Report on the medical topography and statistics of the Northern, Hyderabad and Nagpore Divisions, the Tenasserim Provinces and the Eastern Settlements.

### Contributors

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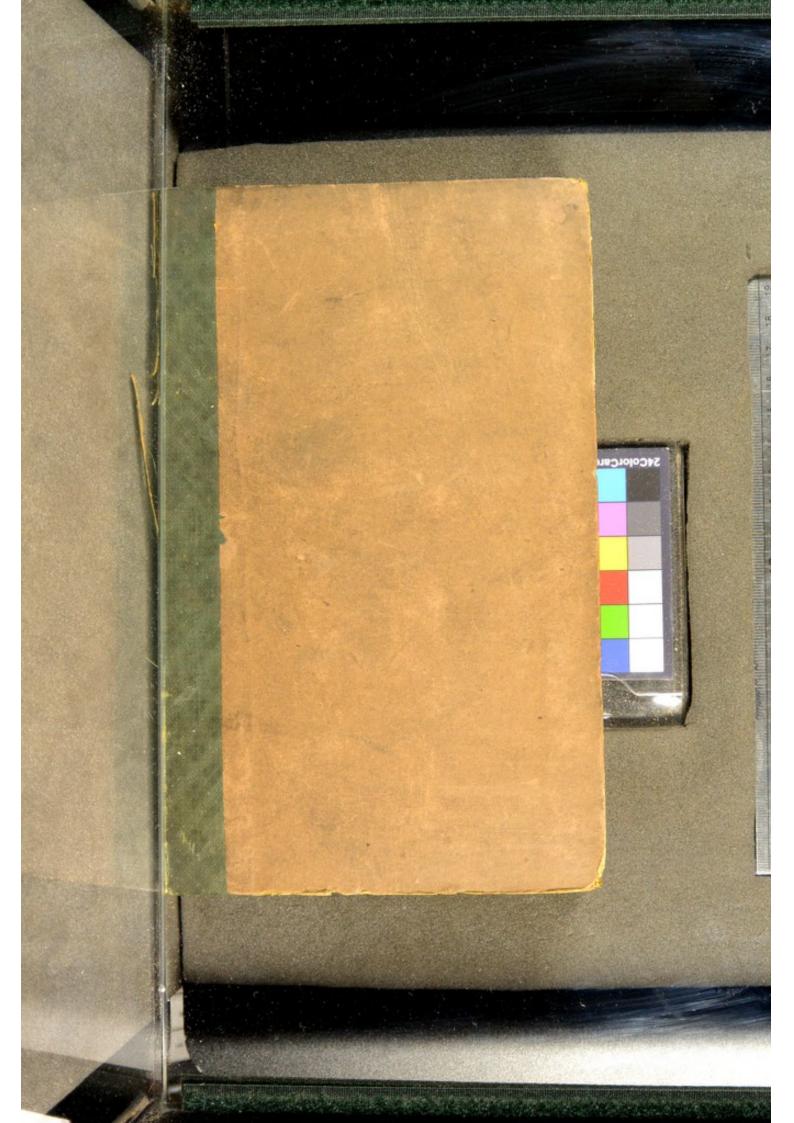
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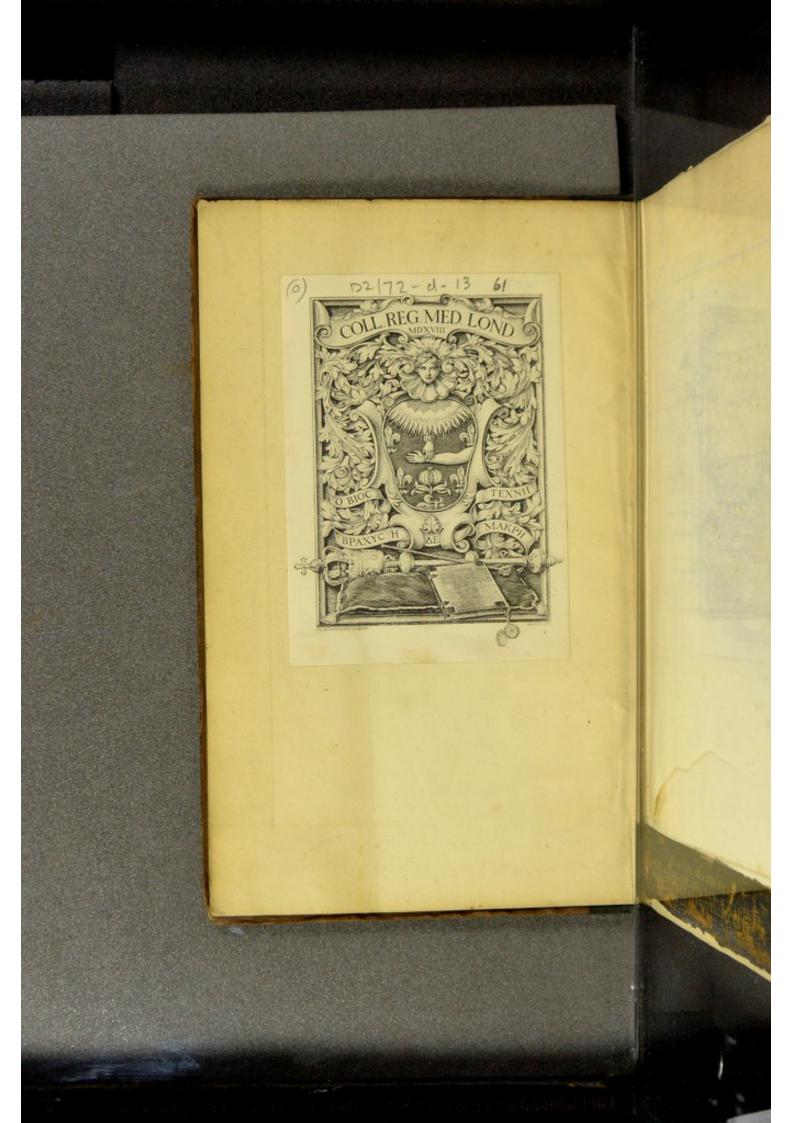
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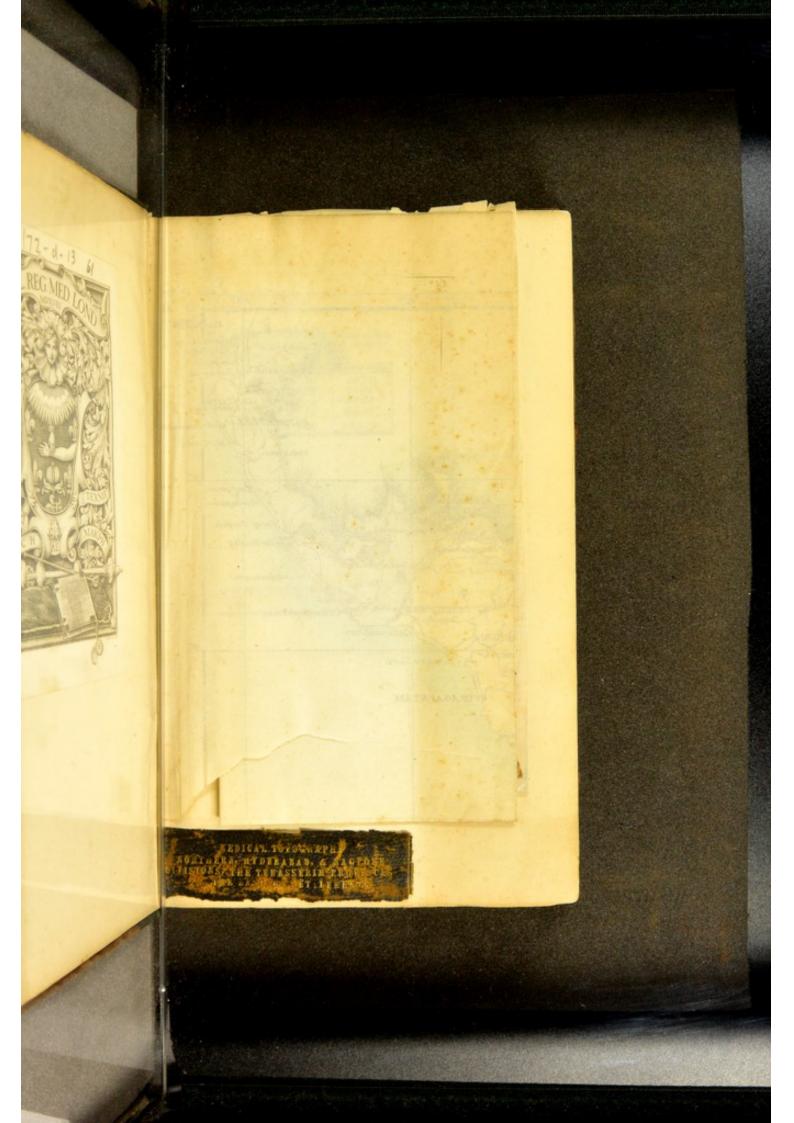
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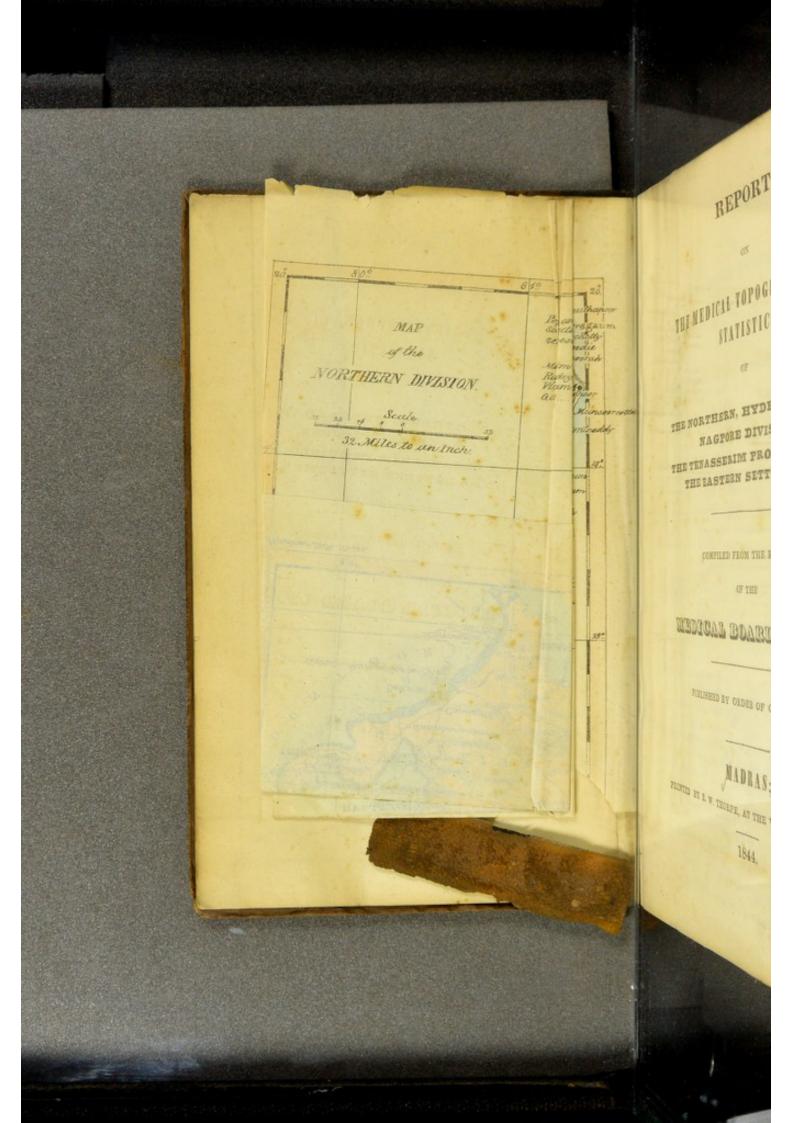


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### REPORT

MAP

of the

RN DIVISION

### THE MEDICAL TOPOGRAPHY AND STATISTICS

OF

ON

THE NORTHERN, HYDERABAD AND NAGPORE DIVISIONS, THE TENASSERIM PROVINCES, AND THE EASTERN SETTLEMENTS.

COMPILED FROM THE RECORDS

OF THE

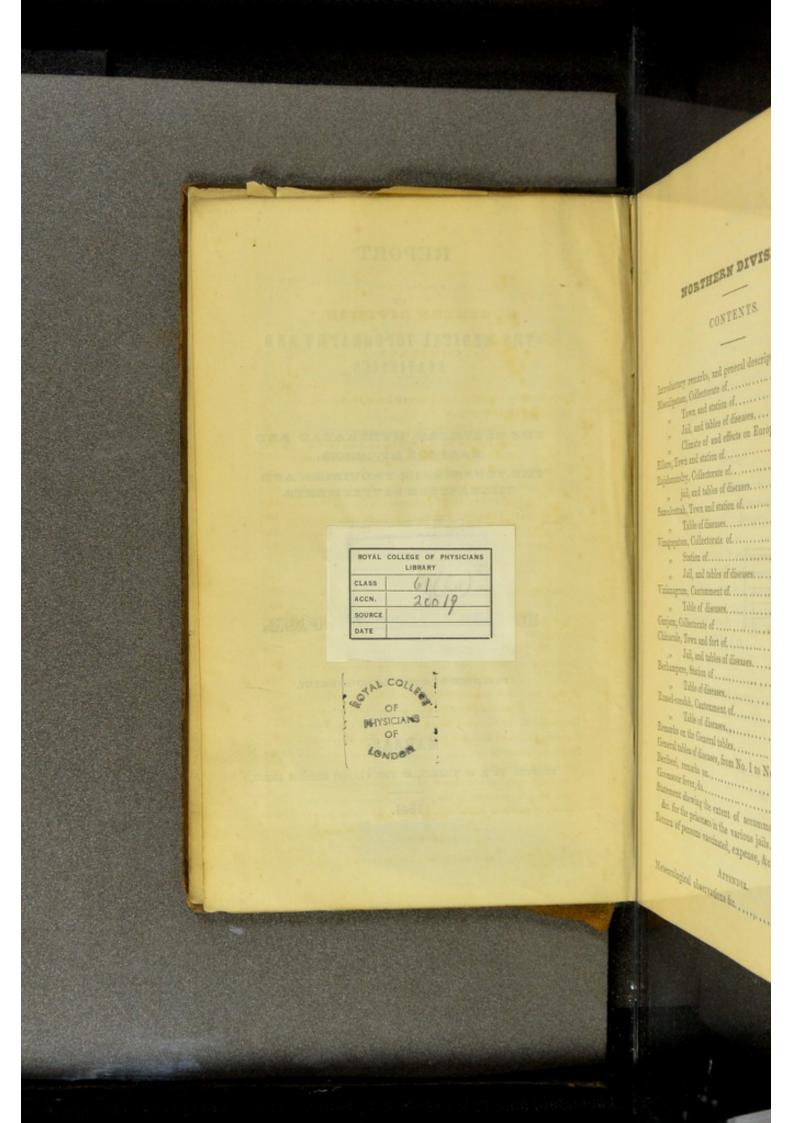
MEDICAL BOARD OFFICE.

PUBLISHED BY ORDER OF GOVERNMEMT.

### MADRAS:

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1844.



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Overage description. This division of the army, lying on the eastern coast of the peninsula, between the 16th and 20th degrees of north latitude, came into the possession of the East India Company, in the year 1766. Of the five districts, formerly known as the "Northern Circars," four, viz. the collectorates of Masulipatam, Rajahmundry, Vizagapatam and Ganjam, are comprehended in this division,—the fifth Guntoor, lying south of Kistnah river, having been annexed to the Centre Division; in the report for which it is described.

In extent it is estimated to contain an area of 32,570 square miles, and a population amounting to 2,351,463 souls.

The division is bounded on the east, in its whole length, by the bay of Bengal; on the west by a chain of ghauts separating it, on the southern part, from the country of the Nizam, and on the north, from that of Gundwanah, which is but little known to the British; on the south it is bounded by the Kistnah, which separates it from Guntoor; and on the north by the Chilka lake, and the country of the Goomsoor Rajah.

The general aspect of the southern portion of the country, including Masulipatam and Rajahmundry, is that of a flat alluvial plain, (but little elevated above the level of the sea,) rising gradually towards the ghauts, which are here at a distance of from 50 to 60 miles from the coast. Further north the country is irregularly hilly, between the coast and the ghauts, which approach considerably nearer to it, rich alluvial plains being every where found between the hills. The climate of the coast, though hot and oppressive, from March till June, may be said to be generally salubrious, from having at that time, the advantage of the cool sea breeze, and a mild temper-

ature, throughout the other months of the year. The ghauts, though possessing a colder climate, are scarcely habitable either by Europeans, or by the natives of the coast, from the malarious condition of the atmosphere, occasioning fevers both of the intermittent and remittent type, from which few who visit these localities escape;—and consequently the hilly regions, as well as the country westward towards Nagpore, are but very imperfectly known, extensive tracts of it never having been surveyed.

Stations in the Division. The civil and military stations in the division, are Masulipatam, Ellore, Condapillay and Raga-

pore, in the Masulipatam collectorate.—Rajahmundry and Samulcottah, in that of Rajahmundry;—Vizagapatam, Vizianagrum, and Palcondah, in the Vizagapatam district;—and Chicacole, Berhampore, Russel-condah, Aska, and Kimmedy in the Ganjam district.—A small and inconsiderable French settlement, comprizing a limited tract of country on the coast, called Yanam, lies opposite to Injeram, on one of the branches of the Godavery, where some coasting trade is carried on with Pondicherry, and other French settlements in India.

The out stations of Condapilly, Ragapore, Palcondah, Kimmedy and Aska, being only occupied by detachments of native troops, relieved periodically from the head quarters, of corps, and under the charge of medical subordinates, require no separate notice.

#### DISTRICT OF MASULIPATAM.

General description. The district, or collectorate of Masulipatam, has undergone several changes, as regards its boundaries, since it first came into the possession of the East India Company, but it is only necessary in this report, to describe it as they are now fixed.

It is about 113 miles in length, by 100 in breadth, comprehending an area of 4,820 square miles, and contains a po RESTORATION Philometerio de la correra de (1857), el participation de la correra de (1857), el participation de la correra de la correra la correction de la correction de la correction de secondo consider de la correction de la correcde secondo consider de la correction de la correcde secondo consider de la correction de la correcde secondo consider de la correction de la correcla consider secondo de la correction de la correcla consider secondo de la correction de la correcla consider secondo de la correction la consider presenta bert to have la correction la consider presenta bert to have la correction la consecuención de la correction de la correction de la correction la consecuención de la correction de la cor

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#### MASULIPATAM.

pulation, according to the census of (1837), of males 1,77,472, females 1,54,567, making a total of 3,32,039, or about 69 souls to the square mile.

It was formerly one of the northern circars, and belonged to the Nizam, who ceded it in 1765, to the English. Upwards of two centuries ago, the Dutch had a commercial settlement here, and several of their tombs bearing date 1660, are still to be seen ; they do not appear to have had any houses in the pettah, but to have lived entirely in the fort, for the security of their property.

The French under M. Dupleix acquired possession of the fort, and part of the surrounding territory.

In 1765 the fort was re-captured from them, after a smart engagement, by a detachment of the English army under Colonel Forde ; and has ever since remained in our possession.

The inhabitants are chiefly gentoos, the proportion of mahomedans not being more, it is said, than 1 in 20.

The district is bounded on the south-west by Boundaries and appearance of the country. the river Kistnah, on the north-west by the Nizam's territories, on the north-east by the river Godavery, and on the south-east by the bay of Bengal. From Beizwarrah; a town on the banks of the Kistnah, about 45 miles from Masulipatam, the country to the north-west is hilly, and rises in elevation as it approaches the Nizam's boundaries; some of the valleys are picturesque and very fertile, although there is a good deal of jungle, affording shelter to tigers, bears, and other wild animals. To the south-east of Beizwarrah, as far as the sea, the country is an extensive plain, without any elevation, that can be called a hill; the general level of this plain is but little above the sea, and in one part near its middle, it sinks somewhat and forms the great Colair lake. Along the coast, the level is rather higher, in consequence of the sand banks thrown up by the sea, which oppose the only barrier to its encroachment, when spring tides and hurricanes occur.

4

Rivers. Besides the great rivers Kistnah and Godavery, which bound the district on two sides, there are many smaller streams intersecting it in different directions. Some take their rise in the north-west, and fall into the Godavery on the one side, or the Kistnah on the other, whilst others, taking a central direction, flow into the Colair lake. Many of them are supplied entirely by the rain that falls among the hills, and are nothing more than mountain streams; and others are mere channels, by which the surplus waters of the Kistnah and Godavery, find a passage to the sea, when they overflow their banks. A stream leading from the Godavery, and another from the Colair lake, unite and form the Oopoolair, a considerable river, which falls into the sea at Maddapolliam; it is salt for several miles inland, and deep enough for the passage of boats, between the sea and the lake. The Moonyair, also a considerable river, falls into the Kistnah about 28 miles above the Beizwarrah ; another, the Boodwair, takes its rise a little to the north-east of Mylavesum, and after traversing the country among the hills, finds its way round the north-east end of the Beizwarrah range, and ultimately runs into the Colair lake. The head of the Tummylair is also among these hills, but higher than the source of the Boodwair, and taking a central direction, passes close to Ellore, and like the latter, runs into the lake.

Between Beizwarrah and the lake, on one side, and the sea on the other, there are no rivers of any size, with the exception of the Poolair, which is more properly a canal supplied by the overflowing of the Kistnah, to which it was formerly joined a few miles below Beizwarrah. This channel partly from neglect, and partly from the obstacles thrown in the way of its being kept open, by interested Zemindars, has been closed for many years, till lately, when it was partially cleared by the Civil Engineer of the division. The new opening into the Kistnah is further down the river, and is furnished with sluices, for the purpose of regulating the supply of water for irrigation. Originally, this river traversed the country, from 30 to 40 miles towards the sea, and it is

# KUSTELEATAN

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#### MASULIPATAM ...

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said to be the intention of the authorities to re-open it throughout its entire length, but the new cut comes far short of this at present. The only canal of any consequence in the district, if the Poolair does not come under the denomination, is one, which opening from the sea, about a mile or a mile and a half from the fort of Masulipatam, and passing close to its walls, through the swamp, with which it is surrounded, joins the Kistnah about 12 or 14 miles inland. It is sufficiently deep to admit small vessels, with cargoes of bricks, tiles, firewood, &c. but its entrance to the sea is obstructed by a bar of hard sand, close to the surf, and which at low water, completely prevents the passage of boats, to or from the shipping in the roads.

Colair labs. The Colair, the only lake in the district; is situated between Ellore and Masulipatam, but much nearer the former than the latter town, and, during the rains is said to cover upwards of twenty square miles; at this time the communication between Masulipatam and Ellore, is kept up principally by the Beizwarrah road. The lake has no permanent outlet, except that which joins the Maddapolliam river, a short distance from the sea. About twenty years ago the water rose so high as to force a new passage to the sea, and although it is closed up annually during the dry season, it again becomes open in the monsoon. These waters abound with fish, and the shores with wild fowl.

Tanks are numerous all over the country, but there are none worthy of particular notice. In the dry season of the year, the chief dependance for water is on large brick built wells, sunk, some of them, to a great depth; the water of which is in general very good.

Here are no hills within less distance than 45 miles of Masulipatam. The nearest are those of Beizwarrah at which place, as well as at Condapilly, nine miles farther west, they rise to a considerable height; but at Condapilly, the highest hills in the district, they do not exceed in elevation 1,700 feet. They are principally composed of a hard, small grained, dark coloured granite.

Reads. There are five roads leading in different directions from Masulipatam, to join the great northern line. One runs south along the coast to Ongole; another to Guntoor; the third and principal one to Beizwarrah; a fourth to Ellore, passing by the Colair lake; and the fifth to Samulcottah, by the coast. From want of materials, the roads can only be kept in order at a great expense, and they are always very heavy during the rains.

Mineral produce Granite, sienite, marble of various kinds, tions, tions, lime stone and iron, are found in the interior of the district; diamond mines were also formerly worked, but it would appear that they do not now yield any profit. There are no mineral springs, with the exception of one, a hot spring in the bed of the Godavery.

The soil is mostly alluvial, and is very produc-Soll. tive, except within a short distance of the sea, where it becomes sandy and light. Of the 4,820 square miles, which the collectorate is said to contain, about 500 are under cultivation, and the greater part of the remainder, is pasture land. Rice is not grown so extensively as the soil would admit of, a sufficient, and constant supply of water not being available; this want it would seem was better attended to, in former than in latter times; though if the improvements going on at present, under the direction of the Engineer, in opening canals, and repairing and making tanks and bunds, be persevered in, the evil will be greatly lessened; in the mean time the people have to depend on other places for this indispensable article, and a large quantity of rice is annually imported from Calcutta, and from the Tenasserim coast. Independently of the employment cultivation would give to the ryots, the ship rice is often bad, and the price high, from its having to pass through the hands of merchants, who have it in their power to regulate the market.

Vegetable pro- Dry grains, are produced in abundance; tobacco, cotton, oil seeds and chay root, are also raised. The chay is sustained by the same dynes, and cloth Pr make and only the same dynes, and cloth Pr and and by the same dynes, and cloth Pr and the same regardles, may be rearded and group in the same regardles, may be rearded and for integers, past, addres, letters, enlary, and makers, past, addres, letters, enlary, and makers, past, addres, letters, enlary, and makers in a des groupes at Maralipation integers and advesting, if the number of the space and desting, if the number of the space and desting, if the number of the space and desting, if the number of the space are defined to create a demand for the space are defined to create a demand for the

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od chor role are aborning. The day's

#### MASULIPATAM.

much used by the native dyers, and cloth printers, in preparing their red colours. All the native, and many of the European vegetables, may be reared and good carrots, turnips, cabbage, peas, endive, lettuce, celery, and even potatoes, produced in the gardens at Masulipatam, are procurable; and there is no doubt but the supply in the bazaar would be regular and abundant, if the number of European residents was sufficient to create a demand for them.

The proportion which the agricultural classes bear to the whole population, is calculated to be about one thirteenth. Some of them are in easy circumstances, but others, are at all times little above want. When the seasons are favourable, all classes can procure a subsistence, but when the rains fail, distress is more or less generally felt, and this of late years, has been often the case.

Nativedwellings. The houses of persons of the better description, are built of brick or mud, of a convenient height, with good sized doors, and small windows, they are roofed with bamboos and palmira leaves, or tiled; but the huts of the poor are generally constructed in a conical form, of bamboos and palmira leaves, resting on the ground, or raised on low mud walls, with an entrance on one side, better deserving the name of a hole than a door. In these the only things to be met with, are a few cooking and water chatties; but in the dwellings of the wealthy it is not uncommon to find cots, chairs, and other European articles of furniture.

The lower parts of the collectorate are open, and comparatively free from jungle, and rocks. Topes of mango, tamarind and palmira trees are numerous, besides a great variety of other descriptions, some of which are esteemed for their medicinal virtues, as well as for the quality of the timber. One of these, the babool-acacia arabica-which grows plentifully on the banks of the Kistnah, is of importance from the quantity of gum it affords, and the employment it gives the people

in gathering it. It is in demand principally by the mootchies and cloth printers.

Wild animats. The wild animals met with, are the tiger, bear, hyena, wolf, byson, hog, jackall, deer, antelope and hare. The larger kinds, are found only in the jungles at a distance from the sea; but the smaller ones are common all over the country. Wild fowl are also very numerous.

Town & station. Masulipatam is the principal town in the collectorate, not only on account of its being the chief military station, and usually the head quarters of the division, and the chief residence of the civil servants; but also from its population, trade, central position, and the facility of communication with Madras by sea; it is also the grand depôt for military, and commissariat stores, for Secunderabad, Jaulnah and Kamptee. It lies in north latitude 16°. 9'., and east longitude 81°. 12' ;- and is 322 miles north of Madras, by the high road, but only 286 by the coast; it is 797 miles distant from Calcutta.

The cantonment stands on a low sandy ridge, about two miles from the sea. Between the beach, which is raised a little by sand banks, and the town, the ground is so low that it forms a swamp, and sometimes a lake of considerable extent in the monsoon, in about the centre of which stands the fort; that part of the swamp north-east of the fort, is only overflowed at spring tides, during the monsoon; and in the hot season is perfectly dry and hard, making the best drive about the place.

When under water, the swamp extends beyond Swamp. the limits of the native town, but its deepest part is near the south-west side of the fort, where it is usually a bed of mud in the dry season of the year, and through which, a canal runs to the sea from the Kistnah river. The lake was formerly divided into two parts by bunds, constructed about 40 or 50 years ago. From Caramede, a fine tope, a mile north-east of the fort, where there is excellent fresh water,

and days build me along the beach, and the a de line, where it joined the wood pused into the place on the oth ter, whe rising ground next the period wheth which as the sea from that pa at the It as as alled the east the old the sectors, in each of which te de est el de water, collected with some Time hads have long been which indeed the greater periods of the w Commit part of the eastern dykes, have d tie en in new free ingress at all quarte owing a light that the sea at low water mushing high spring titles that it is flooded ecusion, the tide is confined to the river, seal dame's bracking from it, in all of w for Fernely there was a free passage fo whe paring order the curseway, but t ben dised up, the advantage gained howeve tion of the mins, which, from the lowness of many and the want of any other outlie again poly and shocked or evaporated.

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stands on a low sandy ridge, about two a. Between the beach, which is mised is, and the term, the ground is so law n.p., and sometimes a lake of considentie score, in about the centre of which sands of the swamp north-east of the fort, is spring biles, during the meson ; and periods its and hard, making the best

sunder water, the swamp crients by ad nive town, but its despest part is now do I the first, where it is analy a lad neuron of the year, and timogo which un fun be Kierneb rive. The bie ru to me peak by back corner and and Jon Canada site op. 1 and and share that is station independent

#### MASULIPATAM.

one of these bunds ran along the beach, until it approached close to the fort, where it joined the glacis, and the second passed from the glacis on the other side of the fort, to the rising ground near the pettah ;- thus completely shutting out the sea from that part north of the salt river. The one was called the eastern dyke, and the other the western; in each of which was a sluice for the exit of the water, collected within them in the monsoon. These bunds have long been useless, from neglect; indeed the greater portion of the western, and the Caramede part of the eastern dykes, have disappeared, and the sea has now free ingress at all quarters; but as the swamp is higher than the sea at low water, it is only in unusually high spring tides that it is flooded; on ordinary occasions, the tide is confined to the river, and one or two small channels branching from it, in all of which it ebbs and flows. Formerly there was a free passage for the water, by arches passing under the causeway, but these have lately been closed up, the advantage gained however, by the exclusion of the sea water, is nearly counterbalanced by the retention of the rains, which, from the lowness of this part of the swamp, and the want of any other outlet, collects into stagnant pools, until absorbed or evaporated.

During the dry season, some parts of the swamp produce a short stunted grass.

Mirage. The mirage\* is a common phenomenon on the morass, and frequently the resemblance to water, both smooth and rippled, is so perfect, that it is quite undistinguishable from a real lake or sea, until close upon it, when it gradually vanishes; on looking round, the same appearance is distinctly seen on the ground just travelled over, so that if unaware of the cause, a person would be not a little puzzled, to account for having passed through so much water, without its being observed.

Behind the pettah there is another morass, but smaller The Sahz-ab, or water of the descript, as it is called by eastern writers.

than the one in front; this is crossed by a bridge of five arches, near its centre, where it is scarcely ever dry, and is so deep in the rains, as not to be fordable. These swamps are partially united at the south west end of the pettah, in heavy monsoons.

Port. The fort, as before said, stands about the middle of the swamp, opposite to the north east end of the native town, with which it communicates by a causeway. It is an oblong square, of 800 by 600 yards, with high ramparts, and a wide and deep ditch. Within the fort are, the arsenal, powder magazines, the garrison hospital, and barracks for one European and one native regiment ; also the protestant church, and a roman catholic chapel, with several large houses, many of which are going to ruin from being untenanted. The Commanding officer, garrison surgeon, fort adjutant, engineer, commissary of ordnance, and subordinate staff, still reside within the walls. There is no good water inside, and that used for drinking is brought from the pettah, or from the Caramede tope. In former days it was conveyed from wells in the pettah, by a covered channel, which ran along the causeway, and was received into a large reservoir within the ramparts, but these works have long been out of repair.

The ridge on which the pettah and cantonment Cantonment. stand, is about a mile north-west of the fort; it is four miles and a half in length, by one in breadth, being highest near the south-west extremity, but falls so much in the direction of the native town, that the greater part of it, and the cantonment, are but little raised above the level of the swamps when flooded ; and from the difficulty, or perhaps impossibility, of the water running off, many parts remain flooded for several weeks. Attempts have been made to drain the place, by means of convict labour, though never on so large a scale as was attempted in 1838, but even after channels have been made, the trouble, and attention necessary to keep them open, when cut through sand, is so great, that it can scarcely be effected. One third of the space mentioned, is occupied by the cantonment, which is

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tau anter. The public buildings are this out, the collectors eacherty, the two usine regiments, and a chapel. Ser building ornaining a theatre and bull-recompation schedulero, it is now however, print a compation as near house.

The lines and hospital of one regiment bondary heige on the north-east; those are on the edge of the solt swamp, but th the centre of the contournent, near the jud is by, but foring the ruins and for sometime at many posts near them, which cannot war is putally abartled by the light puble billings, as well as private dwelli server 49 and 50 in number, are surpricity year helps, which with numerous ad other two, naturally obstruct the in, ad profas a series sensors, an acc ting regular rates. The water is a ticity in making murite of solar, a and large population, in some wells norten. The mine town is situated of

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bounded on the south-west by the native town; on the south east by the salt swamp; on the north-east by ground as high as that of the cantonment, and usually dry; and on the north-west, partly by the fresh water morass, which does not reach the north-east extremity of the cantonment, except in the heaviest rains. The cantonment is irregularly laid out, but the principal roads run parallel with the beach, and join that from the fort, as it passes westward through the pettah; these are again crossed at two or three places by others, which divide the cantonment into several irregular squares.

Fublic buildings. The public buildings are the provincial and zillah courts, the collectors cutcherry, the jail, barracks for two native regiments, and a chapel. Several years since, a building containing a theatre and ball-room, was erected by public subscription, it is now however private property, and is occupied as a mess house.

