a cow, the hybrid is called jabu (*zhobu*); when the parentage is reversed, the produce is called garjo. The jabu is found to be more valuable than the other hybrid, or than either of the pure stocks. It is used for carriage, and will carry from two to three maunds; it is also used for riding in the snows, and is very sure-footed, hardy, and docile. Its price is from 20 to 50 rupees. Both varieties breed freely together, and with the pure stock; in the former case the race degenerates, but in the latter the offspring resumes the original nature of the breed. None of these will stand the heat of the plains. The beasts of burden most in use in the elevated parts are sheep and goats. The common description of the former carry from ten to sixteen pounds; of the latter from twelve to twenty-four; but the taller, stronger, and more active sheep bred in Tibet, resembling the Iceland ram, are equal to weights of forty pounds. The regular day's journey is about five miles, in consequence of the great time they require for pasture, which is their only subsistence. It is by this means that the borax and salt is carried from Húndes to the plains in a sort of pack made of worsted with a pair of pockets called *karbaj* (*pháncha* in Garhwál) slung over the backs of the goats and sheep. The pockets are covered with leather to keep out wet and damp when piled on the ground. This pack is girthed underneath the body; a band round the chest and another under the animal's tail render it perfectly safe. Goats are chosen from their superior boldness and activity as leaders of the flock, and are furnished with bells. It is marvellous to observe the business-like way in which these little beasts of burden carry their loads. Coming upon them on the very narrowest, steepest, and slippiest ascent, or on the brink of a precipice, they seem intent only upon pursuing their way, not turning aside for any one or anything, their obstinacy often causing the traveller uneasiness and teaching him patience. And not the less curious is it to observe flocks of them, numbering many hundred each meeting, each going the contrary way, and yet none make a mistake, but persist in following their own leader, and patiently overcome all obstacles to their doing so.

Be good enough to add the following to the list of crops cultivated in Kumaun, given at para. 15 of the Imperial Gazetteer notice of Kumaun, of which a copy has been forwarded to you.

E. T. A.

English name.	Native name.	Scientific name.	Season.
Wheat (red), " (white)	Lál gehún (bearded) ... Safed gehún, Daúdkháni (beardless).	Triticum vulgare ... " ...	May. "
Barley ...	Jau ... ..	Hordeum hexastichon...	"
Celestial barley.	Ua jau ... ..	" celeste ...	October in Bhot.
Rice ...	Dhán ... ..	Oryza sativa ...	End of Sep- tember.
Millet ...	Manduwa ... ..	Eleusine corocana ...	Middle of October.
" ...	Mundira ... ..	Panicum frumentaceum,	Beginning of Sep- tember.
" ...	Koni ... ..	" Italicum ...	"
" ...	Chína ... ..	" miliaceum ...	End of Au- gust.
" ...	Ganara ... ..	" uliginosum ...	April.
Maize ...	Bhúta, Makai ... ..	Zea mays ...	"
Prince's fea- ther.	Chúa ... ..	Amaranthus anardana...	Beginning of Octo- ber.
Love lies bleeding.	Kedari chúa ... ..	" caudatus ...	"
Buckwheat...	Ogal ... ..	Fagopyrum vulgare ...	End of Sep- tember.
" ...	Pháphar ... ..	" tataricum...	October.
Pea ...	Kulon ... ..	Pisum arvense ...	April.
Vetch ...	Masúr ... ..	Ervum lens ...	"
Gram ...	Channa ... ..	Cicer arietinum ...	"
Pulse ...	Urd ... ..	Phaseolus radiatus ...	October.
" ...	Múng ... ..	" mungo ...	"
" ...	Gurunsh ... ..	" torosus ...	"
" ...	Arhar ... ..	Cytisus cajanus ...	November.
" ...	Gahat ... ..	Dolichos uniflorus ...	October.
" ...	Ríansh ... ..	" catjang ...	"
" ...	Bhut ... ..	" soja ...	"
" ...	Chími ... ..	" lignosus ...	Rains.
" ...	Lobiya ... ..	" sinensis ...	"
" ...	Shiuchanna, bakúla ...	Phaseolus vulgaris ...	April.



14. The ordinary agricultural cattle in use in the district are imported from the Bhábar, where they are bred. A pair of light bullocks will cost from 20 to 40 rupees, and a large pair up to 80 rupees. Bulls were imported from Hissar, but they did not succeed, owing to the climate and the flies in the Bhábar and Tarái. The people themselves object to them as too heavy for their purposes, and that it requires more care than they can give to rear up the young calves. The gúnt or Bhotia pony is imported from Tibet. The Chamurti is the favourite breed, but is seldom met with, owing to its higher price. They are clumsy, rough, and small, but sagacious, strong, active, and very sure-footed. The price ranges from 100 to 300 rupees. The *banjára* pony, bred in the Tarái, is a useful, hardy, small sized animal, worth from 10 to 25 rupees. Grass, gram, barley-meal, and úrd are used as fodder for ponies and cattle. There are two varieties of the domestic dog—the Tibetan, which is large and strong, with a shaggy coat, very fierce, and well adapted to defend flocks against robbers and beasts of prey; and the shikári or hunting-dog, differing little from the pariah of the plains: both are much subject to hydrophobia.

15. The following list<sup>1</sup> of the crops cultivated in Kumaun, with the English, native, and scientific name, and the season when ripe or gathered, as also of the edible fruits, wild and cultivated, will serve for both Kumaun and Garhwál:—

English name.	Native name.	Scientific name.	Season.
Spinach ...	Pálang ...	Beta? Spinacea oleracea?	June, largely.
Cress ...	Hálang ..	Lepidium sativum ...	"
Rhubarb ...	Dolu (red) wild at 11-16,000 feet.	Rheum hybridum ...	April.
	Methi ...	Trigonella fœnugrœcum.	"
Poppy ...	Posht ...	Papaver somniferum ...	April, May.
Sugarcane	Rikhu, púnda	Saccharum officinarum	April, very little.
	Karela ...	Momordica Charantia	Rains.
	Torya ...	Luffa acutangula ...	"
	Ghiatorya ...	" pentandra ...	"
	Chichinda ...	Tricosanthes anguina ...	"

<sup>1</sup> Batten's report.



English name.	Native name.	Scientific name.	Season.
Cucumber	Khíra ... ..	Cucumis sativus	Rains.
"	Kakri ... ..	" utilissimus ...	"
Gourd ...	Lauki, Tumri (not edible)	Lagenaria vulgaris ...	"
Pumpkin ...	Gadúa ... ..	Cucurbita maxima ...	" largely
"	Tarbhuja ... ..	" " ...	"
"	Bhuja ... ..	" pepo ...	"
Asparagus	Kairua ... ..	Asparagus officinalis ...	April and rains.
Mustard	Lái, Dain, Jariya ...	Sinapis dichotoma ...	April.
"	Rára, Sarson ...	" glauca ...	May.
"	Rái ... ..	" erysimoides ...	"
"	Banrái ... ..	" ramosa ...	October.
"	Tori, Bhotia lái ...	" rugosa ...	"
Linseed ...	Alsi ... ..	Linum usitatissimum ...	May, rare.
Sesamum ...	Til ... ..	Sesamum orientale ...	August.
"	Bhangjira ... ..	Perilla ocimoides ...	"
"	Jhatila, ... ..	Prinsepia utilis ...	June.
Hemp ...	Bhang; cloth, drug, oil	Cannabis sativa ...	November, beginning.
Cinnamon...	Tejpat, wild ...	Laurus cassia ...	"
Red pepper	Lai mircha, khursyani	Capsicum frutescens ...	November.
Cardamom	Iláychi ... ..	Cardamomum aromaticum.	"
Turmeric ...	Haldí ... ..	Curcuma longa ...	"
Ginger ...	Adrakh, ádá ...	Zinziber officinalis ...	" for export.
Caraway ...	Saunph, jira ... ..	Anethum foeniculum ...	"
Coriander ...	Dhaniya ... ..	Coriandrum sativum ...	May.
"	Pipalmor, pipali ...	Piper longum silvaticum	"
Tobacco ...	Tamáku ... ..	Nicotiana tabacum ...	" for home
Cotton ...	Kapás ... ..	Gossypium herbaceum	very little.
Reed ...	Motha ... ..	Papyrus pangorei ...	for mats.
Plantain ...	Kela, plentiful ...	Musa paradisiaca ...	Except winter.
Mango ...	Am, in valleys ...	Mangifera Indica ...	July.
Guava ...	Amrúd, scarce ...	Psidium pyrifera ...	June.
Apricot ...	Kúshmaru, zardaru, chúaru.	Prunus adenophylla ...	August, plentiful.
Peach ...	Arú ... ..	"	July, do.
Damson ...	Badam, scarce ...	"	May, June.
Plum ...	Walechu, do. ...	"	September.
Quince ...	Bei, do. ... ..	Pyrus cydonia ...	"
Orange ...	Naringi, do. ...	Citrus aurantium ...	December.
Lemon ...	Nimbu, plentiful ...	Citrus acida ...	July.
Lime ...	Kághazi nimbu, scarce,	"	"
Citron ...	Jamira ... ..	"	"
"	Matkakari ... ..	"	October.
Walnut ...	Akhrot, Bh. kas-shin	Juglans regia ...	November.
Filbert ...	Kapási 8-10,000 feet ...	"	"
Pomegranate.	Anár, sweet; Darim, sour,	Punica granatum ...	July.

English name.	Native name.	Scientific name.	Season.
Fig ...	Timla, large and sweet.	Ficus ... )	June, July.
Raspberry	Jogia hisálú, red ; hisálú, yellow, 4-6,000 feet ...	Rubus ... )	May, black and yellow 9,000 feet. August.
Ground Raspberry.	Ganda kaphal, Bh. Sin-jang	Rubus nutans	April.
Blackberry	Kalía, hisálú ...	Rubus	June, July.
Strawberry	Kapalía ; G. bhula, 7-10,000 feet.	"	
Gooseberry	Lepchat at 11,400 near passes.	"	September
Red Currant	Kúlkúlia, kunkúkurái, 10-13,000.	Ribes glaciale )	"
Black ditto	Darbúi, do. ...	Ribes acuminatum ...	"
Crab Apple	Kaphal ...	R. acuminatum ...	October.
Barberry ...	Chotra, Bh. náchishin, 8,000 kilmora.	Pyrus baccata ...	"
		Berberis aristata ...	September.

16. The quantity of land calculated for cultivation as afforded by nature is within the hills extremely small, and in order therefore to remedy this deficiency, the sides of the mountains admitting of such an operation have been cut down into terraces rising above each other in regular succession, and having their fronts supported by slight abutments of stones. These terraces necessarily vary in breadth and length, according to the form and slope of the mountain on which they are situated, but as a great portion of every mountain, more particularly near the summit and ridges, is not sufficiently productive to warrant the expense and labour of the operation, those spots are clothed with grass, and generally covered with forest, consisting chiefly of pines, oaks, and rhododendrons, whilst some parts, from their rocky and precipitous nature, are wholly barren, or only partially sprinkled with tufts of rank grass. Even on the ridges and sides of the mountains the soil is generally poor and stony, while the depth of earth is seldom great, and rock is commonly to be met with at a few feet from the surface ; in such situations the aid of frequent supplies of manure is required to renew the fertility of

the land. In the valleys, which consist almost entirely of alluvial soil deposited by the rivers, or washed down from the mountains by the rains, the land is tolerably productive, though not to be compared with that in the Tarái and the plains. Irrigation, where practicable, is always had recourse to, but is, owing to natural difficulties, comparatively little used.

17. A single plough drawn by two bullocks is supposed to be able to cultivate three acres of land in the hills. At a first ploughing one pair of bullocks can turn up about one-seventh of an acre in a day, at the second ploughing one-fourth, and at the third one-half in the hills, and about twice as much in the Bhábar and Tarái. The cost of the implements and stock of four cows, two bullocks, and eight sheep or goats for a farm of three acres would be about Rs. 60 in Garhwál, and between Rs. 50 and Rs. 60 in Kumaun. The common standard of land-measure in the hills is the *bísi*, which is just forty square yards less than an acre.

18. A holding of five acres would require a pair of bullocks in the hills, and after deducting all expenses ought to bring in an average season Rs. 80. In the Bhábar a holding of that size would be twice as valuable. In the hills five to six acres would be considered a large holding, two to four an average one, and from a quarter of an acre to one acre a small holding. In the Bhábar eight acres make a large holding, six an average holding, and four a small one. The prevailing custom of dividing all immovable property equally among the sons, together with the tenacity with which hillmen cling to their hereditary landed property, has had, and still must have, the effect of diminishing the size and multiplying the number of holdings. But there is no doubt that these influences have also caused a large increase in the cultivated area; and as there is still plenty of waste land, they are not likely to have any prejudicial effect on the people for a long time to come.

19. The greater part of the land being held and cultivated by the proprietary body, the rent will correspond with the Government revenue.

At the recent settlement, *síra*, or irrigated land, was assessed at twice, and first-class unirrigated at one-third as much as second-class unirrigated land. The rent paid by tenants-at-will is usually in kind in the hills, and amounts to from one-half to one-fourth of the produce, but the rule for all other tenants now is money payment. The proprietor often lets out enough of his holding to pay the revenue, and tills the rest himself. In the Bhábar three rupees an acre pays for the land and water-supply.

20. The better kinds of rice, wheat, and tobacco are usually sown in *síra* land, which generally produces good crops and can hardly fail, as it is always well manured and highly cultivated. First-class unirrigated land yields everything except tobacco and the better kinds of rice, and its productive powers are often not inferior to *síra* land, while it has to be left fallow only after every third crop. Still the crops are always liable to damage by drought, and where manure is not freely given the soil becomes poor and unproductive. The small strips on the edges of the better land, or where the hill side is steep and stony, form the third class. This is usually sown with barley, buck wheat, and the coarser grains. If manured a little, or after it has lain fallow, it yields in a favourable season a fair return, but in a bad season it hardly repays the labour expended on it.

21. From an experiment made in 1863 it appears that the average outturn per acre in Bhábar land was 480 seers of grain, which at 20 seers per rupee yields 24 rupees per annum. If the rent or three rupees be deducted from this sum, the balance is a very fair return for labour and investment in stock and implements.

22. There were in 1874 nineteen tea plantations in fee-simple tenure, four grants and thirty-nine villages assessed in the usual way belonging to tea-planters in this district. The prospects of tea cultivation, long so gloomy and disheartening in these provinces, have

of late years been more promising, owing to the opening up of the Central Asian market through Afghán traders, who come to each plantation themselves and take away the tea. The Kausáni and Katyúr Companies have changed Katyúr from a very desert into a really fruitful garden, and only men and money are required to extend the existing gardens. The Dunagiri plantation has done much for Dwára Hát and its neighbourhood, as Jalna has done for the eastern suburbs of Almora, Beninág for Gangoli, and the small gardens of Lohughát for that station. The great sums of money expended on tea plantations within the last twenty years have produced permanent effect in the improvement noticed in the persons and houses of the people in the neighbourhood, and hitherto have resulted only in unmixed benefit to the country.

23. There are very few forest trees containing valuable timber in the upper hills, though there are a great many varieties. The most useful are the *chitr*, or three-leaved Himálayan pine (*Pinus longifolia*), cedar (*Cedrus deodara*), cypress (*Cupressus torulosa*), weeping fir (*Abies Smithiana*), long-leaved black fir (*Picea Pindrow*), and white-leaved black fir (*P. Webbiana*). *Tún* of two varieties is found, the common one or *tún* proper (*Cedrela toona*), and the bastard *tún* known as *dala* in Garhwál (*C. serrata*). The wood of the latter is much lighter in colour and less valuable. The walnut (*Juglans regia*) is much prized for its hardness, and also a species of sumach called *kakura* (*Pistacia integerrima*), which is hard and tough. The alder, *udesh* (*A. Nepalensis*), is used for tea boxes: the wood is light and rather brittle, and appears when polished like satin-wood. The people towards the snows use the bark of the silver birch (*Betula bhojpatra*), which grows in great quantities at the highest elevations, for writing paper, for which purpose it is peeled off in layers as thin as very fine paper. *Sál* (*Shorea robusta*), the most valuable of all woods, grows in the valleys stretching down to the plains, which are strictly preserved by the Forest Department. *Saindan* (*O. dalbergioides*) grows in considerable quantities in the low hot valleys, but the trees are very stunted, and a straight piece of timber of any length is almost unprocurable. It is used on

account of its great hardness and weight for ploughshares, and pestles for pounding rice.

24. Village houses in the hill districts of the Kumaun division are built of stone laid in mud, and roofed with mica chlorite or clay slates, or, where these are not obtainable, with thatch. In the European stations sheet-iron is largely used for roofing purposes. The wood most generally used in buildings is *chitr*, and occasionally *deodár*. The former is cheap and possesses considerable tensile strength, and is durable for internal work; the latter, though not so strong, stands exposure very well, and is useful for bridges and external decorative work, as in Srinagar. The cost of sawing planks 12' × 1' × 1" is about seventeen rupees per 100. *Tún* is a favourite with the natives for making the elaborately carved fronts to their houses, but it is perishable, and requires therefore protection by coatings of coarse paint. The people do not consider a house properly made which has not doorposts of this wood. Where the forests are not preserved by Government, the cost of timber in Kumaun is merely its cutting and carriage to the building sites. The cost of stone, too, is merely its quarrying and carriage. The cost of burning lime in Kumaun varies from 10 to 30 rupees per 100 maunds, to which should be added six annas per maund for each ten miles it is carried: in Garhwál the cost is about the same. Skilled labour being required for extracting flags and large stones, those measuring 15 feet by 5 feet and from one to two inches in thickness often fetch 12 to 15 rupees each in Almora. Common slates two feet by two inches sell at the rate of two annas each, brought into Almora from a distance of one mile and a half: in Garhwál the price is about 10 rupees per 100, while stone varies from 24 to 48 annas per 100 cubic feet, according to distance. The usual charge is 10 rupees per 100 superficial feet measured on the roof, and including coping stones or 'topís.' The labour in constructing a house is usually performed by the proprietor and his family, occasionally assisted by the village mason, and as the materials do not cost anything, the substantial solid appearance of a Kumáuni's house is no fair criterion of his position. Where labour is employed

the cost may be from Rs. 50 to 100, though, as in Páta village, in the Rámgarh valley, houses are found which cannot have cost less than Rs. 500. The houses of the wealthier natives at Almora, Champháwat, Rámnagar, &c., are often three and four stories high, with elaborately carved fronts, but differ little in their internal arrangements from those of the humbler classes. At a distance' villages in Kumaun present a neat appearance, an impression which, however, is effaced on a closer inspection, from the quantity of filth which is found everywhere. Hindu temples dating from the Katyúra ráj abound throughout the district. Tradition explains their number by the story that a certain Rájá only ate every day on hearing that a temple (*lát*) had been built. It was also a custom then to mark the progress of a Rájá by erecting a small temple of cut-stone at each halting-place

25. “ Within the comparatively small section of the Himá-  
 Geology. layas occupied by Kumaun proper the  
 mountain features exhibit much regularity,  
 and may be noticed in successive zones parallel to the main range,  
 but the Taráí and Bhábar tracts along the base of the outermost  
 hills also belong administratively to Kumaun, and require some  
 notice. They constitute the two uppermost belts in the great sur-  
 face curve of deposition by rivers and rain-wash, from the foot of  
 the steep mountain slopes to the sea. The Bhábar, or forest tract,  
 is made up chiefly of the coarse conglomerates and gravels  
 accumulated by the torrents at the base of the hills, and its slope  
 varies from fifty to seventeen feet per mile. Except in the  
 rainy season, the stream courses in the Bhábar are dry, the  
 water having sunk into the gravel soon after issuing from the  
 gorges. The Taráí, on account of its constantly marshy condi-  
 tion, used to be thought an area of actual depression. In fact,  
 however, it has a considerable slope, averaging ten feet in a  
 mile, and the moisture is due to the re-appearance of the under-  
 ground water from the Bhábar.

26. “ The outermost fringing zone of lower hills is formed  
 The outer ranges. of tertiary sandstones. The true Siwálíks,  
 formed of the upper members of this  
 tertiary series, are very poorly developed on the Kumaun border,

and one has to go west of the Ganges to see these in any perfection. The flanking hills of Kumaun correspond and are continuous with those inside and north of the Dúns to the west, and are formed of the lower beds of the series; massive sandstones with subordinate clays, often highly ferruginous, as at Dechauri, and sometimes containing small nests of lignite. The beds, as a very general rule, dip steeply towards and against the old rocks, the plane of contact often underlying inwards. One small patch has been observed in Garhwál of still older tertiary rocks, on the ridge about the village of Bán over Rikhkhes on the Ganges. It consists of crumbling brown clays and earthy limestone, an outlier of the nummulitic group of Subathu, on the direct extension of which it occurs, and forms a remnant of eocene deposits that once occupied this ground in force. Immediately inside the boundary of the tertiary sandstones the mountains rise steeply to a much greater elevation, forming the face of the lower Himálayas.

27. "This region, some fifty to sixty miles wide between the line of snowy peaks and the plains, is a constant feature of the Himálayas east of the Satlaj. For long distances, too, its structure is uniform. All through Kumaun and away to the Satlaj there is an outer belt, formed of a continuous band of rocks differing from those to the north. The most conspicuous of these is a limestone to which is due the more picturesque character of this first range, as at Naini Tál and Mussoorie. It is known as the Krol limestone, and is supposed to be of Triassic age. It overlies a great thickness of flaggy slates. The northern boundary of the limestone and slate zone is not very regular. Sometimes it is sharply defined, as north of Naini Tál, elsewhere the slates seem to coalesce transitionally with the metamorphic rocks forming the main mass of the lower Himálaya up to the snowy range.

28. "As a rule, the ridge of the semi-metamorphic rocks is considerably higher than a broad band of the metamorphic area to the north of it. The snowy range. Gneiss and gneissic schists are the prevailing rocks in the latter ground. There are some strong courses of granite and trappean intrusions. The latter occur also in force in the lime-



stone and slate region, as about Naini Tal. The main range of peaks occur on the chief line of granitic intrusion, very numerous veins penetrating the schists and gneiss mostly along the line of strike and also massive expansions of granite, as that forming the Kamet peak. High along the northern flank of this granitic and gneissic axis there rest the bottom beds of the sedimentary basin of Tibet. The summits of the passes occur mostly on these rocks which run up into high peaks. Only a narrow fringe of them occur within Kumaun, consisting of the azoic slates resting upon the gneiss and penetrated granite veins. They are overlaid by a tolerably full series of palæozoic and secondary formations, forming a long narrow synclinal trough, with crystalline rocks again to the north of it. One of the most interesting geological features of the Tibetan plateau is the immense accumulation of undisturbed deposits in the old valleys through which the rivers have again cut gorges 3,000 feet deep. Remains of extinct mammalia have been found in these old valley deposits."