The lines and hospital of one regiment, are close to the boundary hedge on the north-east; those of the other corps, are on the edge of the salt swamp, but the hospital stands in the centre of the cantonment, near the jail. The site of both is dry, but during the rains and for sometime afterwards, there are many pools near them, which cannot be drained, but the water is gradually absorbed by the light sandy soil. The public buildings, as well as private dwellings, amounting to between 40 and 50 in number, are surrounded by thick prickly-pear hedges, which with numerous palmira, cocoa nut and other trees, materially obstruct the free circulation of air, and produce at certain seasons, an accumulation of putrifying vegetable matter. The water is generally brackish, chiefly from containing muriate of soda, which however, is in much larger proportion, in some wells than in others.

The native town is situated at the south-west of Native town. the cantonment, and occupies the remaining two thirds of the ridge, giving little more than three miles, for a population which, by the census of 1837, amounted to 27,884; of this number 24,029 were hindoos, and 3,855 mussulmans,

being in the proportion of a little more than one to six; a higher ratio of mussulmans, than is to be found in other parts of the collectorate, from the influx of persons of that religion occasioned by trade; a considerable number of persian and mogul traders, who have long been settled here, are included in the number.

The site of the town, particularly at the south-west end, is low and subject to much inconvenience from the lodgement of water. The principal streets are wide, airy, tolerably straight, and regularly built; and some of them run nearly the entire length of the town.

There is only one large square, for which, and Robertson's Pettah, also the improved condition of part of the pettah in its vicinity, the people are indebted to Mr. Robertson, (formerly assistant to the collector), whose name it bears; and it has now become the principal market-place. Many of the houses in the town, are large and upper storied, substantially built with brick and chunam, and have tiled roofs. Even most of the dwellings of the poor are commodious and clean, the consequence probably, of the cleanliness required in the manufacture of cotton cloth, in which so many of the inhabitants are engaged. Altogether the pettah has somewhat of the air of a European town. The mogul merchants reside in the western quarter, in garden houses surrounded with high walls. Notwithstanding, however, the advantages it possesses over most native towns, there are many narrow lanes, and miserable hovels, which are completely flooded during the rains, and although small embankments are made in front of the doors at this time, to keep out the water, these houses cannot possibly be otherwise than damp and unhealthy; and they are consequently found to be the hot beds of disease, in sickly seasons.

Trades and Mamufactures. The great body of the people are employed in trades, and manufactures of various kinds,

which although not carried on to the same extent, as in former times, when Masulipatam was celebrated all over the mercantile world for its printed clothes, they are still very ADDITIONAL ADDITI

The seasons may be divided into and mill; the first commences in March, and fact werk in June ; the second bats from Jun of October, the greatest fall of rain occurri wei meson; the annual average being The find or cold season commences in terninates about the end of February; at th is penerally clear, with a cold breeze blowing est, ad the nortings are usually cold and thermometer maging from 54° at son rive, most temperature being from 65° to 76°, at months of November, Docember, and Januar ta themameter ranges from 66° to 81°; in to 99°, and in April from 60° to 92°. During notice, which are the most disagreenable three the wird is frequently from the south-west mining ad deliming character. In May there are and sometimes even as a an or had winds using in pretty regularity 10th of the moch the the emergine hear tarea locar, vice artis period assaily st thrase. These visible prosend, combined ted sources the end of the month, where tions logis to according in the worth-मार्थिय व्यक्ति महार्थन्त्र, मंदी केलावेवर सीवम्ब

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press built of the people are explained in all marketures of mice link e curied as to the are crist, and Mussipains was calibrated all our the a in picked circles, they are all res

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considerable, and of late are said to be improving. The manufacture of cotton alone, including weaving, printing, bleaching, washing and dressing of the various kinds of cloth, such as table linen, towels, ginghams, tartans, &c., employs so large a proportion of the inhabitants, of all ages, that it appears to have influenced the character and habits of the people, for no where is a better dressed, or more respectable looking native community to be met with. Indeed frugality among the better classes, most of whom have made their money in trade, seems to be carried to a fault, for according to report, they restrict their charity to the relief of brahmins alone. The poor and indigent, as in all mercantile towns, are however numerous.

The seasons may be divided into the hot, rainy Climate. and cold; the first commences in March, and ends about the first week in June ; the second lasts from June, until the end of October, the greatest fall of rain occurring in the southwest monsoon; the annual average being about 35 inches. The third or cold season commences in November, and terminates about the end of February; at this period the sky is generally clear, with a cold breeze blowing from the northeast, and the mornings are usually cold and bracing. The thermometer ranging from 54° at sun rise, to 70°; and the mean temperature being from 65° to 76°, at noon, during the months of November, December, and January. In February the thermometer ranges from 66° to 84°; in March from 70° to 90°, and in April from 80° to 92°. During the two latter months, which are the most disagreeable throughout the year, the wind is frequently from the south-west, and is of a very relaxing and debilitating character. In May the temperature rises to 96° at noon, and sometimes even as high as 104°; the hot or land winds setting in pretty regularly, about the 8th or 10th of the month, but the excessive heat, is tempered by the sea breeze, which at this period usually sets in early in the afternoon. These winds in general, continue to blow steadily until towards the end of the month, when dense masses of clouds begin to accumulate in the south-west, and in the evenings north-westers, with thunder showers are frequent;

but the hot winds seldom terminate before the first week in June, when in regular seasons, the rains commence, lowering the temperature to about 86°.

The climate, from being hot and moist,—although there is reason to believe the mean temperature in the shade, is less by two or three degrees than that of Madras,—feels warmer, and the reflected heat from the sand, and saline crust on the swamp, in dry weather, increases the temperature considerably. The alterations of temperature, are however, not so great as at Hyderabad, and other parts of the Deccan, where a diurnal range of 30 to 40 degrees is not unusual; whilst at this station the highest range observed has been  $24^\circ$ and upon an average during the months of November, December, and January, the range seldom exceeds 10 or 12 degrees, whilst during the rest of the year, the variation between the day and the night, is much less.

Insects. Throughout the whole of the wet season, insects of different kinds are numerous, and very troublesome. After the first showers in June, the large black ant makes its appearance, some houses being overrun with them, but they are not destructive; the bite however is painful though no bad consequences follow from it. The white ants are numerous and destructive to clothes, books and furniture of every description, and it requires unremitting attention to keep them down; they also speedily destroy the beams and rafters of houses, and if allowed to go on undisturbed, will soon render a house dangerous to live in ; the inside of the beams being sometimes completely destroyed, whilst the outside appears to be quite sound. At a later period of the monsoon, winged insects appear, and soon become a nuisance. In calm evenings, the air appears to be quite alive with them, and when the houses are lighted up, they are attracted in such numbers, as to render all attempts at reading, or other employment near the light, quite impracticable. Although not numerous, there are several kinds of snakes Snakes. to be found ; some few of which are venomous, but they are for the most part harmless. Lizards, centipedes and

RISTITUTAL and empires are also forced, the stirts and he sense had enter is a thick . an and enter had over the weather The matter distants states Marian for silin terminates in t the star had, a large properties, of the ca the maines or contaned from, are fatal. on server and deverious of various kin in in the land, they appear to playe t Lass a absingur, which with the use det epsized for weeks, should the patient Town compliants are frequent, and, as according to the autive doctors, in the he the same at in, they suppose that they dividing too mark water. In these affects nevery, opion and spices ;-chiltra, they man-Benken, and dropsy, they of dense, both in their moure, and in th and the treatment is nearly the same in apen them as technis, but not very unitarit prescribe rust, and other preentitatives of mercury, and subphur, the fourth search sears to be cotion or for time through a mass of and given to the extent of three or four ture daly; ha dia, they acknowledge is a on the storage. Treesk-factories was for report in these functions, but hately it has to tion, in margance as it is supposed. popeig à Bermin is des a com and with he gives, and decontinues ation not with, and is said to be a tections he de mine sonn beliere chat is in als aber directers, and as foret, dec., to which Neire water safer and after per

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aghout the whole of the wet season, meets is are numerous, and very troublecute. owers in June, the large black ust makes ome homes being overna with then, destructive ; the bite however is painful sequences follow from it. The wife and estructive to elothes, basks and furniture s, and it requires unterniting atender to her sho speedly destroy the barrs and and if allowed to go on undeturied, vil or dangentes to live in ; the inside of the cines completely destroyed, while he he pain sound. As a laser provided he ueros sportar, and som become a mismo, the in appears to be quite aire rich then, as including in they at month a so rember all attempts at realizes or other the field, pairs improvided a Atlanti ernes dare are served light d'ada a for a which are reasons, for her part handles Lines might a

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small scorpions are also found, the sting of the latter being painful, but never dangerous; a thick paste made of ipecacuan and water, laid over the wound, speedily effects a cure.

The native doctors state, that intermittent Native treatfever seldom terminates in death, but, that on

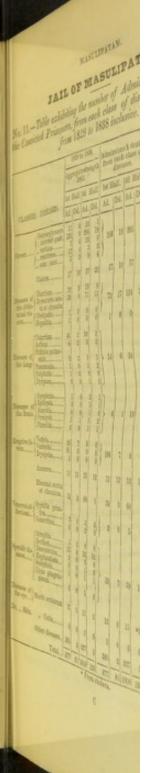
the other hand, a large proportion of the cases which assume the remittent or continued form, are fatal. In the first, they give mercury and decoctions of various kinds, with full diet; but in the latter, they appear to place their chief dependance on abstinence, which with the use decoctions, is strictly enjoined for weeks, should the patient survive to long. Bowel complaints are frequent, and, as they commence, according to the native doctors, in the hot weather, before the rains set in, they suppose that they are produced by drinking too much water. In these affections they prescribe mercury, opium and spices ;- cholera, they treat in a similar manner .- Beriberi, and dropsy, they consider as similar diseases, both in their nature, and in the exciting causes; and the treatment is nearly the same in both ; they look upon them as tedious, but not very fatal, and in the treatment prescribe rust, and other preparations of iron, combinations of mercury, and sulphur, with spices; but their favourite remedy seems to be cow's urine, passed three or four times through a mass of powdered walnuts; and given to the exent of three or four ounces several times daily ; but this, they acknowledge is not always retained on the stomach. Treeak-farook was formerly in high repute in these disorders, but lately it has not been so efficacious, in consequence as it is supposed, of adulteration, in preparing it. Rheumatism is also a common disorder, and treated with hot spices, and decoctions. Consumption is often met with, and is said to be a tedious and fatal disease ; but the native doctors believe that it is always the result of other disorders, such as fever, &c., to which the patient had previously been subject.

Native women suffer much after parturition, especially

from fever, which has of late proved very fatal. Cases of difficult labour are common, but native doctors never engage in the practice of midwifery; and as few of the midwives have the ability, or boldness to make an attempt at manual relief, European aid is often called for, in such cases,

Jail. The prison is situated in the centre of the cantonment on a well raised piece of ground. It was erected in 1819, and is built with brick and chunam. It is in the form of a cross; each wing being 80 feet long, and containing two cells 15 feet in breadth ; that on the south-east side has an additional room which is used as a dispensary. The walls on the outside are 10 feet high, but the floors which are of brick and chunam, having been lately raised 12 inches, they are consequently lower on the inside. Each cell has one door and four windows, without any counter opening in the opposite wall, but there are ventilators in the roof. The jail is surrounded by a wall 14 feet high, which running at right angles to the wings, forms with them, four courts, appropriated for the use of the prisoners. In each there is a well, and a small detached building, originally intended as a cookroom and privy, but never employed for the latter purpose, necessaries having been built behind the blank walls which communicate with the cells; they are however only used during the night.

Hospital. The new hospital built outside the walls, was first occupied in 1842; it is a very substantial building, with a small compound adjoining, and communicates with the jail by a door way. It is raised about 8 feet from the ground, and contains apartments of the following dimensions. One ward 30 by 15 feet and 12 feet high. A dispensary 11 by 9 feet, a dead-room 10 by 9 feet, and two small rooms 10 by 7 feet. It is surrounded by a verandah 18 by 9 feet; the height of the outer wall is 10 feet.



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MASULIPATAM.

#### JAIL OF MASULIPATAM.

No. 11.— Table exhibiting the number of Admissions and Deaths of the Convicted Prisoners, from each class of diseases, for ten years, from 1829 to 1838 inclusive.

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	Cholera	17	10	57	31		17	10	57	31	1.71	4	1 .	-915		-105
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I	Discases of Dysenteria acu-	32 39	2	53		1	12						1.0			1.2
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	Catarrhus	46	2	26	2	1							1			
J.	Asthma	4	- 4	3	- 2						100					
ľ	the Lungs Pneumonia	2	2	1	1	5	31	6	34	7	88	15	3	-178	-14	-778
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11	the eve Morbi oculorum	12	0	35,	2		12	0	15	+2	27	- 2	0	618	7 .	407
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	Other diseases	300	2	227	5	1	305	2	227	5	532	. 7	13	771	1	315
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	Total	811	81	018	1221	1	877	- 83 1	10181	122	14000	203	42	-0351	10	712

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#### JAIL OF MASULIPATAM.

No. 12.—Table exhibiting the number of Admissions and Deaths of the Prisoners under trial, from each class of disease for ten years, from 1829 to 1838 inclusive.

		-	-	1838. streng 5.	gth	Den	Dun	from	8 234 8 644 8 644	h	denissions ach class.	t deaths	centage of to strength.		Per centage of deaths to sick	saled.
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Ferezs	Febris int. quot.	201	001	611	201	1	-	1		3	11	4	1 1	600	36	353
	Cholera	3	2	6	2		3	2	6	2	9	4	1 1	313	-44	-444
Bowel com-	Diarrhœa Dysentoria acu- ts et chronica		4	4	2	1	17	7	17	8	84	15	4 -	519	44	-117
die and	Catarhus		0	0	0		2	0	0	0	-	0	0	291	0	-000
Eruptive fe- {	Variola Varicella	42 55	11 0	8	0	1	n	11	2	0	99	11	14 -	452	11	-111
	Anasarca	0	4	3	1		6	4	3	1	9	5	1	313	55	-555
St. Harris	Eheumat acutus		1	1	0		4	1	1	0		1	0	789	20	-000
	Syphilis primi		0	3			0	0	3	0		0	0	-437	0	-000
Specific dis-	Beriberi Dracunzulus Scrophula			0		}	4	0	9		1	3 3	1	-897	23	-076
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	Total.	, 14	8 27	62	r		48	27	61	1 P	1 21	0 44	30	-656	210	-955

Remarks on the preceding tables.

The average annual strength of the convicted prisoners has been 386, and the annual admis-

sions have amounted to 189, or 49.055 per cent on the strength during the ten years; the mortality has averaged 20 annually or 5.254 per cent on the strength; the total admissions having amounted to 1895, with 203 deaths, from an aggregate strength of 3863.

The prisoners waiting for trial have been comparatively few, the aggregate strength during the ten years amounting to 685; the admissions into hospital have been 210, or 30.656 per cent, and the deaths 44, or 6.423 per cent on the strength.

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The average musual strength of the resolu- primeters has been 386, and the strand strength to 189, or 49055 per cent on the story to
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Table No. 13 Jail of Masulipatam.

MASULIPATAM.

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In table No. 13 are exhibited the annual admissions and deaths from six of the principal diseases, viz. fever, cholera, diarrhaa, dysentery, anasarca and beriberi ; the total sick treated and mortality are also given, for the purpose of shewing the great proportion of the whole mortality occasioned by these diseases ; amounting to 194, out of 274, or fully 4-5ths.

The following extracts from the reports of the medical officer in charge, are interesting and bear upon several points elicited in the preceding tables.

" The celerity with which disease runs its course amongst the prisoners, especially when advanced in years, is remarkable, one of the fatal cases of dropsy was a striking instance of this kind. The patient had been in jail only a few months and came in a firm, healthy, old man; who, if judged from his corpulency, had been in easy circumstances, he soon began to fall off ; but, as he felt no pain, he made no complaint. At last dropsy appeared, and when he applied for relief, his appearance was most miserable ; instead of the fat old man, he was now a gaunt figure with his skin hanging loose about him; he died in a fortnight."

" The causes are doubtless confinement and restriction to a kind of diet to which they are unaccustomed. The prisoners never complained of quantity, but the murmurs regarding the quality were so frequent, that enquiry was lately instituted, and the rice, stored by the contractor for the use of the prisoners, was found so bad and so inferior to the samples which he had lodged in the court, that the officer in charge of the jail, ordered it to be thrown out. But independently of the disadvantages to which they are subject from their being obliged to take all the articles of diet from one person, the want of those stimulating and nourishing additions to their food, of which the natives are so fond, will in some degree account for that deficiency in constitutional vigour, necessary not only to resist the invasion of disease, but which also retards its progress." Dated 30th June, 1832.

VISTIPATAN. The motions amongst the printers at a is not 1812, has been anjeeredratedly 5. common prevalence of Greater, and the m ment population was reduced by the late a through the dist and civilian allowed to the P hiers provins spinst three evils, a great umoid stored a this period, was made tern, where levels and strength were, in m ternelowi periore to confirement that no b tim the tool and electricity, which this secures the one and consists of the hospital. In the half per, dalers, smill pex and chickenie, und although the latter disease was in err as les that 15 cases of the other two terr during the second half year, beriberi, cholera m, druntery and forer were the prevailing of them were more or less fatal; 31 having to the Cambers."

"The debilitated state of the nick prist rendered stimulants and coordials a useful without which the properties of recoveries and indeel. In berberi they were espec Dopp wayny feal, and stimulants only al nizi. The used and most convenient form puch, sale ef stack, and given three or m

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subtless confinement and restriction to a they are unaccustomed. The prisons quantity, but the numeri reporting frequent, that requiry was lately inclucored by the contractor for the use of and so had and so inferior to the amples I in the court, that the officer in charge to be there out. But independently , to which they are subject from their all the mining of life from on prich unduing and availables address a the mines are so first, roll is not at defining in constitutional sport, as with the intrasion of disease, he with the Daled Stele June, 1852

#### MASULIPATAM.

" The mortality amongst the prisoners at this station during the year 1832, has been unprecedentedly great ; owing to the extensive prevalence of disease, and the misery to which the native population was reduced by the late scarcity. For, although the diet and clothing allowed to the prisoners are a sufficient protection against these evils, a great proportion of the numerical strength at this period, was made up of poor creatures, whose health and strength were, in many instances, so far reduced previous to confinement, that no benefit was derived from the food and clothing, which this secured to them, or from the care and comforts of the hospital. In the course of the first half year, cholera, small pox and chicken-pox were epidemic, and although the latter disease was in every instance mild, no less than 25 cases of the other two terminated in death, during the second half year, beriberi, cholera, diarrhœa, dropsy, dysentery and fever were the prevailing diseases, and all of them were more or less fatal; 31 having been carried off by these disorders."

" The debilitated state of the sick prisoners at this time rendered stimulants and cordials a useful class of remedies, without which the proportion of recoveries would have been small indeed. In beriberi they were especially serviceable, Dropsy was very fatal, and stimulants only afforded temporary relief. The usual and most convenient form of stimulant was punch, made of arrack, and given three or more times daily."

" In comparing the proportion of fatal cases, with the numerical strength, they will be found to be nearly the same throughout the whole year; but the proportion of deaths to admissions, is much greater in the second than the first half." Dated 31st December 1833.

" The number admitted from anasarca is 33, and from beriberi 10. Under the former head are included all dropsical cases, though the effused fluid was not confined to the cellular membrane, if neither numbness, nor tottering debility of the legs were observable on admission ; and all those

cases in which the latter symptoms existed although dropsy was present at the 'same time were returned as beriberi-Among the beriberi cases there were only two or three attended with ædema, and in one of them, effusion had already taken place in the chest and the patient died almost immediately. In two others, anasarca afterwards appeared, and one of them terminated in hydrothorax. The treatment, when there was only numbness, and loss of muscular power, was stimulant. Nux vomica was benefical, but neither in this disorder nor in paralysis does this remedy complete the cure. It advances the improvement only to a certain extent, and when the dose amounts to 60 or 70 grains of the nut, it produces so much disturbance of the functions of the stomach and bowels that it must be decreased or omitted; and in either case the patient gradually relapses."

" In the treatment of anasarca greater confidence can be placed in the use of treak-farook, than in any other remedy. The cures effected by it, are not only more speedy, but more permanent, and unattended with any unpleasant consequences. It is remarkable that while 43 cases of these two disorders occurred among the prisoners, only six or seven appeared in each of the two native corps, each being nearly double the numerical strength, and stationed on the same ground."

" The rapidity with which thoracic effusion occurs among the prisoners, from the appearance of the first decided symptoms, till its fatal termination, is very great, and if not checked, death follows generally in a few hours."

" Bleeding from the arm in a large stream until the patient faints or becomes faintish, with blisters to the chest and spine afford the only hope of success, if in time bleeding always gives relief; but there is not much confidence to be placed in it even when relief is obtained; for in too many instances, the difficulty of breathing and oppression in the chest occur; and when bleeding is required a second time there

## KUTUPATAK

what into hope of recovery: in cast instance rule plan the second r. s. If beech fer der blicken mit internal remedies to tak num to bege for manority the medicines sta er ine d'épite est spille, each 20 éra d'amples minut, every two or three he to compare of the spectrum, and after way the pains of this medicine are not couring eferen-in some instances three is but listle po un per surestil. If bleeding fulls, pa he of mach use." Deled Slat December 19

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#### MASULIPATAM.

is but little hope of recovery; in one instance only has recovery taken place after a second v. s. If however time is gained for the blisters and internal remedies to take effect, there is reason to hope for recovery; the medicines generally employed are tinct. of digitalis and squills, each 20 drops, in one ounce of camphor mixture, every two or three hours according to the emergency of the symptoms, and afterwards treak-farook; the qualities of this medicine are not confined to its cathartic effects-in some instances there is but little purging, though it may prove successful. If bleeding fails, no medicines will be of much use." Dated 31st December 1837.

" The number of deaths to the admissions has been high, especially when compared with the rate of mortality in military hospitals, but in the latter there are few if any deaths from age and infirmity, or diseases consequent thereon. On this account the rate of mortality among prisoners is always higher than amongst sepoys. To this cause more than the prevalence of disease may be imputed the present high rate of mortality, as more than half of those who died were advanced in years." Dated 31st December 1838.

With regard to the diseases amongst the native troops at this station the following table has been framed, for the purpose of exhibiting the most prevalent, and most fatal diseases, and the difference in these respects amongst the sepoys and prisoners.

#### 24

#### NORTHERN DIVISION

No. 14.— Table exhibiting th	e number of admissions and	deaths amongs
the Native Troops stationed	at Masulipatam from 1830	to 1840, exclus
	sive of 1882.	

(a, premittens, 25       0       11       32         (a, cont = cont, 7       5       3       5       4       65       5       5       5       5       5       5       5       5       5       5       6       5       5       5       5       5       5       5       5       5       5       5       5       6       7       1       3       1       3       1       3       1       3       1       3       1       3       1       3       3       1       1       3       3       1       3       3       1       3 <t< th=""><th>SI Jastin Lauran Provident</th><th></th><th></th><th></th><th></th><th>100</th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th></t<>	SI Jastin Lauran Provident					100		-						
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Venereal af- fections <sup>170</sup> <sup>103</sup> <sup>01</sup> <sup>103</sup> <sup>01</sup> <sup>103</sup> <sup>01</sup> <sup>103</sup> <sup>01</sup> <sup>103</sup> <sup>105</sup>												less to 1		
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#### MASULIPATAM.

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Effects of the climate of Masulipatam on European Troops.

The fort of Masulipatam having been unoccupied by European troops since 1833, and an unusual mortality having occurred in H. M. 62nd Regiment in that year, a special committee of medical officers was appointed to enquire into the causes thereof, and the substance of their report is given in the following remarks. Dated 14th October 1833.

"The 62d marched from Bangalore, on route to Masulipatam, on the 18th of February 1833, and continued healthy until after arriving at Chittoor, on the 1st March. The following day, a camp colour man who preceded the corps to the village of Keilgherry, was attacked with cholera, which disease continued to carry off numbers of victims daily, until the corps arrived at Woojelly near the coast, on the 13th March."

"From Chittoor to that place, a distance of about ninety miles, the disease manifested itself with the greatest severity two officers, one hundred and forty six men, thirty women and eighteen children, having been attacked; of which number, one officer, thirty-two men, six women and twelve children died."

"The topographical features of the whole line of road, from Keilgherry to Woojelly, seem peculiarly favourable to the production of malaria, in as much as it runs between a high range of mountains, which are in many parts thickly clothed with jungle, encroaching so close on the road, that it has quite the appearance of a mountain pass. The villages on this line, are said to have been free from disease, when the regiment passed, but to have suffered from cholera, a short time previously.

"On the 13th April, the regiment arrived at Masulipatam, and was encamped on a part of the swamp, about a mile to the north-west of the fort, till the morning of the 16th of April, when the barracks were occupied."

"The fort is an irregular oblong square, of an average length of about one thousand yards, by seven hundred in breadth, the elevation above high water mark, being five feet. The height of the ramparts from the ground, on the sea face, is ten feet at the curtains, and fifteen at the bastions, the general width of the ditch, one hundred feet, and its average depth at high water, from four to five feet, but as it contains much mud and filth, if cleared out, it would be nine feet deep."

" The fort is encompassed on the north, east and west sides by the swamp; and on the south, by an inlet of the sea, the distance from which to the main gate, in a direct line is about one mile and a half. The general depth of the river opposite the fort, is from eight to nine feet, and the width at high water, about three hundred yards, but above the fort at spring tides, it expands into a swamp of several miles in extent, the soil being a slimy mud. The swamp-which is from a mile and a half, to two miles in breadth-consists of sand and mud, the sand being in greatest proportion on the western side. It is always more or less overflowed by the tide, but on some parts, there is considerable vegetation, and if the salt water was allowed to drain off, it is supposed that it would become covered with grass, to the fort gates."

" The area of the fort, contains one hundred and forty acres, about sixty nine of which is open ground, exclusive of the streets. The soil consists of clay and sand, the latter predominating, so that water soon runs off."

" The depth of wells is from about ten to twelve feet; the water is all brackish, being found to contain muriate of soda, with a little carbonate and sulphate of soda, amounting to from twenty to twenty-four grains in the pint."

" The native inhabitants it is supposed, amount to about seven thousand."

KURLIPATAN. All the drains are intended to empty the and her sure are at present quite chald The hamiliand barracks, both for offi main of time initings, making merits an stand receipt with reference to the with ant preside a seller sile. • The risks are substantially built of briefs ten nied me het right inches from t prod with cause red said store. The reads, tion of one half of the officers barracks, are torn

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#### MASULIPATAM.

" All the drains are intended to empty themselves into the ditch, but some are at present quite choked up."

"The hospital and barracks, both for officers and soldiers, consist of three buildings, running north and south, and are situated centrally with reference to the width of the fort, but more towards its southern side."

" The whole are substantially built of brick and chunam, the floors raised one foot eight inches from the ground, and paved with coarse red sand stone. The roofs, with the exception of one half of the officers barracks, are terraced ; the dimensions of the apartments, and their construction both in the hospital and barracks are similar, with this difference, that in the hospital range, there are but eight rooms-a space at each end, being left as a passage to the privies-while in each barrack range, there are ten rooms. The width outside is forty six feet, besides a verandah to each range twelve feet broad; the length of the barrack range, is one hundred and ninety five feet, its height thirteen and a half, and it is divided by cross walls, having arched doors in the centre; each room has four windows, except the end rooms, which have seven, of six feet four inches high, by four feet six inches in width, with iron bars to the street, and shutters folding inwards."

"The rooms in the hospital are capable of containing twelve patients each, those of the barrack, are intended for twenty men, or two hundred in each range; and making allowance for the sick in hospital, men on duty, and the married who reside outside, it is considered sufficient for the accommodation of 500 men."

"The hospital is partly shut in by the offices on the west side, having the main entry in the centre, and a wall of one hundred and ninety five feet in length, by ten high, on the east, meeting two others at right angles, on the north and south, by which the whole is enclosed."

" The hospital and eastern range of barracks, are separated

28

by a street of sixty feet wide, a street of similar width, running between the barracks and the officers range."

" The barracks are connected by a wall of one hundred and thirty feet long, by ten feet high, the whole forming an area of two thousand six hundred yards, on the south side of which, stand the kitchens and privies."

" The unusual and extreme heat of Masulipatam, in the year 1833, appears to have been occassioned by the wind blowing over the extensive tracts of dry and heated sand, situated to the north-west, and west of the fort."

" Masulipatam however has always the advantage of the sea breeze, which is denied to more inland situations."

" The annual fall of rain, as formerly mentioned, is about \$5 inches."

" Mirage, is frequently seen here, and is liable to be mistaken for moist exhalations ; it depends on the refrangibility of the rays of light, passing through strata of air of different densities, which bends them from the perpendicular, the heated air at the surface rising upwards, and mingling with the cooler atmosphere above."

" The general aspect of the arrondissement, would lead to the impression of its being a fertile source of malaria, but such is not the case, notwithstanding that sources of offensive effluvia are to be found, more particularly in the ditch of the fort, in parts where the water is shallow."

" The committee however, although disposed to question the existence of malaria, to the extent which the appearance of the more immediate vicinity of the fort might authorize, considered, that the intermittent fever which prevails at the drying up of the rains, originates in this source, and that dysentery, the prevalent discase of the wet season at Masulipatam, also derives its origin from malaria, modified or influenced, by the effect of heat and moisture."

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the model appendixed of particular overtime and community in June, and that the in the terraincing of the minimum, the ie rite, wolde samp i fear which time processes, is the most brainly period ; the nd a de larr anen being still to be they which is not infrequent during the souly and by instanted represent to

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#### MASULIPATAM.

" It would appear that dysentery occurs chiefly in the rainy season, commencing in June, and that the feverish season, is from the termination of the monsoon, until the drying up of the rains, or of the swamp ; from which time until their recommencement, is the most healthy period ; the fevers which prevail at the latter season being said to be cphemeral .- Apoplexy which is not infrequent during the hot wheather, is generally caused by unguarded exposure to the sun."

" Hepatitis is also a prevalent disease, during the hot weather, but cases are met with at all times."

" Rheumatism is most frequent during the rains, both Europeans and natives suffer alike from it; the latter also suffer from beriberi, and from dropsy, during the same season, though the climate is said, on the whole to be very favourable to them."

" The state of health of a company of European artillery, and of the Madras European regiment, stationed at Masulipatam, the former in the pettah, from 1st March 1831, to 31st August 1833, and the latter in the fort, from 1st July 1826, to 30th June 1832, is exhibited in the following table."

COMPANY OF ARTILLERY.

	months.		
In the Part of the		sease	
105	Apoplexy,	 1	
to do per cent. 217	Fever	 9	
imissions 41	Hepatitis		
rength do 94	Rheumatism	 6.	
	Dysentery		
	Diarrhea	 12.	
	Cholera	 2.	
	Other diseases	 41.	2

#### EUROPEAN REGIMENT.

Average diseases and deaths for 12

Average strength... do admissions do deaths to a

THE MERICA		
	Diseases,	Deaths.
Fever	.1384	
Hepatitis		
Rheumatism		
Dysentery		
Diarrhora		
Cholem	184	5
Apoplexy		
Dropsy	34	
Chile allerence		***** 6

Average diseases and deaths for 12

Deaths.

..... 2

" The sickly condition in which the 62d regiment arrived at Masulipatam, has been already noticed, and an idea of the excessive degree of heat of the season, may best be conveyed in the words of those who experienced it."

" An old resident stated, that he did not recollect so trying a season for the last thirty years, and said the thermometer for about twenty days in succession, stood from 10 to 14 degrees higher than usual."

" Captain A-----, who had been four years at Masulipatam, stated that the heat was greater than, he ever experienced either here or elsewhere, and said that the Europeans, eight in number, attached to his department, all married men with families, suffered more than usual-one woman and several children having died-the woman from apoplexy."

" Captain S ---- observed, that the hot winds were for a short time more intolerable, than in any other year, according to his experience, and lasted longer."

" Dr. T---- considered the heat to have been infinitely greater this season, than in any other of his residence, and stated, that the hot winds from the 20th May-the date of their commencement-until the 7th June, when a heavy shower fell, were almost intolerable ; that several of the European residents were affected with giddiness, and that measures were necessary to avert the consequences of such dangerous threatenings. Two prisoners in jail died of apoplexy, during that time."

" But whether the heat at Masulipatam was greater than at other stations or not, seems unimportant; the 62nd arrived after an arduous and disastrous march, whereby a large proportion of the men were much enfeebled, the physical and moral powers of all, were overstrained, and many were labouring under despondency from the loss of wives, children or comardes; which circumstances predisposed them to suffer from the effects of climate."

XUSTIMATAK. The teal side in heapital at the conclus the Marth-manual to fifty eight, of really time new cases of chalters ; this dis arread to the entroy of from entry to fire And the state April, where is created ; appen a me and to the first, and two on an anne al de 19à of the same tion, ill the first first cases were admitted a the first and state May. On the slith and nen namend, in nen bibening under dyn ad they was one admitted from the barrat

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CULTER EXPERIENCE tion is which the field regiment second bern altendy autored, and an idea of the and of the second party loss be conserved in

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who had been four years at Manipolan, was greater than he ever experienced ere, and said that the Europeans, eight in his department, all married nen vith w this coul-one want of second the woman from spoplery."

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### MASULIPATAM.

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" The total sick in hospital at the conclusion of last quarter, 31st March-amounted to fifty eight, of which number twenty nine were cases of cholera ; this disease continued to prevail, to the extent of from one, to five or six admissions daily, till the 26th April, when it ceased ; and with the exception of one case on the 3rd, and two on the 10th May, no more occurred till the 19th of the same month, from that date, till the 22nd, ten cases were admitted ; and five between the 27th and 29th May. On the 20th and 21st June, two cases occurred, in men labouring under dysentery in hospital, and there was one admitted from the barracks."

" Dysentery commenced on the 25th April, from which time, one, two, or three have been admitted daily; of continued fevers, from one to six were also admitted daily, since the 17th April ; a great increase however took place, on the 21st May, thirty having been admitted on that day, on which the hot winds commenced ; thirty seven on the 22nd, eighteen on the 23rd, and ten on the 24th."

" Apoplexy made its appearance on the 10th April, and eight cases occurred in three days : two were admitted on the 25th April ; one on the 2nd May ; two on the 9th ; from the 20th to 24th May there were eleven cases; in all 24 admissions, and 8 deaths."

" From 16th April till October, the admissions and deaths in the regiment, were as per margin."

" The result of an inquiry, instituted for the purpose of ascertaining how far the constitution of the regiment, with reference to the number of elderly or infirm men, has added to the sickness, shewed this to have exerted but a very inconsiderable effect."

" Inquiry was also particularly directed to the supplies issued to the troops, which were found to be of the best quality ; and the water for their use, brought from Goodoore distant about

six miles, is pure, and is always tasted before it is admitted into the barracks, to prevent imposition."

" The accommodation, as already observed, is ample, the barracks are intended for five hundred men, and were formerly occupied by that number of the European regiment, and more lately by H. M. 45th regiment, while the strength of the 62nd, amounted to but four hundred and eighty two, of which, besides the sick in hospital, there were sixty six married men who resided without the walls, and seventy three were employed daily, on garrison and regimental duty."

" After much deliberate consideration therefore, the great sickness which prevailed subsequent to the arrival of the regiment at Masulipatam, was chiefly attributed, to the trying and disastrous circumstances of the previous march, from which all, more or less suffered, together with the subsequent very sultry season; but from the well known prevalence of dysentery, from May or June, till October, it is believed, that had the regiment, not acclimated as it was, arrived under more favorable circumstances, it would not have escaped sickness; an opinion which derives confirmation, from the circumstance, that in seventeen men who landed from Madras, there were no fewer than twenty admissions from acute diseases, of whom four died; viz dysentery 2, diarrhea 1, dropsy 1."

" The committee recommended, as the impurity of the water of the ditch was believed to contaminate the atmosphere, that the tide might be admitted, to flow into it daily, and the sluices to be regularly opened ; but as the clearing out of the ditch, could not fail to be a source of discomfort, and might be prejudicial to health, they advised that the troops should be moved out during the operation; the estimated expense of which work, was forty thousand rupces."

" That the drains, several of which are at present choked up, be rendered efficient, and that cess-pools be constructed."

the de litches and Frities, in the bat The view precision the sections he from in this half lots filly, and their reputs to protocol . The consider fiel and concert in opinion sen dare, his die bright of the ramparts i via tacimatrian d' de in willin the fac with to admit, that is most parts the elevation the; the fact or many open spaces, and at ride; in the set face, the want of a free air we considerably felt; and the hospital and being of a metangulie form, are necessarily ele in and park

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#### MASULIPATAM.

removed."

" That the kitchen and privies, in the barrack square, be

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" That when practicable, the natives be transferred from the fort, their habits being filthy, and their huts serving as receptacles for prostitutes."

"The committee did not concur in opinion with the Engineer officer, that the height of the ramparts did not interfere with the circulation of the air within the fort, for although ready to admit, that in most parts the elevation is inconsiderable; that there are many open spaces, and that the streets are wide; on the sea face, the want of a free circulation of air was considerably felt; and the hospital and barracks, also being of a rectangular form, are necessarily close and confined in some parts."

"The exterior of the fort, more particularly the west side, is a deposit for all kinds of filth, brought from the barracks, hospital and streets, which is thrown out almost under the walls; and the whole of that line is rendered most offensive, from its also being *resorted* to by the native population."

"Considering the prevalence and severity, of hepatic and dysenteric diseases at Masulipatam, during the hot and wet months, the committee suggested, that when practicable, the relief of corps should take place in the cold season, or towards the end of the year, in order that the men might in some measure, become acclimated before the more sickly months came round."

The following table exhibits the comparative healthiness of the station, from 1813 to 1833; and some observations by the Medical Board, on submitting it to Government, are annexed.

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Namber of months at the station. Dysentery. Brever Brever Total admissons. Total admissons.		Rest at a semiclosum         20         107         245         27         548         587           1         1         2         1         1         46         182         257         603           1         1         2         1         1         46         182         27         563         587           1         2         1         1         46         182         27         537         603           1         2         1         46         182         27         537         603           1         2         1         2         1         2         361         367         603           1         2         3         1         2         361         182         27         537         603           1         2         3         1         2         391         193         194         364           1         2         3         1         2         391         194         364           1         1         2         3         1         2         364         364           1         1         2         3         3	12         12         13         118         73         104           10         10         10         10         10         10         10           11         11         11         11         11         10         10           11         11         11         11         10         10         11           11         11         17         10         73         10         11           11         10         73         11         30         666           10         73         113         30         615         666
CORPS.	*H. M.'s Soth Regiment.	Madras Earopean Regt do. do. 24 European Regiment No European Regiment (o. )	do. do. do. falo.f

The Europeans belonging to the garrison, including the detachment of attillery, are not introduced into this statement, the numerous sick occasionally received into the garrison hospital from other stations, or from regiments marching, greatly increasing the apparent proportion of deaths, to numerical strength.
 The regiment had returned from Ava where it had suffered severely from sickness during the war, and on the junction of recruits in March 1827, the whole corps was composed either of men of broken down constitutions, or of recruits, ever the exist of disease. Of the 61 deaths during the year, 61 occurred in the last 6 months.
 With the exception of cholern, of which 20 died, the regiment was free from any severe disease.

2. With the exception of choiers, of which 20 died, the regiment was irect from any sector disense.
7 died of cholers.
6 Pew casualties occurred amongst the European troops at Masulipatam, during the year preceding the arrival of H. M.'s 62d regiment at that station. There were only two deaths in the hospital of the left wing Madras European regiment, during the first six months; in the remainder of the year, the wing was detabled on foreign service, and after its return, proceeded in a few weeks, to Seconderabad. H. M.'s 40th regiment was but a short time at the station, and the numerous deaths which occurred, were for the most part from cholera, when the regiment was marching.

FUSTIFISTIN. - De more small reportion of drafts mente d'allière European regionents servi medicary for 7 perch from 1 155, was \$150 per cost; and the average and s don'ts to remain a straight, of the Europ eximal a Maniputan, Son 1813, to 1852

• The new of morality having been somewi 1100 700 0001 templat de rot of the presidency, for converses to conclude, that the station ca sied is offen dremsmers, as only the maps which have led to the extraordinan H. M. vill organized, from the period of its b a Manipura, it is not secessiry to enter stight hours been reported on at length, camine, appeinted far its investigation. Board have only to observe, that the period d scines prouled, was more unhealthy than u the protes part of the presidency, that the u choice, from which the 62d suffered on the r ariting at Manipatan, predisposed the men that the prost drought, and intense heat, conserv un il fie cire, were also productive sources es fener emaine hare been known to be fol times at the faties."

" is a general report on the health of the E ani 754 Mark 1869, the Madical Board Manipute, though considered an unbealth is hel main, the averages of mortality = Fast & Gauge; force however is the p a Maniputan bough as the one from w also have reasoned. First is the most faital ala alia la langa insp. The non nel carolite, à light in 1908, that what came the Medical Board are at a los the de prove designs by which the

#### MASULIPATAM.

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"The average annual proportion of deaths, to numerical strength, of all the European regiments serving under this presidency, for 7 years, from January 1813, to December 1819, was 5.690 per cent; and the average annual proportion of deaths to numerical strength, of the European regiments stationed at Masulipatam, from 1813, to 1832 inclusive, was 5.100 per cent."

" The rate of mortality having been somewhat lower, than throughout the rest of the presidency, for such a period, gives reason to conclude, that the station cannot be considered in ordinary circumstances, as unhealthy. As to the causes which have led to the extraordinary mortality in H. M.'s 62d regiment, from the period of its being stationed at Masulipatam, it is not necessary to enter into detail, the subject having been reported on at length, by the special committee, appointed for its investigation. The Medical Board have only to observe, that the period during which the sickness prevailed, was more unhealthy than usual, throughout the greater part of the presidency, that the violent epidemic cholera, from which the 62d suffered on the march, and after arriving at Masulipatam, predisposed the men to disease, and that the great drought, and intense heat, consequent on the failure of the rains, were also productive sources of disease, and on former occasions have been known to be followed by much sickness at this station."

"In a general report on the health of the European troops, dated 27th March 1809, the Medical Board observed, "At "Masulipatam, though considered an unhealthy station, from "its local situation, the averages of mortality, are lower than "at Fort St. George; fever however is the prevalent disease "at Masulipatam, though not the one from which most casu-"alties have occurred. Flux is the most fatal disease, as at all "other stations for European troops. The average of sick-"ness and casualties, is higher in 1808, than in 1807, from "what cause the Medical Board are at a loss to say, unless "from the previous droughts, by which the swamp in the

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" vicinity of the fort, which it has been so much an object of go-" vernment to prevent being flooded, may have been drier, " than it was in 1808; the increase of deaths is principally " from flux, which leads to the supposition, that intemperance " may have been a great cause of it."

" In 1793, which was a year of famine and drought, a destructive fever prevailed at Masulipatam, which was more to be ascribed to the partial drying up of the muddy bed of the river, to the south and south-west of the fort, which was usually under water, than to the putrefaction of dead bodies, to which it was then attributed."

" The season of 1833, appears to have been very similar to that of 1793. Fever, and a fatal form of apoplexy, of the same character, having carried off a number of officers and men, on both occasions, viz. at Masulipatam, in May 1833; and at the neighbouring station of Ellore, in 1793."

#### ELLORE.

Town of Ellore. The populous town of Ellore, is situated about 50 miles north and by west of Masulipatam, and has occasionally been a station for a native corps, but at present is only occupied by a small detachment, and by recruiting parties for some native regiments.

The country around is open and flat for a considerable extent, the soil being principally black cotton ground; in the cantonment however, it consists of sand.

A small and shallow river, the bed of which is Cantonment. dry throughout the greater part of the year, divides the town into two portions; on the right bank of the river, is the remains of an old fort, distant about one mile and a half northeast from the barracks, and the cantonment hospital. On the opposite side are the officers houses, at the distance of a mile west of the barracks. No inconvenience has arisen from the river intervening, as it is at all times fordable. The sepoys

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ten as well strated, by red contradional e de tors at praimily and construction becipies the three shally seen in Indian and they would from the servets multy plants in either side,-and they chrosentially upe in the vicinity, the training, builts which there are several anisa riit thegi erapy, and obstra in, must considered to be projudical to

The climate of Ellore does they a namily from that of Masslipstum, al though from being about \$0 miles inland, the benefit of the refreshing sea herease ;- a parietile turing the months of April as trendy due and oppressive; the land turing May, blows with great violence, and has been known to rise to 110° in the house of 1999 in officers trefs.

The following account of a visit to Mullaw area ellages in this district, near to which head is estrated from the journal of Dr. J tiongh the arthern circars, in January 18 the "Mahra Journal of Literature and Scien

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## ELLORE.

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lines are well situated, dry and commodious, and the houses in the town are generally well constructed, and of a better description than those usually seen in Indian bazaars. There is much foliage around, from the streets and roads being usually planted on either side,-and there is likewise an extensive toddy tope in the vicinity, the cause of much drunkenness, besides which there are several extensive betel gardens, which though swampy, and obstructing free ventilation, are not considered to be prejudical to the health of the inhabitants.

Climate. The climate of Ellore does not differ very materially from that of Masulipatam, already described, though from being about 30 miles inland, it does not enjoy the benefit of the refreshing sea breeze ;---and the nights in particular during the months of April and May, are extremely close and oppressive; the land wind likewise during May, blows with great violence, and the thermometer has been known to rise to 110° in the house, and to upwards of 120° in officers tents.

The following account of a visit to Mullavelly, one of the seven villages in this district, near to which diamonds are found, is extracted from the journal of Dr. Benza on a tour through the northern circars, in January 1835-taken from the "Madras Journal of Literature and Science."

" The road to Mullavelly, lies along a sandy plain, which, I am told, is swampy during the heavy rains. Approaching the village the plain is bestrewed with blocks and fragments of a very hard conglomerate sandstone, some pieces of which are of a purplish colour. There are also some large blocks of garnetic gneiss, in a state of decomposition ; but the red sandstone abounds most, although rolled pieces of quartz, with a covering of a ferruginous clay, or carbonate of iron, together with the conglomerate sandstone, are scattered over the plain.

" The hollow flat, where the diamond pits are excavated, was a low swampy plain, at the season I visited them, the

lower part only containing some water ; being surrounded by a bank, or rising of the soil, in a cirular manner, it has the appearance of having been once a lake. The banks are formed of the red ferruginous sandy soil, prevailing all round the place. Through this plain no river or rivulet flows, and the pools, in its lower part, dry up about the month of March, when the excavation may be commenced, and not before.

"The few hills I could see in the vicinity lie to the northward, not above two or three hundred feet above the plain, and were covered with underwood, interspersed with large trees. Some miles beyond these hillocks, runs another range loftier than the nearest ones, having however, the same direction.

" The diamond pits are in general excavated at the north end of the bank, that surrounds the hollow. Judging from some which were dry, the deepest could not be more than 12 feet ; and I observed that, whatever their depth was, they never came to a hard mass of rock. The strata penetrated during the search for diamond, are, first, a gray, clayey, vegetable mould, about a foot or two thick ; below this an alluvium, composed of the following pebbles. (not including the diamonds) which have evidently undergone attrition, their angles having been worn off; sandstone, similar to the one already described-quartz-siliceous iron-hornstonecarbonate of iron-felspar-conglomerate sandstone, and a prodigious quantity of kunkar, or concretionary limestone. Of this last mentioned rock, we must say a little more than of the others ; the reason is obvious, namely, that the gem is the base of the acid in the calcarious stone.

"Besides the numerous pieces of this concretionary rock, scattered on the surface of the soil, and also intermixed in large quantities in the diamond alluvium, it forms regular strata, or veins we might call them, in a horizontal position both in the vegetable earth, and in the diamond alluvium, precisely like flints in chalk. Many of the pebbles of quartz the state of the s

ne oprimes ver talen from twoop he contain, male fre years ago. From hel nu told ne, ner chinited, so nany s. pr. u tight fil the hollow of the palm the scontine his taken place since.

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# NATURAL EXPERSIV

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and hornstone, are not only varnished, as it were, with a ferruginous enduit, but it penetrates into their substance. This kunkar contains not a trace of quartz or any other mineral; and that in strata, in the vegetable soil, and in the diamond alluvium, is more friable than that exposed on the surface of the ground.

" It is in this alluvial detritus that the diamonds are found ; my specimens were taken from a heap, on the brim of the last excavation, made five years ago. From this refuse, the head man told me, were obtained, as many small pieces of the gem, as might fill the hollow of the palm of the hand ; no other excavation has taken place since.

" All the pits are of an irregular form ; generally oblong ; and said to be not more than ten feet deep ; but this I could not ascertain, on account of the water, with which they were partly filled.

" The overseer who appeared an intelligent, obliging person, gave me the following information, in reply to my interrogatories; he always presides over the excavations, whether the pits are formed, or are worked on account of the Nizam. The diamond is never found imbedded, or, in any way, attached to any of the pebbles, with which they are invariably associated in this locality. They are always found loose, mixed with the other little stones. On my particularly pointing out the kunkar, he said the gem was never attached to that substance. On enquiring, which were the pebbles most constantly associated with it, and forming infallible indications of the existence of the diamond ; he picked up from the heaps of detritus, the following pebbles-iron ore, hornstone and the kunkar.

" Notwithstanding the prodigious quantity of carbonate of lime in this locality, the water did not appear to contain any traces of it; and the inhabitants used even that collected in the pits.

"The detritus, forming the diamond stratum, must have proceeded from the hills north, the only ones near this place; being probably the continuation of the sandstone range, which extends easterly from Banganapilly, Condapilly and Mullavelly, in all of which localities the matrix of the diamond is a conglomerate sandstone."

## COLLECTORATE OF RAJAHMUNDRY.

Generaldescrip-tion of the dis-triet. Rajahmundry, an extensive, and for the most part a very fertile district of the northern circars, lies between the collectorates of Masulipatam on the south, and Vizagapatam on the north .- Its eastern and western boundaries being the bay of Bengal on the one side, and the range of eastern ghauts on the other. It comprises a surface of 6050 square miles, and has a population amounting to 5,33,836 souls. It is intersected by the river Godavery, which bifurcates, or divides into two branches, a short distance below Rajahmundry the chief town, and about 38 miles from the sea; the southern branch running into the bay of Bengal at Narsipore, and the northern one at Injeram.

Town of Rajah-mundry. The town of Rajahmundry is situated on the left, or northern bank of the river Godavery, in latitude 16°, 50" north, and longitude 81°, 53" cast. It is built on somewhat elevated ground, and consists of one principal street, about half a mile in length, running nearly due north and south, in which is the chief bazaar. The houses on each side are generally of one story, built of mud, and tiled; from the principal street, there are several narrow lanes, running east and west; those to the west proceed to the bank of the river, in an oblique direction, and consist of mean houses built of mud and tiled, with here and there a large upstaired dwelling, the property of the zemindars of the district, and of some respectable inhabitants, who are principally brahnum. The invest on the est time of the barn and of inspile, maning of lowers of the the surplied by present of various caster, the The population of the town, is deed from 15 to 20,000 works of these ca training of the reactivity gentury, ma purisies. The missioners from the analysis, na emissionly alone area; nemetone most erel calling, which show that former here been both successes and weakhy.

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metalers. The Goldstery at this part runs and worth, having high banks on both sides, an mie in breach opposite to the town ; during nensoes, it is generally filled from bank to beautiful empasse of water, ranzing with great carryon down in its course, large quantities delvie, with numerous trunks of trees, forcontining in bails, depends the fertility part of the distint, so it is the only way county bing berren the town and the m tion, is watered; sumerous small islands or fermi is in more, by the deposit left on the age of a they as very valuable, from the nhano of mperior quility, which is grown. propieton of the proof on either side, are i plasting a species of one grass, in the bed of th a ties to dois farmation, in the grans observe ef the and in its course, and shown up interested war abaile, the detecting a greater of a hadi s dan a fan an a rat an ter aller to the section of the time derived into

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tern of Bajahanneley is simul or the southern basis of the river Golessy, is ets, and longitude \$1°, 55° cost, his basis of ground, and consists of one principal mile in length, running many issues in a data sheet, basis of mod, set tide; tern does sety, basis of mod, set tide; tern does not set the protect to the leak of the set time and here a large space of the modules of the formation of the statistical set. RAJAHMUNDRY.

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mins.—The streets on the east side of the bazaar, are narrow and very irregular, consisting of houses of the same description, occupied by persons of various castes, but principally gentoos.

Population. The population of the town, is calculated at about from 15 to 20,000 souls, of these one fourth are brahmins, and the remainder gentoos, mussulmans and parriahs. The mussulmans form the smallest number, and are comparatively a poor race; numerous mosques however, are still standing, which show that formerly, they must have been both numerous and wealthy.

The distance from the sea by the river is 40 miles, but in a direct line only 28.

River Godavery. The Godavery at this part runs nearly north and south, having high banks on both sides, and is about a mile in breadth opposite to the town ; during the south-west monsoon, it is generally filled from bank to bank, and is a beautiful expanse of water, running with great rapidity, and carrying down in its course, large quantities of mud, and debris, with numerous trunks of trees, &c. On the river overflowing its banks, depends the fertility of the lower part of the district, as it is the only way in which the country lying between the town and the mouths of the river, is watered; numerous small islands or Lunkas, are formed in its course, by the deposit left on the river subsiding; and as they are very valuable, from the quantity of tobacco of superior quality, which is grown on them, the proprietors of the ground on either side, are in the habit of planting a species of long grass, in the bed of the river, with a view to their formation, as the grass obstructs a quantity of the mud in its course, and shoots up immediately after the water subsides, thus obstructing a greater quantity of mud from year to year, until at length an island is formed. About two miles to the southward, the river divides into two branches, forming a rich delta.

During the north-east monsoon, the river dwindles to a small stream, generally fordable throughout, as far down as Cauvelasarapoorum, to which place the tides flow.

Soil. To the northward and southward of the town, the ground is low, and consists of black cotton soil, generally cultivated with paddy; to the east it rises somewhat, the soil being barren, sandy, and covered with a low stunted jungle, interspersed with topes of palmira trees.

Water. The inhabitants are generally supplied with water from the river, for all ordinary purposes, as that in the wells, of which there are but a few, is very brackish, and the several tanks in the vicinity of the town, frequently become dried up.

Food. The principal food of the people is rice, though when the crops fail, for want of rain, cholum and raggy, are much used.

Diseases. Fever prevails to a considerable extent during the hot season, or in the months of April and May; it is usually of the intermittent type, but is seldom followed by enlargement of the spleen; this disease is attributed by the natives to the use of the water, near the bank of the river, in the vicinity of the town, which becomes stagnant from the beginning of February, until the river comes down in June.

Beriberi. The disease next in prevalence to fever, is beriberi, which is usually endemic in this place.

Excessive indulgence in the use of opium and tobacco, is common amongst all classes, from the brahmin to the parriah, and by habit they become actual necessaries of life.

Prevailing winds. The prevailing wind during the months of January and February, is northerly, and occasionally from the east, towards the afternoon : in the month of March it is generally southerly, or south-easterly, the sea breeze being felt for a few hours in the afternoon, usually followed unarrenarie a depi nu hoy de sind is e renderment, my ha, ma landet with is minement, my ha, ma landet with is minement, my ha, ma landet with is minement, my ha, ma landet with is enterment, my ha, ma landet is minement, mis enter enter is expected is month, mis processly lappens about terments, mis processly lappens this processly lappens this processly single and the lame, the side antibust managements termine begins a making, and from which are no begins a making a making and the making termine begins a making a making a making a making a making a making termine begins a making a m

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time does, and fre small windows.

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### RAJAHMUNDRY.

by a calm. In April and May, the wind is either westerly or south-westerly, very hot, and loaded with fine sand ; in June it again becomes more southerly, and is supposed to be influenced by the river coming down, for when the change occurs earlier or later, the river is expected to fill simultaneously, which generally happens about the middle of June. The wind continues southerly with little change, until October, when the north-east monsoon sets in, soon after which the river begins to subside, and from that time until March, the station is particularly healthy.

The fort is situated to the north of the town, Fort and public haildings. and is in the form of a square, having high mud

walls, and a ditch now partially filled up. It is usually garrisoned by two companies of the native regiment stationed at Samulcottah; the barracks, hospital, jail, magazine, and lines of the detachment, are within the fort. The barracks are situated in the south-east corner, and consist of one long mud building, with a tiled roof, and is only used as a place of arms; it is 83 feet long by 13 wide, and 71 high, having three doors, and five small windows.

The hospital, close to the barrack, is a long narrow building, erected on slightly rising ground, immediately under the wall of the fort; it is open and airy-two large tamarind trees stand in the north-west corner, which are a great shelter to it during the rainy season .- It is 100 feet long by 13 broad, and 12 feet high, is built of mud, has a tiled roof, a verandah of 71 feet wide on the west side, and a low narrow verandah on the east, or that looking towards the barracks. There is a small confined room in the rear, which is used as a surgery, and is about 10 feet by 8. The lines occupied by the detachment consist of four rows of thatched huts, immediately in front of the barracks, they are of a very inferior description, and placed in a confined space, but as the detachment is relieved every third month, the sepoys do not in consequence erect good houses, or care to make themselves more comfortable, as they must be considerable lossers

thereby. The barracks, hospital and lines, would be much improved, if the old fort walls were taken down. The magazine was formerly a small native temple, built of large slabs of black granite, and is well adapted to its present use.

Jail. The jail is a square building in the centre of the fort ; it was first erected in 1806, and underwent little change until 1838, when two new cells were added, each 43 feet long, and 141 wide, having five windows and two doors, the windows being 4 by 21 feet. The wards are 13 feet high, and bombproof. The old jail contains an area of 228 feet, by 140, surrounded by a wall of 12 feet in height, within which, there are 14 wards or apartments, and a cookroom and guard rooms, for the sepoys, and peons on duty ; each cell is 28 feet by 14, with walls 13g feet high-and has four windows and two doors. The windows are 4 feet from the floor, and measure 3 feet by 2-there are also several small slits or scuttles in the walls, thereby causing free ventilation. There are four other cells similar to those described, each 231 feet by 181, and 13 feet high, built on a level space, about 4 feet higher than the others, at the end of which, and under the same roof, are two small cells formerly appropriated for lunatics; on the same level, and on the north end, is a small ward formerly occupied as an hospital, with one door and two venetian windows, 19 feet by 9, and 141 feet high. There is also another room of the same dimensions occupied by the female prisoners,---and a cell 15 feet by 12, with two venetian windows and two doors, for the confinement of civil prisoners.

The verandah allotted for the military guard and peons, is 83 feet long, and 9 feet broad. There are two large tanks near the jail, which are now useless from being out of repair.

The jail is calculated to hold about 400 men, allowing each 21 feet, and is built of the most substantial materials, the floor of each cell is flagged with large flat stones. The building is fire proof, there being no wood in its construction, except the doors and windows. The situation is well raised and dry. White the fact is the contributor, and it for far European officers in the European officers in the fallening tables are shown the in the second of materially which have and second of materially which have include a list inclusive ; they also exclude table as point out the per centage of sict fall as point out the per centage of sict falls as inclusive.

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Amongs its prisoners whiting for tristraigh of SU, not more than 428 a plan, being 32-385 per cent on the deshs have occurred, being 14-198 pe

The most structures administerious state prisoners, have been from fetters, challers regular fetters, examples, our prisoners, have been freedoord in a the table No. 17 will chearly there at one view the samual administerious and a date principal diseases, viz. Severe, che actury, maners, strupply and beeriterionid and matritity each year are shall consequenting table for the Material platters in these diseases is to less than \$25 and the whole mathing.

RAJAHMUNDRY.

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SULTE DESERVE

for average in 1806, and so known total मीमा १४० स्टब्स रहीत प्राप्त कोलिने कहा था wide, buring the window and two does. og 4 by 21 fort. The warls are 13 fort cool. The dd jal comins in sex of 23 randed by a wall of 12 lest in brint, withne 14 wards or spartments, and a excision for the separa, and prote on day; each off rith walls 189 feet high-and his for vinw. The windows are 4 feet from the fore and 2-there are also several snall dits or is, thereby enting ine vestigion. These ells similar to those described, and 25-13 feet high, built on a level space, about \$ the others, at the end of which, and more ne two small cells firmerly appropriated for ame level, and on the sorth end, is a small gird as an hospital, with one door and two 19 fret by 9, and 14] feet ligh Then out of the same dimensions accepted by the and a cell 15 feet by 12, with two renarian doers, for the conforment of irst pieces.

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lated to hold about \$10 area, storing cel it of the new substantial metrick, the for with large fait stars. The builder a held a real to it manual and The obligation is real mixed and by alers

Within the fort is the court-house, and also two small bungalows for European officers.

In the following tables are shewn the nature of the diseases and amount of mortality which have occurred amongst both classes of prisoners, during the period of ten years, from 1829 to 1838 inclusive ; they also exhibit the diseases classified, and point out the per centage of sick to strength, and of deaths to sick treated.

The average annual numerical strength of the Bemarks on the convicts has been 137, and the admissions into hospital 100; or 73:542 per cent; the average number of deaths yearly has been exactly 20, or 14.723 per cent on the strength.

Amongst the prisoners waiting for trial, from an aggregate strength of 817, not more than 428 admissions have taken place, being 52.386 per cent on the strength; while 116 deaths have occurred, being 14-198 per cent.

The most numerous admissions amongst both classes of prisoners, have been from fevers, cholera, bowel complaints, eruptice fevers, anasarca, atrophy, and beriberi; and the greatest mortality has been produced by the same diseases, as the table No. 17 will clearly shew. This table gives at one view the annual admissions and deaths from seven of the principal diseases, viz. fever, cholera, diarrhoa, dysentery, anasarca, atrophy and beriberi; the total sick treated and mortality each year are also exhibited, as in the corresponding table for the Masulipatam jail, for the purpose of shewing the great proportion of the whole mortality caused by these diseases ; no less than 295 out of 318, or 13-14ths of the whole mortality.

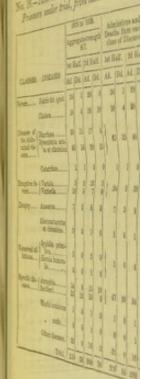
### JAIL OF RAJAHMUNDRY.

No. 15.—Table exhibiting the number of admissions and deaths of the Convicted Prisoners, from each class of Diseases, for ten years.

And South and the	Aggr	egate	a 1838 atres 178.			Deat	hs fr	ons a tons a lista	ach	admissions each class.	deaths class.	centage of to strength.		Per centage of deaths to sick.	
CLASSES, DISEASES.	Ist I	TAIL	\$4 Half.		lat Half.			24	Half	ta had	38	23		r ce	
CLASSES, DISEASES,	Ad.	Dd.	Ad.	Dd.	Ad.		Dd.	Ad	Dd.	Por 1	from	Per		Pe	
Pevers { Pebris int. quot. tertians	0	6 0 0 0	2	1004	15	123	6	158	11	251	17	90	-451	6	-045
Cholera	13	7	6	4		15	7	6	- 4	19	л	1	-384	57	-63
Diseases of Diarrhous. the abdo- minal vis- Heantilia agona	41	11 9	90 117	38 25	3	86	20	210	62	296	82	21	-574	27	-785
cera ( Hepatitis acuta et chronica	0	0	6	0	1	0	0	6	0	6	0	0	-637	0	-00
Diseases of Catarrhus the Lungs Phthisis pulmo- nalis		0 1	0	0	3	7	1	0	0	7	1	•	-510	14	-28
Diseases of [ Paralysis the Brain. ] Amentia	10	] 0	00	00		1	1	0	0	,	1	0	-075	100	-000
Eruptive fe- { Variola	12 29	1 0	18	30	-	41	1	21	3	62	4	4	-518	6	-45
Dropsy Anasarea	9	7	22	11		9	- 7	22	11	31	18	3	-259	58	.06
Rheumatic Rheumat acutus	21	3	- 16	1	-	21	3	18	1	39	4	2	-842	10	-25/
Venereal af- fections Syphilis primi- tiva. Hernia humora- lis	2	00	3 1	0	25		0	4	0	6	0	0	-437	0	-000
Specific dis- { Atrophis	35 12	18	9? 19	35		47	21	111	40	158	61	11	-536	38	-67
Diseases of Morbi ceulorum	3	0	2	0		3	0	2	0	5	0	0	-364	0	-00
Do, " Skin. " Cutis	4	0	3	0	-	4	0	3	0	-7	0	0	-510	0	-00
Other diseases.	18	1	63	2		28	1	63	2	91	3	6	-632	3	-254
Total.	385	68	624	134		385	68	674	134	1009	202	73	-542	20	-001

LUISKINDEL

JAIL OF RAJAHMUNI No. 16.– Take exisiting the number of Admissi Primer under trial, from each class of dise



RAJAHMUNDRY.

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## JAIL OF RAJAHMUNDRY.

No. 16.—Table exhibiting the number of Admissions and Deaths of the Prisoners under trial, from each class of diseases, for ten years.

	15	179 60	1838			Adm		14 AD	a	class.	R R	Jo	4	lei	ek.
	Aggregatestrength Beaths from each class of Disease.							when of	deaths wh clas	centage of		Per contage of deaths to sick			
CLASSES. DISEASES	lat I	laif.	2d H	lalf. 1st Hal			lf.	f. 2d Half.			ale of	10	2 1	er ee	
CLASSES. DISEASES	Ad.	Dd.	Ad.	Dd.	٨	vit.	Dd.	Ad.	Dd.	ÊÊ.	rg -	Per	3	-	9
Fevers Febris int. quot.	24	1	29	0		24	1	29		53	1	6	-487	1	-530
Cholers	10	6	28	18		10	4	23	38	85	22	4	-651	57	-894
Diseases of Diarrhosa. the Abdo- minal vis-	20	11	1.00	1.1	15	63	25	45	17	109	42	13	-341	38	-531
Catarrhus		1	0	1.00	Ľ	1	1	0	0	1	1	0	-122	100	-00
Eruptive fe- { Variola	5 19	20	32	50	;	24	8	39	5	63	7	7	m	n	-11
Deopsy Anasarea	7	\$	. 8	3		7	5	8	- 3	15	8	1	-835	53	-33
Eheumstacutus et chronicus.		0	1	0		5	0	1	0	6		0	-734	0	-00
Venereal af- fetions	•				11	5	0	6	0	ш	•	1	-365	0	-00
Specific dis- Atrophia eases Beriberi	14			1	1	47	20	34	13	81	33	9	-914	40	-71
Morbi oculorum	1	0	1			1	0	1	0	2		0	-214	0	-00
eutis	. 0					0	0	1	0	1	0	0	-123	0	-00
Other diseases.	31		16	1		32	0	16	2	48	2	5	-873	4	-17
Total.	1919	58	305	50	1	219	1 55	209	58	428	116	52	-386	27	+14

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OF RAJAHMUNDRY.

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	Table No. 17 Juli of Rajahmundry:	Pever Dilateria Dilateria Disentory Attophia Attophia Bariberia	Admissions and deaths from these diseases.	Total admissions and deaths	Strength each year	Pever Dotter Dischara, Dysenstery Atroshty Berlberi	Admissions and deaths from these diseases.	Total admissions and deaths	Strength each year	Admissions and deaths amongst hoth classes of prisoners	Total strength each year	Fer rentage of deaths to strength	Fer centage of sick to strength	Per centage of deaths to sick treated	A. M. Orton	
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RAJAHMUNDRY.

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2,243. From each class of diverses. Ist Half, Id Half, Ist Half, 2d Half, 2 centage of this to sick. Per CLASSES, DISEASES. 1 124 19 7 6 1010 00000 109 intermit o tertiana. remittens continua. 2 150 11 259 13 11 659 5 009 9 0 -989 40 -909 5 0 13 12 4 22 Cholera ..... 9 41 6 0 } Disertora ..... Dysenteria acu-ta et chronica 11 0 18 0 29 0 1 .304 0. 000 0 12 74 Catarrhus... 0 81 the Lungs 0 -719 0 .000 hthisis pulm malis..... 4 0 12 0 16 0 0) Ð 0 0 4 0 -044 0 -000 0 0 0 1 Paralysis ..... 00 \* 0 } 4 0 0 -179 0 -000 0 2 0 0 13 Dropsies... { Anasarca..... 11 0 1494 18 181 3 . 2 3 954 42 Rheumatismus. 46 0 0 46 0 42 0 88 .0 0 -000 Venereal af-fections... Rections... Strictura uno thrm... 28 30 0 00 83 0 41 0 74 0 3 .328 0.400 5 0 9 0 0 0 1 0 1 0 1 30 Dracunculus, Atrophia.... Scorbulus... Scrophula... Beriberi.... 01108 00000 pecific dis-10 1 37 2 47 2 114 6 382 3 7 Diseases of Morbi oculorum 0 0 8 0 .359 0 -000 0 7 -1 atis..... 12 0 4 0 12 0 4 0 16 0 liseases... 84 0 58 2 84 0 58 2 4142 2 Total... 205 9 392 20 325 9 392 20 717 27 \* Of this number were Fhlogoals 13, ulcus 27. Per centage of deaths to strength 3 305. Do, " Skin. " Cutis.... 0 .719 0 -000 6 -357 1 -606 Other diseases. 32 -253 4 -014

No. 18. - Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Rajahmundry, from 1829 to 1841 inclusive.