29. There are numerous mines of iron and copper scattered throughout the district, but they are not thoroughly worked, and very often their practically inaccessible position, combined with the absence of coal, renders any idea of a profitable outturn impossible. Lead, salajit, gypsum, asbestos, limestone, slate, and graphite are also found among the mineral products of Kumaun. The history of the Kumaun Iron Works Company is instructive as to the success that awaits the efforts of mining companies in this district. As the success or otherwise of such companies depends to a great extent on the fuel supply, I offer no apology for giving the following extract from a paper by Mr. H. Medicott, the present head of the Geological Survey:—

“There are two groups of rocks, in which supposed coal discoveries have been repeatedly made, in the sandstone rocks of the lower hills, and in the black, shaly rocks occurring beneath the limestones of the fringing zone of the higher hills. I have

‡ From a note by H. Medicott, Esq.

seen a great deal of both these rocks, and I think that the prospect of a useful deposit of coal being found in either is very unpromising. The nests and strings of lignite that occur, sometimes close together, in the sandstones are manifestly the remains of isolated trunks or roots of trees, which were rolled or floated into these positions and became buried in the sand. There is, of course, the chance of a great local accumulation of such matter; but such has not been the mode of origin of useful coal-seams. The carbonaceous shales of the infra-krol band offer at first sight a more promising field of research. Without an extensive exploration of these shales, I should not have relinquished all probability of success. In the many scores of sections I have examined in these beds, within the region from the Ravi to Naini Tál, I have never found a single grain of true coaly matter. The case seems to be somewhat different far to the north-west, if my conjecture be correct that the shales of Dandeli are the representatives of the infra-krol beds. At that place there are strings of anthracite coal in the slaty shales, but the condition of the rocks is very discouraging to a prosecution of the enquiry."

30. In 1872 the population of Kumaun comprised 425,963 Hindús and 5,568 Musalmáns, out of a total of 433,314 souls, or an increase of 11·9 per cent. over the census of 1865. The Musalmáns are chiefly recent settlers from the plains, or the descendants of the dog-keepers, huntsmen, and sweepers of the Rájás of Kumaun. The Hindús number almost 99 per cent. of the entire population, and by position and descent are the real inhabitants of these hills. They may be broadly divided into three classes, the Bhotiyas or people of the northern parganas on the borders of Tibet, the Khasiyas or mass of the original hill population, and lastly, the settlers from the plains. The distribution, character, and habits of all three classes have been more or less affected by the physical circumstances of the tracts which they inhabit. The tract between the range of highest elevation and the plains is in its main characteristics Indian, while the country which lies between the snowy peaks and the Tibetan watershed is, on the other hand, Tibetan in

its character. These facts are more especially true of the inhabited portions of the two regions. The mass of the population of the first named tract is found in the valleys and the lower slopes of the mountains below an elevation of 6,000 feet, where the climate is thoroughly Indian. A well-marked winter, almost without snow, is succeeded by a summer of nearly tropical heat, and followed by a season of periodical rain. The vegetation is semi-tropical in its character, and the common agricultural products are those of the plains of Northern India. In the Bhotiya valleys beyond the snowy peaks a different set of conditions arise. The heavy falls of snow in the winter months give the climate even more than a Tibetan rigour. The summer is always temperate, and the periodical rains fall only as moderate showers. The vegetation is scanty and Alpine in its character, and the late spring and early autumn restrict cultivation to one precarious summer crop of a few of the productions of northern climates. Precisely thus as the climatic conditions of the Himálaya approach those of India on the one hand, or of Tibet on the other hand, so do we find that the Hindu or Tibetan element prevails in its population.

31. The mass of the population on this side of the snows belongs to the great Hindu tribe of Khasiyas, a name which comes down to us from Pauranik times, and which has left its traces from the Caucasus on the west through the Caspian, Kashgár, Kashmír, to the Khasiya hills on the east and the valley of the Brahmaputra. Their country is even to the present day known as Khasdes, or the country of the Khasas, as distinguished from Hundes, the country of the Huns, and Bhot, the country of the Bhotiyas. There is every reason to believe that these Khasiyas are identical with the Khasas, a race of Hindus inhabiting the hills, and somewhat lax in the practice of their faith, who were mentioned by the Hindu lawgiver Manu some 2,500 years ago, a theory which is strengthened by all the facts, so far as known, which have any bearing on the question. The language of the Khasiyas is a purely Hindi dialect without any foreign admixture, and is equally Hindi in the archaic form found in documents of the fourteenth century, as it is in the spoken language of the present

day. That the features of the hillmen differ somewhat from the features of the men of the plains is acknowledged, but the difference is no greater than what may reasonably be attributed to climatic influences and the absence of the leaven of Musalmán immigrants, which has so materially influenced the appearance of the population in many of the districts of the plains. The Khasiyas of Kumaun are now, to all intents and purposes, Hindu in religion, in language, and in customs. Such differences as exist amongst the mass of the Hindu population are due to the successive immigrations of settlers from the plains, who accompanied the Chand Rájas in their first settlement, or were invited by them from time to time either as courtiers, soldiers, or priests. For many years a struggle went on between the new-comers and the Khasiyas, but in the end the former absorbed all power and gradually imposed their stricter notions of Hindu observances on the subject race. Hence we find a spurious caste system in existence, based upon the village from which the parent stock sprang, and not on the tribal system as in the plains, and a curious admixture of laxity and strictness in all their religious customs, which fully supports the theory of the dual origin of their present religious system, partly that of the ancient Khasiyas, and partly due to the teaching of settlers from the plains.

In the lowest state of the Khasiya society comes the Doms with their numerous subdivisions, who correspond to the Chamars of the plains, and were until the British occupation the predial slaves of the Khasiya landholders. The Khasiyas are comparatively a fair-skinned race, whilst the Doms are dark and swarthy, and are probably the remains of a conquered race recruited from time to time by prisoners taken in war or obtained by purchase. What little religion they possess is Hindu in its origin, though largely tempered with the superstitious belief in demons and sprites, which seems common to all mountaineers. Every crag and summit almost has its sylvan deity, and usually a tiny temple devoted to its worship. On feast days and holidays processions take place, and a kid is slaughtered in honour of the deity. In the larger temples and on great occasions a buffalo calf is slain by severing the head from the neck by means of a kúkri, or curved knife, a sacrifice which has taken the place of the human

offerings which tradition says were formerly made to the great goddess Káli in these hills. It would be out of place to notice the great mass of castes amongst the Khasiyas in a short notice like the present. Suffice it to say that most of the great tribes of Northern India have their nominal representatives amongst the hill communities, for in practice a Gaur or Kanaujiya Brahman of the plains will not eat or drink with his namesake in the hills, and, as a rule, the hill castes are looked down upon as impure in blood and careless in matters of religious observance. Strange to say, the Joshis or astrologers, who are looked on as belonging to the lowest class of Brahmans in the plains, have in the hills succeeded in obtaining by intrigue as officials of the Chand Rájás a position and power which long placed them at the head of affairs in Kumaun.

32. To the north of the great snowy peaks we get among a different people, the Bhotiyas. Bod, the Tibetan name for Tibet or Tibbat, as it is called by the Musalmán historians, has been corrupted by the Khasiyas into Bhot, which has given the name Bhotiya to the border tribes between the two countries, and as used in Kumaun is rather an ethnographical than a geographical or political term, the word Hundes being applied to Tibet proper, and the term Huniya to its people. These latter are also mentioned in the Pauranik records under the name of Hunas. As distinctly as the Khasiyas are of Hindu origin, is it seen that the Bhotiyas are of Tibetan origin. Their dialects, which vary in Mána, Níti, Milam, Dárma, and Byáns, are all closely allied to the Tibetan now spoken in Hundes, and the unmistakable peculiarities of feature that belong to the Tibetan family are as strongly marked in the Bhotiyas as in the people of Tibet itself. The Bhotiyas themselves are little inclined to admit this Tibetan origin, and, especially in the Juhár valley, have adopted the language, customs, and habits of their Hindu neighbours, though, if report be true, when once across the border, they act as the Tibetans do, and are there good Buddhists. On the boundary line between the Khasiyas and the Bhotiyas we find a considerable admixture of the two races, especially in the tract known as Munsiyári, but the two pure races themselves now in existence can alone be

considered the representatives of the original inhabitants of these hills.

33. The paramount property in the soil of Kumaun, both in theory and practice, has ever been vested in the state. The occupant landholders possess a heritable and transferable property in the soil, but their rights were never indefeasible, and have ever been revocable at the hands of the grantor of the rights, the sovereign of the state. Property in land is here called *thhát*, and a proprietor is a *thhátwán*, not a *zamíndár*, which latter term is here apparently synonymous with cultivator, whether proprietor or tenant. The proprietary right is in a state of extreme subdivision, each hamlet or village being shared commonly amongst many petty proprietors. At the conquest, Traill found the greater portion of the district cultivated by proprietors who owed their rights to purchase, grant, or long-established hereditary occupancy. Whenever the state exercised its rights over land already occupied, the occupant proprietors, if they remained, sank into the state of tenants of the new grantee, who, moreover, by custom took one-third of the estate into his own cultivation. The original occupants retained the remaining two-thirds and took the name of *khayakars*, or occupants as distinguished from *thhátwán* or proprietor, and paid rent to the grantee, usually in kind, or according to some invariable rate fixed at the period of the grant. Where the proprietary and occupancy rights are vested in the same individual, the cultivating tenants under him possess no rights in the soil, and are mere tenants-at-will.

34. These petty proprietors hold in severalty, and exercise an unrestricted right over their respective shares, subject to the Hindu law of inheritance, and to the joint responsibility of all the sharers, in an estate for the punctual payment of the Government demand assessed thereon and the authorised dues. In such a state of property the character of landholder and farmer are naturally united, as the former cannot afford to part with any portion of the profit of his petty property: accordingly fully three-fifths of the arable lands are cultivated by the proprietors themselves,

who may be termed *thhátwán* cultivators. Of the other two-fifths one-half may be assumed for the estates which are cultivated by resident tenants having no claim to property in the soil, and in the remainder are comprised the lands cultivated by *pahikásht* or non-resident cultivators. The proprietors simply pay the Government demand; the occupancy tenants the Government demand *plus* a money payment in commutation of certain fees formerly demanded. The proportion of proprietors, including co-sharers, to permanent tenants and tenants-at-will in Garhwál is as  $2\frac{1}{2}$  to 1 of the former and 4 to 1 of the latter. There are three permanent tenants to two tenants-at-will. In the Bhábar and Tarái the Government is, with few exceptions, sole proprietor.

35. When the proprietors, from absence or other cause, are unable to cultivate, they let out their land to other cultivators, who, if they reside on the land, pay in kind commonly one-third of the produce, or in money, as may be agreed upon. Where there is little demand for the land, it is usually let for a moderate money rate, which tenure is usually termed *sirtán*, that is, the renter pays merely *sirti* or *hak zamindári*. When there is no offer for the land by any of the resident cultivators, the owner lets it to any inhabitant of the neighbouring villages; this is known as *pahikásht* cultivation. The rent is paid in money or kind, as may be agreed upon, but most commonly in money. Each *pahikásht* tenant usually makes his own bargain with the landlord, and as the competition for cultivators is much in excess of the demand for land, he usually has the better bargain. The rent is commonly paid in money, and is somewhat less than that paid by the *khayakar*. In Garhwál, at least, his rights are hereditary and transferable, and differ in no way from the *khayakar*. Both are equally protected by having their rights recorded with the amount of the holding and demand.

36. The *sirtán* cultivator, on the other hand, is a mere tenant-at-will, whose name does not appear in the record of rights. He has no permanent rights of any kind, usually arranging with the landlord for one

crop, and pays his rent in money or in kind. Tenants-at-will are rare in Garhwál. Occupancy tenants frequently rent in *sirti* some fields adjoining their own. The *sirtán* tenant pays the rent agreed upon, and is exempt from all cesses and dues. Under the former Governments these amounted to three-fourths of the public demand, and fell upon the proprietor. In former times Brahmans and the principal landowners cultivated as much of their lands as practicable by means of their *haliyas*, domestic slaves or servants, principally Doms or outcasts. This state of servitude has, however, gradually been abolished during English rule.

37. The revenue code is very simple; no one can be ousted unless for arrears, except the tenant-at-will, who can always be excluded at the end of the agricultural year. Suits for ouster in default of payment of arrears are very few in number. The principal kinds of claims that come before the courts are suits for possession of shares in land and for partition of shares. The agricultural class is composed of all castes from Brahmans to Doms, and all handle the plough themselves. All the cultivators are very well off, and can make enough from their land to feed and clothe themselves and their families. They are now so well off that it is found very difficult to procure free labour at reasonable rates, their condition precluding the necessity of attempting any extra occupation. The khayakars are for the most part as well off, if not better, than the proprietors, to whom they only pay a small proprietary allowance. Tenants-at-will are for the most part khayakars and small proprietors, who have not sufficient land for their own wants, or are village servants. Of late years the cultivating community has everything in its favour—light assessments, a high price for grain, good markets, and fair roads.

38. There are no classes of landless unskilled labourers in the hill districts. Doms and other low castes sometimes work for hire, but they usually have in addition a small plot of land which they cultivate as tenants-at-will. When employed, the return is usually food for the day and half a seer of rice. The wives and children of the



cultivator are his main support, and usually perform all the duties of a labourer except ploughing and sowing. The children are largely employed in tending cattle both in the hills and Bhábar.

39. The average death-rate per one thousand of the population has been eighteen for the years 1869 to 1875. In 1875, in the 4,606 villages in the district, 8,750 deaths were registered, or 20·21 per thousand. Of these deaths 12 were due to cholera, 5 to small-pox, 4,052 to fevers, 2,061 to bowel complaints, 285 to injuries, and 2,335 to all other causes. There were 43,864 vaccine operations during the year 1875-76, of which 18,705 were successful, the result of 3,930 was unknown, and 21,229 were unsuccessful. There are dispensaries at Almora, Naini Tál, Haldwáni, Káládhúngi, and Rámnagar supported by Government, and in other places dispensaries supported by the American Mission. In connection with the same society was a medical school, through which between 1869 and 1871 nine young women and four young men passed and received certificates enabling them to practise, but the idea has since been abandoned. During the year 1877 the *máhámari* or plague devastated large tracts of country towards Garhwál, its first appearance here since 1848. The climate of the Bhábar enjoyed an even more deadly reputation than that of the Tarái, but the immense clearings and other improvements of a similar nature that have been effected of late years have already had a marked effect on the climate. The Bhábar is now no longer absolutely deadly, and though most persons leave it for the hills from May to November, yet many, and amongst them the native officials, are able to live there the whole year round.

40. The management of the police in the interior of Kumaun is entrusted to the tahsildárs, and the only establishments exclusively devoted to this duty are those already mentioned. The general Police Act is not in force in the Kumaun division, the police administration being guided by the principles of Regulation XX of 1817. In 1876 there were six cases of murder, one of robbery, four of burglary, eight of cattle theft, and ninety cases of common theft.

Out of 679 cases cognizable by the police, 643 cases were prosecuted to conviction, including six cases of murder ; and out of property valued at Rs. 6,931 stolen during the year, property valued at Rs. 3,435 was recovered. Altogether crime is light, and any increase takes place chiefly in the cantonments of Naini Tál and Ránikhet during the season.

41. The trade of Kumaun may be described under two heads :  
 Trade. first, that in the hands of the Bhotiyas with Tibet ; and secondly, that with the plains.

42. The Bhotiyas turn all their attention to the carrying trade  
 Tibetan trade. between Húndes and Kumaun, and the little cultivation that they undertake is entirely subservient to this their principal occupation. The Juhári Bhotiyas alone enjoy unrestricted commercial intercourse with Gartoh, where the great annual fair is held in September. The trade of the Mána Pass is confined to Chaprang; of the Nítí to Daba (called Dappa by the Bhotiyas of Nítí) and to Gartoh for ponies, of the Dárma Passes to Kuinglang, and of the Byáns Passes to Takla Khar (or Taklakot), beyond which the Bhotiyas cannot pass without special license. Yaks, jabus, sheep and goats form the means by which the merchandise is carried. From Húndes the principal articles of import are salt, borax, gold, wool, drugs, coarse precious stones, chaunrs' tails, ponies and animals for carriage for the trade, as yaks and goats, and coarse woollen cloths and Chinese silks. The principal exports are grain, cotton, and broad cloth, quilts, hardware, coral, pearls, tobacco, gúr and other preparations of sugar, spices, dyes, wooden cups for tea, a small quantity of Kumaun tea, and timber for house-building. The trade is an exclusive system of monopoly and restriction, which appears to have been originally established for the encouragement of local and particular interests, and is now pertinaciously adhered to, partly from a reverence for ancient forms, and partly through the influence of the Chinese power. The intercourse to which the Bhotiyas are admitted is considered as a measure of sufferance, and a formal permission is requisite for its annual renewal. During the official year 1876-77 the value of the imports by Lilam from Juhár amounted to Rs. 1,26,000,

and that of the exports to Rs. 41,000, and by Relágar from Dárma and Byáns the imports were valued at Rs. 85,000, and the exports at Rs. 55,000.

43. In addition to the Tatar produce already mentioned, the

Trade with plains. Kumaun division supplies the plains marts with grain of all kinds, such as basmati rice, buck wheat and manduwa, and also ghí, tea, ginger, turmeric, and red-pepper, of which vast quantities are grown in the southern parganas, cardamoms, caraway, chiraita, salajít, *tejpat* or the leaf of wild cinnamon, drugs, bhang, charas, hill paper, hempen cloth and ropes, the bark of the ilex oak for tanning, lichen and wild turmeric for colouring, jungle produce, including timber, bamboos, wax, honey, dried fruits, hawks, gum, catechu, Bhábar grass, ropes, múnj grass, &c. Of metals produced in the hills in 1869-70, about 155 maunds of iron, valued at ten rupees per maund, and five maunds of copper were sold at Haldwáni and Ramnagar. In 1869, 1,977 maunds of *ganda biroza* (lissa) were exported from Garhwál, but this has since been stopped owing to the destruction caused to the chí forests by extracting it. It used to sell at about five seers the rupee. No article of commerce has undergone such a change as copper pice. In Mr. Traill's report it is stated 176 were equal in value to one rupee. Of late years these shapeless pice have been exported in large quantities to the plains; and, when very cheap, not more than eighty pice can be now bought for a rupee. The present price is sixty-six to seventy.

44. The imports consist for the most part of European cotton goods, broad cloth, silk goods, and hardware; sugar and its preparations, tobacco, spices, indigo, drugs, copper in sheets, iron, lead, brass utensils, *kansa* which is an alloy of copper and zinc, gold and silver lace, pearls, coral, salt, and gunpowder. Salt is imported from the Panjáb and Sambhar lakes. Lahorí (Panjáb) salt is generally most esteemed, and is considerably whiter than the others. It averages from 2 to  $3\frac{1}{2}$  seers per rupee in the Almora bazar, whereas the Bhotiya and Sambhar salts (of similar value) sell at from 4 to 6 seers per rupee, the fluctuations depending upon the amount available. The total

amount of Indian salt imported in 1869-70 appears from the local statements to have been about 21,000 maunds, but this is probably below the mark, as no mention of it is made in the Garhwál returns.

45. There are no manufactures of any note in the division: a coarse kind of serge called *pankhi* is made in Kumaun, and *bhangela*, a hempen cloth, and hempen rope and bags in Garhwál, which are exported to the amount of about 8 to 10,000 pieces yearly, value 12 to 20 annas each. The manufactures of wooden vessels, cups, mat-work, brass and copper are very insignificant. It may, however, be noticed that the Garhwáli goldsmith uses the spirit blow-pipe; this instrument is composed of iron and filled with spirits distilled from rice, and when used it is placed on a brazier of burning charcoal.

46. There can be no doubt but that trade has improved very much of late years in the Kumaun division. The establishment of the marts at Barmdeo, Haldwáni, Káládhúngi, and Rám-nagar in Kumaun, and Dharon, Kotdwára, and Chaukigháta in Garhwál, have aided much in its development, as well as the good roads now connecting those places and the plains. The cart road from Rám-nagar to Almora should reduce the cost of hills and plains articles fully twenty per cent., the difference between the cost of cooly carriage and that by carts. The opening of the station of Ránikhet, in addition to the existing one at Naini Tál, has already in itself had a marked effect on the condition of the people in the southern parganas. Twenty years ago all Garhwális purchased their clothing, sugar, &c., at Srinagar; now, owing to improved communications, they go in large numbers to all the marts at the foot of the hills, and also away into the plains, taking down hill produce for barter, and bringing back not only what is required for home consumption but also extra articles for trade. A class of pedlars and bankers also have sprung up, who go from village to village selling coarse cloths, beads, &c. There are now good roads to all the hill marts at the foot of the hills, and there is no doubt but that trade is rapidly developing, while the wants of the people are increasing.

47. The three great markets of Almora, Ránikhet, and Naini Tál alone consume more than the hills can supply, and at the two latter places there is a constant demand for labour, which is so remunerative that a man can pay the whole of his quota of the land-tax by carrying a load from Almora to Naini Tál and back, or by working a week at either of the European stations, or a fortnight on a tea plantation. The villages near Ránikhet can pay their revenue by the sale of their surplus chaff and straw, and milk, vegetables, and fruit are eagerly bought and have a good market. The great Bhotiya fairs at Bageswar in January and at Thal in April are the means of exchanging the produce of the lower hills for those of the Alpine valleys, and with Rám-nagar and Barmdeo are still the great outlets for the Tibetan trade.