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General descrip-Samulcottah, a town and military station in the Rajahmundry district, is situated in latitude 17°, 4" north, and longitude 82°, 17" east, being 404 miles in a north-east direction from Madras, and 281 miles east of Rajahmundry.

The word Cottah means fort, Samula being that of a devotee from whom the place derived its name. Before Samulcottah was ceded to the East India Company by the Nizam in 1766, it was the residence of the ancestors of the present Rajah of Peddapore, and part of the palace which was converted into a dwelling house, is still standing. It was the original intention of government to have occupied the village of Peddapore, two miles distant to the westward, as a military station, but the idea was subsequently abandoned, Samulcottah having been found more convenient, and the Rajah was induced to change his place of abode to Pettapore a village about eight miles to the south-east. Samulcottah till 1835, had a fort of some strength, at which time, in consequence of the offensive state of the ditch, and the rank vegetation, completely obstructing the free circulation of air, it was levelled to the ground, and the ditch filled up.

Cantonment. The cantonment is situated on the north-west side of the village, and contains an area of about three quarters of a mile in diameter ; and both it and the village stands about 70 or 80 feet above the level of the sea, which is distant at one of the nearest points, Cocanada, about eight miles.

The road to Cocanada passes through a cultivated Roads. plain forming almost a perfect level, and through which a small river runs to the sea.

Samulcottah is accessible on all sides, by pretty good roads ; the great northern, or Madras road, from Rajahmundry, is of considerable width, and in good repair, and enters the cantonment on its western side. The other roads are neither so wide, nor so well adapted for wheeled carriages. To the north a good driving road, leads to a small village distant about one mile, called Rayumpettah.

SANG ROOTTAN that a mile beyond the village of P and d Suminously is a small hill called wind consists of a reach about 100 feet in and a dimension thing alongsity from the annahen Tothenmilened of Semales of the tailes, can the time of hills, called the which rise to the beight of 2010 feet. enti fun a pass, ne chiefy den de light who are in possession of them, but is our insures have originally taken the tra steets

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#### SAMULCOTTAH.

Half a mile beyond the village of Peddapore, on the west of Samulcottah, is a small hill called Pandaoonla-metta, which consists of a rock about 100 feet in height, and the same in diameter, rising abruptly from the plain.

Eastern ghasts. To the northward of Samulcottah at the distance of 30 miles, run the line of hills, called the eastern ghauts, which rise to the height of 2000 feet. The names of the several ghauts or passes, are chiefly derived from those of the Rajahs who are in possession of them, but who may perhaps in some instances have originally taken theirs, from these natural objects.

These hills are extremely feverish, and almost uninhabitable by the natives of the coast; the people who live on them are a wild uncivilized race, and some mahomedans from thence, who have lately been met with in the plains, scarcely spoke a word of Hindoostanee, or were intelligible in their own language, so much had it become corrupted by intercourse with the aborigines; like other hill races, they are of moderate stature, but muscular and well formed.

There are no rivers or lakes of importance near Samulcottah, the river to the castward of the cantonment, is a dry sandy bed, except in the monsoon, when it is full from bank to bank, though at all times fordable.

Tanks & Wells. There are but few tanks in the neighbourhood, and those which are met with are of a small size, and become entirely dried up in the hot season.

Wells are numerous, but there are only two in the cantonment, the water of which is drinkable, the others contain carbonate and muriate of lime, and also muriate of soda, some of them being even offensive to the smell. Water is usually found at a depth of from 30 to 40 feet below the surface.

Seil. The soil is alluvial, generally well adapted for both wet and dry cultivation, and is very productive.

At a depth varying from six to twenty feet, a bed of gravel is met with, of various thickness containing masses of lime stone, mixed with comminuted portions of quartz. There is no jungle or stagnant water in the neighbourhood and no noxious exhalations are supposed to arise from the soil.

Vegetable productions. The ordinary country vegetables and fruits, are produced in abundance, and most of the European vegetables found in India, likewise thrive well.

The Swietenia febrifuga is found in a compound, formerly the garden of the late Dr. Roxburgh; the trees are almost entirely denuded of their bark by the natives, who put much faith in its virtues as a remedy in fever.

Azimals. The usual domestic animals, and cattle are abundant. Sheep do not attain a large size, but the mutton is usually good and cheap; good beef is not to be had, but poultry of all kinds are very abundant.

Foxes, hares and antelopes are found in great numbers around the cantonment, which is visited at night by numerous troops of jackalls, and occasionally by hyænas.

Minerals. Minerals do not occur in any considerable variety; strata of gravel and lime stone, as also quartz have already been mentioned. Slabs of gneiss of a dark gray colour traversed by veins of quartz, are seen in some houses, which it is believed have all been brought from near Rajahmundry.

Diseases. The inhabitants are generally very healthy, and many of them reach to an advanced age; and brahmins of nearly 80 years of age, in the perfect possession of their faculties, are to be met with. The principal endemic complaints are fevers, and ulcers ;—large and deep ulcers of long duration have been seen, and the native practitioners it may be inferred, do not therefore possess much skill in the treatment of these complaints, which are found to yield readily to European remedies. As a consequence of severe or ill treated fever many persons from the more inland parts of the country, suffer

suvremental. Vetere tion decard other and droper. and along in the talket, and second anna. Benileni is sa eudenic disease s inhibitors are not so sufject to it as the of the second do not even know the many The barracks or place of any and side of the contraction, were control an ball of tack mildening, the whole beet nel di de veren entremit is a small reported more non, and about 200 yards is a trail, size mater of which is used by the s we a little further st, in the same direction. built as backgroundly and elevated ground ; has been juiciously selected as the force of t with west monscons, are broken upon the et

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#### SAMULCOTTAH.

from diseased spleen and dropsy. Venereal disease exists to a great extent in the village, and secondary symptoms are common. Beriberi is an endemic disease of the place but the inhabitants are not so subject to it as the troops and many of the natives do not even know the name of the disease.

The barracks or place of arms, situated at the Barracks. south side of the cantonment, were erected about 1786, and are built of brick and chunam, the whole being under one tiled roof. At the western extremity is a small building used as a regimental store room, and about 200 yards to the south-west is a tank, the water of which is used by the sepoys, whose lines are a little further on, in the same direction. The barracks are built on hard, gravelly and clevated ground ; the aspect of which has been judiciously selected, as the force of the north-east, and south-west monsoons, are broken upon the ends of the building-

The following are the dimensions of the barrack, height 81 feet-length 1621 by 181, with a verandah 7 feet 8 inches wide ; it has 4 windows-and 6 doors. In front is an open space of ground, the original square of the fort, the sides of which are formed by the officers quarters; this piece of ground is large enough for manœuvering a regiment ; on its western side is the powder magazine, a bomb-proof building.

The officers houses generally run in a north and south direction, and open to the full force of the monsoon ; the doors and windows of which must be kept constantly shut on the side from which the monsoon blows. From being exposed likewise to the glare and heat of the rising and setting sun, as well as for the other reasons stated, this is evidently an injudicious arrangement in a tropical country.

There are fourteen houses for the officers, and a mess house, of these nine are the private property of the occupants.

They are generally of an inferior description and badly built, the usual material being mud walls, with grass for the roofs. There is only one tiled dwelling in the cantonment ;

and house rent is exceedingly moderate, 15 Rupees per mensem being the average monthly charge.

Separations. The separation of the separation of the officers quarters, the ground gradually rising towards them, and a little beyond their limits, it attains to a height of 128 feet above the cantonment; from whence there is an open plain for some distance. Towards the eastward, the side of the cantonment in which the hospital is situated, the ground falls considerably, so that this building is in the lowest and most objectionable situation.

Morphal. The hospital was erected about the year 1786, runs east and west, and is built of burnt brick and chunam, having a tiled roof. The ground from the front of the barrack, slopes gradually to its eastern angle, and in wet weather the whole of the rain water from the square, sweeps towards it; it is moreover rather close to the officers quarters, and too distant from the mens lines and barracks. It contains only one ward for patients, and a surgery. The following are the dimensions, height 8½ feet, length 56, and breadth, 16; it has 6 windows and 2 doors; the surgery is 14½ long, 16 broad and 8½ feet high, and has one door and a window.

The building can accommodate 30 patients, and notwithstanding its being so badly situated, none of the sick have ever laboured under any disease, which could be attributed to the locality. About 150 yards to the north, stands a solitary cell, having two rooms, each for one prisoner.

The parade ground is to the north of the regimental lines and only divided from them by a road; it is open, has a gentle slope and is well adapted for the purpose, being sufficiently near both to the barracks and the officers quarters.

The following table shews the nature and amount of diseases, and the mortality which have occurred amongst the native troops during a period of ten years, from 1831 to 1841, exclusive of 1832.



COLUMN STREEM

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seport lines are to de visited of the the ground gradeally since to the second data limits, it attains to a height of e natouaest; fina viccos ties a a e dacaan. Toracle de eestrud, beske at in which the hospital is strated, the aderably, so that this building is in the bjectionable sinusion.

hospital was crected about the par 11%. t, and is built of burnt brick and chrone. oof. The ground from the front of the tradually to its eastern angle, and in wet e of the rain water from the square, sweeps soreover rather close to the officers quarters, on the mens lines and barnels. It contains e patients, and a surgery. The following us height 84 feet, length 56, and breakh, 16; and 2 doors; the surgery is 14h long, 16 high, and has one door and a window.

un accommodate (0) patients, and accesitso hally situated, note of the sit have der any discuse, which could be attributed About 150 yands to the north, simils a solten ranns, each for one prisons

and is to the mith of the regiment ins them them by a read; it is spec, he a is well adopted for the purpose, being referthe burnels and the often parent while shows the nature and amount of dawritibly which have accord manys the ning a period of two years from 107 to 201.

## SAMULCOTTAIL.

55

No. 19.— Table exhibiting the number of admissions and deaths amongst the native Troops at Samulcottah, from1831 to 1841, exclusive of 1832.

	Aggi	egab 70	e stres 112.	agth		hs fr	ons an om ei Niseas	ich	teritations of class.	denths ich class.	centage of to strength.	trentage of this to slick treated.
CLASSES. DISEASES.	let 1	Ialf.	\$1 H	alf.	1st H	alf.	2d 1	lalf.	m es	Total Fom ea	Per ce lek to	Per cer denths trea
CLASSES, DISEASES,	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	<u>P</u> £	10	田園	2.5
Fevers	L 500 10 10	01-020	71 494 15 19 18	00000	681	11	617	11	1298	22	17 -069	15 -949
Cholera	13	4	13	5	13	4	12	5	25	2	0 -341	31 -615
Diseases of the abdo- minal vis- cera	13	010	12	140008	80	5	111	5	201	10	2 ·600	4 -925
(Hepatitis		1.55	1.11	1	. 1							
Diseases of the Lungs Pathan Pre- Pre- Pre- Dyspace.		2 00	11	0 100	20	9	38	4	55	6	0 (761	10 -344
Disenses of Apoplexia The Brain. Apoplexia Paralysis Mania			039	10000	} 11	3	12	1	23	3	0 -302	13 -043
Eruptive fe- vers			1 10		30		34	1	81	4	1 -103	4 76
Dropsies, { Anssarca,			6 3	0	1 :	1 2		1	16	3	0 -210	18 -250
Rheumatiam	in the second		1 989	1	217		239	1	456	2	5 -989	0 -438
Venereal af- fections Venereal af- fections Societations Hermia humo lis	19 1	0 0	0 91 0 21 0 13	1 0 0	1 1 1 1		143		285	1	3 -756	0 -349
Strictura three	ife-	1 1	0 1	0	5				100			
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Diseases of   Morbi cambo		2	0, 35		в	0	35		54	0	0 .701	0.000
Do, Skin Cutis			0 1.58		196		138		336	0	4 411	0 -000
Other diseas	111		0 450		40		635	1	+951	3	12 -61	0 -312
Tot	al., 190	6 3	2 1981	-	1938	3	1983	- 40	3923	78	51 -53	1 989

Of this number were Phlogests 318, Ulcus...144 and 1 death. For centage of deaths to strengh 1/024.

## VIZAGAPATAM.

General description of the dis-

The district or Collectorate so called, extends along the coast between 17° 10", and 18°30" of north latitude; and 84° 10", and 82° 30"

of east longitude; being bounded on the east by the bay of Bengal, on the west by the eastern ghauts, at an average distance of from 30 to 40 miles from the sea; and on the south and north, by the districts of Rajahmundry and Ganjam respectively.

The general appearance of the country differs considerably from the southern portion of the division, being irregularly mountainous and hilly, the coast for the most part, being a bold and rocky shore; the hills in some places, as at the Dolphin's nose, to the south of Vizagapatam, over-hanging the sea.

The hills lying to the westward of Vizagapatam which approach to within three or four miles of the town, extend far into the district, towards the Hyderabad territory; and those to the southward, to a distance of about 30 miles, where the country becomes flat and continues so, as far as the Rajahmundry district. The hills, many of which are from 1500 to 2000 feet in height, are generally clothed with low jungle to their summits; extensive, fertile and highly cultivated valleys, lying between them, in which are grown rice, and a variety of dry grains.

Population. The district comprises an area of 15,300 square miles, with a population amounting to 1,047,414 souls.

Riversand lakes. The rivers and lakes are not of great extent, or importance. The river Pundavoo takes its rise in Golcondah, and enters the sea after a course of about 33 nin our de villes of Wootedah is the bills west of the Tinismorrow dista ne week Watchild, where it also cal brins must d study 10 miles. The the aim is rise in the hills west of nus can to Binipton, where it joins th proved rives in the partitionest of the nervi h tie sa si Conshit. The r riss in the hills, in the north-west by the nini min a fer niles west of Poleonda riber is rate, and joins the sea at the m the Celesionie, at the village of Dhan ne annena, but chese are only two lak denile extent; one year to Konda-chu nile, and another near Benavoolo of three form. There is like vise a marsh of seve social the vilage Wontenaundee, runni test, which as well as the lakes, shound

TILIGAPATAN

the The climits is considered Vargentum wis franchy much resorted atom actions during the hot months, but minim there, the climits is found to 1 the ar bing soft and the prevailing winds the singestam, or assume ant wind, or the le saids, that hard winds are almost us hely being the bay, being intercepted 1 ing inter-

# IZ AGAPATAM

NUMBER OF STREET

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strance of the country differs ensiderally orthon of the division, being inequality stilly, the coast for the nost part, being ore; the hills in some places, as at the the south of Vingapatan, overhanging

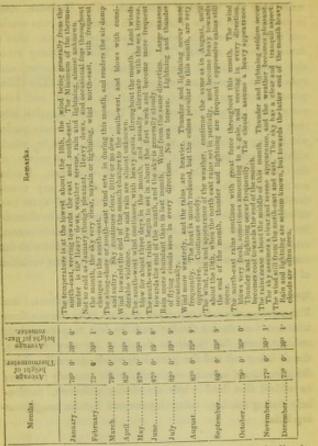
## to the westward of Vingquinn whith three or four miles of the tors, enter for rards the Hydrenhad teminery; and thes a distance of about 30 miles, when the and continues so, as for so the Bijkthe hills, many of which are four 100 bit, are generally clothed with low page optimizer, familie and highly estimated extensive, familie and highly estimated on them, in which are generative, so is

on Senist completes as sens of 13,00 span close anomaling to 1,447,414 subtions and lakes are not of grad cometeres and lakes are periodicen taken to come. The river Periodicen taken to come. The river Periodicen taken to come of the sen when a come of a laws. It

#### VIZAGAPATAM.

miles, near the village of Wootadah. The Sharadah, rises in the hills west of the Vizianagrum district, and runs southeast towards Wootadah, where it also enters the sea, after a devious course of nearly 70 miles. The Goostunny river also takes its rise in the hills west of Vizianagrum, and runs east to Bimlipatam, where it joins the sea. The Chinpavuttah rises in the north-west of the district, and runs eastward to the sea at Conadah. The river Langlah also rises in the hills, in the north-west by three separate heads, which unite a few miles west of Polcondah, close by which village it runs, and joins the sea at the north-east corner of the Collectorate, at the village of Dhurmaveram. Tanks are numerous, but there are only two lakes of any considerable extent; one near to Konda-churlah, of about two miles, and another near Benavoolo of three mlles in circumference. There is likewise a marsh of several miles in extent, south of the village Wontemaumdee, running parallel with the coast, which as well as the lakes, abound with great varieties of water-fowl.

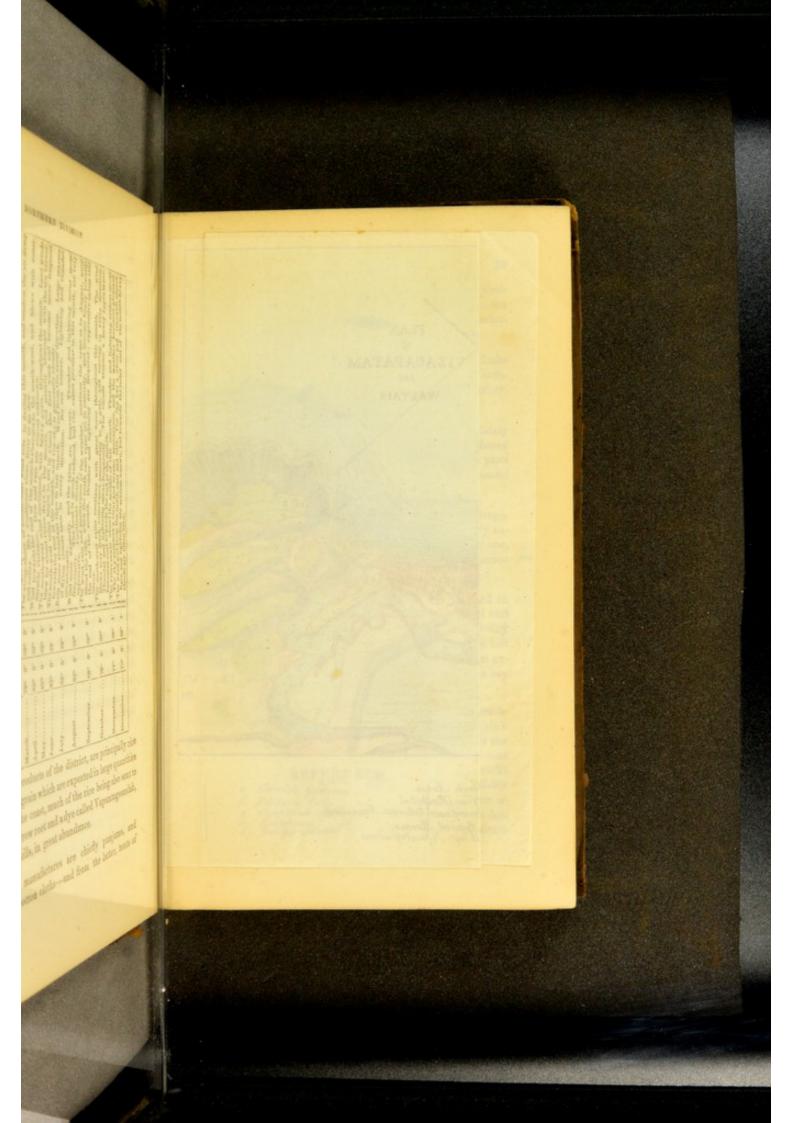
Climate The climate is considered salubrious, and Vizagapatam was formerly much resorted to by visitors, from inland stations during the hot months, but to persons long resident there, the climate is found to be very relaxing, the air being soft and the prevailing winds generally, either the along-shore, or south-east wind, or the easterly; it may be added, that land winds are almost unknown, particularly during the day, being intercepted by the neighbouring hills.

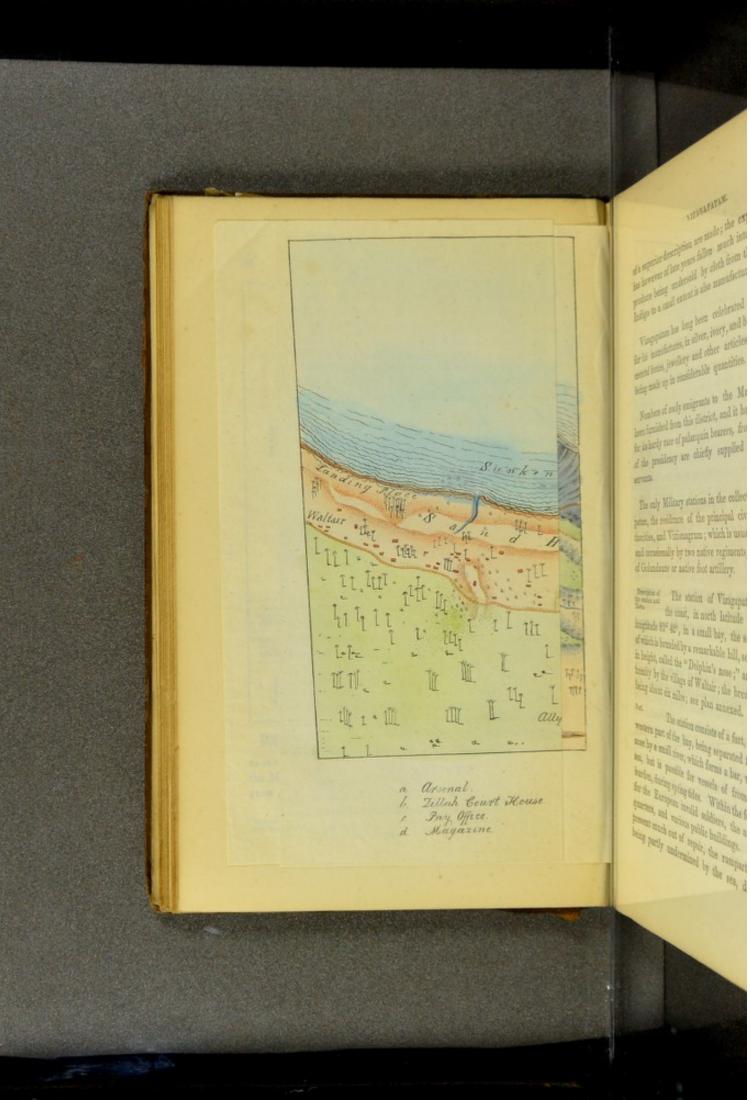


58

Veretables Products of the district, are principally rice and dry grain which are exported in large quantities to several parts of the coast, much of the rice being also sent to the Mauritius. Arrow root and adye called Vapuntagoondah, grow wild on the hills, in great abundance.

Manufactures and trades. Coarse cotton cloths-and from the latter, tents of





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Scales if only enigrants to the Mi ben furnished from this district, and it has for in herby rate of polanquin bearers, fro of the presidency are ellicity supplied

pain, the residence of the principal cit

The only Military stations in the collect

therities, and Vininagron ; which is usu and accessionally by two native regiments

### VIZAGAPATAM.

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of a superior description are made; the export trade in cloth has however of late years fallen much into decay, from the produce being undersold by cloth from the English market. Indigo to a small extent is also manufactured.

Vizagapatam has long been celebrated throughout India for its manufactures, in silver, ivory, and buffaloe-horn; ornamental boxes, jewellery and other articles in great variety, being made up in considerable quantities.

Numbers of cooly emigrants to the Mauritius have lately been furnished from this district, and it has long been famed for its hardy race of palanquin bearers, from whence all parts of the presidency are chiefly supplied with these useful servants.

The only Military stations in the collectorate are, Vizagapatam, the residence of the principal civil and military authorities, and Vizianagrum; which is usually occupied by one, and occasionally by two native regiments, with a detachment of Golundauze or native foot artillery.

Description of the station of Vizagapatam is situated on the coast, in north latitude 17° 41", and east longtitude 83° 42", in a small bay, the southern extremity of which is bounded by a remarkable hill, several hundred feet in height, called the "Dolphin's nose;" and its northern extremity by the village of Waltair; the breadth a cross the bay being about six miles; see plan annexed.

Fest. The station consists of a fort, lying in the southwestern part of the bay, being separated from the Dolphin's nose by a small river, which forms a bar, where it enters the sea, but is passable for vessels of from 150 to 200 tons burden, during spring tides. Within the fort are the barracks for the European invalid soldiers, the arsenal, the officers quarters, and various public buildings. The works are at present much out of repair, the rampart on the eastern face being partly undermined by the sea, during the violence

of the north-east monsoon. Immediately outside the fort gate, and in an open space from near to which the pettah commences, is the garrison and European veteran company hospital, an upstair building, which is in every respect well adapted for the accommodation of the sick.

Native town. The native town, immediately adjoins the fort on its north and west sides. It contains many good streets, and numerous well built houses; but is much crowded, from the space on which it stands being shut in by a range of sand hills, between it and the sea on the one side, and an extensive swamp on the other. Beyond the limits of the Regimentallines. town, are the lines of the native regiment stationed here, and further on in a north-easterly direction, the suburb called Waltair, extending about three miles along the coast. In this direction most of the military officers, including the General commanding the division, and staff, and all the civil officers of the station, reside. An excellent carriage road runs from the extreme end of Waltair to the fort, a distance of about four miles. The northern or Waltair side of the cantonment, is elevated considerably above the town, and is consequently thought to be cooler, and there being no space allotted for the houses of the officers of the native regiment, they are consequently much dispersed over the vicinity.

The parade ground on the right of the sepoys lines, is a square piece of ground, on one side of which are the barracks and native hospital. It is bounded on the south by the swamp before mentioned, about nine miles in circumference, and which from having a free communication with the sea is inundated at every tide, thereby preventing offensive effluvia to any great extent. On the north side it is bounded by extensive plantain gardens, in rear of the barracks and hospital, which are considered unhealthy, from the foliage being so thick as to obstruct the free circulation of air; the east side, is partly bounded by the road leading to the town, and partly by a large tank, which contains water throughout

TILIGURATAN to me; as the wind is the village these risking grand, and the principa or the and by the success for the purpose The office de instandiate vice on the higher ground, is hurren, and prince a realist grand, with here and there large Les ampies deper grain, but in low and and productive loan.

and = The barneds and haspital in the same line, at the upper part of th the inner in the centre, and the latter 53 The humais contrin four apartments, co provided for the regimental stores, one as trang, sal the other two, as places of an

The hospital creatists of one long ward, su ills by m elevated open verandah ten fer being partitioned off for a surgery. Th dow; there are also two small ventilated picel are the real, which is sloping and is equile of containing about 50 patient accumulation is insufficient for the sid pickel for their sec.

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## COLTRE EXAMPLE

nance. Interfinitely ortain for two the system of the state and trine and European views stepped alling, which is a coary coper we

tive town, includintely slipics the feet sides. It contains many goal strets, nit house; but is much crowled, from stands being shat in by a map of and the sea on the one sile, and an the other. Beyond the limits of the are the lines of the naive regiment further on in a north-easterly direction. hair, extending about three miles door section most of the military officers, al communiting the division, and staff, from the extreme end of Waltar to of about four miles. The parties te cantonnent, is elevated ensidentity d is consequently thought to be easier, pace allotted for the houses of the efforts st, they are consequently such Esperad

d on the right of the sport face, is a nd, on one ode of which are the hereda It is bounded on the cost by the wel, about size miles in conneces, ing a five communication with the set side thereby preventing desire effects On the mosth sile it is bounded soudine, in rost of the lamach sol has hand animality, from the hiller level e the free conductor of the de car ad by the read leading to the tree, and which consider when the particular 1223.

## VIZAGAPATAM.

the year; on the west is the village of Ullipooram, the dhobies washing ground, and the principal burning ground, or that used by the natives for the purpose of cremation.

The soil in the immediate vicinity of the station, Soil. on the higher ground, is barren, and principally composed of a reddish gravel, with here and there large slabs of a very hard description of gray granite, but in lower situations, it is a rich, and productive loam.

Barracks and The barracks and hospital are both situated on the same line, at the upper part of the parade ground, the former in the centre, and the latter 53 yards to the right. The barracks contain four apartments, one of which is appropriated for the regimental stores, one as the government treasury, and the other two, as places of arms.

The hospital consists of one long ward, surrounded on three sides by an elevated open verandah ten feet broad, the fourth being partitioned off for a surgery. The ward is 101 feet in length by 141 in breadth, it has six doors and ten windows; there are also two small ventilators at the right end, placed near the roof, which is sloping and tiled. The hospital is capable of containing about 50 patients; and when the accommodation is insufficient for the sick, tents are usually pitched for their use.

Juil. The jail, first occupied as such in 1832, was formerly a Dutch factory ; it is situated within the fort in a very confined site. Some time ago (in 1839) an upper story was added for the accommodation of the court, and the ground floor is now used exclusively as the jail. There is a small court on the north-west side, with a row of what must have originally been godowns, but which have been converted into two cells, one for female prisoners, the other is used as the hospital. The dimensions of the cells in the body of the building and under the court house are as follows, one 56 feet by 33, with four windows, two 22 feet by 16, each with one window, and one 32 feet by 22, with two windows. The



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TELEVITATE

JAIL OF VILAGAPA

taking the m

ventilation in all these apartments is insufficient. The dimensions of the female cell and hospital are 20 feet by 16, and 18 feet by 16 respectively, and the ventilation is equally faulty as in the jail.

The diet clothing, hours of labour and nature of work are given in the general statement annexed to the report of this division.

Tables No. 20 and 21, shew the nature and amount of disease and mortality which have occured amongst the inmates from (1833, the period when first occupied) to 1841 inclusive; by which it will be seen that the mortality has been less than in any of the other jails in this division. Amongst the convicts, from an aggregate strength of 1143, the admissions amount to 1109, with only 44 deaths ; or 27:025 and 3:486, respectively, per cent to the strength ; while amongst those waiting for trial only 207 admissions with 21 deaths have occurred from an aggregate strength of 433, the per centage of admissions to strength being 47.916, and of deaths 4.861.

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19, hours of labour and nature of work are al statement searced to the report of the

al 21, then the nature and surrout of factors ch have accured message the insular from when first occupied) to 1841 industry by on that the mortality has been less than in als in this division. Ananyst the carries, e strength of 1143, the aimistices uncent 14 deaths ; or 27-025 and 3-488, respectivestrength; while anongst those waiting for stions with 21 deaths have counsed from ogth of 410, the per centuge of administrat 47-916, and of deaths 4 861.

VIZAGAPATAM.

## JAIL OF VIZAGAPATAM.

No. 20.—Table exhibiting the number of Admissions and Deaths namongst the convicted Prisoners, for a period of nine years, from 1838 to 1841 inclusive.

A COMMENCE	Agg	inegate	atren	gth	De	ath	of D	isi an isi ca isi ca	e.	dmissions ach class.	deaths	centage of	atrength.	centage of athe to sick	
CLASSES. DISEASES.		half.						2d I		otala rom e	Total		lek to	Per e	trea
Carlonan and and	Ad.	Dd.	-	Dd.	Ad	-	Dd.	Ad.		PA	-	-	-	-	-
Ferera Fehris ephemera int. quot remittens com, cont.	66 38 1		77 105 1	1 0.1	1.	102	5	178		250	7	21	-196	2	500
Cholera	1	0	9	3		1	0	9	3	10	3	0	-671	30	-00
Diresses of the Abdo- minal vis- cers	15 18 4	- 10 4	28 30 8	200		87	6	65	9	105	15		.011	34	-563
Diseases of Catarrhus the Lungs Precumulia	10.0	2	340	100	3	7	2	7	1	14		1	-224	21	-425
Do. of the   Epileptia Brain   Paralysis	0		1	00	1	1	0	- 2				0	-2/2	0	-000
Eruptive fe- { Variola	-		11	10	;	42	1	11	1				-181	3	
Anasarea		2	4	1		-1	2	1				0	-437	60	-000
Rheumatiamus.	. 3	1 1	30	1		34	3	34		6	1	5	-500	3	-125
Venereal af- fections System in the second secon				000	1			. 1		0 1	6	1	-300	0	-000
Specific dis- cases					3				-	4 1	5	6	1 -313	40	•000
Diseases of Morbi oculorum		5 (	0 11			0		0 1	1	1 0	7	0	1 -65	0	-000
Do. "Skin " cutis	. 4	5 1	1 41	1	0	43	1	1 4	T	0 5	12	1 1	8 -04	1 1	-068
Other diseases.	. 20	6	1 231	1		905		1 23	1	1 *43	16	2 5	8 -14	1_	0 -458
Total.	. 40	0 2	1 61	1 2	3	493	5 2	1 61	1 2	3 11	0 4	4 9	7 -12	2	8 - 957
	* 01	this	num		ere	Ule	Sec	da		50 57 50					

Total., 317

Per centage of deaths to strength., 3 396

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TREESTATING

## JAIL OF VIZAGAPATAM.

No. 21.— Table exhibiting the number of Admissions and Deaths amongst the Prisoners, under trial, for nine years, from 1833 to 1841 inclusive.

	Ass	regat 4	e stre 82.	ngth	Deat	hs fr	ome an	ach	edited and	deaths chase.	centage of	drength.	stage of	N. T
CLASSES. DISEASES.	Ist I	Half.	2d I	laff.	Ist H	falf.	24.1	Ialf.	in ea	otal m ek	r co	2	1.50	theat
Canoobo, Diobaobo,	Ad.	Dd.	Ad,	Dd.	Ad.	D4.	Ad.	Dd.	P B	E ou	Por	slo	21	ő
Fevers Febris ephemera intermit quot remittens com. cont	.3	0	1020	0		2	17	0	23	2	7	-638		-060
Cholern	3	2	0	0	3	2	0	0	-3	2	0	-604	65	-065
Diseases of the abdo- minal vis- cera		0100	2500		13	3	7	3	20	4	4	-639	3)	-000
Diseases of Asthma. the Lungs Asthma pulmo- nallis.	0 0	0	1	0 1	} •	0	\$	1	4	1	0	-452	50	-000
Diseases of ( Paralysis the Brain. ( Amoutia	0		13	1 0	1 2	0	4	1	6	1	1	-358	15	-055
Eruptive fe- { Variela	1 18	10	33	1	1 19	1	6	1	25	2	5	787	8	-000
Anasarca	0	0	-1	1	0	0	1	1	1	1	0	-231	100	-000
Rheumatismus.	3	0	5	0	3	0	5	0	8	0	1	-\$51	0	-000
Syphillis primi- tiva	2	0	1	0	2	0	1	0	3	0	0	-694	0	-000
Specific dis. ( Atrophia	8 1	10	36	24	1 0	1	9	6	15	7	4	-165	38	-885
Diseases of Morbi cutis	26	0	18	0	26	0	18	0	44	0	10	-185	0	-030
Other discases	23	0	19	1	25	0	19	. 1	*64	1	10	-185	2	-272
Total	118	7	-89	14	US vere Pl	7	80	14	207	21	47	-\$16	10	-144

Per centage of deaths to strength 4 861.

DIRVIC DIRUCE

LIL OF VIZAGAPATAM

## VIZAGAPATAM.

65

No. 22. — Table exhibiting the number of Admissions and Deaths umongst the Native Troops at Vizagapatam, from 1829 to 1841; exclusive of the 1st half yearly period of 1831, 1832, and 1841, and the 2d half year of 1831.

VE VIZAC			the 3	<i>id</i>	nai	f ye	ar oj	1 10	501.							
Alloing the number of Administration and Decks making the number of Administration and Decks making.				7.3		-	_	disea	se.		dimissions web class.	deaths	centage of	Wrengha	Per centage of deaths to sick	eated.
medicine. Stars, from 1523 to 24	CLASSES.	DISEASES.	Ist H		_	Dd.	Ad.		Ad.		Total.	from	Per e	SICK W	Per e	8
All report to re	Paran	Febrisephemera intermit quot. restians remittens eom. cont	101 218 12 5 21	0 6 0 1 0	356 614 46 3 45	10001	357	7	1065	9	1422	16	19	-126	1.	125
A REAL AND A REAL AND A		Cholera	19 19	13	22 33	10	19	12	22	10	41	22	0	-560	53	658
	Diseases of the Abdo- minal vis- cers.	Splenitis	20 8 17 0	4100	50 11 37 3	5000	0		134	5				773 -136		12
		deparitis	7 28	1	3	1	1		3		10			130	20	-
	Diseases of, the Lungs	Asthma	137	0	19 1 8 25	2 1 1 0	} 48	2	70	5	118	7	1	-612	5	-93
	the Drain.	Apoplexia Epilepsia Paralysis Mania Mania Hydrophobia	100000000	1010110	5170 10 m 1	0000	} "		26	•	33		0	-491	25	•00
1	Eruptive fe-	Varioella Babeola	4 30 1	000		0	} 33	0	12	0	47	0	0	-612	0	-01
1111111111	Dropsies	Anasarca	78	2 2	4		\$ 10		6	0	16	10	0	-218	63	-51
		Rheumatismus	179	2	\$17	2	175	2	277	1	456	1	8	-219	0	-80
a de la composition de la comp	Venereal af- fections	tiva consecutiva. Genorrhesa. Hernia humo- ralis. Strictura ure- thra.	83 9 30 91	0	34 85	0	1		177	2	325	2	4	-439	0	·61
	Spoeifie dis- estos	Dracuneulus Atrophia. Scorbutus. Serophula. Beriberi. Lepra.	217 0 4 5 1	0	1821	02	2	0 1	28		56		0	-793	13	7
1 dia mana amin'ny fisiana amin'ny fisiana 1 dia mana amin'ny fisiana amin'ny fisiana 1 manga amin'ny fisiana amin'ny fisiana	Diseases of the eye	Morbi oculorun	19		71		1	0	71	1	92	0	1	-270	0	-0
Long State	Do, " Skin.	" Cetis	176		191	1	17	6 (	191	1	36	1 0	5	-013	0	-0
March 1	and the second se	Other diseases.	329	1 1	570	0 0	32		1 570		100+30	1 3	1.00	-281		.7

Of this number were Phlogosis 240 and 1 death. Ultras...317 Fer centage of deaths to strength 1 325. I

66

No. 23Table exh	ibiting the number of	admissions and deaths amongst
the veteran in the	Carnalic European	Veteran Battalion from 1820
to 1841	inclusiveStationed	l at Vizagapatam.

	IL A BULL	Agge	regati	o atre 137.1	ngth	Dea	mbad the fr	NOTE OF	ach	mitwions ch class.	deaths chase.	centage of to strength.	centage of hs to sick reated.
CLASSES.	DISEASES.	lat 1	Inif.	211	lalf.	1st 1	alf.	2d	Half	Totalada from eac	11.2	22	Per cental deaths to treated
	State of the second	Ad.	Dd.	Ad.	Dd.	Ad.	D.L.	Ad.	Dd.	10 L	Tom	23	55
Fevers	Febrisephemera intermittens remittens continua	20 39 12 10	0 = 0 =	2534 5	1 0 1 1	} 81	4	75	3	154	7	5 -91	4 -543
	Cholera	10	7	13	8	10	7	12	8	23	15	0.78	65 -217
Discases of the abdo- minal vis- cera	Diarrhee. Dysenteria acu- ta et chronica. Obstipatio Dyspeptia. Hormorrhois Splenitis.	29 130 2 211 44 3	4 230970	25 90 8 267 31 4	0 210790	} 419	38	426	30	845	68	28 -77I	8 -023
	Repatitis	49	-	65	- 4	49	2	66	4	115	6	3 -91	5 -217
Diseases of the Lungs & Heart	Catarrhus Asthma. Phthisis pulmo- nalis. Pneumonis Dyspore	11 13 4 10 7	2 2 4 1 0	941 288	05 810	} 45	9	71	8	1:6	17	3 -50	14 -657
Discases of the Brain.	Apoplexia. Epilepsia. Paralysis. Delirium trem. Ebrietas. Amentia. Mania. Hydrophobia.	10 37 152 0 20	*0309000	47 20 92 92 92	13 9 1 0 0 1	} 245	91	184	25	409	45	13 -92	11 -#18
Erupitive fe-	Variola Erysipelas	1	0	12	0	3 2	0	3	0	4		0 -13	0 -000
Dropales	Anasarea Ascites	11	20	11 13	25	} 15	2	24	7	39	9	1 -02	23 -076
	Rheumat.acutus et chronicus	120	2	119	3	120	2	119	4	230	5	8 13	2 -091
Venereal af- fections	Syphilis primi- tiva	17 57 8 5	1 0 0 0	13 35 7 7	100 0	80	1	66	1	255	2	5 -277	1 3290
Specific dis-	Dracunculus Atrophia Scorbutus Beriberi Lepra	1 3 12 0	01050	0 14 1 30 1	03070	23	6	46	10	6	16	2 -345	13 -188
Diseases of the eye i	Morbi oculorum	8	0	8	0	8	0	8	0	16	0	0 -544	0 -000
Do, a Skin.	Cutis	11	0	22	0	11	0	21	0	33	0	1 182	0 -000
	Other diseases	297	4	224	2	287	4	204	2	511	6	17 -338	
	Total	1383	96	1315	101	1383	96	1345	201	2728	197	92 -812	7 .221

Per centage of deaths to strongth 6-707.

TERNETTY.

54 The surrounding country under exititution, and the soil is a deep, alloring. The crops mised are chiefly rid not of the other ordinary productions of th the bal

non tolerable state of repair. The r are estellent, being hopt up by private for

the. The dinate is generally one succes of the year, are less so that Educe of six miles in a northerly direct maps of hills, canneted with the cash the visitivy of these, haven in always very was formed, around with tares, but a bring only a few detached putches of star

The cinese into September till Mar The second secon and and a sub- of and content dering these bandles. The entertaining of considere of the court, being visible in

## VIZIANAGRUM.

67

NATURAL DISTANCE

50.41010

## CANTONMENT OF VIZIANAGRUM.

Description of Vizianagrum is situated in north latitude 18° 2", and east longitude 83° 32"; being 12 miles distant from the sea. The garrison at present consists of one regiment of native infantry, and a detachment of foot artillery.

At the distance of one mile from the cantonment, which is placed on ground sloping gently to the northward, are the fort and village of Vizianagrum, and lying between them a large tank which contains water at all seasons of the year. The inhabitants of the village are chiefly weavers and cultivators of land; and the fort is entirely occupied by the palace, and buildings of the Rajah. The station contains about 26 officers' houses, the most of which are tiled; but some are roofed with the cadjan leaf, and are in a Reads. tolerable state of repair. The roads in the vicinity are excellent, being kept up by private funds.

Solt The surrounding country is almost entirely under cultivation, and the soil is a deep, and very productive alluvium. The crops raised are chiefly rice and cooltie, but most of the other ordinary productions of the country, are also to be had.

Climate. The climate is generally salubrious, though some seasons of the year, are less so than others. At the distance of six miles in a northerly direction rise numerous ranges of hills, connected with the eastern ghauts, and in the vicinity of these, fever is always very prevalent. They were formerly covered with trees, but are now bare, there being only a few detached patches of stunted underwood to be seen.

The climate from September till March, enjoys a high reputation for salubrity, so much so, as to tempt the European residents from Waltair and Vizagapatam, to remove hither during these months. The enervating effects of the humid atmosphere of the coast, being visible in the pallid looks of

THUS LEARN

persons on first arrival from thence. A short residence however at Vizianagrum produces a marked change, particularly observable in the rapidly improved appearance which takes place in children. In the month of April the weather becomes warm, and towards the middle of the month, the hot land winds commence ; the thermometer sometimes standing at 100° during the whole 24 hours, and at night seldom falling below 96°, when it is both oppressive and exhausting. Towards the end of the month of May rain falls, which cools the air, and early in June, after considerable atmospheric changes, the monsoon sets in, when it becomes cool, although the nights are occasionally warm. A good deal of rain falls in September and October, and towards the end of the latter month, cold northerly winds commence. The weather during the remainder of the year, is cold and to some persons disagreeably so.

Barracks and The barracks or places of arms, are immediately in front of the parade ground, facing to the south, and running east and west. The officers quarters are situated on the west side of the barrack, and immediately behind them, on the north, are the sepoys lines. On the east, and in a line with the barracks, is the hospital, a large and well constructed building, surrounded by a verandah 10 feet broad, capable of containing 60 patients; it consists of two wards, which are placed at right angles to one another, the larger is 78 feet in length, and 18 in breadth, and is calculated for 40 patients, the smaller is 36 feet in length, and 18 in breadth, and is adapted for 20 patients; at the corners, there are four verandah rooms, which are used as the surgery, store rooms and baths. The hospital is raised six feet above the ground, and is entered by a flight of seven steps, at three different places. It is built of brick and chunam and tiled, and is in perfect repair. From the numerous doors and windows, and the elevated position of the hospital. the ventilation is perfect. A wall seven feet high, at the distance of 48 yards surrounds it, and in the east and west corners of the enclosure, are the cook room and necessary.

CONTROL REPRESE wind for these A day related and a pade is such of surger a far nyidij inporte spirate nid adrea. In the meth of Ayril to reader ad securits the middle of the math, for her ence; the thermometer sometimes station whole 28 brun, and so make solice thing it is both opposite and ethnology I the much of May ain fails, which are is the the, after considerable atmospheric charges, in, when it becomes coal, although the onally warn. A good deal of minially d October, and towards the end of the northerly winds commence. The weather oler of the year, is cold and to non-7 80.

burracks or places of urns, are innerfacely rule ground, ficing to the south, and russt. The officers quieters are situated on e harnek, and immediately behind then, the separs lines. On the east, and is nerrocks, is the hospital, a large and well ng, surrounded by a versable 19 fet f containing 60 patients; it ensuits of re placed at right angles to use motion, es in length, and 18 in breakh, and a paonto, the smaller is \$6 feet in length, and is adopted for 20 patients; it for for results room, which as not crome and boths. The hopful is miss month, and is calored by a fight eleman forest phone. It is built of box as ad is in period repair. From the summa and the elevated position of the larged, when I will some feel held a de arread & and is the real real where we the real rule and surger

## VIZIANAGRUM.

69

io. 24.—Table exhibiting the number of Admissions and Deaths amongst the Native Troops stationed at Vizianagrum, from 1829 to 1840, exclusive of 1830 and 1831.

and the second second second		_	_		_		_	-		-		-	-	-	_
		Aggr	egate 110	atres	gth	Adm Death class	s fro	n ea n ea	ch	admissions each class.	al deaths each class.		strength	centage of	od.
		Ist B	latt.	24.11	alf.	Ist H.	uif.	2d 1	falf.	3.0		3	2	85	1
CLASSES.	DISEASES.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Tota	Tota from .	Pler	N1CK	Peer	15
1	Febrisephemera	346	-1	802	0	1									
1	tertian	1661	19	2360	17	\$ 2143	40	3434	83	5583	73	42	-773		: 307
Wevers	remittens.	21 89	-7	139	10	1						1			-
(	., com. cont.	9	8	33	ő	1									
	Cholers	72	: 29	72	29	72	- 29	72	- 29	144	08	1	·108	40	-277
	Diarrhosa	54	4	64	0	1		12.			2				
the second s	Dysenteria acu-			140	10										
Diseases of the Abdo-	ta et chronica. Otatipatio	89	6	87	10	\$ 277	15	440	12	717	27	5	.452	3	.765
minal vis- 5	Dyspepsis	103	3	190							1.44				
0072	Hormorpheis Spienitis	1	0	0	0										
0	Bepatitis	5	1	13	3	5	1	38	3	18	4	0	-137	22	-218
	Cataryhus	31	1	35	1										
	Asthmatter	19	2	55	ź										
Diseases of the Lungs	Phihisis pulino- nalls		3	6	3	> 57	.9	111	7	168	16	1	-217	.9	-523
	Preumonia	6	3	2	1 0					1.000					
U	Dyspace	-3	0	15	- 1	1	2.0	100	12.0	1.000					
6	Apoplexia	0	0		3	1	1	e de la	10	-					
Do. of the	Epilepaia.	4	0	2	0										
APPENDING THE PARTY OF	Amendia	0	0	8	0		3	24	5	39	8	0	·218	39	-512
	Manla Tetanus	6		8	0	100					10.				
						1									
Eruptive fe-	Variola. Varicella.	18	0		0	1									
VERSIONS A	ETTEIOCIAN, MARK	6	0	8	0		.0	27	0	144	0	1	-103	.0	-(0)
	Rubrola	4	0	2	0	1									
Dropcies	Anasarea	2	0		0	1 13	2	7	2	20	4	0	-158	-	-000
mahunu S	Ascites	4	2	2	2	9. 40		10		-	1.80		-	~	
	Rheumat. acu-	1.1.1.1				1.0									
	tus et chronicus.	453	2	591	13	453	2	591	13	1047	15	8	-001	1	-438
1	Syphilis priss	111	1	140	8	1					11				
Wenereal af-	Genorrhea	0	0	65	0	12									
lechone	Hernia humor	25	0		0	> 185	1	246	- 4	432	5	3	-309	1	-155
	Strictura ure-								100						
	thrae	3	0		1	,			100						
	Dracunculus	6	0		0	1		10.0	100	10.00	11				
Specific dis-	Atrophia Beriberi	100	18	21	33	5 165	20	325	40	400	60	3	-593	12	750
	Lepra. Scrophula	1	0	1	0	1									
			0	1 *	0	1				-					
Diseases of i the eye i	Morbi centerum	58	0	103	1	58	0	103	1	161	1	1	-253	0	-601
				1.5			1.00	1.14	1						
				340	1	416	0	312	1	758	1	5	-807	0	-131
Do. "Skin	cutis	416	1 1											10.00	
	., eutis Other diseases.	945		1075		945	3		6	+7021	9	15	-463		
		945	3	1	0	945		1075							-443

Fer centage of deaths to strongth., 2 152,

## GANJAM DISTRICT.

General descrip-tion of the dis-trict. This extensive district, which is the most northern part of the Madras territories, stretches along the sea coast, in a north-easterly direction, from the Vizagapatam collectorate, to the Chilka lake; a part of the Goomsoor Rajah's country intervening between it and the Mahanuddy river, which separates the Madras presidency from the province of Cuttack, in Bengal. It lies between 18°15", and 20° 15" of north latitude, and is of very irregular breadth, varying from 10 to 15 miles in some parts, where the ghauts approach near to the coast, to from 40 to 60 miles, in other situations, where they recede more inland.

The general appearance of the country is not very dissimilar to that of the northern portion of the Vizagapatam district already described, the ghauts however approach nearer to the sea than in that district, although throughout the entire line of coast, an extensive, fertile, alluvial plain free from hills of any considerable height, extends from it to the ghauts.

The country lying between the coast and Population and Extent. the ghauts, is estimated to contain 6,400 square miles, with a population of 4,38,174 souls. It is extremely fertile, and produces larger quantities of rice, and other grains, and also sugar cane and cotton ; besides which a variety of articles of hill produce are to be met with, such as gums, wax, arrow root and native dyes, which are exported in considerable quantities-Ganjam has long been known for its sugar of an excellent quality ; Berhampore silks were formerly prized ; and Chicacole is still justly celebrated for its fine muslins.

There are no rivers of any importance in the Rivers and Water. district, though various small streams, chiefly

SUSTAN DISTRICT. ef die chemeter of monstein secretality simp and op is the last second for th na : the Garjan and Chirache sivers bed tion: tails and reliance every where to rear's grantly of good quility, and we minutes, and for locarsic purposes. The Chillin lake may be co torin last rain to ailes in length, by al or the arch-west sile of which, the chul tions airsply territories ; and on its his's separated from the sea by a long nearly a mile in breadth.

The entrance through this bank from the of Municipatan on the northern side, is ab da nile vile, the ferry is however unsafe and specially during the north-cast mons his usually prefer the circuitous route borders of the lake.

This estensive sheet of water is diver beneficily wooled islands, which abound before Gamian became so unhealthy as to ( while descried, was the frequent resort of from other stations, during the hot months hease hiring been specied on its margin. nas The production read for ants, was through the entire length of the to the cost, and size general within a shoet and more The call and military station

Belanpon, Bassil-condal ad ladapon; Garjan from which it hering here steepledy descred since the milipan optimie institute out, shitti popution of its inhalitants, both Europe and in consequence of which, the courts an Witness, was reasoned from threase to t

## GANJAM DISTRICT.

of the character of mountain torrents, which become completely dried up in the hot season, flow from the hills to the sea : the Ganjam and Chicacole rivers being the largest of these; tanks and wells are every where to be met with, and water is generally of good quality, and well adapted both for cultivation, and for domestic purposes.

Lake. The Chilka lake may be considered as an extensive back water 35 miles in length, by about 8 in breadth, on the north-west side of which, the chain of the eastern ghauts abruptly terminates ; and on its western side the lake is separated from the sea by a long neck of sand, of nearly a mile in breadth.

The entrance through this bank from the sea, at the village of Manickpatam on the northern side, is about three quarters of a mile wide, the ferry is however unsafe at particular seasons, especially during the north-east monsoon, when travellers usually prefer the circuitous route along the western borders of the lake.

This extensive sheet of water is diversified by several beautifully wooded islands, which abound with game ; and before Ganjam became so unhealthy as to occasion its being wholly deserted, was the frequent resort of European visitors from other stations, during the hot months, some excellent houses having been erected on its margin.

Roads. The great northern road from Madras to Calcutta, runs through the entire length of the district, parallel to the coast, and is in general within a short distance of it.

Chiaf Stations The civil and military stations are, Chicacole, Berhampore, Russel-condah, Aska, Kimmedy and Itchapore; Ganjam from which it derives its name, having been completely deserted since the year 1815, when a malignant epidemic fever broke out, which carried off a large porportion of its inhabitants, both Europeans and natives, and in consequence of which, the courts and other civil establishments, were removed from thence to Chicacole.

MIAM DISTRICT.

NUTRI EXERCISION

evenire district, vitch is the test a part of the Malera territories, statutes in a meth-enterly direction, from the case, to the Childra lake; a part of the country intervening between it and the which separates the Matras positions Cuttack, in Bengal. It lies between of north latitude, and is if very implier n 10 to 15 miles in some puro, where near to the coast, to from they thunks, here they recede more inland.

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country bring between the coast and its, is estimated to contain 6,600 space ion of 4, 8,174 scale. It is estimate we larger quantities of size, and other par case and estion ; besiles which a Lill produce are to be not with rad rest and more dyes, which are expende vier-Ganjan has long bees lover for in subly; Berhampsee alle ver ferreit to it will justly eclebered for it for e are an times along information in the

they's mine and some hid

## CHICACOLE.

Description of the station. Chicacole lies about four miles from the sea in a direct line, on the north bank of the Nagglawdy river, which divides the village into two nearly equal parts, being distant 44 miles north-east of Vizianagrum, and 115 south-west of Berhampore. On the north, east and west, it is surrounded by large tracts of rice cultivation, and extensive plains of cotton ground, which are partially watered by channels from the river.

The face of the country on the opposite bank of the river, is of a dry ferruginous nature, and not so well adapted for cultivation as that on the cantonment side ; and there are no hills of any magnitude nearer than from 12 or 15 miles.

Native town. Chicacole, which lies south of the old fort, is built in a straggling manner, and like native towns in general, the streets are narrow, confined and dirty, and from the flatness of the ground, and surrounding country, they are frequently almost impassable after heavy rain, in consequence of which, the houses are all raised from two to four feet, in order to secure dry flooring ; the houses are usually built of mud, and thatched, but many also are tiled, and some few have terraced roofs. Wells are numerous, but the water in all is brackish, except in one from which the European inhabitants derive their supply; the sepoys and inhabitants of the town use the river water, which is considered good for culinary purposes.

The river has its source in the hills, near The Chicacole river or Nag-glawdy. Polcondah, and in its bed are numerous rocks, of granitic formation ; when full from bank to bank, it is about a quarter of a mile in breadth in some parts, and as much as half a mile in others; the stream is very rapid during the rains, and the natives float down timber, and bamboos by it for building purposes. Both its bed and banks are

GRUTTE high corporal of suid, in which then point and. There are but re the second size mining of the same, but serv the maninus or to be fored within the ज्या थे कोर्टने पर दारराजी कोर्टने रागते राष्ट्रायो by more, when they are almost dried up,

surge of militia The people of the year when exhibitions at, i das de terminitas of the most the true and agues precisil. The clima addition; for number of the inhabitan a sity thousand, the arrange number of house, raying from five to fifteen.

During the cold months of the year, fogs a in the mernings and evening. winds from April to September, the from such-est, and fram October to March, fra muth-east; the latter is cold, and that fro coming from the sea and along the bed of with it much fase and which accumulates . these the town; it such an extent in some s old Minmedia mosque has become mearly o

matternes Gauss doths and musilins are e mershetun, fie latter of a very supe tilly writed, ar to be not with in all the r on the country.

The regardler constrainly in use are in ad its lange is well formabled with mative himes or anidered shills, through very with European nations ; and there is a class ting ion los in tills, lossy, loss test, The rade are of the work the exception of one, which has basely been empires early those in the arighbour

## CHICACOLE.

COULD EFFERRE

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viver has its source in the bills, and tah, and in its bed are namena roba ni nha fal fan hat a hat i a a mile in breath in some parts and a the in colores; the stream is very mail ad the paires find down inder million ting purposes. Both is tel adjusting

## CHICACOLE.

chiefly composed of sand, in which there are numerous quick sands. There are but very few tanks in Tanks. the immediate vicinity of the town, but several of considerable magnitude are to be found within five or six miles, many of which are covered with rank vegetation, and in the dry season, when they are almost dried up, are productive sources of malaria.

The periods of the year when exhalations are most abundant, is after the termination of the monsoon, at which time fevers and agues prevail. The climate of Chicacole is salubrious; the number of the inhabitants is computed at fifty thousand, the average number of inmates in each house, varying from five to fifteen.

During the cold months of the year, fogs are common both Climate. in the mornings and evening. The prevailing winds from April to September, are from the south and south-east, and from October to March, from the north and north-east; the latter is cold, and that from the south-east, coming from the sea and along the bed of the river, brings with it much fine sand which accumulates in large mounds about the town ; to such an extent in some situations, that an old Mahomedan mosque has become nearly covered with it.

ManufactureRe. Coarse cloths and muslins are the only articles of manufacture, the latter of a very superior texture and richly worked, are to be met with in all the markets throughout the country.

The vegetables commonly in use are in great abundance ; and the bazaar is well furnished with native medicines. The hakeems are considered skilful, though very little acquainted with European medicine ; and there is a class of persons, who bring down from the hills, honey, bees wax, and dammer.

Roads. The roads are of the worst description, with the exception of one, which has lately been laid down with ferruginous earth; those in the neighbourhood, are generally

sandy, and no labour is expended on them for repairs. The jail prisoners have been occasionally employed digging drains in the town.

Many of the better class of natives sleep on cots, with coir bedding or mats, but the poor lie on the ground, either on mats or cumblies; and their clothing is scanty and indifferent.

The fuel chiefly used is cow dung formed into cakes, and dried in the sun, for firewood though plentiful, is beyond the means of the poor.

The necessaries of life in favourable seasons are in great abundance, and cheap-the average price of the ordinary rice, being about one rupee for forty seers. Raggee is very cheap, and also much used, being eaten like porridge.

Employments. Many of the inhabitants are employed in weaving cotton cloth and muslin, the work being carried on in the open air; and the remainder are cultivators.

There are several native schools in the town, and one supported by voluntary contributions, in which the English language is taught.

There has heretofore been no poor house, or place of reception for vagrants or destitute persons, but a society has lately been formed for their relief.

Breed of Cattle. The breed of cattle is diminutive, and the pasturage, throughout a considerable part of the year, exceedingly scanty; at the commencement of the monsoon, numbers die of purging, produced by the sudden change from dry to green food.

Public buildings. The barracks, hospital, magazine, stores, and also the residence of the commanding officer, the adjutant and the medical officer, are all situated within the walls of an old mud fort, which is in a ruinous condition. The ditch though partly filled up, can still be traced, and in many places conmade open space, called the purple a and first being without the fact, at the ne mak in the such see, direction ; the The heaping which is intended both for th ad ngalaty halt regioner, milde gerriere details, stands much Banfittelly lage and roomy to no dea, to spool amony - 1 sparate nit dike garian, make small gourd room. tak si the building is a wall belonging to presises ranning parallel with it, by which tim d'ut in the direction, is somewhat pro

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tains pools of stagnant water. The buildings enumerated, surround an open space, called the parade ground; the regimental lines being without the fort, at the distance of about 100 yards, in the south-west direction; they are open, airy and regularly built.

The hospital which is intended both for the sick of a native regiment, and the garrison details, stands on elevated dry ground. It is sufficiently large and roomy to admit of a double row of cots, has a good surgery, —a separate apartment for the sick of the garrison, and a small guard room in front. —At the back of the building is a wall belonging to some adjoining premises running parallel with it, by which the free circulation of air in that direction, is somewhat prevented.

The jail is situated near the river, about half a mile from the cantonment; it is a substantial building, but the walls are rather low, not being more than nine feet high; it is divided into several courts, for the various classes of prisoners, and altogether consists of ten cells; their average dimensions being 54 feet by 18, and 8 feet high, with six windows and two doors to each; the whole is considered to be well ventilated, and there is an ample supply of good water on the premises. The hospital is 50 feet by 15 and ten feet in height, and is also well ventilated. See the statement at the end of the report for diet, clothing, labour &c.

This jail was closed in December 1839, and the prisoners removed to Vizagapatam; but it is deemed proper to give here the usual tables of disease for the ten years from 1829 to 1838 inclusive. In table No. 27 are exhibited the annual admissions and deaths, from six of the principal diseases, viz. *fever, cholera, diarrhæa, dysentery, anasarca and beriberi*; the per centage is also given for the purpose of contrasting the state of the health of the prisoners in this jail, with that of the others in the division. It will be observed that the number of deaths from these six diseases amounts to 175, or 7-8ths of the whole mortality, the total deaths being 201.

## JAIL OF CHICACOLE.

No. 25.—Table exhibiting the number of Admissions and Deaths of the convicted Prisoners, from each class of disease for 10 years.

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	Agg	regal	testn 973,	regth	Deal	missi the fi s of L	DEE (	each	denisation officers	deaths ch class		o strengty		this to sick
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Fevers	163		230	1 0	1 178	6	241	3	419	9	25	-914	-	-117
Cholera	1	12.3		0	18	12	16	п	35	23		-		-714
Diseases of Diarrhosa	25			4	11.12	-		1		23	1	- 40.	1	-114
minal vis-	20	50		90		8	73	13	128	21	2	-650	15	-406
Hepatitis acata.	9	0	1	0	0	0	1	0	1	0	0	-669	0	-000
Diseases of Catarrhus the Lungs Pneumonia	2	0000		000		0	2	0	8	0	0	-178	0	-000
Siseases of Epilepsia the Brain Amentia Mania	6	0000	6	0000	1 2	0	4	0	16		0	-956	0	-000
vers {Variola vers {Varicella Eryipelan	14 23 -0	300	111	100	3 37	3	3	1	40		2	-290	10	-000
Rheumai.acutus et chronicus	82	1	70	0	82	-	70	0	152	1	9	-065	0	-657
Syphillis primi- tiva	4	0	5	0	. 4	0	5	0	.9	0	0	-537	0	-909
estes	15303	0 12 10 1	New 24	4 16 0 1	61	14	65	21	130	33		-770	26	-923
the eye Morbi ceulorum	4	1	6	2	4	1	6	1	30	2	0	-597	20	-000
o "Sikn "eutis…	41	0	38	0	41	0	28		79	0	4	722	0	-000
Other diseases	205	1	118	0	206	1	188	0	394	2	23	-50.0	-	253
Total	705	46	716	50	205	46	716	5013	1221	98	84 .	\$37	6	755

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3 5 5 5				1					Catarrhus	1	1	1		1	1	1	0	2	1	0	-198	50	-000
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	Table No. 27 Jail of Chicacole.	Peret Cholera Diarrhea Diarrhea Anasarta	Admissions and deaths from these diseases.	Total admissions an deatha	Strength each year	Fever Choltera. Discribes Discribes Anasarca. Betilseri	Admissions and deaths from these diseases.	Total admissions at deaths	Strength each year	Admissions and deaths amongst both classes of prisoners	Total strength each ye	Per centage of deaths strength	Per centage of sick strength	Per centage of deaths sick treated	The No.

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CHICACOLE.

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STRUCTURE REALFYER

o. 28.—Table exhibiting the number of Admissions and Deaths mongst the Native Troops at Chicacole, from 1830 to 1841; excluwe of the years 1832 and 1834, and the 2d half of 1833 and 1840.

		Aggt	egate 607	atres 0,	igth	De	ath	i free	n eac	:h 0.	admissions each class.	al deaths cach class.	centage of	strength.	centage of athe to sick	1
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	and the second se	Ad.	Dd.	Ad.	D4.	A	4.	Da.	Ad.	Da.	10-1	-	-	-	-	
Perezs	Febris ophemera int. quot tertian remittens com. cont.	302 1196 33 53 11	10001	493 426 22 11 7	000000		597	15	909	14	2556	32	42	108	1	251
	Cholera	24	30	32	21		24	10	32	21	56	31	0	-528	55	-357
Diseases of the Abdo- minal vis- cers.	Diarrhona Dysenteria. Obstipatio Dyspepsia Hormorrhois	581834	0	59 40 125 3	16010	1	147	~	157	8	404	11	6	.655	8	722
	Bepatitis	3		5	0		3	0	3	-		0	0	-131	0	.000
Diseases of the Lungs	Cataryhus. Asthma. Phthisis pulmo- nalis. Pneumonia.	12 3 3 3	0	10 03	0 2 0 0	1	29	2	19		48	4	0	-750	8	-333
Do. of the Brain	Apoplexia. Epilepsia. Paralysia. Mania. Tetanus.		0		000	IJ	30	1	15	- 23	85	3	0	-576	8	571
Eruptive fe-	. Usalaha	11	0	1	0000		50	3	3	•	58	3	0	873	5	-660
Deopsies	Anasarea	1		5	1	1	7	4	6	1	13	6	0	-214	45	-153
	Rheumatismus,	1000	1	240	7		256	1	240	7	496	8	8	-171	1	.613
Venereal af-	Syphilis prim., ,, Consecutiva Gonzerhosa, Hernia humor., Strictura ure- thrae.			14			61	0	66	2	130	2	3	-141	1	538
Specific dis- eases	Dracunculus Atrophia. Scorbutus Scrophula Beriberi. Lepra.	1	-	0 20 0		1	85	9	198	14	285	23	4	m		-041
Diresses of the eye	Morbi oculorem	1 8	8	0 24			28	0	24		28	0	0	-856	0	-600
Do Skir		1.00	8	0 156		0	198	0	150		307	0		-851	0	
	Other diseases	. 50	2	3 45	5 1	s	531	1	458	1	+989		16	-293	-	
	Total.	300	0 5	4 243	7	1	3052	5	2433	1	5463	133	90	- 339	2	-189

\* Of this number were Phlogosis 699 and 1 death. Ulcus...110 Per centage of deaths to strength 2:156.

### BERHAMPORE.

General description. The station of Berhampore lies 150 miles north

of Chicacole, and has been occupied by a native regiment for about 29 years past, having been selected in consequence of the malignant epidemic fever, which broke out about that time, at the neighbouring station of Ganjam, 17 miles to the north of it, and which, was in consequence wholly abandoned, both as a civil and military station. It is in north latitude 19°, 20" and east longitude 84°, 50", and is placed on a rocky ledge of ground, surrounded by an extensive cultivated plain, bounded by a range of hills, on the west and north at the distance of from five to ten miles, and open to the south and east.

Hills. The western hills are of considerable altitude, and covered with c. usnwood, and bamboo jungle to their summits, forming a bold continuous outline ; those to the north, being undulating, and less elevated. About six miles to the eastward is the sea coast, towards which the plain gradually slpoes ; an extensive bank of sand hills, though of inconsiderable height, running along the shore.

Nullahy. There is no river in the vicinity of Berhampore, but there are several nullahs, which are quite dry except during the monsoon, when they become rapid streams, conveying the rain from the western hills, to the Ganjam river. The plain is studded with numerous small tanks, though little is done in the way of irrigation, the crops being allowed to depend upon the rains for the necessary supply of moisture.

The great northern road from Madras to Calcutta, passes close by the western end of the cantonment, and is in excellent order in the vicinity.