48. The public revenue under the Rájas of Kumaun and Garhwál arose from duties on commerce, Revenue. cultivation, mining, law proceedings, making ghí or clarified butter, grazing cattle, weaving, and the produce of land. All these dues, except the land-tax, mining royalties, and grazing dues, were given up by the British and a regular settlement of the land was made. These land assessments were at first temporary, but Batten's settlement in 1846 was for twenty years, and Beckett's settlement recently completed is intended to last for thirty years, after which a revision on equitable terms will take place. This last assessment was based on a regular survey of the terraced land, in which every field was demarcated and its quality and value recorded, with the result that a rate of Re. 1-3-11 per bisi (4,800 square yards) was imposed on the cultivated and Rs. 0-13-10 on the cultivated and culturable area, as compared with a rate on cultivation of Rs. 0-12-7 in Garhwál. The land revenue by this settlement has risen from Rs. 1,27,115 to Rs. 2,37,536 in 1876-77, reaching its maximum in 1887-88, at which sum it continues until the end of the settlement. Parganas Mahryúri and Katoli, yielding a land revenue of Rs. 5,800 a year, with parganas Dasoli and Painkhanda in Garhwál, yielding a revenue of Rs. 3,585 a year, are dedicated to the maintenance of dispensaries on the pilgrim roads to Badrináth

and Kedárnáth. Over 3,000 bísis, nominally assessed at a value of Rs. 3,412 a year, are held free of revenue by individuals, while 9,476 bísis, yielding Rs. 8,447 a year, are assigned in support of temples. Every village almost has its water-mill for grinding corn, on which a small tax of from Re. 1 to Rs. 3 per mill is levied.

49. Of the early history of Kumaun we know very little, but the few facts that have been recorded would lead us to believe that at a very early period these hills were inhabited by a distinct race, and that they were then the recognized home of the gods and an object of veneration to the Hindu tribes of the plains. The Pandavas are said to have retired here after the great battle of Kurukshetra, and the Kumaunis have transferred the site of the battle from the Jumna near Delhi to the valley of Lohaghat, where the river Lohávati ran red with the blood of the slain, while Debi Dhúra was the place where the great game of chess was played, and the granite boulders lying there were the pawns used in the game. This localisation of the great story of the Hindus is not peculiar to Kumaun, as we have it also in Gorakhpur and Bundelkhand. Ptolemy records that the upper valleys of the Jumna and Ganges were inhabited by a race called Xulindas, and that a great colony of hermits existed near the sources of the sacred river. We next have the travels of the Chinese Hwen Thsang, who proceeded in the seventh century from the kingdom of Mandawar, lying in the north of the Bijnor district, to the kingdom of Brahmapura in the hills, and thence to the kingdom of Govisana, identified with Káshipur at the foot of the hills, but the true site of Brahmapura has not yet been satisfactorily established. The notice, however, shows that in the seventh century there existed in western Kumaun a recognized government with considerable pretensions to civilisation as then understood.

50. Tradition gives the name Katyúra to the dynasty which was supplanted by the Chands. They are the earliest known to history to have reigned in Kumaun, and originally held Joshimath in the valley of the Alaknanda in Garhwál, whence they emigrated to Baijnáth in the Katyúr valley near Bageswar. The ruins of

many old buildings are to be seen there, and there seems no reason for doubting that this was really the old capital of the country, and that the present pargana of Katyúr derives its name from the dynasty that reigned there. To the Katyúras are attributed the old temples, wells, and chabútras which are so common in central Kumaun. How and when the power of the Katyúras began to decline there is little evidence to show, but their once extensive dominions seem to have been gradually broken up into a number of petty states until little remained to them but the tract around Katyúr itself. The family of Chand, under which Kumaun was at length re-united into one state, first rose to importance in Káli Kumaun, the most eastern portion of the province bordering on the river Káli and on the Doti district of Nepál. The founder of this dynasty was

Som Chand, a Chandrabansi or Sombansi Rajpút. He is said to have come from Jhusi near Allahabad into Káli Kumaun, where he married the daughter of the Katyúra Rája of the country, called Sri Brahm Deo. With her he received as dowry the petty kingdom of Káli Kumaun, and established his seat of government at Champháwat.

51. According to some authorities the change of dynasty happened in the twelfth century, but according to the genealogical lists of Kumaun the date of this occurrence is declared to be 757 Sambat, corresponding to 700 A.D. ; a mean between the two dates will perhaps be nearest the truth. Vikram Chand, who lived in the beginning of the fifteenth century, is said to have been the thirty-fourth in succession from Som Chand. According to one of the current stories, Som Chand was the brother of the king of Kanauj. On the death of the eighth Rája of the Chand dynasty, by name Bina Chand, the Khasiyas are said to have "lifted up their heads," to have expelled their Chand rulers from Champháwat, and to have established the Khasiya *ráj*. The names of fourteen Khasiya Rájas are given, and they are stated to have ruled for about two hundred years in Káli Kumaun, acknowledging, however, the supremacy of the Rája of Doti, as their Chand predecessors and successors are said also to have

done. The Khasiyas expelled the Brahmans and Rajpúts from Káli Kumaun, a sign probably that this Khasiya *ráj* was the result of a national movement, not only against the foreign dynasty, but generally against the intruders from the plains.

At length Bír Chand, one of the descendants of the former Chand Rájas, who was living in the Doti Tarái, determined to make an attempt to recover the country. He collected a force, attacked the Khasiyas, and killed their king Soupál, and established himself as Rája in Káli Kumaun. This is said to have happened in A.D. 1065. Bír Chand recalled the Brahmans and Rajpúts, and gave to them all the chief offices of the state. The possession of the Chand family, which was thus re-established at Champháwat, went on gradually extending until the end of the fifteenth century, when Rája Kirati Chand completed the conquest of the greater part of Kumaun from the petty chiefs among whom it was divided. In 1563 A.D. Rája Bálo Kalyán Chand transferred the seat of government from Champháwat to Almora, which has ever since remained the capital of the province. The son of this Rája was Rudr Chand. He was a contemporary of Akbar, and his visit to the emperor at Lahore in 1587 A.D. was recorded in characteristic terms by the Musalmán historian of the times:—"Neither he nor his ancestors (the curse of God on them!) could ever have expected to speak face to face with an emperor." Up to this time the ancient Katyúra family is said to have retained its power in Katyúr. The last of its Rájas, Sukhal Deo, was killed by Rudr Chand, and Katyúr was annexed to the other possessions of the Chands. Shortly afterwards the Kumaun state, though harassed by frequent revolutions and petty wars with its neighbours in Garhwál and Doti, seems to have attained the highest point of prosperity under the Chand dynasty. It comprehended the whole of the hill country, from the Káli to the borders of Garhwál, and from Tibet to the borders of the present plains districts of Moradabad and Bareilly, including the Tarái district.

52. The rise of the Rohilla power in the first half of the eighteenth century not only disturbed the possessions, which had seldom been very  
 Rohilla invasions.



peaceable, of the Kumaun Rájá in the Taráí, but brought for the first time a Musalmán invasion of the hills. In 1744 A.D. Ali Muhammad Khán sent a force to invade Kumaun. The resistance of the Rájá Kalyán Chand was weak and ineffectual. The Rohillas captured and plundered Almora, and "though their stay in Kumaun was short, its ill results to the province are well and bitterly remembered, and its mischievous, though zealously religious, character is still attested by the noseless idols and trunkless elephants of some of the Kumaun temples." The Rohillas remained in the hills for seven months, when, disgusted with the climate and the hardships that they were forced to suffer, they accepted a bribe of three lakhs of rupees and returned to the plains. But Ali Muhammad Khan was not satisfied with the conduct of his lieutenants, and three months after their retreat, at the commencement of 1745, the Rohillas returned. Their second invasion was less fortunate. They were defeated at the very entrance of the hills near Barakheri, and made no further attempt on Kumaun. These were the first and last Muhammadan invasions of these hills. The Delhi emperors never exercised any direct authority in Kumaun, although it was necessary for the Rájá to admit their nominal supremacy for the sake of his possessions in the plains. These events were followed by disturbances and revolutions in Kumaun, and within the next thirty years the hill Rájás had lost all the country which they had held in the plains, except the strip of forest called the Bhábar, immediately at the foot of the hills.

53. We have now reached the time when the Chand dynasty, that had so long ruled in Kumaun, was finally to be destroyed. In the middle of the eighteenth century the Gúrkha tribe, under their chief Prithi Naráyan, had made themselves masters of the most important part of the present kingdom of Nepál. The successors of Prithi Naráyan carried on the conquests that had been thus commenced, and in 1790 A.D. Rájá Ran Bahádur Sáh determined to attack Kumaun. The Gúrkha forces crossed the Káli under Chauntra Bahádur Sáh, Amar Singh Thápa, and other chiefs, and advanced upon Almora through Gangoli and Káli Kumaun. They were completely successful. The titular Rájá of Kumaun

fled to the plains, and the whole of his country was annexed to the other conquests of the Gúrkhas. In 1799 they invaded Garhwál. The Rájá of that country was defeated and he himself killed, and pushing on their conquests, the Gurkhas had soon subdued the whole of the hill states as far as the Satlaj.

54. For twenty-four years the Gúrkhas retained possession of Kumaun. Their government was most cruel and oppressive, and the reputation they earned for themselves will not for many generations be forgotten in Kumaun. Their tyranny has passed into a proverb, and at the present time, when a native of these hills wishes to protest in the strongest language in his power against some oppression to which he has been subjected, he exclaims that for him the Company's rule has ceased, and that of the Gúrkhas has been restored.

55. For several years before the commencement of the Nepalese war in 1814, the Gúrkhas had been making a series of petty encroachments on the British territories at the foot of the Himálayas. Most of these aggressions were without excuse, and being succeeded only by weak remonstrances, or, still worse, demands, the fulfilment of which were either forgotten or not enforced, encouragement was given to further encroachments, until in 1812, when the conduct of the Gúrkhas on the Gorakhpur and Tirhút frontier became so outrageous that the attention of our Government was at last drawn to them. The Marquis of Hastings, in April, 1814, ordered the occupation of the disputed pargana of Butwal in the Gorakhpur district, and by November in the same year a general war broke out. As a part of the general movement, a body of irregular troops was assembled at Moradabad and Káshipur under Lieutenant-Colonel Gardner, whose brother, the Hon'ble E. Gardner, had civil charge of the force and directed the mode of its employment. In December, 1814, it was finally resolved to attempt to wrest Kumaun from the Gúrkhas, and if the operations were successful to annex it to the British possessions, as there was no legitimate claimant on the part of the Chands then in existence. Harakdeo Joshi, the minister

of the last legitimate Chand Rája of Kumaun, warmly espoused the British side, and lent his weighty aid to gather adherents to our cause within the hills.

56. At the end of January, 1815, everything was ready for the attack on Kumaun. The whole force consisted of 4,500 men with two six-pounder guns, and it was determined to send the main body under Colonel Gardner by Chilkiya direct on Almora, while a subsidiary force under Captain Hearsey was to move by Pilibhit up the Káli by the Timla Pass and cut off the communications with Nepál. On the 9th February 500 men were sent to Rudrpur to co-operate with the main column by advancing on Almora by the Bhím Tál route, as soon as the main body advanced sufficiently far to admit of their joining. The main body arrived at Dhikuli on the Kosi on the 15th February, and drove in a party of Gúrkhas and captured a stockade. The stockades at Chukam, Kath-ke-nau, and Ukhaldhunga were evacuated at the approach of our troops, who eventually occupied a position near Kumpur (Ránikhet) opposite to a stockade recently erected by the Gúrkhas to oppose the march on Almora. For almost a month the forces remained encamped close to each other, both sides awaiting reinforcements, until operations recommenced by the occupation of Siyáhi Devi by the British force on the night of the 22nd March. This was a strategical movement intended to turn the flank of the Gúrkha stockade, and was entirely successful, as was shown by the retreat of the Gúrkhas on Almora, after setting fire to their stockades on discovering that their position was threatened. The British force followed the same road, and on the 26th reached the village of Riúni, and on the 28th occupied the post of Katármal above Háwalbagh on the Kosi, whilst the enemy held the Sitoli heights on the other side of the river.

57. Nothing could have been more judicious than the manner in which Lieutenant-Colonel Gardner had carried on the whole of his operations. It must, however, be admitted that the success of the British was brought about more by the weakness of the enemy

than by any skill and courage of their own. There are no means of discovering the amount of the force which the Gúrkhas were able to bring against us in Kumaun, but it is probable that the number of men actually opposed to us never exceeded 1,500, and of these not much more than half were true Gúrkhas. By the time that Lieutenant-Colonel Gardner was fairly established in the hills, the greater part of the natives of Kumaun in the Gúrkha service had deserted, and this loss it was quite impossible to supply by new levies, so that the whole available force could not have been more than 1,000 men. The greatest source of weakness to the Gúrkha cause was the universal disaffection of the people of the country. Nothing could exceed the hatred which the tyranny and exactions of twenty-five years past had created, and no sooner had the British forces entered the hills than the inhabitants began to join our camp and bring in supplies of provisions for the troops. The same causes made it easy for us to obtain information regarding every movement of the enemy, and gave us every facility for obtaining a knowledge of the localities of the country, a knowledge which in mountain warfare such as this, and in the absence of all trustworthy maps, was almost essential to success. We thus possessed every advantage which an invading force could desire, and the Gurkha chiefs appear to have been devoid of the ability and energy which might have helped them as it had helped others of their nation elsewhere to withstand the adverse circumstances under which they were placed.

58. While these events were passing in central Kumaun, Captain Hearsey was invading the province on its eastern side, and his operations were at first attended with equal success. He left Pilibhít with a force of 1,500 men in February, and met little opposition until he reached Champháwat, the old capital of Kumaun. He was then directed to do all in his power to prevent the junction of a force which was being raised in Doti by Hastidal, the brother of Bam Sáb, who commanded at Almora, with the garrison at Almora. As a means to this end he patrolled the Káli and laid siege to the fort of Kotolgarh, but thus so broke up his force that when Hastidal did cross the river, Captain Hearsey had

not proper means to resist him. He marched, however, with what force he had to Khilpati, where he met the Gúrkhas and was wounded and taken prisoner to Almora, his men having fled after a merely nominal resistance. The Bhím Tál expedition merely occupied the forts of Barakheri and Chhakhátagarhi, and took no further part in the operations.

59. Seeing the importance of the movement towards the occupation of Kumaun already commenced, Lord Hastings deemed it wise to assist the irregular levies under Lieutenant-Colonel Gardner by the despatch of three regiments of native infantry and twelve guns. These were placed under the orders of Colonel J. Nicholls, who joined the camp at Katármal on the 8th April and assumed command of the entire force, while the Hon'ble E. Gardner remained, as before, in charge of the civil affairs of the province, and the direction of the diplomatic transactions with the Gúrkha authorities. Negotiations were opened without result, and on the 22nd April Hastidal pushed forward with a portion of the Almora force to occupy Gananáth, an eminence about fifteen miles west of Almora in the valley of the Kosi. His design apparently was to hold this position as a means of communication with the Gúrkha forces to the west, and above all to keep the expedition a secret. The movement was, however, soon discovered, and the British pursued without loss of time. A little to the south of the temple of Gananáth in one of the beautiful turfy glades among the pine-groves the Gúrkha and British forces met. The contest was a short one. Hastidal was killed by a musket ball, and his fall was the signal for the flight of his followers.

60. Colonel Nicholls resolved to follow up this success, and on the 25th the British forces advanced to the attack on Almora. The main body of the Gúrkhas under Angad Sirdár was stationed a little above the village of Pándekhola in a position protected by stockades, on the ridge called Sitoli, about two miles west of Almora, and between it and the Kosi; a detachment under Chámu Bhandári held the Kálimatiya hill in order to protect the right flank of the position, while the remainder under Chauntra Bam Sáh occupied Almora itself. The British crossed the Kosi, and

advancing up the Sitoli ridge carried by assault one after the other four of the enemy's stone stockades and drove the defenders into Almora. On the night of the 25th the headquarters were established at Pokharkháli, whilst the troops occupied Haridungari. During the night Chámu's party from Kálimatiya, in conjunction with a sortie party from the fort, attacked the British position on Haridungari. Chámu's force was at first successful. They carried our most northerly post, though stockaded and defended by a picquet of a regular regiment, and it required the aid of a party of the flank battalion of the same regiment and a body of irregulars under Lieutenant-Colonel Gardner himself to recover the post, and even then the British succeeded not without a hard struggle. The enemy was finally repulsed on all points, though not without considerable loss on our side. Natives of Kumaun, who were present at the time, declare, however, and very probably with truth, that a considerable part of our loss on the occasion was due to the fire of our own men, in the confusion which was caused by the first successful attack of the Gúrkhas. Our loss in killed and wounded on the 25th amounted altogether to two hundred and eleven men.

The next morning, the 26th April, 1815, the mortar batteries opened on the fort of Almora, and the fire continued till about 10 A.M., when the Chauntra sent a flag of truce to Colonel Nicholls, requesting a suspension of hostilities, and offering to treat for the evacuation of the province. Lieutenant-Colonel Gardner was deputed to hold a personal conference with Bam Sáh, and on the following day the negociation was brought to a close by the conclusion of a convention, under which the Gúrkhas agreed to evacuate the province and all its fortified places. It was stipulated that they should be allowed to retire across the Káli with their guns, arms, military stores, and private property, the British providing them with the necessary supplies and carriage. As a pledge for the due fulfilment of the conditions the fort of Lálmándi (now fort Moira) was the same day surrendered to the British troops. Captain Hearsey, who had hitherto been imprisoned at Almora, was released at the same time.

61. The Gúrkhas were escorted across the Káli by our troops, and the British took possession of Kumaun and Garhwál. The Hon'ble E. Gardner was the first Commissioner of Kumaun, and in August, 1817, he was succeeded by Mr. Traill, who had been his Assistant since May, 1815. Traill ruled absolutely in Kumaun until 1835. He was followed by Colonel Gowan and Mr. S. T. Lushington, under whom Mr. J. H. Batten carried out the first regular settlement of the province, and in 1848 succeeded Mr. Lushington as Commissioner. In 1856 Captain (now Major-General Sir Henry) Ramsay was appointed Commissioner, and still manages the affairs of Kumaun. Traill, Batten, and Ramsay are the names best known to the people as those of the men whose indefatigable industry, talent, and zeal have brought Kumaun and Garhwál from a state of desolation scarcely paralleled elsewhere in India to a height of material prosperity and security never before enjoyed by them. I close this short notice with an extract from Mr. P. Whalley's report on the laws of the non-regulation provinces:—"The administrative of history Kumaun divides itself naturally into three periods—Kumaun under Traill, Kumaun under Batten, and Kumaun under Ramsay. The *régime* in the first period was essentially paternal, despotic, personal. It resisted the centralising tendencies which the policy of the Government had developed. It was at the same time, though arbitrary, a just, wise, and eminently progressive administration. Mr. Traill's incumbency terminated in 1835, and there followed an interval of wavering uncertainty and comparative misrule. The system of government," as was observed by Mr. Bird, "had been framed to suit the particular character and scope of one individual," or, as he might have said, had been framed for himself by that individual. "Traill left the province orderly, prosperous, and comparatively civilized; but this machinery was not easily worked by another hand. There was no law, and the lawgiver had been withdrawn. The Board of Commissioners and the Government, which had remained quiescent while the province was in the hands of an administrator of tried ability and equal to all emergencies, found it necessary to re-assert their control, and to lay down specific rules in matters that had hitherto been left to the judgment of the Commissioner.

“Mr. Batten was then only Assistant Commissioner of Garhwál, but he was a man eminently qualified both by training and disposition to second the action of Government, and to assist in the inauguration of the new era. His talents had already been recognized, and from this period he was consulted in every step, and it was his influence, more than that of any single officer, which gave its stamp and character to the period which is distinguished by his name. Its duration covered the years 1836-56. It was marked in its earlier stage by an influx of codes and rules and a predominancy of official supervision, which gradually subsided as Mr. Batten gained in influence, position, and experience. Thus the second period glided insensibly into the third, which, nevertheless, has a distinctive character of its own. In General Ramsay’s administration we see the two currents blended, the personal sway and unhampered autocracy of the first era combining with the orderly procedure and observance of fixed rules and principles which was the chief feature of the second.”