Climate. The south-west monsoon sets in at the beginning of June, and continues till September, when it is succeeded is the free the personal which security The course is more leadedly and bracking. ent al October. and maine constitutions, than most others . Knumber, December, Jamany and Febru much, the sit being clear, and the simes herry dens a right. The thermanster al tim we to the The lot season comment e Merk, us contross throughout April a witch period strong synchestly winds press the adjusticality period of the year, when nation prevail. The thermometer them rail 90°; ile writer is also very saltry and op the shores, at the commencement of the ra

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The sol of the contournent is 10 here imposed granitic rocks rising through al directions, especially towards the ad which is the most elevated part, the ave range being from 40 to 50 feet above the bouring plan.

A platful supply of good spring w timuphon the year, in walls of from 10 to

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The officers increase through built of more recies, and thereined, are comformable down adjud To be respect, in which i menutar becerta, in the parale group are needs, tagaines, taining calls, the nd regimenal lines. The magazine is a b

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BERHAMPORE

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of it, and which, was in consequence which

n a civil and military station. It is in auti-

### RERHAMPORE.

by that from the north-east, which usually terminates by the end of October.

The climate is more healthy and bracing, both to European and native constitutions, than most others in southern India. November, December, January and February are delightful months, the sky being clear, and the atmosphere cool, with heavy dews at night. The thermometer at this time ranges from 50° to 75.° The hot season commences about the end of March, and continues throughout April and May, during which period strong southerly winds prevail, and constitute the only unhealthy portion of the year, when fevers and rheumatism prevail. The thermometer then ranges from 75° to 90° ; the weather is also very sultry and oppressive, between the showers, at the commencement of the rains.

Soil. The soil of the cantonment is dry and gravelly, large heaps of granitic rocks rising through the surface in all directions, especially towards the north-eastern point, which is the most elevated part, the average height of the range being from 40 to 50 feet above the level of the neighbouring plain.

A plentiful supply of good spring water is obtainable throughout the year, in wells of from 10 to 12 feet deep.

Vegetable pro-The vegetable products of the country are rice and a variety of other grains, sugar cane, gram, and oil seeds. The principal trees are the banian, mango, Animals. cushoo-nut and the neem. Of wild animals there are bears in considerable numbers, chetahs, tiger-cats, hyenas, jackalls, hares, &c.

The officers houses though built of mud, plastered over wattles, and thatched, are comfortable dwellings, and particularly cool. To the westward, in which direction the level somewhat descends, are the parade ground, places of arms, store rooms, magazine, solitary cells, staff serjeants quarters, and regimental lines. The magazine is a bombproof building L

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## and east longitude 84°, 50°, and is placed of ground, surrounded by an extensive unded by a range of kills, on the west and e of from five to ten miles, and open to the west-y hills are of considentile shirale, and bankes jurgle to this

a bold continuous outline ; these to the ting, and less elevated. About six tiles the sea coast, towards which the plan a extensive bank of sand hills, though of is, running along the shore.

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and all Systember, where is a sur-

the others are built of brick and mud, with tiled 'roofs-The solitary cells are well situated, each is ten feet square, and they are lighted and aired from the top, by small windows.

Native lines. The lines, though lower than the other parts of the cantonment, are elevated with regard to the adjacent country; they are sufficiently open, spacious, and comfortable, the huts being built of mud, and thatched. There are numerous wells in the lines, the water of which is said to be brackish, but a plentiful supply of good water, is procurable from a large neighbouring tank.

Native town. The native town is adjacent to the northern side of the sepoys lines, and somewhat lower ; it is a large and densely populated place, containing 20,000 souls, chiefly gentoos and woodias. The houses are small, and generally built of mud—(though some few are of brick,)—and the streets are narrow and dirty. Beyond the town on the north side, is a strip of paddy ground, and a considerable swamp extending towards the base of the hills ; malaria however, if engendered in this locality, does not appear to reach the lines, or influence the health of the cantonment. The wind seldom blows from that direction, and when it does, the neighbouring lofty hills, protect the lines from the influence of the swamp.

The town has extensive well supplied bazars, in which all sorts of grain, meat, fish &c. are abundant; it has a manufacture of silk and cotton cloths, and sugar and sugar candy, are also made in large quantities.

The hospital is distant eastward from the place of arms, 1140 yards, it is an oblong building of brick and mud with a tiled roof, containing one ward, 43 feet by 24, a dispensary, 11 by 24, with verandahs in front and rear, 12 feet broad. It is situated in the highest part of the Cantonment, and in an open and airy position, free from all stagnant pools, or other offensive accumulations.



MATTER EXERTENCE with of brick and mad, with their inde-Tawell stated, sech as in feet up to a line to the section of the se and from the top of the sole brain e lines, through lower than the other pen of are denated with regard to the adjusts

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## BEBHAMPORE.

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No. 29.—Table exhibiting the number of Admissions and Deaths mongst the Native Troops at Berhampore, from 1829 to 1841; exclu-sive of the years 1831 and 1832.

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	Other diseases.	- 58	4	5 64	-	4	58	-	5 64	-	4 12	-	2 12		-	0.1
The second second second	Total.	246	15 1	18 313	19 8	11	246	5 6	18 33	19	11 57	141 14	191.60	-013	14 2	1 61

Per centage of deaths to strength ... 1 672

## RUSSEL-CONDAH.

Description of the Cantonment Sc. The new cantonment of Russel-condah, is the most western station in the division, and was first occupied subsequent to the Goomsoor war of 1836, having been named after G. Russell Esq., the Commissioner, attached to the army during the campaign. It lies at the foot of a hill, from which it derives its second appellation of condah, and is in north latitude 20°, 00" and east longitude 84° 40, being distant six miles north of the fort of Goomsoor ; 736 miles from Madras, and 450 from Calcutta; to the nearest sea port, Ganjam, the distance is 56 miles. Its height above the level of the sea, is about one hundred and fifty feet. The surrounding country, is very hilly, the hills varying in height from 500 to 2000 feet, and thickly covered with dense jungle, that in low situations being chiefly jungle composed of bamboos. The soil of the plains, which is alluvial, is sandy and very fertile. For some miles round the cantonment, the plains are cultivated with paddy, and very productive. On the higher grounds, dry grains, sugar cane, cotton, and castor oil are grown. The mango tree is very plentiful and productive, large topes being found every where throughout the surrounding country ; when in season, the fruit is the principal food of the natives, and no bad effects have been known to follow its use. The country is well supplied with good water, and the wells in the cantonment, do not become dry throughout the year. Two small rivers pass through the station, on the left bank of one of which the sepoys lines are built, and the other runs through the village of Nowgaum, about a mile and a half distant ; both streams unite about six miles from Russel-condah, and running a very devious course through Aska, flow into the sea at Ganjam; in the hot season these rivers become quite dried up, but in the monsoon they occasionally overflow their banks.

ROSEL AUX 2 IN Tain are small, and few, unt, à fire ailes fron aite contonneuls m nici i consistent The anti-rest monorous as milite of hear, and is generally over toward Oraber, de menge annal fail of rain has tical. The resider is cost and pleasant the part, but let turing the other three, via ned May, a visit time the nights are very

The providing winds are north-east and from hirrs during Norember, and is very Timier ad Ichning frequently occur at net d'us accient monson, accomp heny doners ; is October 1842, this part o visited by a typhoon from the north-west

heats at The harnches or place of near the fact of a hill, fronting the east, an yiel in Ottober 1842. The hospital is also en ar elevated platform, about a hundred y a partial line with the horracks ; it is well from there are two wards placed at right lage, kity and marketable, with verandalis open and well versified. The dimension to by 18 feet, and 34 by 18, with walls 20

In addition to the above, there are two a a sheknow and a dependency; with a piny; do while being enclosed by a wal forms to first in forst and at the video, an nur, terring alegeber 2 very complete terinal and increase are built of burnet bur for the soil wet's forged, that

USSEL-CONDAH

SUSTRIES RELITION

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### RUSSEL-CONDAIL.

Tanks are small, and few, the largest to be Tanks. seen, is five miles from the cantonment, and measures about two miles in circumference.

The south-west moonsoon sets in about the Climate. middle of June, and is generally over towards the middle of October, the average annual fall of rain has not been ascertained. The weather is cool and pleasant nine months of the year, but hot during the other three, viz. in March April and May, at which time the nights are very oppressive.

The prevailing winds are north-east and south-west, the former blows during November, and is very cold and piercing. Thunder and lightning frequently occur at the commencement of the north-east monsoon, accompained with very heavy showers ; in October 1842, this part of the country was visited by a typhoon from the north-west, which did much injury.

The barracks or place of arms, are situated Barracks and near the foot of a hill, fronting the east, and were first occupied in October 1842. The hospital is also a new building on an elevated platform, about a hundred yards from, and in a parralel line with the barracks ; it is well built and commodious, there are two wards placed at right angles, which are large, lofty and comfortable, with verandahs all round, and it is open and well ventilated. The dimensions of the wards are 80 by 18 feet, and 34 by 18, with walls 20 feet high.

In addition to the above, there are two small rooms, used as a bath room and a dispensary; with a cook house and privy; the whole being enclosed by a wall five feet high, distant 30 feet in front and at the sides, and 40 feet in the rear, forming altogether a very complete structure. Both hospital and barracks are built of burnt brick, and tiled. The floor of the small ward is flagged, that of the large one chunamed.

86

## No. 30.—Tuble exhibiting the number of Admissions and Deaths amongst the Native Troops at Russel-condah, from 1837, (when first garrisoned) to 1841, inclusive.

	Agg		estre 51,	ngth	Deatl	tissio hs fra s of I	im ea	ch	Totaladmissions from each class.	deaths	centage of to strength.	centage of uths to sick sted.
CLASSES. DISEASES.		-	2d 1		let H	alf_	2d 1	falf.	talad	fotal d m eac	N LO G	er cent deaths treated.
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Cholera	55	21	7	6	51	- 21	2	6	63	27	1 -447	42 -857
Diseases of the Abdo- minal vis- cera	41 21 0 23 3	0	1 28 10	N U O O O O	87		102		189		4 -343	3 -174
Catarrhus	1 9		1 7	0	1. 1000	0	0	0	10.01	0	0 -022	0 -(00
Diseases of the Lungs Phthiais pulmo- nalis Precimentia Dyspace	5	1	9 9 0	1 200	} 17	2	15	3	42	3	0 -965	11 -501
Do. of the Brain Amentia Mania		0	123	100000	1	0	7	1	13	1	0 -258	7 -692
Eraptive fe- vers Varioella. Erysipelas	1 85	0	1 1	000	} 100	1	2	•	107	1	2 -459	0 -936
Dropsies { Anasarca	4			0		0	8	0	13	0	0 -298	0 -000
Rheumatismus,		0	165	3	163	0	108	1	331	1	7 -607	0 -302
Venereal af- fections Strictura ure- thrae.	100	10	6 10 16	0	- 54		: 50	1	117	3	2 -689	2 -364
Specific dis- eases Beriberi Scrophula	30	0	11	0040	1 10		27		43	4	0 988	9 -302
Diseases of Morbi oculorum	26	0	34		2	5 0	34	0	60	0	1 .378	0 -900
Do. " Skin " eutis	102		55	0	10		50		157		3 .605	0 -900
Other diseases	313		349	1	37	8 1	341	1	*722	2	16 -593	0 -977
Total.	163	1 3	s]2003	28	163	1 38	2090	1 25	3724	65	85 -580	1 .771

Of this number were Phlogosis #34—Ulcus... 232 Per centage of deaths to strength, 1-516.

# RENARKS ON THE GENERA

is the general table No. te is: Mains Emperar regiment at in her of the Venants at Vinagaputan in inne bes gives at page 29, schues and mortality amongst the latter d tion time of the traces of the line. The administration into hespital, and the mostality deces ach half year, for the usual pe ion 1859 n 1888 inclusive. The ann nit to storagth, of deaths to sick treated arength, are also given; the average of the Abstract table No. 2, being 184 243, 5-50 pertiteix.

In 1888 and 1884, these averages were tion the prevalence of chokers, dysentery the remarks appended to the report of Mar planation thereof is given.

During the last four years to European war satisfied in this division; table No. 2 the ancre of the diseases which have occu Verma at Vingspelan. Of the total deal hed 157, he grave masher of those openiery, il under the beads dyrpoperia, be the project for several territory projects sain is the best scattered, in the optial Ofice is darg, by exercise induly eden sine : maj si thin reform on thi On ordering to the Abstract table N

REMARKS ON THE GENERAL TABLES.

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## REMARKS ON THE GENERAL TABLES.

Remarks on the series at labes of the first Madras European regiment at Masulipatam, and also those of the Veterans at Vizagapatam; separate tables have however been given at page 29, 34, and 66, as the sickness and mortality amongst the latter differ exceedingly from those of the troops of the line. The table exhibits the admission into hospital, and the mortality from the principal diseases each half year, for the usual period of ten years, from 1829 to 1838 inclusive. The annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength, are also given; the average of these as shewn in the Abstract table No. 2, being 184:243, 5:509, and 10:151, respectively.

In 1833 and 1834, these averages were much increased, from the prevalence of cholera, dysentery and fever, and in the remarks appended to the report of Masulipatam, an explanation thereof is given.

10110

During the last four years no European troops of the line were stationed in this division; table No. 23, page 66 shews the nature of the diseases which have occurred amongst the Veterans at Vizagapatam. Of the total deaths therein exhibited 197, the greater number of those, under the head dysentery, all under the heads dyspepsia, hepatitis, apoplexia, paralysis, delirium tremens and ebrietas, amounting in all to nearly 80, have been occasioned, in the opinion of the Medical Officers in charge, by excessive indulgence in the use of ardent spirits; many of their reports on this subject are truly melancholy.

On referring to the Abstract table No. 2, it will be

observed that the admissions have amounted to 11670, and the deaths to 643, from an aggregate strength of 6334 men.

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during the period of

The most prevalent diseases have been fevers, dysentery, venereal complaints, rheumatism, hepatitis, diarrhaa, and cholera ; and the greatest mortality has been produced by dysentery, cholera, fever, hepatitis, thoracic diseases and diarrhæa; the per centage from each of which is noted in the table. The admissions are pretty equal during each of the half yearly periods, but fever and dysentery are most prevalent during the second half yearly period; and the excess of mortality in this season of the year is wholly caused by dysentery and fever.

Cholera appeared in an epidemic form in 1830, 1831, 1832 and 1833. In April and May 1830, while the left wing of the first Madras European regiment was marching from Kamptee to Masulipatam, 20 men were buried out of 40 attacked ; in August 1831, in the same wing while stationed at Masulipatam, 40 cases of cholera occurred with 6 deaths ; again in November 1832, H.M. 46th regiment, while marching from Secunderabad to Masulipatam, lost 15 men out of 34 attacked, and lastly as has already been detailed in a former part of this report, H. M.'s 62d regiment suffered severely from cholera in 1833, on its march to Masulipatam from Bangalore.

Tables No. 3 and 4, exhibit the admissions from the same diseases and the mortality which have occurred amongst the Native troops throughout the whole division for the same period.

Fevers, rheumatism, bowel complaints and cutaneous diseases and beriberi have been the most prevalent diseases, while the greatest mortality has resulted from fevers, cholera, bowel complaints, beriberi, rheumatism and thoracic diseases. The total number treated has been 72190, and 2122 have died, from an aggregate strength of 81,806 ; the average per centage of sick to strength being 88.245, of deaths to sick

## CONTRA EEEETRO

minious have amounted to 11470, and na a signed stops i all an ent diseases have been forer, duriter, ricumation, legation, dantes, ad matest mortality has been produced by feter, lepatite, therapic factors and entage from each of which is noted in the tions are proved equal during such of the but faver and dysendery are not presand half yearly period; and the excess of tion of the year is whally caused by by-

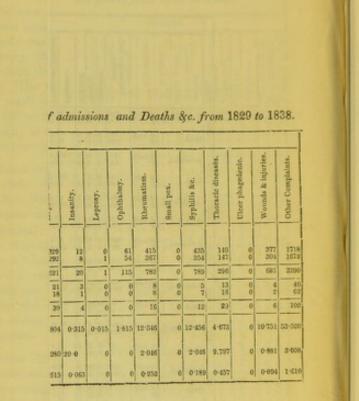
n an epidemic form in 1830, 1883, 1888 and May 1830, while the left wing of Suropean regiment was meeting from ipatam, 30 men were buriel out ef gust 1831, in the same wing while station-40 cases of cholera occurred with 6 deaths; 1832, H.M. 48th regiment, while maring to Masulipatam, lost 15 men out of 54 st has already been detailed in a fame H. M.'s 68d regiment suffered useredy 13, on its march to Massignam from

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Other complaints. Strength each year.		Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.	
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1120 3 4	650	149 -565	5 717	8 -55	
236 308 9 13	801	165 -005	5 -612	9 -31	
270 238 2 9	904	178 -629	5 -145	9 -18	
309 380 6 16	924	185 -173	6 -603	18 -83	
150 78 3 6	707	387 -694	5 -948	17 -114	
50 50 30	an	143 -636	3 -917	5007	
87 43 5 1	306	79 1934	8 -230	6 -378	
43 24 1	300	02 ·156	7 -801	7 -180	
28 16 2	277	75 -090	6 -730	5 -051	



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Wounds & injuries Other Complaints.

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Thoracic diseases

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Syphilis &c.

1905 713 10

26 80

Small pox.

57 20 77 1027 878 321 393

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1.509 15-581 1-354 11-220

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tal number of Admissions and Deaths, &c. from

Rheumatism. Ophthalmy.

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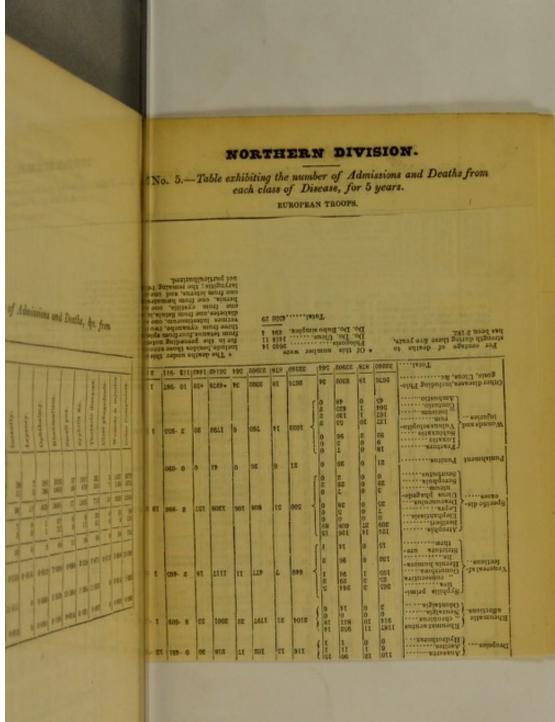
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European Troops. STRENTH, 1915. Treentage of sick to strength of deaths to sick Active Troops. Serverth 45 308	All and a second strend	The second second	. 10 Table exhibiting the per centage of Admissions from the same classes of amongst Europea	Native Troops. al Admissions 56,142 Deaths	European Troops. al Admissions	
1402 54	Ad. & deaths.	Fevers	per cen	34047	1402	Ad. deati
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400	Ad. & deaths.	Dys	from th	1129	190	Ad. deat
9-921 21-062 2-088	Per- cent- age.	Dysentery.	he same classes of disease to the streng amongst European and Native troops.	wi = [5] =	o. ====	Prop
9999 9999	Ad. & deaths.		classes t Euro	2119	269	Ad. deat
14-047 3-345 0-470	Per- cent- age,	Abdominal complaints.	pean a	51-51+	31-31-	Pro
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000	Per- cent- age.	Diseases of the Liver.	tive tro	월 <b>~</b> 월~	al-21-	Pro
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## REMARKS ON THE GENERAL TABLES.

treated 2.939, and of deaths to strength 2.593. In the year 1836, the sickness and mortality were greatly above the average, occasioned solely by fever, from which the native troops employed in the Goomsoor campaign, during that year, suffered very severely.

The admissions and deaths are most numerous in the first half yearly period, and chiefly from acute disease, with the exception of beriberi, which prevails most during the latter months of the year. It is thought proper to give here a few remarks on *beriberi*, and also a few observations on the *jungle or bilious remittent fever* of Goomsoor.

Berberi. The disease called *Beriberi*, being endemic at the several stations on the coast, throughout the Northern Division, from the Kistnah river to the Chilka lake, a short account of it may appropriately be given in this place; and the following observations are taken from an unpublished essay on the disease, forwarded to the Medical Board in the year 1831.

The word Beriberi is derived from the Hindoostanee name of a sheep (b,herc) from a fanciful notion, that persons affected with the disease, walk like a peculiar species of that animal, i. e, with a kind of jerking motion—but the name by which it is known, to the Gentoos of the coast, *Oobooteaioo*, simply means, rheumatism combined with dropsical swelling.

This disease, though endemic in many situations, frequently appears also as an epidemic, after the setting in of the rains, or from July to the close of the year, when fevers, dysenteric complaints and cholera also break out, to a greater or less extent annually—and they would all seem, to have a common origin, viz. malarious exhalation, though modified in the several forms of the diseases enumerated.

The stations of Chicacole, Samulcottah and Berhampore, which are low, damp and more or less swampy, appear to suffer more than the other towns in the division, though none of the stations, whatever may be their position,

#### NORTHERN DIVISION

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are wholly exempt from it. And it is found in all situations more or less, and at all seasons of the year, and extends it is said, to about 40 miles inland.

Natives appear to suffer from beriberi more than Europeans, and the inhabitants of the coast more than those of inland situations; the sepoys, natives of the upper provinces of Bengal; frequently escaping altogether, whilst amongst the coastmen it was prevailing extensively. Relapses are of very frequent occurrence, coming on usually at the close of the monsoon.

Beriberi appears to be a disease of middle life, and instances of its occurrence under the age of 17 years, or above 50, are very rare, and no cases have been seen in females, though doubtless, they must suffer from it as well as the other sex, though perhaps in a less degree.

The disease occurs both in an acute and chronic form; the acute form of beriberi, being usually attended by fever, of an intermittent type, and of 4 or 5 days duration, whereas, the chronic form is more frequently the sequela of rheumatism, or of fever, either of the intermittent or remittent form.

Acute form of Beriberi of the acute form, whether preceded by an attack of fever, or suddenly appearing without premonitory symptoms, is characterized by swelling of the extremities, both upper and lower, but more particularly of the legs, which pit on pressure, with numbness of the integuments of the swollen parts, extending upwards ; and there is frequently paralysis of the feet and legs, and of the hands and fore arms, which rarely however extends to the trunk. The muscles of the limbs to the patient's feelings are tense, and there is an extreme sense of lassitude, and indisposition to use any exertion.

The more urgent form of the disease, which frequently attacks persons of robust frame, and previously in the enjoyment of good health, is usually attended with extreme dyspncea, and a feeling of anxiety and throbbing at the precordia; there is also great anxiety expressed by the counte-

DUELS OF THE GAMEAU enne, the palse in from 100 to 130, fail i spore a peculiar daming struction is the fire action of the heart, on the hand testi can al the form of the disease t unites doub, elen accurring after sile efficient late previourdinan, or into the o the series is there high coloured and series

When not of so sugent a character as

perclyin of the lay and some begin to for dep, de Inis less their power, and ther carry his hands to his mouth, not ca rappert, if pland in the erect posture ; an desense to walk, the limits which yield beer, mi head backwards, are raised with beire alairi ta

A print in this state, if unsupported, groud in a siting posture, and however have progressed, the paralysis never ext of the trunk, and the sitting posture can be preserved; acitier has the dropoical s to extend to the integrments of the trunk moles.

Another, and frequently a distrussing a the number of the lower limbs, come as being nost some in the tendo Ad not then winested in taking patients, Euro for from constant and service spacents of the

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urs both in 20 ante and chrocic form; type, and of 4 or 5 days duration, whereas, a more frequently the acqueia of themaither of the intermittent or remittent form

eri of the acute frem, whether perceled eer, or suddenly appening without prois characterized by swilling of the error and lower, but more particularly of the a pressure, with numbers of the interer puris, extending aparels; ad then a e of the first and legs, and of the bands and only however extends to the track. The is to the patient's feelings are term, and serve of logitude, and independent on

tion of the discuss, which frequently a where france and previously is the agen the a multi- model and area ling of mining and insiding a do per a great anticit opened in the const

## REMARKS ON THE GENERAL TABLES.

nance, the pulse is from 100 to 120, full and bounding, and it imparts a peculiar thrilling sensation to the finger, as does also the action of the heart, on the hand being placed on the chest; cases of this form of the disease usually terminate in sudden death, often occurring after slight exertion, from effusion into the pericardium, or into the cavity of the thorax ; the urine is always high coloured and scanty in such cases.

When not of so urgent a character as that just described, paralysis of the legs and arms begin to be manifest after a few days, the limbs lose their power, and the patient can neither carry his hands to his mouth, nor can he stand without support, if placed in the crect posture ; and in making an endeavour to walk, the limbs which yield to the weight of the body, and bend backwards, are raised with the peculiar jerk, before alluded to.

A patient in this state, if unsupported, instantly falls to the ground in a sitting posture, and however far the disease may have progressed, the paralysis never extends to the muscles of the trunk, and the sitting posture can consequently always be preserved ; neither has the dropsical swelling been found to extend to the integuments of the trunk, or to terminate in ascites.

Another, and frequently a distressing symptom, is pain in the muscles of the lower limbs, complained of generally as being most severe in the tendo Achillis; and though not often witnessed in native patients, European subjects, suffer from constant and severe spasms of the limbs.

The post mortem appearances, have been found to be slight effusion into the cavities of the chest, with ordema of the lungs throughout, the structure of the heart is found to be natural ; the right side being filled with dark blood, the left empty; the liver engorged with dark blood, and in some cases great anæmia of the kidneys. Effusion of a ropy scrum into the pericardium is also a common morbid result.

Chronic form of The chronic form of Beriberi as before stated, is usually the sequela of rheumatism or fever, though it oc-

#### NORTHERN DIVISION

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casionally comes on insidiously. The most prominent symptom being partial paralysis of the extremities, both upper and lower, commencing in the hands and feet, and extending towards the trunk, which is succeeded by wasting of the solids, and ultimately by anasarcous swellings of the limbs, and effusion into the chest and pericardium. This form of the disease may exist for several months, and recovery in such cases is extremely slow, and where death follows, the unfortunate sufferer is usually reduced to an extreme state of emaciation and helplessness, the power of the limbs being completely lost.

The various functions of the body continue to be performed regularly, though imperfectly, and with considerable loss of tone; the pulse is small and weak, ultimately becoming a mere thread, when felt at the wrist, and it often happens that the only complaint made by the unfortunate sufferer, is of pain in the lower extremities, the muscles of the calves of the legs and tendo Achillis, being the chief seat of the uneasiness.

The spongy state of the gums, indicating a scorbutic condition of the system, which has been said by some to exist in this disease, has not been seen, though enquiry was particularly directed to that point; but there is no doubt that in many cases a cacheotic state is present, which is followed by atrophy, and extreme debility.

Neither has the inflamed or congested state of the spinal canal, noticed by\* Malcolmson been witnessed, though the condition of the spine has been carefully examined, by means of pressure and percussion-and enquiry as to the existence of pain along the spine, has failed in eliciting any proof of the existence of irritation, or inflammation of the spinal nerves.

Treatment. In the acute form of beriberi as above described, the most active antiphlogistic treatment is often called for, at the commencement of an attack, and by which alone a fatal termination can be prevented. If a patient therefore, who after an illness of a day or two, perhaps only of a few hours • Essays en beriberi, 1835 p. 113.

LIMINES OF THE ENTITE TH where is sum to be enficing from source aing d'antiopra che precordia, having indice pile, and where fare produidly instant from 12 to 18 survey of blood the shorted and the lowers facely act adarás S. d casposd julio Porder. Ater risid, carrand with squally, sh and mained and the system is in der the influence of the merci an case cleated ingeorement a In patiens, it is earely require

T.S. if the first bleeding he sufficiently cop opprised cardition of the circulating apa shall be lept free, by accessingly aperien tentent, mitte anist die diuretie arbor deal addition with the supertaintrate of poclud his plus of treatment must be perserve dinas action of the heart and arteries is sub feral to succeed on the first appearance of t being established in the system ; should th at my time show a tendency to increase

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Should be paired complain of spearse, o in the links, or throld the calonicl act in tim is leavily, form powlet may ' time, or a small specify of the extract added to the pills Principes to the limits ectronices, as for both in which aroup the' he bers build, will be tid; ad lating uzulasance, or who their methods over reindically must true the toe of the subplace of Romandian Racing in contact in the contact from

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ions of the body comings to be performimperfectly, and with considerable has of small and weak, ultimately becoming a elt at the wrist, and it often happens that rade by the unfortunate sufferer, is of pain

of the game, indicating a worked onwhich has been said by some to chie in been seen, though enquiry was perfecat point; but there is no drolt that in tic state is present, which is followed by te deboity.

finnel or congrated state of the spiral Maleslassen been winessel, though the se has been carefully examined, by near unite-und coquiry is to be existent of has filled in election ary part of the or or information of the spind server were form of berileri u shere desciled. all gives treatment is the call for a of its work, and by which also a fair permited. If a patient distrim the det at two perhaps and de las hum And a sure in 1 in

## REMARKS ON THE GENERAL TABLES.

20

duration, is seen to be suffering from urgent dyspnœa, with a feeling of enxiety at the precordia, having a full bounding or throbbing pulse, and whose face probably appears bloated, or edematous, from 12 to 18 ounces of blood should immediately be abstracted, and the bowels freely acted on by an active cathartic; 3i. of compound jalap powder, or calomel with Catomet gr. U. to Detroit with sense of the system is brought fully un-der the influence of the mercury, when in most cases a decided improvement usually takes place. jalap. After which, calomel with squills, should be given and In natives, it is rarely requisite to repeat the

V. S, if the first bleeding be sufficiently copious, to relieve the oppressed condition of the circulating system. The bowels should be kept free, by occasional aperients throughout the treatment, and to assist the diuretic action of the medicine, drink acidulated with the supertartrate of potash, may be allowed and this plan of treatment must be persevered in, till the inordinate action of the heart and arteries is subdued, which will be found to succeed on the first appearance of the mercurial action being established in the system ; should the dropsical effusion at any time show a tendency to increase a draught consisting of,

> Tincturæ digitalis M x Scillae m xx Spiritus ætheris nitrici 3ss Aquæ menthæ piperitæ gi may be given thrice

### in the day

Should the patient complain of spasms, or rheumatic pains in the limbs, or should the calomel act more on the bowels than is desirable, dovers powder may be ordered at bed time, or a small quantity of the extract of opium, may be added to the pills. Frictions to the limbs with stimulating embrocations, and foot baths in which the root of the morunga tree\* has been boiled, will be found to afford relief; and during convalescence, or where a tendency to febrile exacerbations occur periodically, much benefit will result from the use of the sulphate of quinine, in small

\* Hyperanthars Morings an excilent substitute for the radix armoracia.

## NORTHERN DIVISION

doses, or occasional antimonials, in addition to the other remedies employed.

During convalescence the greatest benefit will be found from the effect of change of climate, which should be resorted to in every case in which it may be practicable.

The dict should be light and nutritious.

In chronic beriberi, whether succeeding to other diseases, or appearing as a specific complaint, the symptoms are rarely of so urgent a character as to call for the use of the lancet, though if the breathing be oppressed, and there is also much vascular excitement, the abstraction of a few ounces of blood will be found to afford decided relief.

The constitutional treatment should be commenced by an alterative course of the blue pill, combined with diuretics; the bowels which are often torpid should be kept free by some mild aperient, for which purpose rhubarb in the well known compound, called "Gregory's powder," answers well; —it will, in cases of this nature, seldom if ever be requisite to push the mercury to the extent of causing salivation.

Acting on theoretical views, leeches have frequently been applied over different parts of the spine, and blisters, have been repeatedly placed over the same region, without it is believed, any benefit resulting from these measures.

The local means to be used are frictions to the limbs, with camphorated oil and terpentine, and the warm stimulating foot baths before mentioned.

The rheumatic symptoms also require attention, and benefit will in some cases be found to result, from the use of the pulv. ipecae comp. or compound guaiac electuary.

The diet may be generous, light and nutritious, and to those accustomed to stimulants, wine or spirits in limited quantity may be allowed, with any appropriate tonic during convalscence, the best of which is sulphate of quinine, with sulphuric acid.

LOUGES OF THE CREEKEL THE The mine remains black all, and from or applied assarity, in the chronic sendormer from brideris or after the sen in two reacted and in many cases with unter any here to brief precious. The along signers, a black empiricumsta brillein per descences, by menos of a a continuin of spine, with the service of the and gan benefit. It is given in doses of free 30 days, I thus during the day, and ly de mins rade into a bolas with tion, or taken on a beted leaf; the diret observ ring in use, is entirely faring second, as when ten and make without such. The action of the cill of a similar, it is also diurche, and produce teral host, standed with high coloured un one sefusion of the conjunctive, but it

The treak-fored, a remedy said to be country, from the shores of the Red sea, any is obtained in most hannes throughout In posed to be uter spurious; it is said to e rap of mine spices and simulants, an tines with risingly in the propertion of weikfank a ? of thotarb, male inte or bein, with large, the dose being the neg coup maning; it smally acts as anties, is allies to which some pa of a being of internal beat, in the d and, and after continuing its top for sher more a good deal of irritability. the pole; and a liverish best of skin; two p et at its bring cased down to your blood y the second and the is not year of et die enternet wold ant be solafietorile or system any here been voting to and the second with matters to take

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stons also require attention, and beau he fined to reach, that the read the and point guine electrony server, light and noticities, and to the and, where of spirits is limited quarty any appropriate area during more which is resplace of quints, which as

#### REMARKS ON THE GENERAL TABLES.

The native remedies black oil, and treeak-farook having been employed extensively, in the chronic form, and during convalescence from beriberi, or after the stage of excitement has been removed, and in many cases with considerable advantage, may here be briefly noticed.

The oleum nigrum, a black empyreumatic oil, is obtained by distillation per descensum, by means of a strong fire, from a combination of spices, with the seeds of the malcungrunny, and gum benzoin. It is given in doses of from 5, increased to 30 drops, 3 times during the day, and is usually taken by the natives made into a bolus with aromatic confection, or taken on a betel leaf; the diet observed by them during its use, is entirely farinaceous, as wheaten bread, or cakes, and made without salt. The action of the oil appears to be that of a stimulant, it is also diuretic, and produces a feeling of internal heat, attended with high coloured urine, and in some cases suffusion of the conjunctivæ, but it has no apparent effect either on the bowels or skin.