NAINI TAL, }  
*The 31st August, 1877.* }

E. T. ATKINSON.





# GAZETTEER MAP OF GARHWAL.

78° 30'

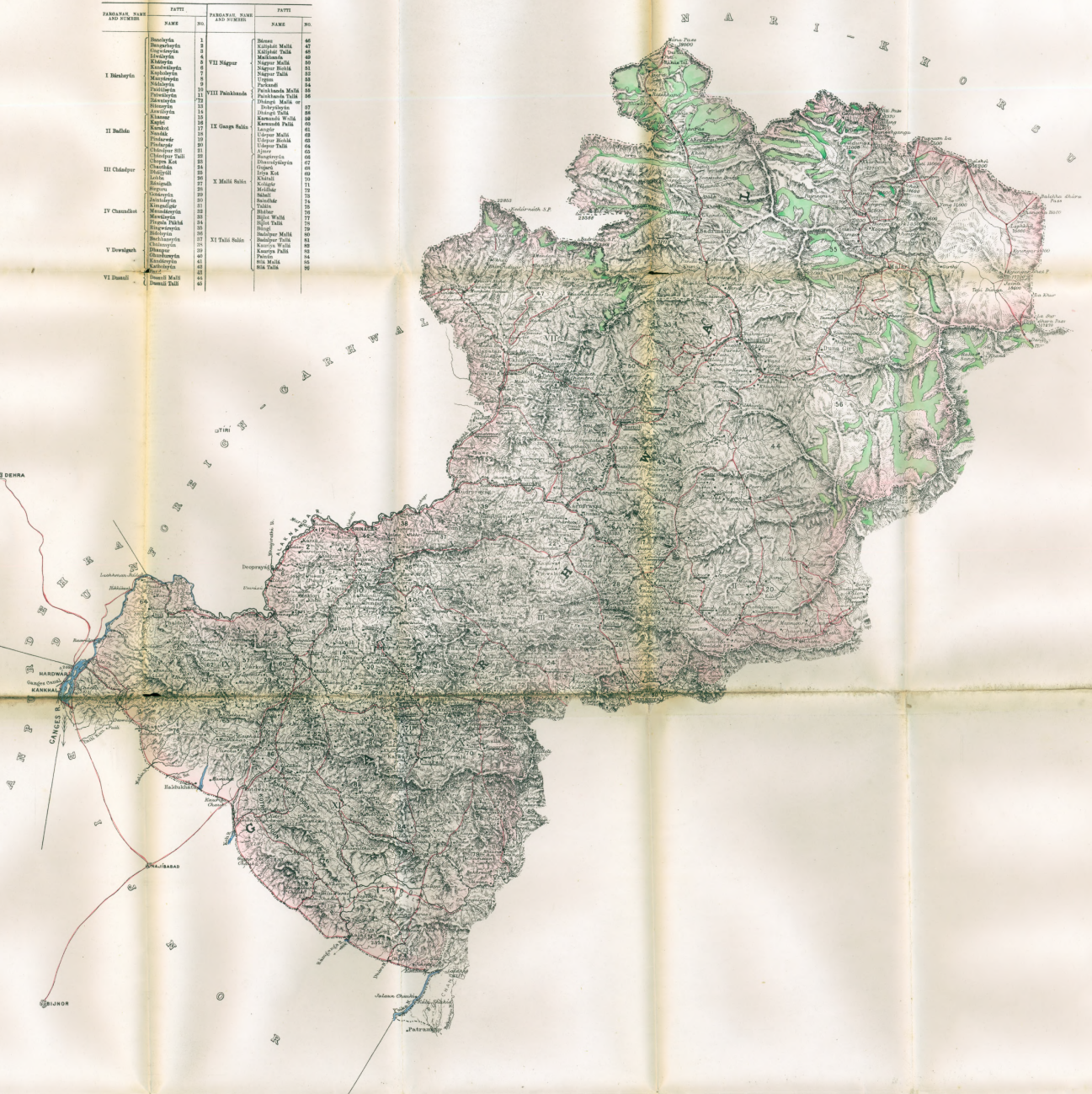
79° 0'

79° 30'

80° 0'

### NAMES OF PARGANAHS AND PATTIS IN BRITISH GARHWAL.

PARGANAH NAME AND NUMBER	PATTI		PARGANAH NAME AND NUMBER	PATTI	
	NAME	NO.		NAME	NO.
I Hindustan	Dandiyala	1	Bhona	46	
	Dandiyala	2	Kanhalia Malla	47	
	Dandiyala	3	Kajjial Talia	48	
	Dandiyala	4	Makhan	49	
	Dandiyala	5	Nagar Malla	50	
	Dandiyala	6	Nagar Malla	51	
	Dandiyala	7	Nagar Malla	52	
	Dandiyala	8	Talia	53	
	Dandiyala	9	Parvati	54	
	Dandiyala	10	Parvati	55	
II Bahala	Dandiyala	11	Parkanda Malla	56	
	Dandiyala	12	Parkanda Malla	57	
	Dandiyala	13	Parkanda Malla	58	
	Dandiyala	14	Parkanda Malla	59	
	Dandiyala	15	Parkanda Malla	60	
	Dandiyala	16	Parkanda Malla	61	
	Dandiyala	17	Parkanda Malla	62	
	Dandiyala	18	Parkanda Malla	63	
	Dandiyala	19	Parkanda Malla	64	
	Dandiyala	20	Parkanda Malla	65	
III Chaudgar	Dandiyala	21	Parkanda Malla	66	
	Dandiyala	22	Parkanda Malla	67	
	Dandiyala	23	Parkanda Malla	68	
	Dandiyala	24	Parkanda Malla	69	
	Dandiyala	25	Parkanda Malla	70	
	Dandiyala	26	Parkanda Malla	71	
	Dandiyala	27	Parkanda Malla	72	
	Dandiyala	28	Parkanda Malla	73	
	Dandiyala	29	Parkanda Malla	74	
	Dandiyala	30	Parkanda Malla	75	
IV Chamawat	Dandiyala	31	Parkanda Malla	76	
	Dandiyala	32	Parkanda Malla	77	
	Dandiyala	33	Parkanda Malla	78	
	Dandiyala	34	Parkanda Malla	79	
	Dandiyala	35	Parkanda Malla	80	
	Dandiyala	36	Parkanda Malla	81	
	Dandiyala	37	Parkanda Malla	82	
	Dandiyala	38	Parkanda Malla	83	
	Dandiyala	39	Parkanda Malla	84	
	Dandiyala	40	Parkanda Malla	85	
V Dewalgar	Dandiyala	41	Parkanda Malla	86	
	Dandiyala	42	Parkanda Malla	87	
	Dandiyala	43	Parkanda Malla	88	
	Dandiyala	44	Parkanda Malla	89	
	Dandiyala	45	Parkanda Malla	90	
	Dandiyala	46	Parkanda Malla	91	
	Dandiyala	47	Parkanda Malla	92	
	Dandiyala	48	Parkanda Malla	93	
	Dandiyala	49	Parkanda Malla	94	
	Dandiyala	50	Parkanda Malla	95	
VI Dandil	Dandiyala	51	Parkanda Malla	96	
	Dandiyala	52	Parkanda Malla	97	
	Dandiyala	53	Parkanda Malla	98	
	Dandiyala	54	Parkanda Malla	99	
	Dandiyala	55	Parkanda Malla	100	
	Dandiyala	56	Parkanda Malla	101	
	Dandiyala	57	Parkanda Malla	102	
	Dandiyala	58	Parkanda Malla	103	
	Dandiyala	59	Parkanda Malla	104	
	Dandiyala	60	Parkanda Malla	105	



#### REFERENCES

District Boundaries are shown thus — — — — —  
 Parganah Do Do Do — — — — —  
 Patti Do Do Do Do — — — — —  
 Patwarli Stations Do Do Do — — — — —

Scale 1 Inch = 6 Miles or 1:60000

78° 30'

79° 0'

79° 30'

80° 0'



# GARHWÁL.

**GARHWÁL**, a district of the Kumaun division, in the North-Western Provinces, is bounded on the north by Chinese Tibet, on the west by the native state of Garhwál and the Dehra Dún district, on the south by the Bijnor district, and on the east by the Kumaun district. It lies between north latitude  $29^{\circ} 26' 15''$  and  $31^{\circ} 5' 30''$ , and east longitude  $78^{\circ} 18' 45''$  and  $80^{\circ} 8' 0''$ , with an area of 5,500 square miles, and a population in 1872 numbering 310,288 souls, or 56 to the square mile, comprising 308,398 Hindús, 1,799 Musalmáns, and 91 Christians. For administrative purposes this area is divided into 11 parganas, which are further subdivided into 86 pattis, and in 1874-75 yielded a land revenue of £9,558.

The district comprises mountain ranges separated by narrow valleys which are almost ravines (the broadest, at Srinagar, being barely half a mile wide, with an elevation of 1,820 feet above the level of the sea),<sup>1</sup> and a narrow strip of Bhábar or waterless forest about two to three miles in breadth on the south, where it adjoins the plains.

The Alaknanda and its tributaries drain the entire district and form the valleys. The course of the Alaknanda itself marks the great central line of lowest elevation, receiving rivers on either side, which in turn receive minor streams, and these again rills and rivulets, until the great dividing ridge is met which forms the watershed between the head waters of the Káli or Ghágra system on the east and the Alaknanda or Ganges system on the

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<sup>1</sup>For the greater portion of the notes on which this article has been based I am indebted to Captain Garstin, Assistant Commissioner. The article has been prepared to afford information required for the Imperial Gazetteer.—E. T. A.

west. The entire drainage of Garhwál proper flows into the Ganges. With the exception of parganas Bárahsyún and Chaundkot, the entire district is thickly covered with forest, forming in many places an almost impenetrable jungle. To the north the mountains are a part of the great Himálayan chain, of which the principal peaks in this district are Trisúl, 23,382 feet; East Trisúl, 22,342 feet; Nanda Devi, 25,661 feet; Dúnagiri, 23,181 feet; Kamet, 25,413 feet; Badrinath, 22,901 feet; Nálikánta, 22,388 feet; and Kedárnath, 22,853 feet. From the main range to the north-west the slope inclines to the elevated plateau of Tibet, and the valley of the Sáraswat or Bishnuganga rises gradually from 6,200 feet at the confluence of that river with the Dhauli to 18,000 feet at the Mána pass into Tibet. Between this valley and the valley of the Dhauli on the east is a ridge of great elevation, bounded by a peak having an altitude of 22,093 feet on the south and Kamet on the north. The Dhauli valley comes next, and leads to the Níti pass into Tibet, which has an elevation of 16,570 feet above the level of the sea. To the south of the main range the hills are spurs running from it, generally in a direction from north-east to south-west and parallel to each other, with cross spurs at intervals and occasional ridges of greater elevation, such as Tunganáth (12,071 feet), Dudu-ke-toli (10,188 feet), and Dobri (9,862 feet.) South of the river Nyár, however, the ranges run more parallel to the plains, and are nowhere more than 7,500 feet above the level of the sea. Most of these hills are rugged and densely wooded up to between ten and eleven thousand feet, steep towards the ridges, somewhat flatter about the middle, and end in abrupt slopes towards the valleys. Along the larger rivers the hills usually present a gradual slope at their base, and end in a succession of narrow terraces or flats, which are all dry, and are also as a rule cultivated. The strip of Bhábar from Kotdwára on the west to Bhamrauri on the east is separated from the plains by a continuation of the Siwálik range, which is crossed by numerous passes. The remainder of the southern boundary to the east and west of these points is entirely open to the plains. The Bhábar is but partially cultivated, and for the most part consists of forests of *sál* (*Shorea robusta*), *sissu* (*Dalbergia sissu*), and bambus.

The forests are of such extent and are so broken up by patches of cultivation that it would be useless to enumerate them. Generally

**Forests.** the southern portion of the district is still covered with primeval forest. The largest forest tract in the centre of the district is the tiger-haunted jungle of Chandpur, which is still some 25 to 30 miles long by 12 to 15 miles broad. Year by year the jungle is encroached on by cultivation and people are encouraged to settle by the grant of land at nominal rents. Hitherto the scanty population and the presence of wild animals have retarded the progress of reclamation, but these obstacles are gradually being removed, and a comparison of the state of cultivation in 1815 with that now existing shows a marvellous and steady increase in prosperity. Much of the forest land is now held by the Forest Department, and is rigidly conserved for the sake of the timber.

As already noted, the Alaknanda with its tributaries mark the distinguishing physical features of

**Rivers.** the district and show the direction of the great valleys. This river is one of the sacred streams of India, and each of the places where it meets a considerable affluent (called *prayága* or confluence) is esteemed holy and forms a station in the pilgrimage which all devout Hindús make to Himáchal. The first confluence is at Bishnu-prayág, where the waters of the Dhauli from the Níti pass unite with the waters of the Sáraswat or Bishnuganga from the Mána pass and thence onwards to Deoprayág the stream is known as the Alaknanda. At Nandprayág is received on the left bank the Nandákini, which drains the western slopes of Trisúl. At Karnprayág on the same bank is received the Pindar, which drains the southern and eastern slopes of the great Trisúl group. At Rudrprayág the Mandákini is received on the right bank and drains the entire tract along the southern slope of the Kedárnáth and Badrináth peaks. At Deoprayág the Bhágirathi joins the Alaknanda, and henceforward the united streams are known as the Ganges. The Bhágirathi rises in the Native State of Garhwál from the Gangotri peak,

and though popularly considered the chief branch of the Ganges, is inferior in importance and volume to the Alaknanda. The only other important tributaries are the Nyár and Hiunal, which join the Ganges below Deoprayág. The only river of any size in Garhwál which does not join the Ganges within the district is the Rám-ganga, which rises near Lobha and flowing through Kumaun and the plains only reaches the Ganges in the Farukhabad district. All these rivers, owing to their great velocity and the existence of rocks, shoals and rapids, are useless for navigation ; several, however, are used for rafting timber. Wherever culturable land occurs near their beds they are used for irrigation, and are also made available for giving power to mills for grinding corn. The beds of all the rivers are hard rock and gravel with a little sand, and little erosion takes place. Srinagar, the only place in the district approaching a town, lies on the right bank of the Alaknanda. Diluvion, owing to sudden floods, takes place, but alluvion is not known. There are four small ferries on the Alaknanda, the boat being formed out of a hollowed log. On the rivers rising in the snowy range fords are rare, but all the other rivers are fordable except during heavy rain. Before the conquest one-half of the town of Srinagar was swept away by flood, and again in 1868 great loss occurred from a sudden rise in the Alaknanda. The only canals in the district are two small ones irrigating some 1,300 acres of Bhábar land near Kotdwára, and the only lake of any considerable size is Deori Tál, near Tunganáth, which is about 400 yards long by 250 yards wide.

The nearest railway-station to Garhwál is at present that of Saháranpur, which is about 100 miles from  
 Communications. Pauri. The district is well intersected by hill roads varying from 10 to 12 feet in width, nearly all of which are bridged. The total length of roads is 1,000 miles. The principal roads in a commercial point of view are, (1) that from Srinagar to Níti, 125 miles long, which serves the Bhotia and Tibet trade ; (2) from Srinagar to Kotdwára, 55 miles long, which serves the traffic with the plains ; (3) from Kainúr to Rám-nagar, 40 miles long, which takes a considerable amount of hill

articles to the great trading mart at Rámnagar ; and (4) from Pauri to Almora, which connects the head-quarters of the two districts, and also forms the Government postal line ; 50 miles of this road lie in Garhwál. There are also small marts along the foot of the hills, where fairs are held weekly ; these are all accessible by roads from different parts of the interior. Very few new roads are now required, and attention is chiefly given to improving those that already exist. The passes through the Himálayas from Tibet to Garhwál are the Mána and Níti. The passes to the plains are the Bilasni, Bhorí, Sigdhi, Choki, Kotdwára, Pálpur, Babli and Kangra. Besides these there are many *chor gháts* leading to individual villages and seldom used except by the neighbouring inhabitants. The roads here as in Kumaun are kept up by labour supplied by the landholders and covenanted for in their agreements with Government regarding the land-revenue supplemented by a Government grant.

**Climate.** The climate of Garhwál for six months in the year, *i. e.*, the rainy season and the months of January and February, is damp. For the remaining half of the year it is dry and bracing. But owing to the influence of the natural features of the country there general statements regarding the climate are subject to great variations. Towards the Níti and Mána passes, where the Bhotias reside, there are no periodical rains, while in the hottest weather it is cool. In the portions bordering on and to the south of the snowy range it is always cool, but more moist, while on the rest of the hills the temperature varies, and in the valleys it is intensely hot and feverish during the hot weather and rains, and bitterly cold during the nights and mornings in the cold season, although warm in the day time. Under such circumstances the readings of the thermometer would be no criterion of the actual temperature. The average rainfall at Pauri is about 48·4 inches, and at Srinagar about 37·1 inches.

**Animals.** The wild animals found in the hills and in the forests at their base are noticed in the article KUMAUN. During the year 1875 thirty-seven persons perished from the attacks of wild beasts, or died from snake bites.



A considerable trade in the skins of the rarer game birds, and those of the barhal or wild sheep and the musk deer used to be carried on, and even still exists, but owing to the reckless way in which birds were destroyed, and which rendered their total extinction not improbable, measures have recently been taken for their preservation, consequently the trade has somewhat decreased. Musk deer are still eagerly sought for, and their pods fetch a high price, a heavy one selling at from ten to sixteen rupees. There is a breed of horned cattle indigenous to the hills known by their small and stout build and usually black or red color. As the people have become richer, they have purchased plains cattle, for crossing purposes and there is now a mixed breed in the greater portion of the district. Hill cattle sell for from eight to fifteen rupees each, and a pair of ploughing bullocks can be purchased for from twelve to twenty-five rupees. The people prefer small sized ones for ploughing, as owing to the narrowness of the fields, large bullocks do not work so well. In the Bhotia villages there is a breed called *jabu* which is described in the article KUMAUN DISTRICT. Hill sheep are small with wiry brownish grey wool. They are short tailed, and have large horns. They are not good for the table and are kept for the sake of their wool, out of which coarse blankets are made. Attempts are being made by the introduction of English and Tibetan rams to improve the breed, but the results are not yet perceivable. The hill goat is a small animal useless for milk-giving purposes, but kept in large numbers for food, and for offering up at religious ceremonies and festivals. The Bhotias and those hill men who trade with them use sheep and goats imported from the Chamba district as beasts of burden. Thousands of these are brought down yearly, but in order to keep the trade in their own hands, the Kangra people never bring either rams or ewes. Salt, borax, and grain are carried by these animals in two small bags called "*phanchas*" swung over the back, and kept on by a breast-band and crupper. They are driven only in the early morning, and never over six miles. A sheep carries from eight to twelve sers, and costs Rs. 3-8-0, while a goat usually carries from ten to sixteen sers, and costs from four to five rupees. Hill ponies are not indigenous, but are imported from Tibet, and only in small numbers, into Garhwál; a few

ponies are also brought from the Tarái. Buffaloes are kept in considerable numbers for milk and manure.

Several minerals of economic value are found in Garhwál.

Minerals.

Copper and iron are the chief, but lead and a little silver are also found, and there are two sulphur springs. Asbestos of good quality has also been lately discovered. The copper mines, which lie chiefly in the Dhánpur and Nágpur Pattis, used to be largely worked, but of late the shafts have been sunk so deep that the miners find it dangerous going into them, while the profits have become so small that agriculture pays them better. There is no doubt plenty of copper to be found, but it requires money and energy to get at it, as new shafts would have to be sunk. Iron is found in many parts of the district, but excepting at the Semalkhet mines in Lohba and in Bachhansyún, it is not of very good quality. The last named is famed for its hardness, and tools and other implements are preferred when made of this iron. The lead mines are two in number, one of which is in the snowy range, but has been closed by a landslip, the other is not at present worked, as there is no demand for lead. The asbestos mine lately discovered is near the village of Ukhimath, but is too far inland to be useful. Asbestos is used by the people medicinally for wounds, also as wicks in oil lamps. Gold is washed in some of the rivers, but the return is very poor indeed; gold to the value of four annas a day being considered a good yield.

Slates of good quality are found all over the district, and are universally used for roofing. Lime is found in large quantities. There are three distinct ranges of limestone hills, the first north of the Alaknanda in Nágpur, the second running from the Lohba Patti to the Pindar, and again to the Alaknanda in Patti Bachhansyún, and the third running parallel to the plains and south of the Nyár river. There are also small patches of limestone elsewhere, but not in such large quantities as in the abovementioned ranges. Stone of various kinds and suitable for building is found everywhere, and is always used for this purpose. The average

Building materials.

price of the several metals per rupee is iron ten pounds ; copper one pound, and lead three pounds. Lime sells at four annas a maund at the kiln, and stone at rupees one and a half to three rupees per 100 cubic feet, according to the distance it has to be transported. Slates vary greatly in price according to size, some are quarried as large as six to eight feet square, and these are greatly sought after, but the ordinary slate is about two feet square, and sells at ten rupees per hundred. The wood most commonly used for building purposes is deal made from the *chír* (*Pinus longifolia*). The people usually cut and transport it for themselves, and there is no fixed rate. The ordinary rate for planks cut by contract is rupees seventeen per hundred, measuring twelve feet long, one foot broad, and one inch thick. Deodar (*Cedrus deodara*) is in great demand where procurable, but it is very scarce. In Srinagar a great quantity of this wood floated down by the river in the rains has been used in building. Tún (*Cedrela toona*) also is greatly sought after and doors are chiefly made of it ; as the people do not consider a house properly built which has not door posts of this wood.

Several kinds of fruits, both cultivated and wild, flourish in the hills, the principal varieties are as follows :—*Cultivated*—Peach (*arú*) ; apricot, (*zard-arú*, *chuarú* and *kusmarú*) ; plums (*ulecha* and *alú bukhará*) ; plantain (*kelá*) ; mango (*ám*) ; guava (*amrud*) ; orange (*narangi*) ; lemon, (*nimbu*) ; lime (*kághazi-nimbu*) ; citron (*jámtra*, *mad kákari*) ; walnut (*akhrot*) ; pomegranate (*anár*, *dárim*) ; fig (*timla*, *beru*) ; raspberry (*hisálu*) and a fruit called *káphal*. In addition to the above the following English fruits are found at Pauri, where a nursery has been established with some success for spreading them in the district, apples of kinds, pears, cherries, and damsons. The *wild fruits* are—the cherry (*padam puya*) ; hazel nut (*kapási*) ; fig (*timla*) ; raspberry (*hisálu* and *jogia hisálu*) ; ground raspberry (*ganda káphal*) ; blackberry (*kaleri hisálu*) ; strawberry (*kiphalia bhyula*) ; gooseberry (*lepcha*) ; currant (*kalkáliya*), and wild pear (*mehal*). A crabapple and a wild medlar are also seen, but rarely. The hazel nut is only found bearing fruit in one strip of jungle in Painkhanda, about nine miles

south-east of Joshimath ; it bears every third year, and the fruit is gathered in large quantities and sent to all parts of the district. Wild strawberries grow in quantities in all grass plots near the snow above 9,000 feet. The gooseberry and currant are only found inside the snowy range, both are very inferior to the cultivated varieties though not badly flavored. Wild rhubarb of the red species grows in immense quantities in the snowy range at heights above 11,000 feet, and is of very good flavor. There is every reason to believe that English fruits would flourish in the hills, and as the people are getting anxious to obtain grafts, it is hoped that in a few years they may be found in all parts of the district.

Though there are a great many varieties of forest trees in these hills there are very few which afford valuable timber ; the most useful are the *chir* (*Pinus longifolia*), *deodár* (*Cedrus deodara*), and *tín* (*Cedrela toona*) of two kinds, the common one and the bastard *tín* called *dalla*, the wood of which is of a much lighter color than that of the real *tín*. Walnut wood is also prized, and a species of ash called *kakura*, which is hard and tough : the wood of the alder called *atís*, is used for making tea boxes, it is very light, but rather brittle, and has the appearance of satin wood. Of the coniferous trees with the exception of the two named before, the cypress alone is of any value, but it is scarce and the little that exists grows in inaccessible spots. The people towards the snows use the bark of the silver birch which grows in great quantities at high elevations, for writing on in lieu of paper, and also for packing with, as it can be peeled off the tree in layers as thin as very thin paper. *Sál* can hardly be said to be used by the hill people, to any great extent, except by a few villages lying near the *sál* forests, which are nearly all strictly preserved, but the people look on it as the wood of woods on account of its durability. *Sákin* grows in considerable quantities in the low hot villages, but the trees are very stunted, and a straight piece of this timber of any length is unprocurable ; it is used, on account of its great hardness and weight, for plough-shares.

There has been a marked improvement in the condition and prospects of the Garhwál peasantry since  
 Fiscal history. 1840, the date of Mr. Batten's settlement.

Extensive clearings have been effected, roads have been made, the number of wild beasts has been reduced, education has spread among the people, and they now freely resort to the Bhábar marts to exchange their produce, an occupation which formerly was left to middlemen. The following statement shows the land revenue and its incidence at four periods during the last 50 years:—

Year.			Number of villages.	Cultivated area in bísís. <sup>1</sup>	Land revenue in rupees.	Rate per bísí.
						Rs. as.
1822	...	...	2,929	57,432	58,511	1 3
1824	...	...	...	73,340	66,361	0 14
1840	...	...	4,103	82,653	68,682	0 12
1864	...	...	4,395	149,379	95,546	0 11
1875	...	...	4,417	135,758	95,559	0 11½

The area of 1824 includes 30,135 bísís of waste, and from the revenue of 1840 that of the Bhotia maháls is excluded. The *sadábant*, or charitable assignments, amounting to Rs. 4,213 at the recent settlement for charitable purposes, were in 1850 placed under a local committee by whom the revenues are administered. From these funds seven dispensaries have been founded along the pilgrim road to Kedárnáth. *Gúnth* or temple lands amount to 8,078 bísís, of which the revenue is Rs. 7,139. The present settlement is practically a peasant settlement. In Garhwál revenue and rent are synonymous terms, and the great mass of the cultivators may be considered to be the proprietors of the small plots of land they hold, subject to the payment of the revenue plus the fee for collection payable to the *Padhán* (*sadr-malguzar*) or representative of the village community in their engagements for the land revenue. The *khayakar* or hereditary tenant corresponds to

<sup>1</sup>See Garhwál Settlement Report (Allahabad, 1866.) The bísí as fixed by Traill is equal to 20 nális (12×20=240 yards) or 4,800 square yards, being only 40 square yards short of an acre. The náli is further sub-divided into sixteenths or annas.

the '*maurúsi kadími*' of the plains, and the *sirthán* to the tenant-at-will.

A patwári (or village accountant) cess of four per cent. was imposed in 1864, and the patwári's circles were re-arranged and rendered more compact. A *dák* or post-office cess of three per cent. in lieu of personal service renders this branch of the service much more efficient as well as equally distributes the burthen and prevents unnecessary exactions on the part of peons and others engaged in laying *dáks*. A school cess of three per cent. has also been imposed which will enable the inhabitants of every village to avail themselves of the rudiments of knowledge at least. The patwári cess amounts to Rs. 5,578 and the post-office and school cesses to Rs. 3,238 each.

Mr. Beckett made the existing settlement, which is based upon a regular village survey in which the maps show the smallest fields. The previous settlements subsequent to 1823 were based on the gross measurement-book, then formed which rather over estimated the area under cultivation at the time. The terraced land only was measured in 1864, and the old boundaries, as far as possible, retained. Water power for private mills was charged by private proprietors at the rate of one-sixteenth of the grain ground, and on these a royalty of one rupee per mill for those liable to interruption and two rupees per annum for those in constant work has been imposed.

The tenure of land for the most part is that known as imperfect *pattidári*, where each proprietor is answerable for the revenue assessed on his actual holding and for his share of that assessed on the common land. At the late settlement in 1864, some land in almost every village was made common, thus giving rise to this tenure, but owing to disputes regarding it, partitions are taking place in the majority of villages, and before long *bháyachára*, where possession is the measure of liability, will be the tenure of the district as it was when Mr. Batten made his settlement. In some few instances the descendants of the former *Thokdárs* and *Sayánas*, who were

nominal proprietors of numerous villages, have still retained the proprietorship. Where these descendants are few in number, they have divided the villages in whole amongst themselves, and their tenure may be considered *zamindari*, but they do not hold *sir* land *i. e.*, land in their own cultivation as proprietors, and only receive *malikána* or an allowance in lieu of proprietary right. In these villages the cultivators, called elsewhere *khayakars*, are almost sub-proprietors. They are conjointly answerable for the rent of the village. They can make their own arrangements for cultivating common or waste land, and can claim the holding of a tenant dying heirless. They pay 25 per cent. on the Government demand as *malikána*, and this cannot be increased during the currency of the settlement. In all other villages tenants with permanent rights of occupancy called *khayakars* hold on certain defined terms. They pay a *malikána* of 20 per cent. on the Government demand to the proprietor, and their holding is hereditary in the direct male line, but they cannot alienate it. They may improve it as much as possible without rent being enhanced during the current settlement. Tenants-at-will are called *sirtháns*. No length of occupancy gives them a claim to become *khayakars*. They pay sometimes in money sometimes in kind. In the former instance two to three times the Government demand, in the latter one-third to one-fourth of the produce, and they are liable to ejection at the end of each agricultural year. *Thokdárs* in some places called *Sayáns* are the descendants of those persons who formerly farmed the Government demand of a certain number of villages. In the early days of our rule they held considerable power, but they abused it, and it was gradually taken out of their hands; they are now only bound to report heinous criminal offences occurring within their *thokdári*. They used to receive dues of several kinds, but these have all been commuted to money payment varying from three to ten per cent. on the Government demand. The number of proprietors registered at the late settlement is 31,118; while the *khayakars* or hereditary tenants amount to 17,399, and the *sirtháns* or tenants-at-will to 11,703. *Padhán* is the term used to denote the person who engages direct for the revenue on behalf of the

village community, and represents the Lumberdar and Sadr-mal-guzár of the plains districts. The office of Padhán is hereditary except in special cases, when from the son of the former Padhán having been a child at his father's death, a relative had been appointed to the duty, that man's possession was not disturbed at the recent settlement, but it was declared that on the occurrence of a vacancy the succession may revert. The Thokdárs and Sayánas in the exercise of their police functions were found to be in the habit of taking bribes to let off a criminal, so that in 1856 on the joint recommendation of the Senior Assistants in both districts of the Kumaun Division, they were relieved of all police duties.

Agriculture is carried on with considerable skill and great labour. The implements used are a light wooden plough, which does not penetrate more than four inches into the ground, and two harrows, one peculiarly for harrowing and the other also for pounding the earth. For weeding, a *kútla* alone is used. The plough is drawn by a pair of small bullocks and the soil is usually turned up two or three times, after which the harrow is drawn over it, and it is pulverised. Manure is used as largely as it is procurable, and is of two kinds; that of animals mixed with leaves, and that procured from the ashes of burned jungle. Common rice and *sáthi* millet and *mandwa* are always harrowed once when the plants have attained three or four inches in height. The *rabi* crops are usually cleaned once, but the *kharíf* crops, notably rice, are constantly cleaned. When the very steep nature of the country is considered, it is wonderful how the people have been able to terrace it in the way they have, seeing that in places the fields formed are not three yards wide. The principal grains exported are rice, wheat, barley and buck-wheat. The three former are taken by the Bhotias into Tibet, while the last with *til*, pepper, turmeric, cardamoms, ginger and potatoes, in small quantities are taken to the plains. Very little grain is imported, the country producing sufficient for the wants of its inhabitants. Since our rule commenced the cultivated area has doubled at least. At the expiration of the 20 years settlement in 1840,



it was found to have increased 66 per cent., while since the currency of the present settlement, owing to enhanced rents and the effects of the famine of 1868-69, the cultivated area has in many villages increased by one-fourth, and it is yearly increasing, as there is still a large margin of culturable but uncultivated land in almost every village. Within three years 93 new villages have been applied for and settled. Considering the great increase of the land-revenue (39 per cent.) on the former demand and the occurrence of several bad seasons, there has not been any marked change in proprietary rights. In some villages where there was a large amount of common land the community have given or sold portions to tenants, and there have been some private sales. The old families of Thokdárs have, owing to our system, become impoverished, and have now very little influence, but there never have been and never will be any rich proprietors in Garhwál. The average revenue paid by them is from Rs. 3 to 5 per annum; while a man holding land paying a revenue of Rs. 15 a year is considered a large proprietor. The agricultural class is composed of all castes; from high Brahmans down to Dúms all handle the plough, and Brahmans do not consider it at all derogatory to do so.

There has been no change in the distribution of the population of the district of late years. It is, as it always has been, exclusively agricultural. There are no old towns nor any new centres-forming to attract the people from their hereditary pursuits, nor does there seem any likelihood of the occurrence of such a change. The consequence is that the rural population increases in a greater proportion than the urban. Every village has its pancháyat or local committee, consisting usually of the

Village communities. Padhán and one or more of the influential proprietors. They decide petty disputes and common questions, they also apportion any common receipts or expenses which are usually divided according to shares. When any important matter, such as the expulsion of one of the community from the caste, has to be decided, the whole village, aided by the Thokdár, if there be one, and some influential men from the neighbouring villages sit in conclave. These pancháyats,

however, have not the influence that they possessed in former days a change which is apparently due to the facility with which access may be had to our courts and to the fact that the people themselves have become more intelligent and do not place trust in the decisions of their pancháyats. The Dúms perform all the

offices of village menials and get certain dues from the residents. One of them is always the páhri or watchman, though he has very little watchman work to do, being chiefly employed in carrying messages and reports for the headman (Padhán). There is also a sweeper in each village for sanitary purposes, who gets paid two sers of grain from each crop per family for his labour. The old local officers of most repute and influence were the Sayánas or Thokdárs described before. These were answerable for the revenue of certain tracts or had other

Old local officers. powers chiefly judicial. They were, before our rule commenced, all powerful within their *thokdáris* and were seldom interfered with. Since we took over the district, their power has been gradually lessened, and their duties are now almost nominal. Chaudhris are unknown in Garhwál. There is no trade of importance or with a sufficient number of members engaged in it to call for the appointment of these officials. Patwáris are quite a distinct class from those bearing the same name in the plains. Here they are both fiscal and judicial officers; and each has one or more *pattís* embracing tracts of various extent under his charge. One or two of these tracts are 60 miles long with a breadth of from 15 to 30 miles. The number of villages under one *patwári* varies from 70 to 100. They have to report everything of importance occurring in their *pattis*, they collect the Government revenue, and are, also, registrars of life statistics. They are paid by Government, chiefly from a cess of 4 per cent. on the land revenue. Every *patwári* is expected to become acquainted with surveyor's work, and is occasionally employed to measure land when any dispute arises.

The staple food of the lower classes is *mandwa* (Eleusine corocana) which they vary with *junjera* or *kauni* and other common grains. Rice

Food and its price.

and wheat are only eaten by them on festive occasions. In ordinary seasons the price of food per diem of the several classes of inhabitants is as follows :—Lowest classes, half a ser of *mandwa*, one-third of an anna ; half a ser of *kauni* or *junjera* (the same) ; vegetables, *dál*, salt, oil, wood, seven pie, or a total of  $1\frac{1}{4}$  annas. Petty traders and the better class of agriculturists substitute red wheat and inferior rice of the same quantity at a cost of about two annas, while the better classes of traders and well-to-do persons add clarified butter and milk, which cost about  $3\frac{1}{4}$  annas a day. Officials and the higher classes use the flour of white wheat and good rice, both of which are much dearer.

During the last few years there has been but little change in the staple crops. Improvement in staple crops. These are still wheat, rice, and *mandwa*, and are the same as were chiefly grown twenty years ago. There is a little more wheat grown than used to be, as a greater demand for this cereal has sprung up. The most marked improvement is that the people having grown richer, are able to keep more cattle and put more manure on their land than they could formerly. Cotton is rarely sown, as it does not give a produce sufficient to yield a profit and the people can purchase it elsewhere at a cheaper rate than they can grow it themselves.

The chief object to be aimed at now is to grow a sufficient quantity of food-grains to meet the demands of the Bhotias and the tea plantations. The staple crop in Garhwál is *mandwa*, which forms the chief food of the agricultural and poorer classes. It gives a greater yield than other crops and also increases in bulk when ground, and on these accounts is in more general use, for in itself it is a poor and very coarse food-grain. It has but one name from the time it is sown till it is threshed out, when it is ground and made into unleavened bread, or into a kind of porridge called *bári*. It is also manufactured into a kind of liquor called '*dáru*.' The ordinary price of the grain is from 30 to 40 sers per rupee, while the liquor sells at from three to six annas per bottle according to its strength.

There is abundant uncultivated pasture land ; in parts extending for several marches along ranges of hills without a single intervening patch of cultivation. Towards the snowy range up to heights of fourteen thousand feet, there are magnificent pastures, where large herds of goats and sheep with a few ponies and cattle graze during the rains. In the Dúns and Bhábar at the foot of the hills there is unlimited grazing land, but it is all preserved by the Forest Department, who allow very few cattle to enter, and levy dues on those that do enter. It is impossible to give the extent or situation of the pasturelands, as with few exceptions they exist in every parganah and form the greater portion of the district. Beyond enabling the people to keep larger herds of cattle, and thus improve their cultivated land, no direct benefit is derived from them. There are no people in this district who live solely by pasturing cattle ; indeed there are no persons who possess large herds of cattle. But large herds come for grazing from the western parganahs of Kumaun, where there is scarcely any pasture land.

In Garhwál, under the terms cultivators and peasantry are included not only tenants, but almost all cultivators and their proprietors of land. The chief cultivators are the petty proprietors, and there are very few of this class who do not cultivate their own land. Next in numbers and importance come tenants with permanent rights called *khayakars*, and lastly tenants-at-will or *sirhdáns*. Speaking generally, all are well-to-do. They can all make enough from their land to pay the rent, and keep themselves and their families in food and clothing, and even to put by money. The proof of their being well off is that it is a most difficult matter to procure free labour, the fact being that the people do not require to work at any extra occupation to support themselves. Tenants with permanent rights, as before described, have their land on terms little inferior to those of a proprietor, and frequently they are far better off than the proprietor himself. Indeed the worst off of this last class are those who have most of their land held by permanent tenants, who only pay them a small *malikána*. Tenants-at-will are chiefly small proprietors and *khayakars*, who have

not sufficient land for their own wants ; or the menials of the village. Of late years everything has, in spite of indifferent seasons, been in favour of the cultivating community. The price of grain has risen greatly, and does not seem at all likely to fall to any great extent. Many marts for the sale of agricultural produce have arisen ; and the assessment of the land revenue is light, and cannot be raised for a number of years.

A cultivator having six to eight acres of land is held to have a large holding ; an average one is from two to four acres ; while there are some so small as from one-quarter to one-half an acre. The prevailing custom of dividing all immoveable property equally amongst the sons, together with the tenacity with which hill men cling to their hereditary landed property, has had, and still must have, the effect of diminishing the size and multiplying the number of holdings. But there is no doubt that these influences have also caused the large increase in the cultivated area, and as there is still plenty of waste land, they are not likely to have any prejudicial effect on the people for a long time to come. A single plough in this district is supposed to cultivate three acres of land. The implements and cattle required in aid are worth about sixty rupees. A holding of five acres in extent would require two ploughs, and after deducting all expenses, it ought, in an average season, to bring in eighty rupees profits : or something like seven rupees a month. The peasantry are not, as a rule, in debt : when they are so, it has generally been incurred in procuring wives for themselves and their sons, or in purchasing or redeeming some hereditary land to prevent an outsider getting it. The proportion of proprietors including co-sharers, to permanent tenants, and tenants-at-will, is as  $2\frac{1}{2}$  to 1 of the former, and 4 to 1 of the latter, while there are three permanent tenants to two tenants-at-will. There is no such thing as a landless unskilled labourer in this district. Every man, who has no land, has some distinct occupation, indeed many artisans such as smiths and tailors combine their trade with cultivation. Women and children are largely employed in field labour, but they work for their own families alone and not for wages. The women do the greater portion of the agricultural

work, in fact everything but ploughing and sowing. Children also are employed in weeding and reaping, but chiefly in tending cattle.

In assessing the demand in 1822, 1824 and 1840, no distinction was made in the kinds of soil. Taking into consideration that the measurements were made by guess, "*nazar andāzi*," the rates per *bīsa*—forty square yards less than an acre and the standard measure to this time—were as follows:—in 1822, nineteen annas; in 1824, fourteen annas; and in 1840, twelve annas. At the late settlement, completed in 1864, the land was properly measured, and as there were a great number of varieties of soil, for simplicity they were divided into three kinds:—irrigated; unirrigated, first quality; and unirrigated, second quality. In fixing the rate on these, the unirrigated first quality was assessed one third higher, and the irrigated at twice as much as the unirrigated, second quality. The average rate per *bīsa* on the whole district was eleven annas. Irrigated land is chiefly cultivated with the better kinds of rice, wheat and tobacco, and though it generally produces good crops, and they can rarely fail owing to the unfailing water supply, still it has to be left fallow oftener than the other kinds of soil. Unirrigated first quality is the most useful soil; it produces every thing except tobacco, and the better kinds of rice; and its productive powers are often not inferior to that of irrigated land, while it has to be left fallow, but every fourth season, still the crops are always liable to damage by drought, and where manure is not freely given, the soil becomes poor and unproductive. Unirrigated second quality consists of the small fields (*khets*) on the edges of the better land, or where the hill side is very steep and stony; it is generally sown with barley and the several millets and buck-wheat. If manured a little, or after the land has been left fallow, it gives a fair return in a favorable season; but in a bad season, it hardly repays the labour expended on it.

There is one other kind of cultivation called *khil* or *kandāla*,  
 Temporary or "*khil*" meaning temporary cultivation; for this  
 cultivation. the people cut down a strip of jungle on

the hill side, burn the felled timber on it, take one or two crops off it, and then leave it waste for ten years. They usually sow the hardier kinds of grain, such as buck-wheat, amaranthus, and *mandwa* on such land ; but in parts near the plains, *til* is also sown and yields largely ; this land is of course unassessed.

Rents are generally paid in money : prior to the current settlement, a large proportion, notably those assessed on temple lands, were paid in kind, but almost all have now been commuted for cash. The only tenants who now commonly pay in kind are tenants-at-will. The rate varies from one-third to one-fourth of the crop realized, but it is usually the latter. Manuring is largely practised, the people procure manure from their own cattle sheds, and by bringing leaves from the jungles ; it cannot be purchased and costs them nothing beyond the labour. Irrigation is practised in all the low valleys, and where water is easily procured. The only labour is the making of the water channel, and this is given by the whole village community, so that irrigation really costs very little. In the Bhábar *khám* estate, where Government has paid for making the small canals, the water rate is two annas per *kuchcha bigha*, or twelve annas per acre. Lands are usually left fallow after three crops have been taken off them : but only for one season. This even is not always done, as after a bad season the people cultivate all they can for the following crop. The rotation of crops is as follows :

Rotation of crops. first rice, then wheat, and lastly *mandwa* : after which the land is left fallow till the next rice crop. This system is seldom varied except by substituting barley for wheat, and some other millet or a pulse for *mandwa*. The lands of a village are always divided into two *sárh*s, one called the wheat *sárh*, the other the rice *sárh*, and these are changed every second year.

Though there is an immense amount of waste land in Garhwál, it may be held that almost all tracts having an elevation exceeding 8,000 feet above the level of the sea are useless except for pasture, while a great portion of their area is too precipitous even for grazing. There are

Waste land.

very few villages so high as 8,000 feet, while for tea planting it is considered that, though the flavor of the tea may be finer, plants grown above 6,500 feet do not give produce sufficient to yield a remunerative profit. Many planters have purchased land at a greater elevation but they have come to the conclusion that it was a waste of money. For tea plantations too, intending settlers have other points to look to in taking up land. Land destined for a tea-garden should have easy and near communication to the plains : should be near a populous district ; should have a favourable aspect and a good water supply and timber for fuel and boxes and grazing land should be available in the vicinity as the cost of carriage of timber alone would amount to a considerable sum. There are not many plots of waste land which supply all these requirements while some which have them, are for reasons, to be hereafter noted, unattainable.

There are numerous places however which would suit a sheep or cattle breeder, whose only difficulty  
 Waste for grazing. would be wild animals, while this is one that might easily be overcome. There are stretches of jungle which would afford pasturage to thousands of sheep, where water is abundant, and the climate cool and healthy ; and now that European troops are stationed in these hills, sheep breeding ought to prove remunerative. Some of the waste lands are being taken up for villages, but as hill men are averse to settling far from their fellows, and only extend cultivation by small degrees as their numbers increase, it must be many years before the area of useful waste shews visible signs of decrease. Under the village tenure which we found obtaining when we took possession of the hills, each village had a certain defined boundary, extending in many instances for miles and miles into dense jungles, and to the tops of high ridges. These boundaries have never been altered by us, and though Government is the absolute lord of the soil and has reserved to itself certain rights beyond the cultivated and measured area, there is some difficulty in dealing with land, though waste, within a village boundary. For the people adhere tenaciously to their old boundaries and look upon any attempt to abridge them as an interference with their rights, and on any



one who steps in as an enemy and interloper. This feeling has caused much annoyance to and disputes with planters, who cannot understand the community of grazing rights existing amongst the people around them, as all grazing lands, except when measured, are common. This question has not, up to the present, given much trouble, but as cattle increase, it will be a source of dispute and will have to be provided for. During the hot weather and rains, many of the pasture lands, furthest removed from all habitation, are used for feeding herds of buffaloes and cattle which are driven up there, and housed in rough huts made of branches thinly roofed with grass. These places are called "*kharaks*," and the same spot will be used year after year by one herd. A few men attend on each herd, and they collect the milk, and turn it into *ghí* or clarified butter for future sale. It has never been thought worth while to levy any grazing fees, indeed the expense of levying would almost equal the receipts, while it would also be interfering with an old established right. Still there is ample room for persons who would wish to rent farms for sheep or cattle breeding. The most extensive waste lands lie on either side of the Dúdú-ke-toli range, the Badhangarh range, and in pattis Chaprakot, Chauthan Iriakot and also in the Dhánpur range. In all these places there are large tracts of waste land, though not many fit for tea plantations owing to their distance from the plains. Mr. Beckett, in his Garhwál settlement report (1865), gives a list of sites available for tea plantations.

The crops produced in the district are usually sufficient for its wants, but little is left for export. Indeed none is exported, except wheat, which the Bhotias carry into Tibet. Coin is accumulating, but not so much from trade as from carrying and supplying the wants of the thousands of pilgrims, who come yearly to visit the shrines of Badrináth and Kedárnáth. The planters too have spent large sums of money in cultivating tea; a great portion of this money is expended in purchasing wives, and building better dwelling houses. Some is turned into ornaments, but very little is expended in improving the land, except by purchasing cattle, the number of which is yearly increasing.