The treeak-farook, a remedy said to be imported to this country, from the shores of the Red sea, and Persian gulph, is obtained in most bazars throughout India, but is supposed to be often spurious; it is said to consist of a farrago of various spices and stimulants, and is given combined with rhubarb, in the proportion of about 1 part, treeak-farook to 7 of rhubarb, made into an electuary, or bolus, with honey, the dose being the size of a nutmeg every morning ; it usually acts as a purgative or laxative, in addition to which some patients complain of a feeling of internal heat, in the chest and abdomen, and after continuing its use for 3 or 4 days, it often causes a good deal of irritability, with increase of the pulse ; and a feverish heat of skin ; two patients complained of its having caused them to pass bloody urine, this however occurred only once in each person, and the correctness of the statement could not be satisfactorily ascertained, and the appearance may have been owing to the effect of the rhubarb. It is usual with natives to take this medicine

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for 9 days, and then to omit it for the same length of time, and so to continue it in successive alternations, as long as necessary.

The diet recommended by the natives was observed whilst using these remedics, and consisted of milk and farinaceous food, such as wheaten bread without salt, and abstinence from meat.

A rebellion having broken out in Goomsoor, a country belonging to an independent chief, lying at the north-western part of this division, it was found necessary at the end of the year 1835-to send a force amounting to nearly 7000 native troops, into the disturbed districts, where was employed until the end of the following year.

Goomsoor, through which the continuation of the western ghauts runs at a distance of about 45 miles from the coast, may be divided into the upper and lower country That portion lying at the foot of the ghauts, in which the troops were chiefly employed, is covered with dense jungle, (principally of bamboos) where fever of a deadly character prevails, and which occasioned a great mortality both in officers and men.

The table land above the ghauts, here rising to the height of from 1500 to 2,000 feet, above the level of the sea, is more open and is found to have a cool and bracing climate;the inhabitants are a savage race,(called " Khonds") and the country itself affords but little in the way of supplies necessary for the wants of an army.

The following extracts from a report by the Superintending surgeon of the division, in which are embodied the opinions of several of the medical officers, of the force, respecting the character of the fever, which so extensively prevailed in Goomsoor, contain some interesting remarks; but as no troops have occupied the country since 1836, with the exception of one native corps at the station of Russel-condah on the eastern boundary of the district, it has not been considered necessaryto enter more into detail respecting the history of the disease.

LOUGH OF THE OPPRAL TO The sidness and mortality in Gooma milently interend the results when units of the president of the division and o a ha ben analyred desirable to adver

. It asy remains that tis phie account of the forer which h time access of an arrest, and u is case. The graptenes may in and in deforms constitutions ; but it is, nià a lass à, el Nesquan, à fever o gration, mainly affecting the head; and o point. Mr. McKents says," " It is d satisfictary reasons for that want of energy and mental depression, which characteri one; the feltific misses acting equally t ni unguierou systems, exhausting in tme, the whole stock of sensorial power. "It was characterized by entire and fre protestion of strength, skin preternatural pile call and repid, and frequently w time faced, always feel and in some instr is may instances sepulched, patient in complete reaction but in few instances ( majors," speaking of the Dargurpe Kelle ap + he head was invariably deted." He fortune min " the symptot by the points on administra, were, great land pain over the whole body, beaut, ache, finite at a courts species, borness tol delle भये । केने प्रमुख कर्म स्वर्थकों केन्द्रस्थ, का arnie bir, a say cae asouth wint output it is the fact of the state المعالمة عنه المعالمة عنه الم 

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ernels from a report by the Separated · Unition, in which we excluded in I d the mitch attach of the last. where it the forest, which is reasoned na, carata nore interning made the accupied the country star loss and maine corps where sains if Baselonial day of the district & has not been made white more into detail responsing the lines.

#### REMARKS ON THE GENERAL TABLES.

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The sickness and mortality in Goomsoor in 1836, having considerably influenced the results shown in the general tables of diseases, both of the division and of the Army at large, it has been considered desirable to advert to it briefly in this place.

Extract from the report of the Supp. Surgeon Northren divisi-on December 1836 " It now remains that I should give an account of the fever which has proved so nearly universal, and so severe, to all those exposed to its causes. The symptoms vary in different situations, and in different constitutions ; but it is, for the most part such as I saw it, at Nowgaum, a fever of debility, and congestion, mainly affecting the head ; and caused by endemic poison. Mr. McKenna says," " It is difficult to give any satisfactory reasons for that want of energy, extreme debility and mental depression, which characterized almost every case; the febrific miasm acting equally upon the nervous, and sanguiferous systems, exhausting in a short space of time, the whole stock of sensorial power." Mr. Kellie says, " It was characterized by entire and frequently immediate prostration of strength, skin preternaturally cold and damp, pulse small and rapid, and frequently weak, tongue sometimes furred, always foul and in some instances florid, voice in many instances sepulchral, patient inclined to doze ; complete reaction but in few instances followed the above symptoms ;" speaking of the Durgurpersaud fever Mr. Kellie says "the head was invariably the organ chiefly affected." Mr. Porteous says " the symptoms complained of by the patient on admission, were, great langour and lassitude, pain over the whole body, head-ache, thirst, great prostration of strength, oppression, shortness and difficulty in breathing with a foul tongue and parched fauces, and cold chills over the whole body, in many cases amounting to rigors, the patient continued in this state for a longer or shorter period, and then followed the hot and sweating stages of fever, after which he felt much better, but weak and depressed" such however was not always the asthenic character of this

#### NORTHERN DIVISION

fever." Mr. Eyre says "among the sepoys of the 50th regiment Native infantry who came into the field, for the most part, strong and in high condition, found more strength of action, the pulse generally hard and full; besides the symptoms above enumerated there was commonly conjection of the liver, of the lungs, and indeed universal internal conjection, the urine scanty and high coloured, the excretions from the bowels of all colours, the tongue presented various appearances, one of which was a bright red glazed surface, as if the papillæ had been completely obliterated, it was also frequently overspread with a coating, like white paint, or a thick composition of chalk and water; either laid on in patches, or in longitudinal streaks ; where free from this coating, the glossy surface before described, appearing."

" The type of this fever was usually intermittent and quotidian, often times however remittent, and at others, continued, with a low typhoid character; long protracted or repeated attacks of fever frequently terminated in dysentery, or looseness, caused by irritation of the mucous coat of the intestines ; and these were mostly fatal cases. The subjects of this fever frequently became ædematous and dropsical, before the fatal termination. Among Europeans, the symptoms were usually more violent, with greater determination to the head, and more strength of arterial action."

" The treatment varied, according to the several forms of the fever ; leeches and cold lotions to the head, emetics, and purgatives, calomel, antimonial powder, ipecacuanha, tartar emetic, in appropriate doses, were given during the presence of fever, sponging the body with vinegar and water, and cold effusions were used. When intermissions or remissions of the fever were present, bark, and quinine, alone, or variously combined with stimulants, or laudanum, were exhibited, the quinine was given in doses of from two to thirty grains. Mr. Evre went as far as thirty grains, for a dose, I cannot however think that these large doses, were benefical. Where there was greater strength of arterial action, as among Europeans,

insite of the spital and in the series of the fifth and some a unployed; and from tex to twenty can Chains presided in as equilerance form in the set? and 1885, and perially in 1881. The Into regiment N. L while marching throu Inited in Jamy 1822, and carried a decel ; in Normher and December in the spinor while stationary, lost unch Agin is the month of Jan regiment N. L while matching from Sec nen out of \$4 attacked; and in the for brary de 14th N. L while marching to 17 mm, 45 having been attacked; in the the same year, the 8th regiment N. L. st pun, last 10 men from 22 attacked ; again of administers and deaths from cholers in ver 1887, no less than 35 attacks and 2 the 6th regiment N. L. at Vinianogroup ; ry and Pelevary 1888, the 27th N. L ban 148 mein while marching from Bangale is issue had almost entirely ceased Nothen drisin.

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# STREET DITIES

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utied, seconding to the second lates of ad cold lations to the head, entries, and antimental powder, ipecanants, neurote doses, vero given during the present to body with rinegar and water, and add body with rinegar and water, and add back, and quinties, since, or removing backs, and provides, for a dose, I comes former thirty prints, for a dose, I comes former back, and provides, or some formers, and attendid action, or some formers, of attendid

## REMARKS ON THE GENERAL TABLES.

and in the sepoys of the 50th and some others, the lancet was employed; and from ten to twenty ounces of blood, taken from the arm."

Cholera prevailed in an epidemic form in 1832, 1833, 1837 and 1838, and partially in 1831. The disease attacked the 12th regiment N. I. while marching through the division to Jaulnah in January 1832, and carried off 23 men out of 74 affected ; in November and December in the same year, the 49th regiment while stationary, lost 24 men out of 70 attacks. Again in the month of January 1833, the 43d regiment N. I. while marching from Secunderabad lost 15 men out of 24 attacked; and in the following month (February) the 14th N. I. while marching to Cuddapah buried 17 men, 46 having been attacked ; in the month of March in the same year, the 8th regiment N. I. stationed at Vizianagrum, lost 10 men from 22 attacked ; again, out of the number of admissions and deaths from cholera in the first half of the year 1837, no less than 35 attacks and 20 deaths occurred in the 6th regiment N. I. at Vizianagrum ; and lastly in Janury and February 1838, the 27th N. I. buried 70 men out of 148 attacks while marching from Bangalore to Samulcottah ; the disease had almost entirely ceased before entering the Northern division.

The tabular statements No. 7 and 8, exhibit at one view, as in the preceding divisions much interesting information, relative to the most important diseases amongst both European and native trops.

Tables No. 5 and 6, exhibit the admissions and deaths from each disease in the various classes therein given, as in the preceding reports, for the period of five years from 1834 to 1838 inclusive. The total sick from each class is also shewn, with the mortality, and the per centage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, (Table No 5) the greatest number of admissions have been from the class of fevers, bowel

#### NORTHERN DIVISION

complaints including hepatitis, rheumatic affections venereal complaints, and wounds and injuries; the most fatal have been fevers, bowel complaints, diseases of the brain and of the lungs. The per centage of sick to strength, during the five years has been 168.302, of deaths to sick treated 6.050, and of deaths to strength 10.182; thus differing but little in these respects, from the results shewn in the preceding table for ten years.

The corresponding table for the native troops, (No. 6) gives 123.911, as the number of admissions annually for every 100 men, and 2.568 per cent of deaths, to the sick treated, while the per centage of deaths to strength during the same period has been 3.182; the total admissions being 56142, with 1442 deaths, from an aggregate strength of 45308 men. The greatest mortality has been produced by *fevers*, *cholera*, *bowel complaints*, *beriberi and rheumatism*; the greatest number of admissions have been from the same classes of disease, along with *cutaneous and tenereal affections*.

The tabular statements No. 9 and 10, have been framed from these two tables, in the same way as in the preceding reports, and exhibit at one view the proportion and the per centage of admissions and deaths from the principal classes of disease.

# SUSTRICE STREETS

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ents No. 9 and 10, have been franed in the same way as in the procedure reno view the propertion and the per centdeaths from the principal clases of

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Convicts labour of the troads, and in the of manufacture of paper, and bricks.	) ) Sentenced prisons - work on the high road - and security prisons II in or about the jail.	Working on the roa a. Working on the roa y, and at the reparts of the court bose cath - bosen fort walls, an of filling the dicks, ent - ing the streets of the - bosen &c.	er er er er er er	Number of prisoness the prison is capable of Dictary or other week. Allowance of cloth Description of em- the prison is capable containing where more trainwance and week- ing and bedding, and howing in the prison week in the prison of containing the sepa-than more prisoner steeps by cost per head.	Statement shewing the extent of accommodation, diet, &c. in the several Jails.
3. Of a seer of rice Two pieces of cioth C-corvets labour can be piece for condit, or for the two pieces of the two pieces and the pieces of the two pieces and the pieces of the pie	2         Ferces of cloch of a local process of cloch of typics per day, the same some every year-max- for mern and written, small optic respect it and a security priormers Worky root 8 anaas and Spirces of cloch 12 in or about the juli, and 2 pice.         Sentenced priormers with respect to the priormer it and sentence it is proceed in the priormer it is process.           and 2 pice.         and cumby for a make per sentence it is proceed in the priormer it is process.         Sentenced priormers is and sentence it is proceed in the priormer is process.	I See of rice and 4 Male prisegers are price dily for a male allowed two elods, a priseders and to every mat. and a cumby and at the repairs of from 311 K as for transc priseder every mat. and a cumby and at the repairs of from 311 K as and transc priseder every mat. and a cumby and at the repairs of from 311 K as and transc priseder every mat. and a priseder over house exitting which they wash in the workly east to a male ever reserve a coth of filling the direk, chan after the shows date, make 6 armas and a plete. Frenske prised for a sale, and the they work frems 31 to 37, so make 6 armas and a plete reperive a for a same ing the streets of the flary work frem 8 Boys receive the same flarg the same as the at rom.	In moderate weather from T to 11 a. w. and from T to 57, w. but during the bet weather from 5 to 10 a.w. and from 3 to 5 p. s.	Hours of labour, and by of exercise.	

NORTHERN DIVISION

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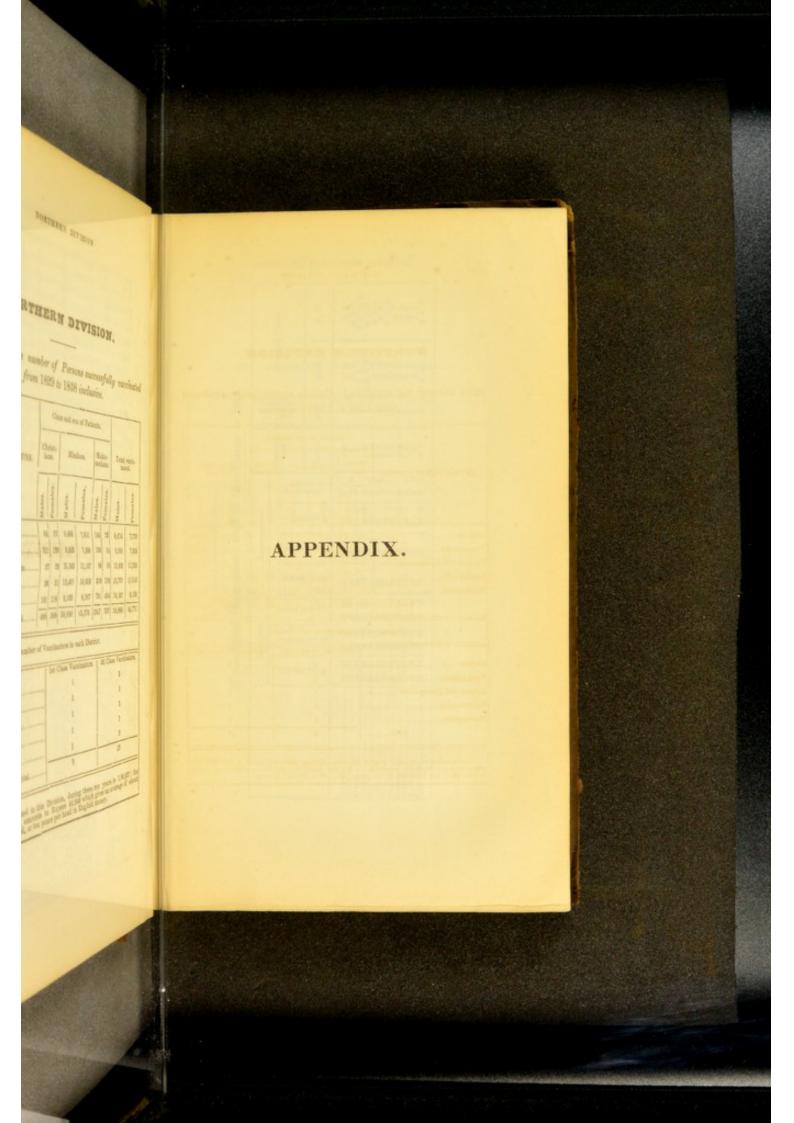
## NORTHERN DIVISION.

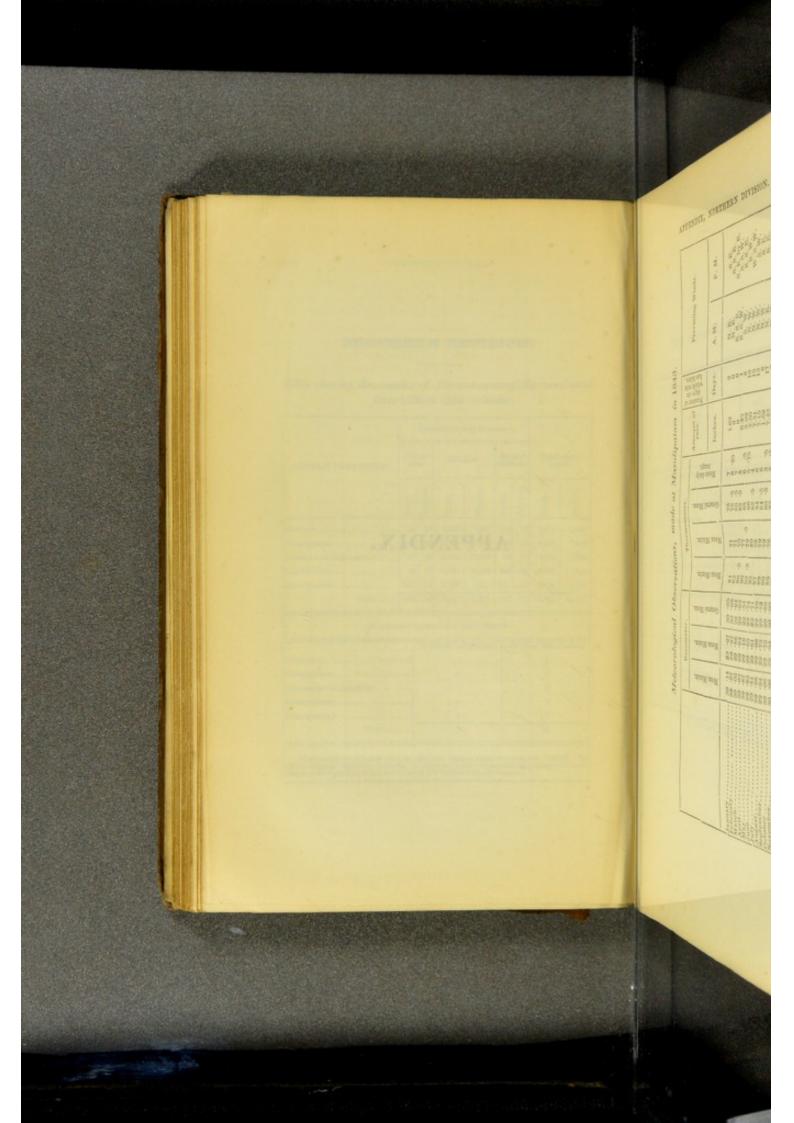
4.516		Class and sex of Patients.							
DISTRICT OR STATIONS.	Chr	tist- as.			Mal		Total vacci- nated.		
	Males.	Pernales.	Males.	Pemales,	Males.	Permahas.	Males.	Pemales.	
Ganjam	64	57	9,465	7,611	144	72	9,674	7,770	
Viragapatam	211	163	8,613	7,388	105	54	8,930	7,605	
Injeram and Madepollum	27	29	15,345	11,107	96	89	15,468	11,225	
Rajahmundry	26	31	15,461	10,853	220	128	15,707	11,012	
Masulipatam	161	118	9,165	8,567	781	454	10,107	9,159	
Total	489	398	58,050	45,576	1347	797	59,885	46,771	
Number	of Va		ators in e			d Cla	as Vacel	nators.	
Ganjam			1				3		
Viragapatam			1				3		
Injeram and Madepollum		. 1							
Rajahmundry			1			3			
Masulipatam			1		1		3		
Total			5				15	1000	

## Table shewing the number of Persons successfully vaccinated from 1829 to 1838 inclusive.

The number vaccinated in this Division, during these ten years is 1,05,657; the whole expense incurred, amounts to Ropees 44,940 which gives an average of about Ropees 42-2 per hundred, or ten pence per head in English money.

APPENDIX





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# Meteorological Register, Berhampore. 1827.

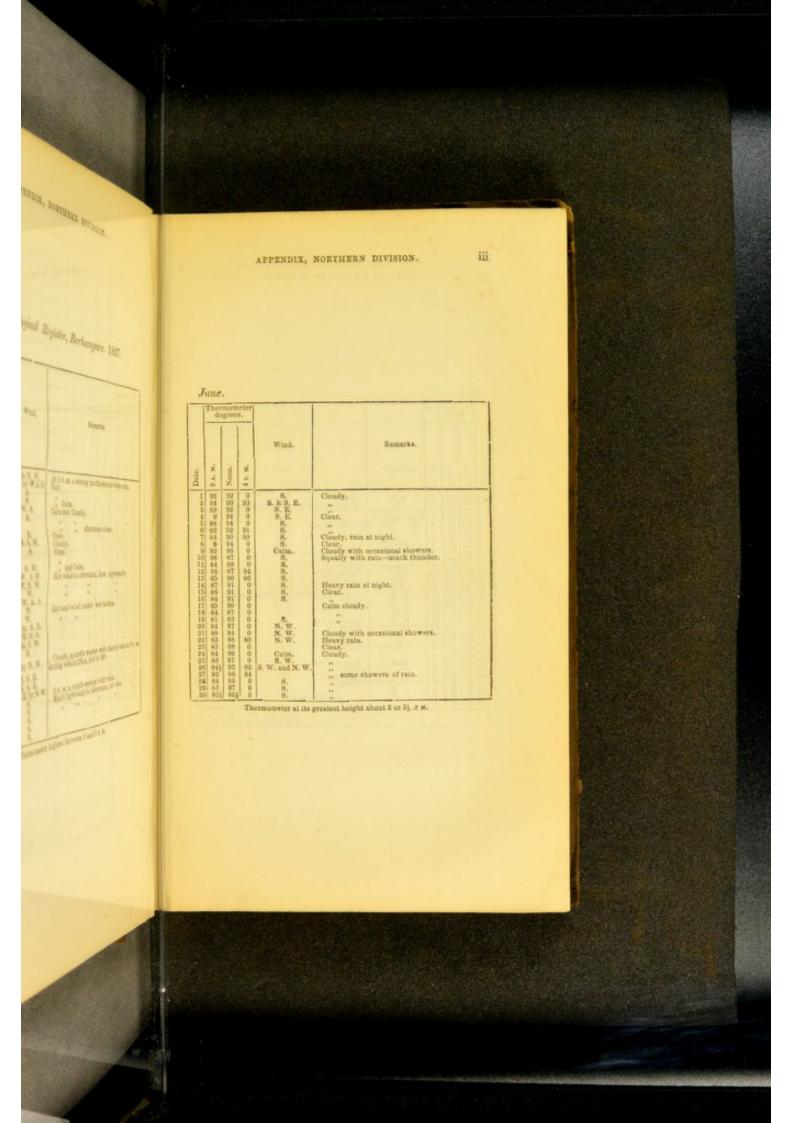
		grees			
Date.	9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
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Thermometer highest between \$ and 3 P. M.



ATTEST STATES NUMBER

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APPENDIX, NORTHERN DIVISION.

July. Thermometer degrees. Wind. Remarks. Date. S. W. S, Cloudy. Strong wind, with rain in the afternoon. 8. W, and N, W, do. do. do. do. Caim, S. W. S. W, and N, W. Cloudy, rain. -Rain in afternoon, from N. W. Clear." Cloudy. Variable. do. do. " Char in the forenoon, afternoon cloudy. Choudy. Much rain. N. E. N. E. N. W. N. W. Clear and dry. Clear. Calm. 8, 8, Cloudy. Rain in afternoon. Rain. Light rain. Cloudy. Calm. 8, W. 8, W. ; and light rain.



ATTENDED, POLITICIAN PATTENDA

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-	degrees			
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## September. Thermometer degrees. Wind. Remarks. 0168419044001 | Date. 828889111588888 | 9 4. M. Noon 0000020000 4 P. N. Date. Clear fresh breeze, Formoon clear - a/ternoon heavy rain & thunder. Do. Do. Do. Clear. E. & S. E. S. E. N. E. S. E. S. E. S. E. S. E. Calm. B. W. W. S. W. 85 87 85 85 85 85 85 85 85 85 85 85 85 85 8. W. N. E. 851 84 82 82 80 80 82 84 88 85 85 85 85 85 85 85 85 85 85 N. E. N. E. N. E. Calm. do. N. W. Calm. do. 8, E. N. [the Northward. Thunder storm with heavy rain at 3 r. s. from Clear,



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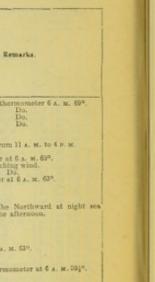
APPENDIX, NORTHERN DIVISION.

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ATTENDED, SECTIONES, PUTTINGS



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January 1828. Thermometer degrees. Wind. Remarks. 4 P. M. 1000N 17687778888878887457788777887778 Date. 8. E. & Ny. do. do. s. E. & E. S. E. Do. S. E. S. E. S. E. のはないないないないないないないのののないのの Cloudy, wind northerly by night easterly by day. Strong sea breeze from E. S. E loudy. Wind Ny. at night from S. E. by day. N. N. Ther. 6 A. M. 62 9. N, E, Ny, & S. E. do, do, do, Clear. Cloudy. Do. son breeze in the afternoom do. do. Cloudy, light rain. Dry warm winds, do, do, do, 75 81 85 82 10 73 76 75 88 88 88 71 75 8. 8. 8. E. 8. E. do. do. do. Clear.



APPERDIX, SOUTHERS DIVISION

February 1828. Wind. Lemarks. 
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 Res</th Date. S. E. & Ny. do. do. S. E. do. do. do. E. do. do. do. do. Fair weather, winds S. E., during the day Ny. at night. Cloudy, light rain. Do. Do. Clear. Do. Cloudy, Heavy fall of rain. Cloudy, light rain. Do. Do. Cloudy, light rain. Light rain. E. S. E. do. E. S. E. Sy. S. E. Heary dews. S. E. Heavy rain at 9 P. M. Bain from N. W. Heavy rain last night. Rain. Occasional heavy showers, Clear. 8, W. 8, E. N. E. & S. E.

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united successing approxim xii APPENDIX, NORTHERN DIVISION 401188 March 1828. Thermometer degrees. Smith Wind. Remarks. 
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April 1828. Thermometer degrees. Remarks. Wind. \* × Noos. 4 11 Severe thunder-storm at 1 r. m. during which the Gloudy, light raim. [ther, fell to 797. Forenoes cloudy, afternoon clear calm & sulary. Clear, wind warm from S. E. Cloudy. Chear, fresh breeze. Clear, hot wind at noon. Clear, fresh breeze. Soliry. Cleady, a gale of wind from 6 p. M. till mid night, do. do. (with thunder & lightning. Land winds in the forenoon, yesterday from 1 p. M. Fair. do. Light rain. Land wind from 5 r. s. yesterday. Clear fresh breeze, do. do. light rain. do. do. s. north western in the afternson. Cloudy, a north western at 4 r. s. with a low drops do. do. at 4 r. s. with rain. [of rain. Clear, wind high.

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APPENDIX, NORTHERN DIVISION

# May 1828.

		gree	neter a.		
Date.	2 A. H.	Neon.	4 P. M.	Wind.	Remarks.
THEFT	85 85 87 88 88	92 98 99 97 97 97	90 91 89 90 88]	S. E. W. S. E. S. E. by S. S.	Clear, caim. [aftermoon Winds westerly in the forenoon, casterly in the Clear, fresh breeze.
678410112	89 88 88 89 89 90	92 91 92 92 93 93 93 93 93 93 93	87 90 88 90 89 88	8. 8. E. E. 8. by E. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	Clear weather strong breeze.
13 14 15 16 17	易約務務務	881 90 90 90 89 93	88 58 91 87 90	8, E, 8, 8, E, W, & 8,	Few drops of rain. Deavy rain at 7 r. as Thunder storm or squall from the N. W. with Porenton wild westerly, alternson southerly and clear,
18 19 19 19 19 19 19 19 11 11	87 85 85 85 85 85 85	02 80 9 80 00 1	50 56 56 88 87 90	8. by W. 8. E. by E. 60, E. E. S. E. E. E.	A fine gale with heavy rain at 4 r. M. from the west, which continued to blow till 6 a. M Clear, wind moderate afternoon cloudy. Clear. do. close and sultry.
24 23 26 27 28 29	88 89 88 91 89 80	91 93 92 93 93 93	891 891 90 881 90 90	L. S. L. E. S. E. S. S. S. S.	Cloudy, Clear fresh breeze, do. do. dr. do. de. afterson cloudy, do. do. do.
30 31	82 89	92 91	89 82	8. E. 8. E.	do. do. do.) country has a parched do. do. do. apearance. Clear fresh breeze.

# HYDERABAD. The county of Hyderaba

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bounded on the cast, by the Right of Nuppore, the War

ry rises sparsing the two countries ;-on th of the Nappor country, Meivar, and a paon the west, in the Brahey territories; and Colled östrics, Kurneel, Guntoor, and part drinkin of the Madras provinces, the T Kistah rises throughout a great part limit, firming the natural boundary.

Its arenge length may be estimated at north to work, and its breachth 270, from east ing an arm of short 50,000 square miles.

The good arrive of the country is i bing densel for 1,500 to 2,000 feet above are; but here are no montains of any go are. The axisy life so common throug dis proton, maint distly of dark colours in any place a large denshed blocks, and eily dyin of grow state, which are from count

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## HYDERABAD.

ATTAINS, SATURA STOCK

Createral desrightion of the liver-abad terprovinces of Hyderabad and Beeder, and also part of Aurungabad, Candeish, and Berar, in its extreme limits, extends between the 15th, and 21st 30" degrees of north latitude, and the 75th, and 81st 30" of east longitude. It is somewhat of a quadrangular shape, but the sides are so very irregular, as to defy description.

Boundaries and It is bounded on the east, by the country of the Rajah of Nagpore, the Wurda and Godave-

ry rivers separating the two countries ;—on the north by part of the Nagpore country, Meiwar, and a part of Candeish ; on the west, lie the Bombay territories ; and on the south the Ceded districts, Kurnool, Guntoor, and part of the northern division of the Madras provinces, the Toombuddra and Kistnah rivers throughout a great part of its southern limit, forming the natural boundary.

Its average length may be estimated at 320 miles, from north to south, and its breadth 270, from east to west, containing an area of about 90,000 square miles.

The general surface of the country is irregularly hilly, being elevated from 1,800 to 2,000 feet above the level of the sea; but there are no mountains of any great height to be seen. The rocky hills so common throughout all parts of this province, consist chiefly of dark coloured granite, found in most places in large detached blocks, and in others, pervaded by dykes of green stone, which are frequently of great extent.

The soil in general, between the granitic hills, is extremely fertile, and when capable of being irrigated, and in situations where alluvial deposits are collected, produces rich crops of rice.

#### HYDERABAD.

The following account of the geological features of the province of Gundwana, is from the pen of Dr. Voysey.

Geological observations. "The granitic part of this country may be called both mountainous and hilly, and in the plains and valloys are found, elevations which are miniatures of the loftier ranges. These ranges are few in number, and remarkably interrupted and irregular, their extent inconsiderable, and their height above the level of the sea, about 2,500 feet, most of them falling far short of that height. Single isolated hills, and groups with round and conical summits, are by far their most common features.

"Although the complete isolation of these hills and groups, first strikes the observer as being the prevailing character, on a closer examination it will be found, that the apparently isolated hills are connected at their bases, by scarcely distinguishable elevations, pursuing the north-west and south-east direction, common to them and the larger ones.

"They are extremely bare and rugged in their outline, and consist of piles of rocks, lying on enormous masses of concentric granite. In the process of decomposition, these form *tors, and logging stones*, of a singular appearance.

"The hill on which the fort of Bhowanighur is built, and that of Maul-Ali, 2017 feet above the level of the sea, may be taken as specimens of the isolated hills and groups; and the ranges of Mulkapore and Golcondah, as specimens of the continued. The only parts of the country which are entitled to the name of plains, are those in the neighbourhood of the rivers, being formed by their inundations, and therefore of small extent.

"The above description applies to the greater part of the granite country; the ranges of granite, however, which run north-east and south-west, from Guntur-gundwana, forming the pass of the Kistna at Beizwara, and that of the Godavery at Papkunda, are of a different character; being less interrupted, more elevated above the plains, and although nontrature in bible short the level of the sets, are the solar termine. The solar are very in the sets results to set his hands and his solar termine to set his hands and his solar termine to set his hands and his solar perior, or are table. The construct of Balance for miles in the sonart of Balance for miles in the sonart of Balance for miles in the sonart in Balance for the sorter in the sonart in Balance for the sorter in the sonart in Balance to the sorter in the sortiers.

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#### HYDERABAD.

not higher above the level of the sea, are altogether of a different structure. Their sides are very precipitous, and oblige the traveller to use his hands and knees for a considerable portion of the ascent, though their outline is not rugged, and the logging stones and tors, of the former mentioned granite, are not visible.

"The cantonment of Bolarum five miles north of Secunderabad, is one of the highest inhabited parts of the granite country, and from thence to the northward, gradually decreases in height as far as Munackpet, the same takes place more suddenly at Mulkapore to the eastward, and at Patancheroo to the north-west.

"The city of Hyderabad, close to the walls of which the river Moosey runs, is by barometrical measurement, 1,672 feet above the level of the sea, and the cantonment of Secunderabad, 1,837, which agrees with Colonel Lambton's trigonometrical measurement, within 19 feet.

"The outline of the basaltic trap hills, is smooth and rather flattened, with a few conical elevations in the range; or they consist of an accumulation of round hills, with deep ravines intersecting and separating them. They are covered with long grass to their summits. Their course is the same with the granite they cover, but it frequently happens that no regular direction can be perceived. The sandstone country and rocks are flat, the sides of the hills steep, with extensive gaps in the course of their ranges, at times, nearly reaching to their bases; their direction is north-west and south-east, or nearly so, and it is probable, that they extend over a considerable portion of the south-east part of Gundwana.