The ordinary rate of interest is 25 per cent., but in addition thereto, a certain sum, usually 5 per cent., of the money is deducted at the time of lending it ; this is called *ghant kholái*, so that in reality the rate of interest is much higher than that nominally taken. Pawning is hardly known and very seldom practised. Mortgages of moveable property are infrequent, and the same rate of interest is taken as on money. Mortgages of immoveable property are common. They are of two descriptions ; one, when possession of the property is given to the mortgagee and no interest is charged ; the other, where the land is merely security for the debt, and interest is charged at the usual rates. Land is hardly ever purchased as an investment, but merely to satisfy the craving that all hill men have to become proprietors.

The administration of the district is entrusted to an Assistant Commissioner, who resides at Pauri, and has criminal and revenue jurisdiction. He is now a military officer in civil employ, and is assisted in his work by a tahsildár, who resides at Srinagar. The latter place is also the head-quarters of the native Civil Judge. There is no regular police except at head-quarters, and there is little crime of any kind. The revenue laws of the plains districts are not in force here, and the existing laws and customs are much more favourable to the tenant than those which obtain in the plains. The rules of procedure in revenue cases are very simple, and as the tenures are well defined and permanent tenants cannot be ousted during the currency of a settlement, except for default, there is very little litigation between this class and the proprietors. Tenants-at-will can always be ousted at the end of the agricultural year, and thus any quarrel is avoided. Considering the large number of rent-payers, there are very few suits for rent. The principal litigation arises between sharers in the proprietary right for possession and for partition. All long-term prisoners are sent to the Almora Jail, and there is merely a lock-up at Pauri, the head-quarters.

The average death-rate per one thousand of the population has been nineteen for the last eight years.

**Medical statistics.**

In 1875, in the 4,023 villages in the district, 8,750 deaths were registered, or 20·21 per thousand. Of these deaths 587 were due to cholera, a number far above the average ; 16 were due to small-pox ; 2,769 to fevers ; 2,376 to bowel complaints ; 285 to injuries, suicides and accidents ; and 2,335 to all other causes. There were 35,085 vaccine operations during the year 1875-76, of which 26,662 were successful, the result of 1,300 was unknown, and 7,123 were unsuccessful. There are dispensaries at Pauri, Srinagar, Mahal Chauri, Karn-prayág, Ukhimath, Chimoli, and Joshimath, and during the same year 7,710 patients were treated, of whom 6,290 were cured, 73 died, and 45 remained at the close of the year. These dispensaries cost Rs. 7,482, of which Rs. 7,142 were defrayed from local sources, and Rs. 600 by Government. Small-pox formerly ravaged the district, but owing to the admirable arrangements made of late years, what was once an annually recurring scourge, is now practically unknown. The year 1877 has been marked by a recurrence of the *mahámari* or plague but as yet the progress of the disease has not been marked in Garhwál.

The present wages of an ordinary coolie is two annas per diem. Up to about 1850 it was six pice.

**Wages, &c.**

While up to 1864, coolies employed to carry loads along the roads for Government officials were only paid two annas a march, they now receive four annas. There is no such person as an agricultural day-labourer in Garhwál. Smiths, brasiers and carpenters up to 1850 used to get two to three annas a-day, according to the quality of their labour, while they are now paid three to six annas per diem.

The hills are never subject to disastrous floods. Here and there in the rains damage is sometimes done to small portions of land, but it is never serious. Blights and droughts occasionally occur, but these never affect the whole district at once. Blight generally attacks the crops in the low villages and shrivels up the grain, rendering

**Floods, blights, droughts.**

it light, though rarely unfit for food. Droughts also occasionally occur, but as there are high ranges of hills through the district which attract the clouds and bring them to the villages in their vicinity, the drought is never general, although it may extend to so large a portion of the district as to render its effects felt all over it. The last great drought was in 1867, when the *rabi* crops of all the lower and most fertile half of the district almost entirely failed. Government advanced Rs 10,000, and grain was purchased in the Bhábar and carried up by the people themselves to certain centres where it was sold. There was no great scarcity of money at the time, so that the majority of purchasers paid ready money, a few giving labour in exchange for food. This famine was only temporary, as the *kharif* crops of the same year were excellent. In the great famine of 1868-69-70 the district suffered very little, and was in the end a gainer, for measures were taken to prevent the export of grain, while the ingress of pilgrims was forbidden; and as the crop in 1869 turned out better than was expected, when export was permitted in the cold season of 1869-70 the people sold large quantities of grain at very high rates to the people of the Bijnor district. This last famine also acted as an incentive to them to increase cultivation. It not unfrequently happens that the crops are damaged by an excessive fall of rain which rots the wheat, and if in the rains prevents the ears of rice and millet filling. In 1872, the people suffered somewhat from this cause. Want of carriage is the great difficulty in relieving famines in the hills, for they can only draw their supplies from the Bhábar and adjacent plain districts, and to reach these places a very hot and malarious jungle has to be passed. When wheat sells at eight sers and *mandwa* at ten sers for the rupee, we may feel sure that famine prevails. Much has been done by General Sir H. Ramsay to prevent the recurrence of famine by his settlements in the Kumaun Bhâbar, where the land is excellent and well irrigated, but the capacities of the Garhwál Bhâbar in this direction are not so good. There are six and a half miles of canals in Garhwál, and, in addition, the people everywhere make use of the large water supply available by turning small channels from the streams to every place which the limited means for cutting

and levelling at their disposal will allow them. As irrigation chiefly takes place in low and damp situations devoted to the cultivation of rice, it must increase the unhealthiness of the climate and though the natural drainage of the country does lessen its ill effects, they are plainly visible in the appearance of the inhabitants of villages where irrigation abounds.

The only industries carried on under European supervision are the several tea estates. They employ Manufactures, &c., under European supervision. about 400 permanent and 600 short service labourers. The latter being employed during the tea picking season. The annual expenditure on these estates amounts to about Rs. 45,000. Formerly it was larger, but the planters have learned to economise labour, and some estates have had to reduce expenditure, for with the exception of one estate none have yet yielded a fair profit, and that one has only lately begun to do so. There are no large banking establishments. The richest money lender in the district does not own Rs. 15,000, and the average wealth of this class does not exceed five to seven hundred rupees. The people never lend amongst themselves largely without taking bonds or charging interest. The Bhotias are the largest borrowers, as they are very reckless and improvident, and from their being for the most part uneducated, they are greatly imposed upon by their creditors.

There are no written records procurable by which to trace back the history of Garhwál, and it can History. only be gathered partly from tradition, and partly from conjecture. It is a known fact that some five centuries ago Garhwál was split up into 52 petty chieftainships, each chief having a *garh* or fort of his own, many of which are still in existence. Some say that this gave rise to the name of the district. *Garh-wál*, the 'land of forts.' Others with more probability derive the name from '*gad̄h*' or '*garh*,' a stream, and explain the name as the 'land of streams.' Between four and five centuries ago Ajaipál, chief of Chandpur, reduced all these petty chiefs, and bringing their territories under himself, formed the kingdom of Garhwál. He became the founder of the Chand dynasty, having

Srinagar for his chief city, where he built a palace, the ruins of which are still in tolerable preservation. The Rajas of this line ruled over the district, in which was included the territory now known as the Native State of Garhwál or Tehri till they were ousted by the Gúrkhas. The succession seems to have been almost uninterruptedly hereditary. They first added the affix '*Pál*' to their names, then that of '*Deb*,' and finally that of '*Sáh*,' which title as Rajas of Tehri they still bear. One of the line, Pritambar or Pritam Sáh, was chosen Raja of Kumaun, but on his father's death he preferred ruling in Garhwál to the uncertain tenure of the Kumaun throne, which rested chiefly with the party in power at Almora. The Rajas of this line are said to have on the whole ruled justly, and the country was in a fairly prosperous state under them. They had twice to repel an invasion of the Rohillas, once when those raiders came in through Kumaun, and once when they attempted to enter the hills by Dehra Dún: on both occasions the invaders were turned back. There was always a constant feud with the people of Kumaun, each party making forays into the other's country when opportunity offered, and plundering all that came in their way, and to this day there is a slumbering hatred between the inhabitants of the two districts.

The Gúrkhas did not conquer Garhwál until 1803 when Prithiman Sáh was Raja and they held their conquest only until 1815, when they were expelled by the British. The then Raja fled to the plains, but on our conquering the country was given the Tehri territory which his grandson Partáb Sáh now holds. During the short period the Gúrkhas held power, they utterly impoverished the country by their exactions and tyranny. They divided the district into a number of petty military commands, and each commandant made all he could in excess of the Government demand. The consequence was that villages were left waste, the inhabitants fled into the densest and most impenetrable jungles, and to this day the Gúrkhas are hated by the people and their name is held up as a synonym of all that is cruel and tyrannical. It took years of our rule to enable the people to recover the effects of this invasion, which threw them back at least a quarter of a century.

Of the races and castes who inhabit the district, very little is known. They cannot, with a very few exceptions, tell when they settled in it, or where they came from, and on this point a great deal must be pure conjecture. There are, however, three distinct races, first, the Dúms; second, the Khasiyas; third, the higher class Brahmans and Rájputés, and they appear to have settled in the country in the same order. The Dúms seem to be the descendants of the original inhabitants, and Mr. Traill in his notice of Garhwál apparently comes to the same conclusion. They now form the menial class, and in features, manners, habits and religion, differ totally from all the other castes by whom they were brought into bondage when their country was conquered. The Khasiyas evidently came from the plains of Hindustán, but their immigration took place so long ago that they cannot tell when they came or where they came from. They comprise many castes of Brahmans, Rájputés, &c., but are regarded by the orthodox castes as Sudras. They reside principally in the central and northern parganas, and are more ignorant, dirtier in their habits, of much stronger physique, and of a different physiognomy to the third class; they much more resemble the Gúrkha in appearance, and like him make good soldiers. The third class comprises all the higher Brahmans and Rájputés in the district, into which they came from time to time, and for the most part after a permanent Government had been established. Some of them, especially the Brahmans, can trace back their residence to the time when Ajaipál founded his dynasty. The Brahmans are now divided into so many branches that the majority of them cannot point out the place from which they came and the names of those branches appear to be derived usually either from the name of the founder or from the village in which the branches originally settled. Those few who have kept up any record, can trace back their origin from the time when they left the plains. Many of the Brahman sub-divisions are of the Gaur, Adhigaur, Kanauj and other important clans, while others are probably off-shoots from them. When Ajaipál settled in Srinagar, he named those Brahmans who came with him Sarotas, while those who settled afterwards were called Gurgáris.

The people.

and these are the two chief branches to this day, the former being esteemed the highest of all. Of the Rájputés whose sub-divisions are also innumerable from the custom of naming by villages, many can trace their descent from Chauháns, Rajbansis, and other high Rájput families of the Duáb, while others say that they came from the west, from Kangra and its vicinity, but as a rule, the majority can tell nothing of their history. These are a much more intelligent and more civilised class than the Khasiyas. They reside chiefly in Bárasyún, Chaundkot and the Salán parganahs, but are also to be found scattered all over the district. The heads of many of the Rájput families were in the time of the Rajas and Gúrkhas called Thokdárs or Sayánas. They had the power of collecting the revenue of certain tracts, and had great authority which has since been altogether taken from them. There is one other distinct race of people who inhabit the portion of the district lying in the snowy range. These are the Bhotias, who divide themselves into two clans, Marchas and Tolchas. The former have most Tátar blood in them; all must originally have sprung from Tátars from Tibet, but from intermixing with other races, they have partially lost that peculiar physiognomy, though it still shows itself especially in the women. They talk the Húnia or Tibetan language as well as Hindí, and have also a patois of their own. Their total number is but 3,030, they are the traders with Tibet, to which place they carry grain, *gér*, cloth and tobacco and bring back salt, borax, wool, a little gold, precious stones, and ponies. They are a more powerful set of men than the hill men, but dirty in their habits and greatly addicted to drink, the women forming no exception. All that they know of their history is that they were originally descended from Tibetans, who first settled in Kumaun, and thence emigrated to Garhwál. The Tolchas have more of the Hindí in them, and though they allow their daughters to marry Marchas, will not take the daughters of the latter in marriage.

In writing a brief notice of Garhwál, mention must be made of the sacred shrines of Badrináth and Kedárnáth, which must have had much

The temples.



influence on the history and manners of the people. Of these Badrináth, dedicated to Badrinaráyan, an incarnation of Vishnu, is the more sacred. It is situated in pargana Painkhanda on the Vishnuganga below the village of Máná, and at an elevation of 10,400 feet within the snowy range. The existing temple, not a very imposing building, is said to have been erected some 800 years ago by Sankara Swámi, who brought up the figure of the deity from the bottom of the river after diving ten times. The Ráwal is a Brahman of the Nimbúri caste from Kírat Malwár in the Dakhin. There are always three or four men of this caste in attendance, who are aspirants for the Ráwalship. The Ráwal and priests officiate from May to October at Badrináth, and then retire to Joshimath for the winter. At this place there is a temple to Nára Sinha, another incarnation of Vishnu. The idol in this temple has one arm much thinner than the other, and it is said to grow thinner yearly and there is a prophesy to the effect that when this arm breaks off, the road to the present Badrináth will be closed and the place of worship removed to a spot near Tipuban called Bhabishya Badri. At both this and the present temple are hot springs. In conjunction with Badrináth are four other temples called Pandukeswar, Bhabishya Badri, Animath or Bridh Badri, and Dhyan Badri. These compose the Panch Badri. The income of the temple is derived from offerings by pilgrims, which amount sometimes to a large sum : and the revenue of a large number of villages in Kumaun and Garhwál, set apart for the purpose, which amounts to Rs. 3,943 per annum. Next in sacredness is the temple of Kedárnáth in pargana Nágpur, immediately below the snowy peak of Mahapanth, and at an elevation of a little over 11,000 feet. It is dedicated to an incarnation of Sudashiu, or Sibh, or Siva, and is supposed to be built on the spot where that divinity, after fighting his numerous battles, being pursued by the Pandavas, who wished to touch or worship him, attempted to dive into the earth, but left his lower limbs above the surface, the upper part of his body going elsewhere. Close to the temple is a precipice called Bhairab Jhamp, where in former times devotees used to commit suicide by throwing themselves down. This practice was stopped soon after our

rule commenced. With Kedárnáth are included the temples of Kalpesvar, Madmahesvar, Tungnáth and Rudrnáth, the five forming the Panch Kedár. The Ráwal of this temple is a Brahman of the Jangam caste from Maisúr. He does not officiate at Kedár itself, but at Gupt Káshi and Ukimath, which are branch temples, his adopted son or chela going to Kedár. The revenues are derived from the same sources as those of Badrináth, but are of less amount. In addition to these two there are innumerable temples of lesser magnitude and sacredness scattered all over the district, but they are entirely of local importance. There is no doubt the number of these, added to the influence of the priests attached to them, have made the people more superstitious and bigoted. Though the influence of thousands of pilgrims yearly has also added materially to the wealth of the district.

Of the social customs of the people of Garhwál the most common and demoralizing is polygamy. Every man who can afford it keeps two or more wives, and the result is that a great deal of immorality exists amongst the women. The custom probably arose from the great difficulty there was in tilling the large amount of waste land available. Wives were procured to help in field-work and were looked on as beasts of burden : indeed, up to the present day they are treated as such, consequently many desert their husbands, while yearly a number commit suicide. Children are contracted at an early age, and marriages are very expensive owing to the sum which is paid as dower. The amount ranges from Rs. 100, among the poorer classes to Rs. 800 and Rs. 1,000 amongst the more wealthy. Widows are sometimes re-married ; but it is a civil contract made before the patwári, and is not held to be very binding. Most widows take up their residence with other men as mistresses, but this is not viewed as disgraceful, and illegitimate children have by custom obtained, in almost every family equal rights with legitimate ones. A very few families of the highest castes are an exception to this rule. Another very prevalent custom is that of deciding quarrels and disputes by oath. This has several forms. It may be on a son's head, but this is very uncommon, or on a lump of the land in dispute, or by one

side cutting in two a piece of bambu placed on the disputed land by the opposite party ; but the most common is for the form of oath to be taken to be written on a piece of paper called *banda*, which one party leaves in the temple where he worships, and which the opposite side takes up. These oaths are considered most binding, so much so that a dispute settled in this manner is hardly ever heard of again. The parties however so deciding are usually out of caste as regards each other. Besides Hinduism no other religion has any firm footing in Garhwál. There is a Christian Mission at Chapra, one mile from the head-quarters' station of Pauri and near a village, but it is in its infancy and has made but few converts, its efforts being chiefly directed to education at present. The Brahmo Samáj is altogether unknown, while Muhammadanism has no power, the number of Muhammadans being very small and at the same time they are so scattered as to have no influence local or otherwise whatever.

E. T. ATKINSON.

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## TARÁI.

TARÁI, or Tarái parganas,<sup>1</sup> a separate charge subordinate to the Commissioner of Kumaun, is bounded on the north by the Kumaun Bhábar; on the south by the British districts of Bareilly and Moradabad and the native state of Rámpur; on the east by Nepál and the Pilibhít subdivision of the Bareilly district; and on the west by Bijnor. The district has an area of 589,359 acres, or 920.8 square miles, and a population of 185,813. The gross revenue for the year 1876-77 amounted to £39,364.

2. The headquarters of the district are at Naini Tál, where the European officers reside from May to November. The civil courts are those of the Superintendent and his Assistant, from whom an appeal lies to the Commissioner of Kumaun in certain cases, and that of the tahsildár of Rudarpur. The same officers have criminal powers under the Indian Penal Code and Code of Criminal Procedure, and the Rájá of Káshipur is a Special Magistrate for pargana Káshipur, and Muhammad Abdul Azíz Khán for parganas Bázpur, Gadarpur, and Rudarpur.

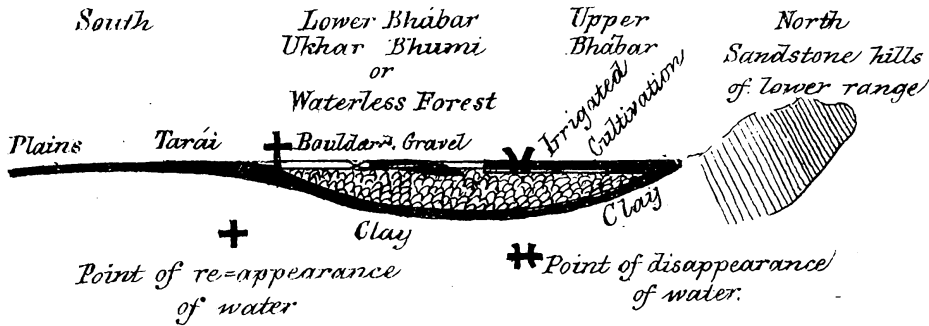
3. The district comprises parganas Káshipur, Bázpur, Gadarpur, Rudarpur, Kilpuri, Nánakmata, and Bilhari, and appears as a long narrow strip of country running for about 90 miles east and west along the foot of the hills, with an average breadth of about 12 miles. The northern boundary is well defined by the commence-

<sup>1</sup> I am indebted to Messrs. J. C. Macdonald and F. Kilvert for the greater portion of the notes on which this article has been based. It has been prepared by me for the Imperial Gazetteer.—E. T. A.

ment of a series of springs which burst from the surface where the Bhábar or waterless tract ends, elsewhere the boundaries present no marked natural features. The general surface of this tract presents the appearance of a plain with a slope towards the south-east, covered either with patches of forest which grow thicker and larger towards the east, or with savannahs of luxuriant grasses and reeds which flourish towards the west. To the north the jungle is thick and unused, except for grazing purposes; but towards the south cultivation has been extended much of late years, and little useful timber is found in the few patches of forest that still remain. The whole of the Tarái is cut up by numberless streams and nálas, the former bringing down the drainage of the hills, and the latter the spring water which rises at the head of the Tarái itself. The banks of these streams and nálas are in places covered with a low and thick scrub forest, the favourite resort of wild animals, such as tiger, deer, and pigs. The general slope of the plains has here an average fall of twelve feet per mile. They undulate from east to west, rising and falling as they leave and meet the river beds. Towards the north these undulations are small and decided, while towards the south the country becomes level and the distance between the rivers increases. The spring level varies with the undulations; in the hollows stiff clay land is met with, whilst the rising and upper land contain both sand and loam. The culturable area may be set down at 463 square miles, of which about 271 square miles are cultivated.

4. The water system of the Tarái consists of, first, those streams which flow direct from the Himálaya; and secondly, those fed by springs rising in the Tarái itself. Beneath the shallow soil and deep gravelly bed of the *úkhar bhámi* or waterless forest immediately to the north of the Tarái the drainage of the lower hills of the Himálaya flows at a great depth, exceeding in some places 300 feet; the point of re-appearance of water in the river beds and the rushing out of the multitudinous springs being determined by the thinning out of the porous, gravelly detritus and the approach of

the clay or impervious stratum to the surface, as illustrated in the accompanying sketch.<sup>1</sup>



It is these springs that increasing and uniting in their progress form the numerous streams that intersect the Taráí. The general direction of the course of all the streams is from north to south. Of the rivers that take their rise in the lower hills of the Himálayas we have the Saniha, which forms the north-eastern boundary to its junction with the Sárda or Ghágra, whilst the Sárda thence forms the eastern boundary. Between the Saniha and the Deuha or Dyoha are numerous small streams, such as the Tanora, Badora, Sarsutiya, and Lohiya. The two latter unite at Kua Khera, and the two former after their junction join the Kaman, which again becomes a feeder itself. In fact the position and appearance of the streams resemble the reticulations of a leaf, the rills on the edge of the moist country unite to form a streamlet, streamlets unite to form a stream, which in its turn becomes a feeder of the main arterial line of drainage. The Deuha, which forms the eastern boundary of Nánakmata, is the great river of the Taráí proper. It flows by the mart of Pilibhít and possesses sufficient water to allow of large boats and timber rafts passing down it, and is the principal line of traffic for the *sál* trade in the eastern part of the Taráí. It is subject to violent floods in the rains, when its channel becomes broad and deep, although in the

<sup>1</sup> H. Batten in Stat. Acc., 184.

hot weather barely carrying 150 cubic feet per second. Between the Deuha and the Sukhi are numerous torrents of no use for navigation, and the Sukhi itself is dry during the hot season, though in the rains it brings down at a rapid pace a considerable volume of water surcharged with silt and sand. The Bahgul, rising in the Taráí itself, is connected with the Sukhi, and together they give rise to the canal system known as the eastern Bahgul mentioned hereafter. To the west of the Sukhi the more important streams are the Kichaha or Gaula, Bhakra, Kosi, and Phíka.

The Kichaha receives the surplus waters of the Naini Tál and other lakes, and forms the arterial line of drainage for the lower hill and Bhábar waters between the Deuha and the Kosi. It is subject to heavy floods, and the rise is often so high as from 14 to 17 feet, and much damage is frequently caused to the low-lying lands in its course. Between the Kichaha and the Kosi are numerous streams which take their rise in the Bhábar close to the Taráí frontier, and join either the Kichaha or Kosi or their feeders. The principal are the Páha, Bhakra, Bhaur, and Dabka. The Kosi flows through pargana Káshipur, and is more particularly noticed under Kumaun, whilst the Phíka forms the western boundary. All these rivers except the Sárda eventually join the Rámghanga, which falls into the Ganges in the Farukhabad district. The beds of the rivers are, as a rule, broad, and consist of a sandy loam without rocks. The slope of the country, as already noticed, is about twelve feet per mile, and in consequence the streams take sudden bends to avoid such a rapid fall, and thus reduce their average fall to two and a half feet per mile. The smaller streams, like the larger, flow from north-west to south-east; their discharges varying from fifteen to forty cubic feet per second, with a velocity of from one to two feet per second, and supporting a tolerably constant flow during the whole year. The banks are usually abrupt, and the beds present a line of narrow swamps, so that they are for the most part impassable, except by bridges or on an elephant. All these streams are used for irrigation.

5. The first attempt at regulating the water system used for irrigation was made by Captain W. Jones in 1851. The mutiny supervened, and weightier matters attracting attention, it was not until 1861 that the present system of canals was thoroughly taken in hand. Under the present arrangements the Irrigation Branch of the Public Works Department has control over all waters between the Sárda on the east and the Baraur in pargana Rudarpur, comprising parganas Bilhari, Nánakmata, Kilpuri, and a great part of Rudarpur. In the two first parganas irrigation is not carried on directly by the department; there is plenty of water and the people are allowed to help themselves, provided they do not interfere with the natural drainage and thus create swamps. The eastern Bahgul system of canals provides for the irrigation of the Kilpuri pargana and the Maina Jhúndi portion of Nánakmata, and is then carried on into the Bareilly district. Next comes the Kichaha or Gaula system and the Páha system, both of which are in full operation. To the west of the Baraur, the Tarái marches with the native state of Rámpur, and the waters of the various rivers passing from the Tarái to Rámpur are managed under an agreement effected with the Nawáb of Rámpur. Where the land is owned by Government as landlord the rental and the water-rate are consolidated, there is, therefore, no need for an expensive separate measuring and collecting establishment, and the irrigation is supervised by the revenue officials as a part of their regular work. The principal works are those on the Bhakra and Bhaur rivers and their affluents. In Bázpur water is taken from the Gandli and the Naya and its heads which lie in the Kosi khádir. In Jaspur irrigation does not appear to be necessary, and in Káshipur the efforts made are entirely local, and an efficient regular system is now being developed.

6. The principal road is that which runs due east and west from the Nepál frontier to Káshipur, connecting all the parganas, and in length about 90 miles; next comes the line from Moradabad to Naini Tál by Káládhúngi, which runs through pargana Bázpur.



Mundiya or Shafakhána is on this road, at a distance of 33 miles from Moradabad and 15 miles from Káládhungi. The Bareilly and Naini Tál road passes through the Rudarpur pargana for 13 miles; another line much used for local traffic connects Moradabad with Káshipur and the hill mart of Rám-nagar, whence there is a good road to Almora. Running north and south are the Pilibhít and Naini Tál and the Pilibhít and the Barmdeo lines. These are all first-class unmetalled roads partly raised and partly bridged, and are under local management. There are also numerous cross-roads of more or less importance and of a similar description connecting the main line of roads with those running north and south. The nearest line of railway is the Oudh and Rohilkhand, with its stations at Bareilly and Moradabad. The communications are fairly sufficient for the stage to which civilization and population have reached in the Tarái, and year by year some further advance is made.

7. The wild animals found in the district are the elephant, an occasional wild buffalo and rhinoceros, tigers, bears, leopards, hyenas, wolves, pigs, and several kinds of deer, as the jarau, swamp deer, spotted deer, hog-deer, nil-gai, antelope, and four-horned deer. Although rewards are given by Government for the destruction of wild animals, about thirty persons perish every year from their attacks or from snakebites. There is no trade in the skins of wild animals. Bullocks and buffaloes are used in agriculture, and are purchased in Rohilkhand at from Rs. 40 to Rs. 80 the pair. An effort was once made by Government to improve the breed by introducing Hissar bulls, but the climate was against them and they soon died. Indeed the malaria that causes fever amongst the plains people that come to the Tarái does not spare their cattle, which have also to become acclimatized before they can endure the moist heat of the rains. The cultivator himself is too much occupied with his duties as pioneer in breaking up the jungle to devote much attention to the breeding of cattle. He provides himself with that class of cattle which he finds sufficient for his

purpose, and is a source of no great loss, should sickness attack and destroy it. Where the soil comprises a stiff clay he employs buffaloes, and elsewhere is satisfied with the ordinary small but wiry bullock of Rohilkhand. A few colonies of Banjáras breed ponies, which find ready purchasers in the hill-men at from ten to fifty rupees each. Some camel owners endeavoured to keep their camels in this district throughout the whole year, but the loss of stock, however, was so great that now, after the month of May, none remain. Large flocks of sheep and goats arrive about the end of October for grazing purposes, principally ewes, and as soon as their lambs are sufficiently strong they are again removed to the plains.

8. Fish abound in the streams of the districts and are caught for food principally by the Dhímar caste, who are not numerous. Other castes when they have leisure from agricultural employment occasionally fish. Amongst these are the Thárús and Bhuksas, the so-called aborigines of the tract, who frequently assemble by whole villages during the winter time for a fishing expedition. All classes except a few Brahmans and Baniyas eat fish, though it is not a favourite or coveted article of food with any large class. The selling price is from a penny to twopence a pound.

9. The following crops are grown in the district :—wheat, barley, rice, gram, peas, maize, *bájra*, *jodr*; Crops. sesamum, mustard, linseed, castor bean; ginger, turmeric, red pepper, potatoes, melons, cucumbers, plantains, pineapples; hemp, cotton, tobacco, and sugarcane. As might be supposed from the moist nature of the climate and the country itself, rice is the staple crop and the chief article of daily consumption. It occupies about 60,000 acres of the cultivated area and yields on an average 1,120 pounds per acre. There are three seasons at which rice is sown, the *gaja*, *bijhua*, and *rasauta*. The *gaja* sowing commences in April and May, when the finer kinds of rice are planted; the reaping takes place in September, and the average yield per acre is about 640 pounds of the

finer kinds, and 480 pounds of the coarser ; 40 pounds of seed are generally sown per acre. The *bijhua* sowing commences in May and June, when other sorts of rice are sown, which are reaped in October, with an average outturn per acre of 1,120 pounds from 48 pounds of seed per acre. The *rasauta* sowing takes place in June and July, when only the finest rice, such as *hansráj*, *basmati*, and *sonkharcha*, are sown, and the reaping goes on from the end of October until the end of November, the outturn being about 880 pounds per acre.

10. In this district, as might be expected, the husbandry is ruder than elsewhere. A very large area of waste land exists, which, though under a most imperfect system of cultivation, yields, from its natural fertility, a satisfactory outturn. Manure is hardly ever thought of ; in fact the soil would not bear it. A large holding for a peasant may be placed at fifty acres, a middling sized one at twenty acres, and a small one at six acres. Taking the average stock of a peasant, he will possess two ploughs, employing four to six oxen, and will cultivate, exclusive of two-crop land, twelve acres of *kharíf* or rain crops and four acres of *rabi* or cold weather crops. The gross value of produce (an average of five years' prices having been struck) is as follows : *kharíf* crop, Rs. 163 : *rabi*, Rs. 68 ; or a total of Rs. 231, from which must be deducted an expenditure on seed, implements, rent, &c., of Rs. 126, leaving a net profit of Rs. 105 a year. The work of weeding, watching, cutting, and threshing the crops will be done by the family, the value of whose labour cannot be estimated.

11. The Tarái forests contain no valuable timber or any worth preserving beyond the occasional patches of *khair* (*Acacia catechu*) and *sisú* (*Dalbergia sissoo*) found in Bilhari and the islands of the Sárda. The timber that chiefly abounds is the *haldu*, which, though of a fine appearance, is useless as a building or cabinet wood. The *sál*-covered patches, some of which run several miles into the plains, are as timber-producing reserves worthless, as the

young trees, in common with all *sál* grown in the plains, becomes rotten at the core before arriving at maturity. The only *sál* exported is cut either immediately at the foot of the hills or more generally on some small eminence. It was doubtless owing to these considerations that the Tarái forests were removed from the administration of the Forest Department in 1865 and placed under the Superintendent. A small tax is now levied on the export of all forest produce, and the proceeds of this tax are appropriated to the general improvement of the district. The levy of these dues has been recognized and declared at successive settlements to be vested in Government.

12. With the exception of bricks, all building materials have to be carted from the foot of the Kumaun hills, and are therefore expensive ; labour, too, having to be imported, the cost of all buildings is much enhanced. Bricks which are made throughout the district cost for the nine-inch brick Rs. 750 per lakh, and for the small native brick Rs. 100. Nearly all the structures are of brick, though stone has in a few instances been used ; but the distance that stone has to be brought from makes its cost so great that its use has been discontinued. All the wood requisite for any large work is obtained from the Kumaun forests, and consists either of *haldu* (*Adina cordifolia*) or *sál* (*Shorea robusta*). The cost of wood, including that of working it up, is Rs. 3 per cubic foot. Two kinds of limestone are used in the district, the one obtained from the quarries at the foot of the Kumaun hills, which give by far the best kind of lime, the other obtained in the small nálas of the district itself ; the latter, however, is of very inferior quality. First-class lime costs from ten to twelve annas per 80lbs., second-class Rs. 25 per 8,000lbs. Good kunkur is not obtainable in the Tarái, and all that is used has to be brought from the adjoining districts of Rohilkhand ; the average cost of 100 cubic feet is from Rs. 15 to Rs. 17, and the cost of metalling one mile of road Rs. 4,500 to Rs. 5,000. Broken stone as metalling can be supplied, in some places, at nearly the same rates, but there is greater difficulty in the consolidation.

13. This district cannot be said to be subject to either blights, floods, or droughts. Mildew of wheat sometimes shows itself, but to no great extent. Hail, too, occasionally does damage. Drought is to a very great extent prevented by natural causes, such as the proximity of the tract to the Himálaya, getting thereby the rain from the first showers of the rain-clouds which collect in those mountains, whilst the country lying further south remains parched. The climate being naturally humid, the nearness of the spring water to the surface keeps the soil moist and causes the wheat to germinate readily even in the driest year; and in addition to these causes irrigation, which is very largely carried on, makes the country less liable to the effects of drought.

14. During the famine of 1868 scarcity and want were alone felt in those villages where irrigation was impracticable, and in which the cultivators with a blind persistency would sow nothing but rice; thus when the drought came on they lost their only crop. Actual distress was averted, however, by the neighbouring villages, who were more fortunately situated as regards water, coming to the assistance of those whose crops had failed. No relief works were necessary for the cultivators of the district itself; it was only in the capacity of landlord that Government gave relief by advancing sums of money for the purchase of seed lost. Relief works were started for the purpose of employing such destitute people who had whilst wandering from other famine-stricken districts reached this tract; these were employed on roads and on irrigation projects. From the 16th to the 28th of February, 1869, there were over 15,000 people thus employed. Others found their way to the forests to seek there a scanty subsistence from the wild fruits and berries, as well as to procure pasturage for the flocks which they brought with them. The district itself became the highroad between the famine-stricken districts and Oudh, so that the main road running east and west was for some months lined with carts and cattle conveying grain. It was estimated that from the middle of December, 1868, to the middle of April, 1869, upwards of 10,000 carts, 5,000 herd of oxen, and 2,500 mules

laden with grain, computed to have amounted to nearly 5,000 tons, passed by this road. The failure of rain in the more southern districts, as well as the attraction of plentiful irrigation, brought large numbers to seek in the Tarái a new home; these, however, were not starving people seeking merely food, but those who had left their old homesteads in search of more favoured spots. The wandering poor were entirely discouraged from settling in the Tarái; they were merely relieved and passed on their way. On the whole, a year of drought may be said to be beneficial to the Tarái; prices range higher, thus giving the cultivator a better return for his produce; labour becomes cheap, and the health of the community at large is greatly improved by a dry year. The means of external communication with other parts of the country are amply sufficient to avert any extremity from famine.

15. There are only two towns in the district, Káshipur and Jaspur. By the census of 1872 the population of the former was 13,113, and of the latter 6,746. With the exception of these towns the whole population is scattered over the country in small villages. At the time the census of 1854 was taken, the parganas which now belong to the Tarái district formed part of the Moradabad, Kumaun, and Bareilly districts; the population in 1854, exclusive of Káshipur pargana, which was annexed in 1870, was 67,187, in 1865 was 91,802, and in 1872 was 114,365, or, inclusive of Káshipur, 185,813, of whom 122,657 were Hindus and 62,977 Musalmáns. From these figures it will be seen that the population increased from 1854 to 1865 by 36 per cent., and from 1865 to 1872 by 24 per cent. It is impossible to compare any difference of castes with reference to the census of 1854, as the whole of the records do not now exist. The marked increase of population, as above indicated, is entirely due to the policy as laid down by Government having been strictly carried out, *viz.*, to encourage the introduction of settlers by giving them low rates, liberal treatment, and assistance when necessary. The whole tendency of the population is to agricultural, and not to urban life.

16. The kinds of grain used for food by the labouring mass are barley, millets maize, and the species of rice known as *síri* and *sati*. The average daily requirement for each person may be placed at one and a half to two pounds of grain, at a cost of about half an anna. Wheat is used, in addition to the other grains, by Baniyas and the classes immediately above the agriculturist ; while the more well-to-do classes, such as mahájans, &c., consume the finer kinds of rice and flour, and also generally indulge in simple luxuries of some kind or other which vary with the taste and means of the individual.

17. The style of houses for dwelling prevailing throughout the greater portion of the district is the ordinary mud hut of Rohilkhand. It is built at a cost of about seven rupees, *i.e.*, the walls three rupees and the grass roof four rupees. The Thárús, however, build their houses of mud and wattles, and take particular care in their construction ; damp is much less felt in such structures than in the usual mud hut. A Thárú village has a straggling appearance, the houses being built separately at some little distance from one another, and owing to this peculiarity when a fire does break out it is generally confined to one or two houses at the most. The whole work of construction is done by the owner and his own family, the cost of whose labour cannot be estimated. In the towns of Káshipur and Jaspur alone are there any brick-built houses. The larger of these belong to wealthy bankers or shopkeepers, and often large sums are expended in their outward adornment ; they are generally two or three stories high, and are built round an open courtyard with terraced roofs. The cost of construction depends entirely on the means and taste of the owner. The average number of occupants to each house among both urban and rural inhabitants may be placed at four persons. There is nothing peculiar in the style adopted for buildings of worship ; that which prevails so generally throughout the North-West Provinces prevails also here, both as regards the Hindu *mandir* and the Muhammadan *masjid*.

18. No dialects which can be called peculiar to the district exist. Although the Thárús have a patois and accent entirely their own, it is not sufficiently marked to be called a separate dialect, and people of other classes easily understand them.

Language.

19. In connection with the subject of tenures of land in this district it is necessary to remember that the parganas which now form the Tarái have been at various times separated from the adjoining districts of Rohilkhand. In 1823 these parganas were all subject to the regular revenue authorities. The settlements made by these authorities up to the year 1842 resulted in over-assessments, and gradually landlords, farmers, and grantees, either of their own free will or from inability to manage their properties, relinquished their rights, and Government became, with fifteen exceptions, the sole landlord in parganas Bázipur, Gadarpur, Rudarpur, Kilpuri, and Bilhari. As landlord it has been the object of Government by fixity of rent and tenure to encourage tenants and improve their status. In the pargana of Káshipur may be read a similar history. A series of settlements characterised by a series of over-assessments compelled the Revenue Department in 1840 to fix the Government demand for a period of thirty years at a reduced rate. There were only two parties with whom the settlement officer at the time found himself prepared to make a settlement: first, the hereditary *mukaddams*, and, secondly, the official mukaddams; but both of these parties were quite unprepared for the rights and duties which were forced upon them. As was natural to expect, many of them fell into arrears, and their estates were sold; while others, having borrowed money at high rates of interest, finally succumbed to civil court decrees. This was the state of things in existence when Government on a large scale stepped in and assumed in many instances the responsibilities of landlord until a rise of prices might allow it to transfer its rights to others. Under these changes the pargana of Káshipur, with some slight reductions, pays the land revenue as assessed; the persons invested

Tenures.



with the proprietary right, however, have changed. In some cases the *mukaddam* or headman who was never zamíndár or landholder has entirely disappeared; in others, again, the heirs of those with whom the settlement had been made held their villages in pure zamíndári. The general tenures of land are coparcenary, subdivided into zamíndári, pattidári, and imperfect pattidári tenures.

20. The status of the tenants must be held to be a fair one, although as a body they scarcely understand their positions or their rights.

Cultivators-  
As in the rest of the Tarái, the large amount of waste land is the chief protection of the cultivator. The zamíndár is forced to treat his tenants with consideration, otherwise he finds himself left without regret; his neighbour, it may be, being only too glad to obtain new tenants to work up land lying idle for want of labour. There remains only the pargana of Nánakmata to notice. There are two divisions, Nánakmata proper and Maina Jhúndi. The tenure is peculiar in the former, owing to the views held by the revenue officers in 1835. It was imagined at that time that a community in full possession of the superior rights in the soil had been discovered, and it was held that the Thárús were the people entitled to those rights. The Thárú cosharers elected from their body four men who were called *sadr málguzárs*; they collected the Government demand, receiving  $7\frac{1}{2}$  per cent. for their trouble. The right of pre-emption in cases of transfer by sale, &c., exists among this class. In default of payment of revenue the mode of duress has been that of transferring the defaulting share to a solvent cosharer. This has tended to throw the estates into the hands of a few successful cosharers, and the smaller men have in many instances quite disappeared. In the other division, *viz.*, that of Maina Jhúndi, the villages are generally what is termed '*khánah kháli*' or '*must-ájjiri*;' the farmers hold on a certain assessment, and, as far as the land will permit, they make the best of their bargain. There are a few tenures scattered over the district which may broadly be termed revenue-free.

21. The position of a cultivator in a district of this nature must be a peculiar one, and does not admit of any regular comparison with other districts, the element of chance in the character of the landlord being eliminated. From the fact of the cultivator being eagerly sought after, and brooking no interference, his position becomes a law of itself, and many years must elapse ere the fine distinctions drawn by the Rent Law in the other districts of the North-Western Provinces can be made here. The greater portion of the land is held by the cultivator direct from Government. As a rule, the peasantry amongst the Thárús cannot be said to be involved in debt. The custom is to take advances from traders, repaying such in produce on the crops being reaped; these debts seldom remain unsettled after the year in which they are incurred; formerly debt was almost the normal state of both Thárús and Bhuksas. Assisted, however, by the district officers, the prices of produce having risen too, they have now got clear of the money-lender. Coming as the plains cultivator does without stock of any kind, he is obliged, to enable him to make a start at all, to go to the money-lender; and it remains a mere matter of good or bad crops how long it may be before he can extricate himself. Government as landlord assists to the extent of eight or twelve rupees new cultivators, and no interest is taken. Large tracts of land to the north of the district, running east and west parallel to the Kumaun Bhábar, are used for nothing but pasturage; their extent may roughly be estimated at 350 square miles. Upwards of 60,000 head of cattle graze in these tracts, and from Rs. 8,000 to 12,000 are yearly collected as grazing dues. The cattle are watched by men of the Ahír and Gujar caste, who form rather a lawless community. The cattle are the property of the landowners of the adjacent district of Rohilkhand. There are but few unskilled daily labourers in the Tarái, and those that exist almost entirely belong to the Banjára, Beldár, and Chamár castes. Of these, the latter generally hire themselves out for field labour, being paid both in money and in kind. When in money, they receive two and a half to three rupees a month, with a blanket and one pair of shoes each crop; when in kind, they receive one-half of the

produce, after deductions of rent and village expenses. Women very seldom work for hire, but when they are employed it is at husking and grinding grain; a small share of the grain so prepared being given them in payment for their labour. Children are usually employed in tending cattle. At harvest time, however, they assist in the field operations. In the Tarái there are three kinds of soil—*dúmat*, *mattiyár*, and *bhár*, but the second class largely predominates.

22. Rents are paid both in money and in kind, and are taken in the following ways: (1) in the crops known as *nijkári*, such as the cereals, where actual division of produce prevails, and crops known as *nukshi*, such as cotton, maize, and sugarcane; and (2) where *nijkári* crops are divided by estimate of the produce (*kankút*), at money rates; (3) money rates all round; (4) *halbandi*. In the first class one-fourth to one-sixth is taken, and the money rate on cotton is rupees three, maize rupees four and a half, and sugarcane rupees six per acre. In the second, when the crop is assessed, one-fourth to one-sixth, with deductions of one-fifth for errors, is taken, and the value of the produce is fixed according to harvest prices. The money rates as given obtain in the third class. The fourth class is peculiar to the Bhuksas, being, as its name implies, a fixed rate per plough. This class of people pay ten rupees per plough, with one rupee in lieu of cesses, and are at liberty to cultivate whatever amount of land they are able. The Thárús pay only at money rates, which vary from eighteen to thirty-six annas per acre. Irrigation is extensively practised, the cost of which, except in Káshipur, Rudarpur, and Kilpuri, is included in the rent. In the above parganas the charges are as follows:—

*Table of water rates.*

Class.		Flow.		Lift.	
		Rs.	a.	Rs.	a.
I.	Garden and orchards per crop ...	2	0	1	0
II.	Sugarcane, tobacco, opium, first watering.	a	0 8	b	0 4
III.	All cereals, pulses, oilseeds, ditto ...	c	0 4	d	0 2
	a. Increasing 4 annas every subsequent watering.				
	b. & c. Ditto 2 „ ditto ditto.				
	d. Ditto 1 „ ditto ditto.				

As a rule, lands are not allowed to lie fallow; when they are, it is from sickness or loss of cattle preventing the cultivator working them, but no system of rotation of crops is now practised.

23. In 1876 there were 2 burglaries and 159 thefts; property valued at Rs. 9,927 was stolen, and Rs. 3,976 recovered. Of 251 cases cognizable by the police 134 were enquired into, and in 110 cases conviction followed: 258 persons were tried and 202 were convicted. The crime of the district is low, consisting principally of petty thefts, cattle thefts, and such like, and the criminals are the wandering clans of Ahírs, Gújars, and Mewatís. With Rámpur on the border, and villages isolated by tracts covered with high grass, police have little chance of success if their aid is called in a day after the theft occurs. By that time the thief is across the border, and so many bad characters from other districts come up as cowherds, or servants at cowsheds, who cannot be suspected for some time, that it is almost a necessity that many cases occur which cannot be prosecuted to conviction. In the same way others come up under the garb of poverty or seeking for employment, and commit petty thefts and make off; the owners, when they have time, merely report their loss at the police station, so that it is difficult to obtain an apparently good return for police administration in this district.

24. The average death-rate per thousand of the population has been 33 during the eight years 1869—1875. In 1875, 5,897 deaths were registered, or 31·76 per thousand of the population; of these deaths 31 were due to cholera, 88 to small-pox, 5,197 to fever, 429 to bowel complaints, 56 to injuries, suicides, and accidents, and 96 to all other causes. There were 4,186 vaccine operations during the year 1875-76, of which 2,991 were successful, the result of 266 was unknown, and 929 were unsuccessful. There is a dispensary at Káshipur, and during the same year 2,779 patients were treated, of whom 565 were cured,

22 died, and 15 remained at the close of the year. This dispensary cost in 1875-76 Rs. 1,747, of which Rs. 1,424 were defrayed from local sources and Rs. 323 by Government. Malarious fevers of the intermittent type are endemic, but much improvement has been noted in many places of late years, due doubtless to the drainage of swamps, increased cultivation, the cutting down of forest, and other sanitary efforts. Cattle epidemics are frequent, and are attributed to the effect of the climate and the custom of assembling vast herds for pasturage. The most common is that called *chíra*, which begins when the rains cease, and continues until January; in 1867 the mortality amounted to 9,000 head of cattle, out of a total of 48,000 head in the district.

25. Grain is largely exported, and in a few instances there are evidences of an accumulation of coin in consequence of the balance of trade being in favour of the district, chiefly so, however, in the pargana of Káshipur. Such accumulations are employed in building, in the purchase of ornaments for women, and in lending out money on interest. The current rates of interest in (a) small transactions is 12 per cent.; (b) in large transactions with mortgage on movable property, 24 to 30 per cent.; (c) in loans with mortgage on a house or land, 18 to 24 per cent.; (d) in petty agricultural advances upon personal security, 36 per cent.; (e) and in the same with lien on crops, 12, 18, and 24 per cent. Twenty years' purchase on the land revenue is considered a fair investment. In Káshipur there are two or three large native bankers, and in the rest of the Tarái loans are conducted by Kumáonis, who come down into the district during the cold months; and by Banjárás who advance money on the crops and take the produce in return, which they carry to the neighbouring marts for sale. The exports are usually grain and cloth, goods of the coarsest kinds; the imports salt, brass and iron vessels, and the finer kinds of cloth goods. There are no manufactures worthy of notice. Coarse cotton cloth is made in Káshipur, but merely

affords a comparatively small portion of the inhabitants a scanty living.

26. The total land revenue of the district as it stood in 1872 was Rs. 1,74,017. The incidence on total Land revenue. area was four annas and nine pie, on the cultivated area Re. 1-3-3, and on the culturable area Re. 1-2-3. No comparison can be made with former assessments for the greater portion of the district, as the present is the first settlement which has been made. Save in the parganas of Káshipur and Nánakmata, the proprietary right is held by Government alone, and there have therefore been so very few sales of land under assessment that no data that can be relied upon for estimating the value of land are available.

27. It has been stated that there was a time when irrigation was unknown in the Tarái, when no dams existed on its numerous streams, and when Irrigation. the health of the inhabitants is said to have been better than it now is. However this may be, long before British rule the people had commenced stopping up the rivers and streams for the purpose of employing their water in irrigating the crops. There was nobody to regulate the dams so erected, or to determine what waters should be drawn for the use of this village, and what waters naturally belonged to that village. The results were that swamps were formed along every stream, and quarrels arose between every neighbouring village in regard to their respective rights to water. Under the rule of the farmers and grantees there was no regular system of irrigation, so that the country became by the backing up of the water a place fit only for tigers, deer, and pigs to dwell in. Some tribes, however, whose constitutions by habit could stand the climate, remained in these dreary wastes. On the failure of payment of the revenue demand the attention of Government was drawn to the subject, and an officer was deputed to visit the country. Under instructions from Government a new system was introduced, swamps were partially drained, and

the country began to return to somewhat of its former state, and parganas Rudarpur, Gadarpur, and Kilpuri ceased in a measure to deserve the title of "the tract of the deadly swamp," the name they had hitherto been known by.

Not only have those who have come to the Tarái from other districts taken to the cultivation of rice as the most profitable employment, but the Tháru and Bhuksa community also consider the growing of rice their hereditary occupation, and almost entirely depend upon it for their support. In many parts the soil, too, is well adapted for the propagation of the finer kinds of rice, and is capable of yielding no other sort of crop. To cultivate this crop water in large and constant supplies is absolutely necessary, and the great problem in the Tarái is to so control the use of the abundant water-supply at hand that every one may get his fair share without unnecessary waste, and that there may be as little left to form swamps as possible. Should irrigation be abolished in the Tarái the health of the people would doubtless improve, for there is a marked difference in this respect between the people of the swamps and those who live where very little irrigation is carried on. But here you have a rich soil, a certain crop, light rents, and, chiefest of all, an unfailing system of irrigation to attract settlers; and the result is that they come in large numbers, and immigration fills up the ranks when thinned by fever. There is no doubt but that irrigation is the greatest attraction of all; to it the cultivators look for an increase in the produce and a constant full crop. Land that has been accustomed to receive water rapidly falls off in productiveness if the water fails, and where a constant supply can be had continues for many years to give good crops. It thus becomes in the Tarái a matter of profit compared with health, and unfortunately the cultivator considers a good rice crop, though accompanied by malarious fever, more to be desired than health and a poor crop. All that can now be done is to regulate the supply of water, and as far as possible discountenance the introduction of canal irrigation in those parts where it is still unknown. The spring level varies from seven to fourteen feet from the surface,

and wells can in most places be constructed without any great labour or expense, and should be encouraged.

28. The only section of the inhabitants of the Tarái proper that has resided in it for any length of time is the Tháru and Bhuksa portion. These tribes have inhabited the moist country at the foot of the hills from time immemorial, but know very little of their own country or its history. The Bhukṣas call themselves the descendants of one Jagdeo, a Panwár Rajpút of Dáranagar, the home of the celebrated Bhoja Rája, and say that on account of family disputes they emigrated towards the rising sun, and finally settled in the Tarái. The Thárús too claim to be of Rajpút origin; they say that they are descendants of the followers of one of the Ranas of Chitor with whom they fought in the great fight in Lanka (Ceylon), but terrified at the din and confusion of war, they trembled (*thartharáya*), and hence their name. Ashamed of their conduct, they left their homes and settled down in the wilds of the Tarái many centuries ago. The other inhabitants of the Tarái are recent settlers. There are traces, however, of a very early civilisation in various parts of the tract lying along the foot of the hills, which the people attribute to the Pándavas, and especially mention the Pándava tutor Drona as the architect of several large excavations for holding water which exist near Káshipur.

29. We have fortunately, however, some better materials than local tradition to rely upon in giving a sketch of the early history of this tract. There is little doubt that so early as the seventh century of the Christian era the Tarái formed a portion of the kingdom of Govisana, which was visited by the Chinese traveller Hwen Thsang, and the ruins in the neighbourhood of Káshipur have been identified by General Cunningham with the capital of that kingdom. Govisana was subsequently absorbed in the kingdom of Kumaun at a time of which we have no record. From the earliest dawn of traditional history in Kumaun we find the



Tarái forming an integral part of the Kumaun *rāj*, though subject by its position to the incursions of the lawless tribes of Katehir, and once for a very short time almost independent, during the usurpation of Nandrám. These interruptions, however, were never sufficient to sever entirely the intimate connection with the hill state which has continued down to the present day.

30. In the reign of Akbar (1556—1605 A.D.) the Tarái was known as the Naulakhia or Chaurási Under the Kumaun *rāj*. Mal; the former name was given from its nominal revenue of nine lakhs, and the latter name from its presumed length of 84 *kos*. The earliest record of the actual assessment, and the items of which it was composed, is found in a document of the reign of Kalyán Chand giving the assessments of the year 1744 A.D., which amounted to Rs. 4,25,251 of the currency of the time. The cess on the spring and rain harvests amounted to Rs. 3,55,000, and was almost equally divided between them. In addition we have dues paid on holidays and festivals of the nature of a benevolence, a gambling tax, presents to officials, miscellaneous taxes, and dues on fruit trees and timber. All reports make the revenue something over four lakhs of rupees in 1744 A.D., but at the time of the Rohilla irruption in that year the actual collections had dwindled down to two lakhs. It is doubtful, however, whether any portion of this sum ever reached Almora, as the tract was then given as an assignment in lieu of pay to a body of mercenaries from the Kangra valley known as Nagarkotiyas. In the hands of Sib Deo, the clever minister of Díp Chand, the revenue recovered a little, though the Rohillas subsequently seized and kept possession of a portion of Sarbna and Bilhari, and in those parganas the Rájá of Kumaun was only nominally *jágírdár*. Even then the Rájá's share of the rental amounted to only Rs. 1,32,000, and of this sum but Rs. 40,000 found its way to Almora, the remainder being swallowed up in the expenses of management and in the pay of the Nagarkotiyas. The other part of the rental was absorbed by Brahmin grantees and the headmen of the hereditary *chaukidárs* or watchmen of the Tarái who had been

gradually introduced into the territory since the days of Báz Bahadur Chand.

31. In the south-eastern extremity of the Tarái the Barwaiks, and in the same direction towards the hills the Luliyas, and in the western parganas the Mewatis and the Heris (Musalmáns), performed the duties of policemen and guards. A system of levying blackmail was thus introduced, the evil effects of which remained for many years, and which during its continuance rendered the submontane tract the general safe resort of banditti and the lurking-place of the worst of criminals. Owing to this state of things and the general weakness of the hill state, torn as it was by the feuds of the Joshis, Nandráam, the kiladar or governor of Káshipur, rebelled, and having murdered the governor of Rudarpur, took possession of the whole tract, which he handed over to the Oudh Nawáb and held from him in fief as *ijáradár*. He was succeeded by his nephew Sib Lál, who retained it till 1802 A.D., when the British took possession of Rohilkhand.

32. Batten thus sums up the character of the native administration :—“ The rule of the Oudh Nawáb in the Tarái was on the whole beneficial, but chiefly in a negative point of view. The bad government of districts naturally more adapted for culture and habitation, drove large colonies of people from the south to a region where the background of the forest and the hills could always afford a shelter against open oppression ; where the nature of the climate was not such as to invite thereto the oppressors into whose hands a whole fertile and salubrious land had fallen ; and where also on this very account the rulers who did exist found it their interest to conciliate and attract all newcomers. The management of the territory in question by Nandram and Sib Lal is generally well spoken of, except in the matter of police ; but even in this latter respect the mismanagement was not more injurious to society than the state of affairs in regard to the forest banditti became in times not far distant

from our own. I believe that it may be confidently stated that at the commencement of the British rule in Rohilkhand there existed in the Tarái a greater number of inhabited spots than there existed thirty years afterwards in the same tract ; that more and more careful cultivation was visible in every direction ; that the prairie, if not the forest, had retreated to a greater distance ; that the *gñls* or canals for irrigation were more frequent and better made ; that more attention was paid to the construction and management of the embankments on the several streams ; and that, finally, on account of all these circumstances, the naturally bad climate, now again deteriorated, had somewhat improved. While recording this statement, I must not omit to add that I myself possess no positive separate proofs that my assertions are correct, but that I write under the influence of almost universal oral testimony, supported, nevertheless, by this circumstance, *viz.*, that the revenue statistics of the tract under discussion show a descending scale in regard to the income of the state, a product which under general rules bears an approximately regular proportion to the prosperity of a country.

“ I must not omit to mention the fact that the Bhuksa and Thárú tribes are extremely migratory in their habits, and are peculiar in requiring at their several locations more land for their

Effect of earlier settle- periodical tillage than they can show  
ment. under cultivation at one time or in one year.

To these tribes is in a great measure now left the occupation of the Tarái territory ; so that now (1844) for every deserted village there may be perhaps found a corresponding newly cultivated one within the same area, and large spaces of waste may intervene where under the present system no room for contemporaneous cultivation is supposed to exist, the periodical waste or fallow also in that peculiar climate presenting as wild and jungly an appearance as the untouched prairie. In the times, on the contrary, which I have advantageously compared with our own, the fickle and unthrifty races whom I have named were not the sole occupants of the soil ; all the number of contemporaneous settlements was therefore greater, and the extent of land required for each was less. I therefore come round in due course to the

next fact (the obverse of that first stated), that as bad government in the ordinarily habitable parts of the country introduced an extraordinary number of ploughs into the borders of the forest tract, so the accession of the British rule, by affording a good government to Rohilkhand, re-attracted the agricultural resources to that quarter, and proportionately reduced the means of tillage in the Tarái. Such is my general position, but local circumstances also added to the deterioration, and amongst these an allusion on my part is all that is necessary or proper, to the hasty and perfunctory mode of settlement adopted in the earlier years of the British rule; to the disputes, in and out of court, concerning zamíndári rights between Sib Lal and Lal Singh, and again between the latter and his nephew Mahendra Singh's family; to the continued bad police management; and perhaps more than all, to the neglect and indifference of the English revenue officers, who were scared away from the tract by the bad reputation of its climate, and were only occasionally attracted thither by its facilities for sport. In fact the sum of the whole matter is in my opinion this,—that even long neglect in other quarters can by a change of system be speedily remedied, but that, in the peculiar region of which we are treating, a very brief period of neglect or bad management is sufficient to ruin the country."

The above extract is given as showing the opinion of a man well qualified from long experience to judge of the necessities and capabilities of the Tarái. It is not, however, to be supposed that this state of things was entirely due to British mismanagement. The elements of disorder and destruction came down to us as a legacy with the district itself, and the chaukidárs turned into banditti became the terror of the industrious, and eventually led to the depopulation and desertion noticed by Mr. Batten in 1844.

33. Owing to the commotions in Rohilkhand from 1764 A.D. the Tarái became filled with emigrants from the lower country, who had fled from the extra taxation and the multiplied masters which the wars of that period had created. This was the first great recent

immigration into the Tarái. The next extensive influx of lowlanders occurred immediately after the accession of the ruler of Oudh to the sovereignty of Rohilkhand, and continued till the tyranny of the new reign had somewhat overpast, and till (after the second Rohilla war with Faizullah Khán, who himself brought large numbers of people to the jungle where his entrenchments were formed) the lower districts became again fit for the habitation of a peaceful and industrious people. Thus, at first tolerable good government at one place and intolerably bad government at another contributed to the occupancy of the waste lands of the Kumaun Bhábar and Tarái by natives of other districts ; and, a few years subsequently, the Gúrkha invasion of Kumaun, and the civil wars which preceded that event, drove down numerous mountaineers to the same quarter, and made Káshipur, Rudarpur, Kilpuri, and other frontier towns and villages the emigrant settlements of numerous individuals whose political importance or wealth rendered them peculiarly obnoxious to the evil of a revolution, and whose stay on the hills had become incompatible with their safety. We may date at this period the planting of some of the mango groves in the Tarái, which are now within spots where wild beasts occupy the place of human inhabitants, and swamps lie over what may have at one time been the site of the village. The greater portion of these settlers, however, fell victims to the deadly malaria of the more swampy tracts, whither the Gúrkhas on the one side and the Marhattas on the other had driven them to take refuge. Jones speaks of a case where 4,000 inhabitants of a single immigrant settlement near the Sárda perished in one season from Tarái fever.

34. As already noticed, the British obtained possession of the Tarái in 1802, and it was with Sib Lál, the nephew of Nandrám, that the first settlement, or rather temporary arrangement, was made. This was made for the years 1803-4 to 1806-7. The revenue rapidly increased until the fourth settlement for four years—1809-10 to 1813-14—when it as rapidly began to decline. In 1823 the Tarái parganas were transferred to the plains authorities, and

The British.

during the same year some attention was paid to the management of the forests, and portions were demarcated for Government use. In 1824 the boundaries between the hills and plains were laid down by Messrs. Halhed and Traill after a long and warm controversy, during which Mr. Traill is said to have fought for every inch of ground as if he had been a hillman himself and had a personal interest in the matter. Mr. Holt Mackenzie's review of the sixth settlement, which extended from 1823-24 to 1828-29, discloses a tale of ruin and depopulation arising from over-assessment, careless supervision, and bad management, which was most disgraceful to the officers concerned. Mr. Boulderson revised the settlement and did much to alleviate the evils which existed, and in 1831 a settlement of parganas Rudarpur and Gadarpur for fifteen years was made on an apparently equitable basis. In 1835, however, these parganas were handed over to Rájá Gumán Singh on a fixed annual revenue of Rs. 28,270. This was supposed to leave a large margin for reasonable profits, but the Rájá paid little attention to his estate, and on his death in 1836 it came under the Court of Wards. In 1841 the present Rájá of Káshipur, Shiuráj Singh, assumed the management of the estates, but under him they fell into only deeper disorder, and became little better than huge swamps, the home of wild pigs and deer. Although assisted by the Nawáb of Rámpur, the Rájá drew so little advantage from the parganas that in 1848 he was unable to pay his revenue and resigned his lease of Rudarpur and Gadarpur and also that of Kilpuri which he had held since the cession.

35. Some temporary arrangements were made until 1851, when the parganas were made over to Captain W. Jones. Captain W. Jones with full directions as to their management and a liberal establishment to aid him. He did much for the improvement of the country and devoted himself especially to the reclamation of swamp, the discouragement of the habit of erecting embankments across the streams wherever any one wished for the purposes of irrigation, the training and distribution of water actually required by the cultivators, and the

elaboration of a system of canals. Owing to the disturbances during the mutiny, the unsettled state of the country in 1858, and the change of officers in charge of the irrigation works during this period, and also probably to some faults of construction, the greater portion of the works carried out by Captain Jones were much injured, and all had to be re-aligned and freshly provided for.

36. Immediately after the mutiny the Taráí was attached to Kumaun as a temporary measure, and in Taráí since the mutiny. 1861 was formed into a separate district, except pargana Káshipur, which remained attached to Moradabad until 1870. By a resolution of Government under Act XIV. of 1861 the Taráí was removed from the control of the Regulation Courts and their procedure, and separate rules for the guidance of the Superintendent in revenue, civil, and criminal matters were drawn up and sanctioned by Government.<sup>1</sup> The preamble of the resolution relating to the revenue administration describes the Taráí as having "boundless resources in the natural richness of its soil and in the abundance of its water; and it required only an industrial population, fair roads, and skilful drainage to convert what is now a pestilential prairie into a prosperous district." It was not hoped that its regeneration should be made through the Bhuksas and Thárus, or that a settlement could be made with the migratory populations who had hitherto resided in it. Existing settlements were allowed to stand, but, in the words of the resolution, "it is thought that the best hope of bringing the Taráí into cultivation lies in a judicious system of direct management, and in the appropriation of the proceeds, as sanctioned by the Home authorities many years ago, in respect of the Bhábar tract, to the drainage of swamps; to the construction of dams and channels of irrigation; to the opening-up of communciations; to the settling and hutting of immigrant cultivators, and generally to the improvement of the tract. In this view there will be obvious advantage in regarding all the parganas comprising the Taráí district as one undivided

<sup>1</sup> G. O. No. 2666A, dated 10th October, 1861.

estate, and in authorizing the Superintendent to regulate his expenditure without reference to the proportion of *khám* collections from each pargana.

“In the improvement of communications all the parganas must be interested. From the drainage of swamps, the excavation of irrigating channels, and the extension of cultivation advantages accrue to all indirectly in the improved salubrity of the surrounding country, which always follows clearances after the first two or three years. The Superintendent will therefore be guided in his appropriation of *khám* collections, having for their object the improvement of the Tarái, by a consideration of what will tend in the largest degree to benefit the whole tract. The Superintendent of the Tarái has the power, subject to the confirmation of the Sudder Board of Revenue, of conferring proprietary right in land on cultivators who may have formed villages in the Tarái and been settled upon the lands for a period not less than ten years, and may have brought under cultivation not less than half the culturable area assigned to them. It is thought that the object to be aimed at in giving proprietary right will be as surely attained in the end by holding out hopes of such rights at the next settlement to those who had earned them by their industry, and of *mavrási* rights to others having lesser pretensions and more slender claims to favour. The Superintendent will bear in mind that the object with which all these parganas have been formed into one district, and placed under his direct charge, is the reclamation of the Tarái. The introduction of a simple and uniform administration, adapted to the rude nature, the social backwardness, and the primitive customs of those who form the greater part of the population, will assist the furtherance of this object, but success will depend chiefly on the temper, the direction, and the energy of the Superintendent.”

With these instructions Mr. Elliott Colvin, of the Covenanted Civil Service, was placed in charge of the Tarái, with Mr. Macdonald as his Assistant. The Tarái was at first placed in the Rohilkhand



division, but in 1870 was transferred to Kumaun. The Superintendent was invested with primary authority in all matters relating to the administration in all departments, and power to assign such duties, executive, fiscal, or judicial, within certain defined limits, to the Assistant as he might be deemed qualified to discharge. Rules for the guidance of both officers in all matters were drawn up. The police in the Tarái are not organised under Act V. of 1861, as in the rest of India, and the duties of supervision are performed by the revenue officers. There are but seven police stations in the Tarái, and there seems to be no need for more, owing to the little crime existing among the scattered and quiet population of the jungles; and altogether we may now reasonably hope that the Tarái is entering upon a time of prosperity, moral and material, which it has not known for centuries.

NAINI TAL,  
*The 5th July, 1877.*

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E. T. ATKINSON.