"The lakes are all artificial, and are found only in the granitic and sandstone country; they are usually formed by uniting two projecting points of low hills, which nearly separate the upper half of a valley from the lower, by enormous causeways of granite, or mounds of earth, which collect the different streams rushing from the hills during the rainy sea

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son, forming sheets of water, of from three to ten miles in circumference. This mode of retaining water artificially, is probably coeval with the first increase of population in this country, as the small supply derived from wells, would not be equal to the cultivation of rice, which is the only grain extensively produced in the granitic soil. After the rains, the loss they sustain from irrigation, evaporation, &c. is supplied by infiltration, nevertheless, many become dry before the monsoon season returns. Those tanks which are neglected, and no longer supply rice-fields, are speedily covered with the large leaves and flowers of the nelumbo-indica, othelia alismoides, and other aquatic plants : their waters acquire a noisome smell and unwholesome taste. The number of tanks, and their state of repair, afford a fair criterion of the prosperity of the country.

" They are less frequent in the sandstone country, and the unirrigated cultivation is accordingly more abundant.

" In the basaltic trap they are rarely seen, and the irrigation of rice when cultivated, is performed solely by wells.

" The fertility of the soil which composes the cultivated districts, of the granitic part of this province, depends greatly on the facility with which the rock of which they are formed, becomes decomposed. The soil is silicious, but varies as much as the granite rock itself, and yields but few spontaneous productions. The rich valley of Mulkapore forms an exception, and it may be said, that usually, the spontaneous fertility is in the inverse ratio of height above the level of the sea.

" The following is an analysis of a garden soil at the cantonment of Secunderabad, which has not received much manure.

" Specific gravity of soil 1.70. Four hundred and eighty grains contained viz :

Of water of absorption. ..... 10 grs. Stones consisting of quartz and felspar. ..... 255 "

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teineties There are inconcrable tank throughout the country, formed as above an belasts inves up between ranges of mult," but with the enception of the 13) miles noth-east of Hyderabad-ther reservers of water to be not with, and but Parial, a boly of water of great extent depth, gives rise to a stream called the Ku which a well as several other large streams both in the eastern and western direction, tion, which enters the sea worth of Mo wher is praced, both of tanks and wells erentry, is of good quality.

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HYDERABAD.

# Vegetable fibre. .... 2 " Silicious sand...... 154 "

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The surface of Hyderabad is an elevated table-land, hilly but not mountainous, with a climate of a more moderate temperature than its latitude would indicate.

The country in general may be said to be thinly wooded ; and there are no jungles of any great extent, and no forest trees to be found, except in the northern parts, and the but little known, north-eastern direction ; extensive topes of date and palmyra trees, are however to be found every where.

Tanks and lakes. There are innumerable tanks, and of all sizes throughout the country, formed as above mentioned, by embankments thrown up between ranges of hills or elevated grounds," but with the exception of the Purkal lake, about 120 miles north-east of Hyderabad-there are no natural reservoirs of water to be met with, and but few swamps. The Purkal, a body of water of great extent and considerable depth, gives rise to a stream called the Kussera or Over,which as well as several other large streams, taking their rise both in the eastern and western direction, join the Kistnah river, which enters the sea south of Masulipatam. The water in general, both of tanks and wells throughout the country, is of good quality.

Rivers. The principal rivers are near the northern boundary, as the Poorna which flows through the rich valley of Berar, and unites with the Taptee at Chandway in Meiwar ; the Wurda, which runs along the western boundary, dividing Hyderabad from the country of Nagpore, and which unites with the Godavery near a place called Serlouncheh. The Pyne-gungah, takes its rise in the north-western part of the country, and flowing eastward joins the Wurda near

The most remarkable of those are the Hussain Sugger tank lying between the emborment of Secunderabad and Hyderabad, which is soveral miles in circumference, and brigstes a great extent of paddy ground; and another tank to the west of the city of Hyderabad, the bund of which is formed by 21 horizential arches-15 of which are 150, and the other 7, 100 feet in span. This holy of water is 17 miles in circumference when the tank is full. It is filled by a canal from the Mooser river, and supplies the city with water. It was constructed at an expense of 8 lace of Ropers.

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The Godavery, the most considerable river in Warra. Southern India, takes its rise in the mountainous parts of Aurungabad, and flowing eastward, intersects the country of Hyderabad, and after receiving innumerable tributary streams, the principal of which are the Manjeera, the Ghurkpurna, and Wurda, it flows south-eastward, into the Bay of Bengal, below Rajahmundry. The Kistnah, next in size and importance, also rises in the western ghauts, in the province of Beejapore, and takes a direct easterly course through the southern part of the Hyderabad country, being joined by the Beema and Toombuddra rivers, which also have their origin in the same range of ghauts, the former uniting with it at Culloor, and the latter at Mooricondah; many smaller streams also flow into it, amongst which, is the Moosey or Hyderabad river, which joins the Kistnah below Warrapilly;after which it inclines somewhat to the northward, and making a considerable sweep then proceeds south, and enters the sea at Masulipatam.

Roads. The military roads passing through the Hyderabad country, are kept in a state of excellent repair at all times. The principal road is that, running from Secunderabad to Madras, via Warrapilly and Ongole; and along this line, excellent bungalows have been erected at each stage, for travellers. A branch from this road strikes off near Nacracul, and proceeds by Beizwarra to Masulipatam, along which are also good bungalows at the several stages. Proceeding northward to Nagpore there are two good roads, one via Nandair, and the other by Nirmul. The latter road however, can only be travelled with safety from January till the end of May, or previous to the setting in of the south-west monsoon, owing to the danger of contracting remittent fever, at the other periods of the year, in passing through the extensive Nirmul jungle. This jungle commences about five miles from Nirmul, on the summit of the ghant of the same name, and extends to within two or three miles of Yedulabad, the total distance between these places being 46 miles and 2 furlongs.

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HTDERABAD.

The road via Nandair, being open, and free from dense jungle, may be travelled with safety at all seasons, and though circuitous, is consequently preferred. A good road also proceeds north and by west to Jaulnah.

A road running southward, divides at a place called Juddacherlah into two branches, one leading to Bellary and Bangalore, the other to Kurnool and Cuddapah; Bungalows have not been erected on these lines. In addition to these various roads, others intersect the country in all directions, running between the different stations of the Nizam's army, and the principal towns.

The travelling distance from Secunderabad to Madras, viâ Ongole, is 399 miles; to Masulipatam viâ Beizwarra 221; to Nagpore, via Nirmul 3233; and by Nandair 420; to Jaulnah by Oodghir 263; to Bellary, viâ Adoni 2293; and to Cuddapah, viâ Kurnool 2563.

Wild snimals. The wild animals do not differ from those usually met with in Southern India, tigers, cheetas and antilopes are however very numerous; and in the unfrequented country to the north-east, wild buffaloes are also to be found. The wild elephant is not known in this part of the Deccan.

Subsidiary force. The British connexion with this country, commenced in the latter half of the last century, during the long contest for supremacy, between the French and English powers ;—and about the year 1798, a treaty was entered into with the Nizam, under which a certain number of troops, commanded by European officers, and instructed in European military tactics, were agreed to be kept up; and again, a further treaty was made in 1800, when the subsidiary force was fixed at 8000 infantry, and 1000 cavalry; a certain portion of territory having been ceded for their maintenance.

The Hyderabad subsidiary force now consists of two distinct bodies of troops.—His Highness the Nizam's army; and the regular troops of the line, European and native, belonging to the Madras presidency.

The Nizam's army consists of five regiments of irregular cavalry—four companies of native artillery—eight regiments of native infantry, a company of hill rangers, and one of pioneers; the whole of which are officered by Europeans from the regular armies of the three presidencies.—The stations occupied by the Nizam's troops, are Bolarum, Aurungabad, Goolburgah, Ellichpore, Monidabad, Mucktul, Lingasore and Hingolec.

The medical officers of this service not being under the Madras government, no reports or returns are received at the Medical Board office from them, nor do the records contain any information relative to the medical topography of the stations above mentioned, which, consequently do not fall within the scope of this report.

The stations occupied by the troops belonging to the Madras presidency, are Secunderabad and the adjoining cavalry cantonment of Bowenpilly, and Jaulnah.

# SECUNDERABAD.

Cantesement of Seconderabed, and wienity. This cantonment, the head quarters of the Hyderabad subsidiary force, is situated in north latitude 17° 26", and east longitude 78° 32". The city of Hyderabad lies 6 miles to the southward, separated from the Residency, usually called Chudderghaut, by the river Moosey, over which an excellent bridge has been erected under the superintendence of Major Oliphant, late of the Madras Engineers.

The military cantonment of Bolarum, occupied by the Nizam's troops, lies about 5 miles north-east, and the cavalry cantonment of Bowenpilly, 2 miles north-west.

The surrounding country is wild and picturesque, being interspersed with small hillocks of granite, over the entire of its surface. The soil is principally silicious on the higher grounds, and many of the scintillating stones are to be

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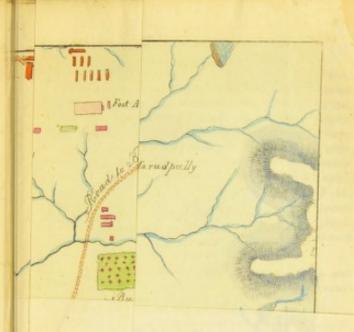
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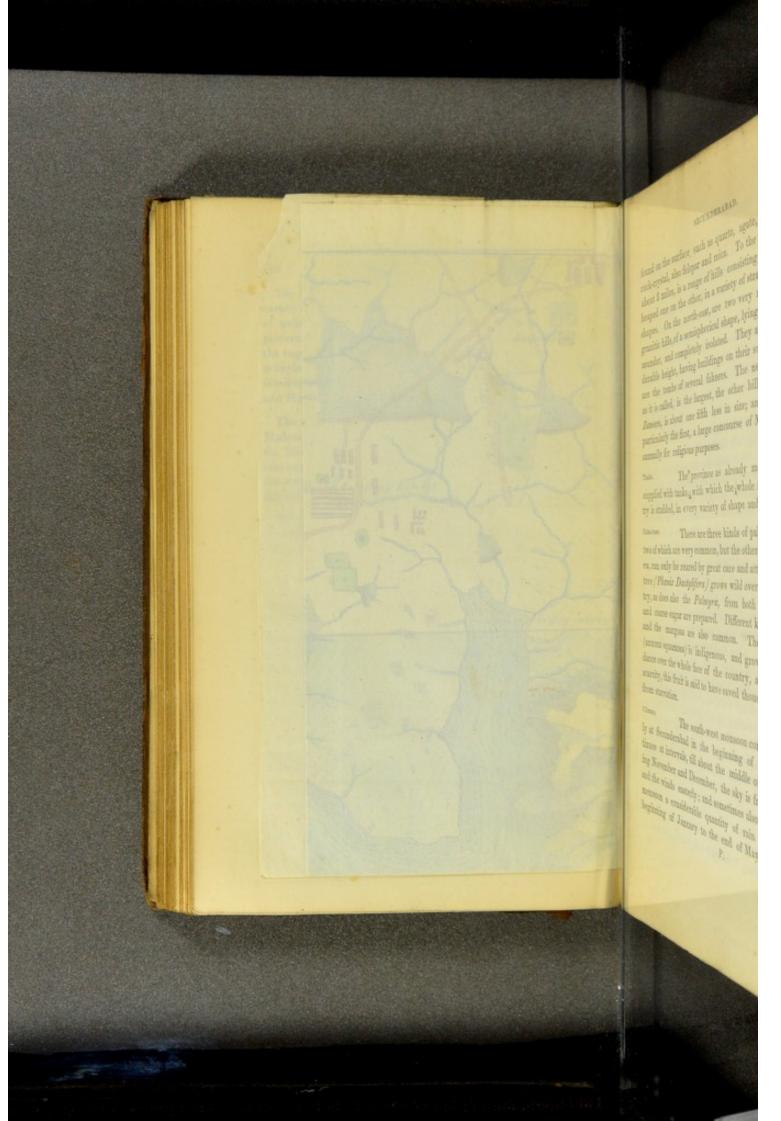
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# SECUNDERABAD.

found on the surface, such as quartz, agate, calcedony, flint, rock-crystal, also felspar and mica. To the westward, distant about 3 miles, is a range of hills consisting of granite rocks, heaped one on the other, in a variety of strange and fantastic shapes. On the north-east, are two very remarkable large granitic hills, of a semispherical shape, lying about three miles asunder, and completely isolated. They are both of considerable height, having buildings on their summits, in which are the tombs of several fakeers. The nearest, *Maul Ali*, as it is called, is the largest, the other hill named *Emaum Zameen*, is about one fifth less in size; and at these places, particularly the first, a large concourse of Mahomedans meet annually for religious purposes.

Tasks. The province as already mentioned is well supplied with tanks, with which the whole face of the country is studded, in every variety of shape and size.

Palm-trees. There are three kinds of palm trees met with, two of which are very common, but the other the Cocus Nucifera, can only be reared by great care and attention. The date tree (Phaniz Dactylifera) grows wild over the whole country, as does also the Palmyra, from both of which toddy and coarse sugar are prepared. Different kinds of banyans, and the margosa are also common. The custard apple (annona squamosa) is indigenous, and grows in great abundance over the whole face of the country, and in seasons of scarcity, this fruit is said to have saved thousands of the poor from starvation.

Climate. The south-west monsoon commences generally at Secunderabad in the beginning of June, and continues at intervals, till about the middle of October. During November and December, the sky is frequently cloudy, and the winds easterly; and sometimes also in the north-east monsoon a considerable quantity of rain falls. From the beginning of January to the end of May, the sky is gene-

rally clear, and the weather dry. Dews are not infrequent in January, and the early part of February ; and in some years, light showers of rain occur during these months. The annual fall of rain is estimated at thirty-two inches ; but in years when the monsoon fails, it does not amount to half that quantity. The mean temperature in the house, for one year, deduced from observations made at sun-rise, at two o'clock in the afternoon, and at sun-set, was in January 741, February 761, March 84, April 911, May 93, June 88, July 81, August 803, September 79, October 80, November 761, December 74, giving as the annual mean 811. Had these observations however been made earlier in the morning, and later in the evening, and the thermometer placed in a more exposed situation, it is probable that the annual mean would have been at least two or three degrees lower. Indeed, the daily range, which more especially affects health, is very considerable during November, December, January and February, amounting in the shade, generally to about 20%, and not infrequently to 30° .- The most sickly periods are the wet and cold seasons, when the mortality amongst Europeans chiefly occurs.

Military lines, and public build-ings. The cantonment extends in a direct line from east to west, nearly three miles in length. forming one long curved and irregular street, having the officer's houses ranged on either side, in moderate sized compounds ; this street is intersected in different parts, by others running north and south, which afford a facility of communication with the bazaars, sepoys lines, and parade ground. The original lines face the north, and behind them is the bazaar, commencing on the right or east end, and extending three-fourths of the length of the cantonment. The bazaar, generally speaking, runs in a parallel line with the street, about two furlongs in its rear, having the sudr bazaar situated about the centre. On the right or east end of the whole line, stands the European infantry barracks, and somewhat in their front, to the north-east, is the burial ground

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Led of the European Tenes, follow proop the flow anties regiments, and the officers h is the waters and of the continuent; on the tands the church, a large and handsome bu on the lightest spot of ground in the contition emborest of it, is the masmit: hodge.

In front of the lines of the native corps, hospitals, places of arms, and quarters for th torps; and at about the centre of the whole arsenil; the front, of all of these buildings, b ine short they feet in advance of the offi with a raw elevers before them. About fifty admars is good read retaining from east to w church to the lines of the home brigade of artic the pends ground, which is about half a mile i percle form an inclued plane, descending in the pail, and is brended to the north by ten und beites unes it, over which run to the feet settlery lines, and to the cantoon On de unh sile d'ên tirdet, due tool a the convertice buried ground, in a lo maxim, manualed by a fance of mills. andres alle as int the public transm the iner energy about a spectra of a mile the powler magnings, and half a trail

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enclosed by a wall; the road from Madras and Masulipatam, running between the barracks and burial ground. A little to the west of the barracks is the hospital, a large and commodious quadrangular building, enclosed by a high wall ; and further west, are the lines of the officers of the regiment. Southward, and at a right angle with the lines of the European regiment, are those of a native corps, added to the force in 1834 ; they are of a temporary structure, the ground on which they stand is high, intersected by ravines, and the surface very uneven.

Left of the European lines, follow progressively those of the four native regiments, and the officers houses extending to the western end of the cantonment; on the extreme right stands the church, a large and handsome building, situated on the highest spot of ground in the cantonment, and to the north-west of it, is the masonic lodge.

In front of the lines of the native corps, are the respective hospitals, places of arms, and quarters for the serjeants of the corps; and at about the centre of the whole of the line, is the arsenal ; the front, of all of these buildings, being in a straight line about thirty feet in advance of the officers compounds, with a row of trees before them. About fifty paces farther in advance is a good road running from cast to west,-or from the church to the lines of the horse brigade of artillery,-adjoining the parade ground, which is about half a mile in breadth .- The parade forms an inclined plane, descending about two inches in the yard, and is bounded to the north by a rivulet, having two small bridges across it, over which run the roads leading to the foot artillery lines, and to the cantonment of Bolarum. On the south side of the rivulet, due north of the arsenal, is the cantonment burial ground, in a low and swampy situation, surrounded by a fence of milk-hedge ; on the northern side are first the public rooms, and near them the fives court, about a quarter of a mile to the north-cast, the powder magazines, and half a mile north-west the

lines of the foot artillery. These lines are situated on higher ground than those of the infantry, and the original granite rocks, with which the whole country is covered, in a greater or less degree, have not been removed from around them ; both lines run parallel, and are rather more than a mile asunder. On the right, of the artillery lines, are two hospitals-one for the gun lascars, and the other for the Europeans. About half a mile distant in the direction of Bowenpilly, are lines for a native corps, which was added to the force on the removal of the troops from Jaulnah in 1834; they are of a temporary structure ; the ground on which they stand is elevated, and somewhat undulating, having some small tanks in the vicinity. The troop of horse artillery, are placed on the north-west end of the cantonment, from whence is a commanding view of the whole length of the parade ground, extending as far as the church. The barracks are on an elevated site, and separated from the lines of the native infantry by a narrow strip of low rice ground, through which a causeway has been made, there is also a small bridge leading to them, under which passes the little rivulet bounding the parade ground, before mentioned.

Hussain Sauger South of the horse artillery lines, and at the south-western end of the cantonment, is the extensive sheet of water, called the "Hussain Saugor" tank, which formerly gave its name to the cantonment of Secunderabad ; on the eastern side of this large tank, is the bund or bank, which runs due south leading to the Residency, and city of Hyderabad. The top of the bund forms an excellent road, wide enough for three carriages to pass abreast, and is about a mile and a half in length.

To the eastward of the tank is a tract of cultivated rice ground, extending about eight miles in length, to the river Moosey, near to the village of Oopal, on the Madras road.

Bowenpilly, Ca-The Cavalry lines are distant about two miles north of the cantonment, at a place called

Bornty E. Sinced is an open (reptil). months derived ground; and the rethen have presently here very braidings tenie diesers, mare particularly cholers. · These are about 5000 has Success later, which at the average a to each, while give a population of \$0,000 under im noise neuroly made out, amore sydein of HAST. The s house at al an stary, built of much and min sner here we a considerable wat description, consisting of two stories, and p costs principality, and deficient in breadd is more and rocky, causing much difficu effectuality. The common servers are gene and entend throughout the several streets o for it merenness, pools have formed in into which the servers empty themselve milities of fith, which at certain set tone very offensive, and are productive of tim is loweser poil to the cleanliness of t as praticitie, the inhabitants being held evening in four of their houses, and bein white avoid the repair of the drains, which they reside. Houses of the bester ( raly have period standard to them, but of the countries, tranget the pointer classes emin haires exercingly effensive. the bases, and the convenience of its inhal goaly praired by the recent exection of open tell ing situation, where the butch wanties as located; it has also had the peness to build in the neighbourhood, and a person of the population forms that more

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Bowenpilly, situated in an open country, and on dry, and somewhat elevated ground; and the regiments stationed there have generally been very healthy, and free from epidemic diseases, more particularly cholera.

Population of There are about 5000 houses in the Sudr

bazaar, which at the average of six inhabitants to each, would give a population of 30,000; this is however under the estimate recently made out, which exhibits an aggregate population of \$ 34,357. The generality of the houses are of one story, built of mud and tiled, but in the main streets there are a considerable number of a better description, consisting of two stories, and pucka built. The streets are irregular, and deficient in breadth, and the ground is uneven and rocky, causing much difficulty in draining it effectually. The common sewers are generally covered in, and extend throughout the several streets of the bazaar, but from its unevenness, pools have formed in various directions, into which the sewers empty themselves, causing accumulations of filth, which at certain seasons of the year prove very offensive, and are productive of malaria, ; attention is however paid to the cleanliness of the bazaar, as far as practicable, the inhabitants being held responsible for sweeping in front of their houses, and being obliged to contribute towards the repair of the drains, in the streets in which they reside. Houses of the better description generally have privies attached to them, but there is a want of that essential, amongst the poorer classes, which renders certain localities exceedingly offensive. The cleanliness of the bazaar, and the convenience of its inhabitants, have been greatly promoted by the recent erection of a market, in an open and airy situation, where the butchers and sellers of vegetables are located ; it has also had the effect of inducing persons to build in the neighbourhood, and of withdrawing a portion of the population from the more crowded districts



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of the bazaar, affording facilities for widening the streets in those parts. The bazaar is well provided with water of good quality, from wells and bowries, fed by springs.

There are no returns kept of deaths among the population, and consequently no data exist to determine the average mortality. Fever, bowel complaints, and rheumatism, are the most common diseases, and are most prevalent at the close of the monsoon. Considering the extent of the population, there are but few paupers at this station, and a fund is provided by voluntary subscription among the gentry, for the relief of the indigent; and those who are able to work are seldom without employment.

The fund adverted to, is under the management of a committee, and mendicants are not allowed to prowl about, or frequent officers compounds.

Pedice. The Police force consists of a cutwal, 2 jemadars, 3 duffadars, and 61 peons, who are divided into night watches for the protection of property, &c. The establishment is paid from the revenue accruing from the Abkarry contract; but there is a separate establishment of a jemadar, and 27 peons, paid by the Nizam's government, specially employed in preventing the sale of illicit spirituous liquors. The Abkarry contractor is also required to support an establishment of 84 peons, for the prevention of smuggling.

A distinct building is appropriated as a jail; the mean average number of prisoners throughout the year, being about 28, which includes persons confined for debt, for petty offences, and criminal offenders under sentence by general court martial. Punishments for petty offences are awarded by the Superintendent of police, such as fines, imprisonment, with or without hard labour, and corporal punishment; but the latter is only had recourse to in aggravated cases, or where other means have proved ineffectual. Prisoners sentenced

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to hard labour, are employed under the orders of the Superintendent of police, in draining and levelling the streets, and in repairing bridges and other public works. Prisoners for debt, are supported by the parties at whose instance they are confined, and criminal offenders are subsisted by Government, at the rate of four pice each per diem; all fines, which are regularly accounted for, are generally sufficient to cover the expenses of the maintenance of the prisoners.

Barrack & Hespital accommodation, for the European Infant. Uy. The barracks for the European infantry, at the eastern extremity of the cantonment, are situated on the side of a hill sloping gently to the

eastward, with high land on three sides, and a low swampy plain on the fourth, the latter being interspersed with tanks, stagnant pools, rice fields, and a date plantation, which extends to within 500 yards of the barrack wall; and besides the intoxicating beverage it so abundantly produces, it serves also as a place of deposit for all the filth, and nuisances of the neighbourhood. On the north-west or opposite side, and distant 100 yards, is the burying ground, densely crowded with graves and tomb stones, and about half a mile further back is a high rugged ridge of granite rocks. The soil on which the barracks stand, consists of a reddish coloured clay, mixed with decomposed granite, and except the low cultivated ground above mentioned, the surface in the immediate vicinity, is dry and barren.

The dimensions of the several apartments in the barracks are as follows.

Rotms, No.	Length Feet,	Breadth Feet.	Height Feet.	No. of Cots.	Total.
1 Centre room. 1 do. 2 Verandah rooms each 2 do. 4 Centre rooms 4 do. 32 Serjeants' rooms	210 229 196 215 142 164 135 150	18 18 12 12 18 18 18 12 12	18 18 12 18 18 18 12 12 12	76 84 34 58 60 21 25 2	76 84 68 208 208 240 96 104 24

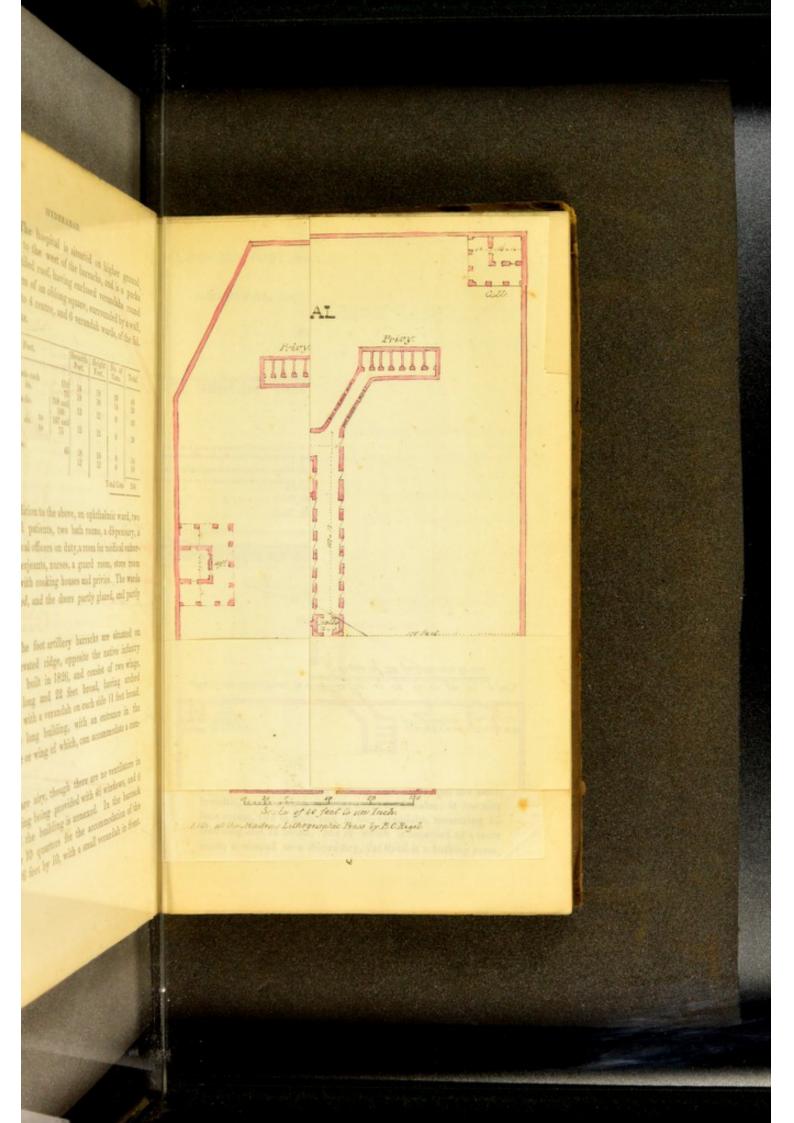
Hospital. The hospital is situated on higher ground, about 400 yards to the west of the barracks, and is a pucka building with a tiled roof, having enclosed verandahs round it; it is in the form of an oblong square, surrounded by a wall, and is divided into 4 centre, and 6 verandah wards, of the following dimensions.

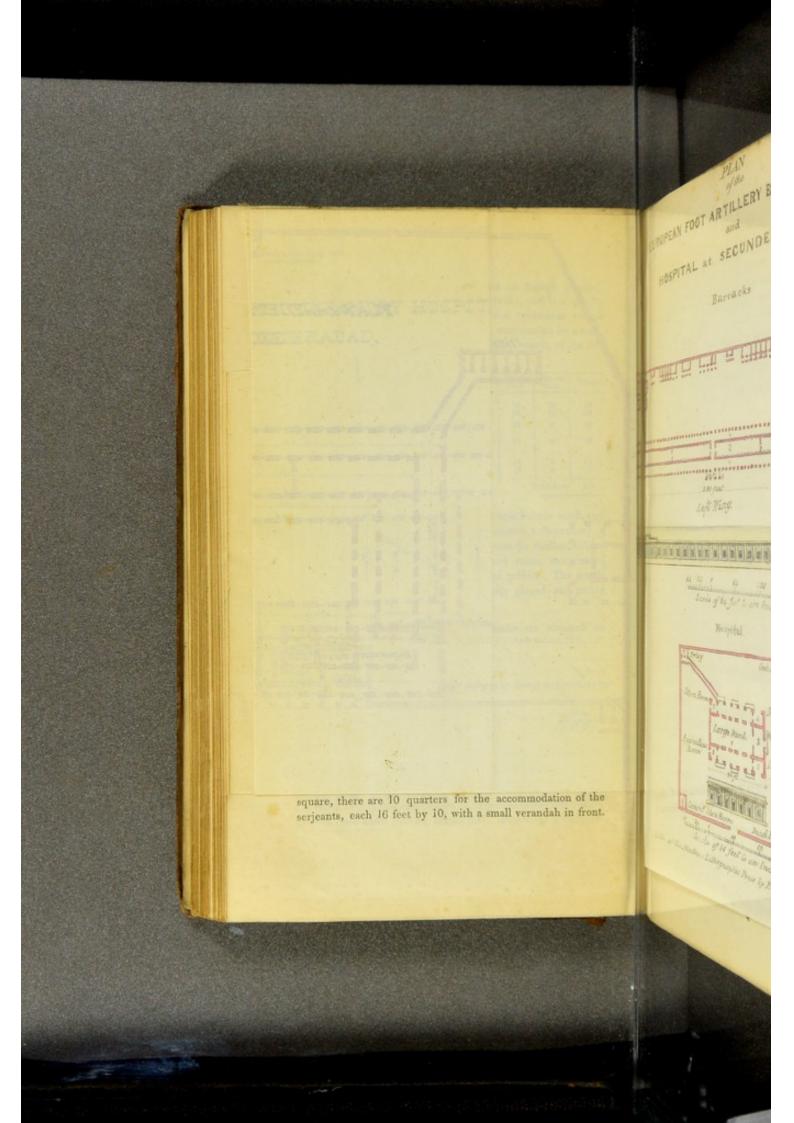
Length Feet.	Breadth Feet,	Height Feet.	No. of Cots,	Total.
2 Long centre wards each 110 2 Short do. do. 75	18	18 18	20 14	40 28
2 Short do, do, 75 2 Long Verandahs do, [248 and 4 Short do, do, to [107 and	12	12	0	36
to 1 70	12	12	0	28
$ \underset{i \in [M]}{\overset{g}{\underset{i \in [M]}{\underset{i \in [M]}{\overset{g}{\underset{i \in [M]}{\underset{i \in [M]}{\overset{g}{\underset{i \in [M}}{\overset{g}{\underset{i : E}{\underset{i : E}}}}}}}}}}}}}}}}}}}}}}}}}}}}}} } } } $	18 12	18 12	0	14 18
A L	1.00		Total Cots	164

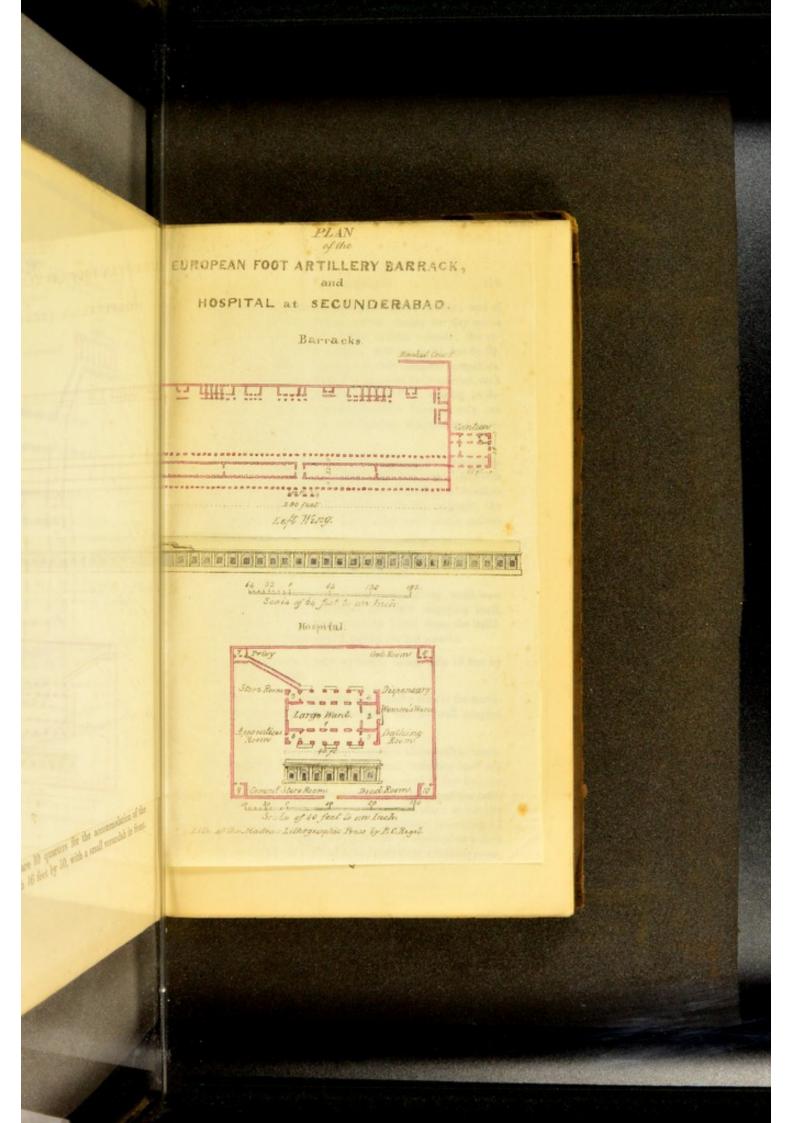
There are in addition to the above, an ophthalmic ward, two cells for maniacal patients, two bath rooms, a dispensary, a room for the medical officers on duty, a room for medical subordinates, for the serjeants, nurses, a guard room, store room and dead room, with cooking houses and privies. The wards are well ventilated, and the doors partly glazed, and partly venitianed.

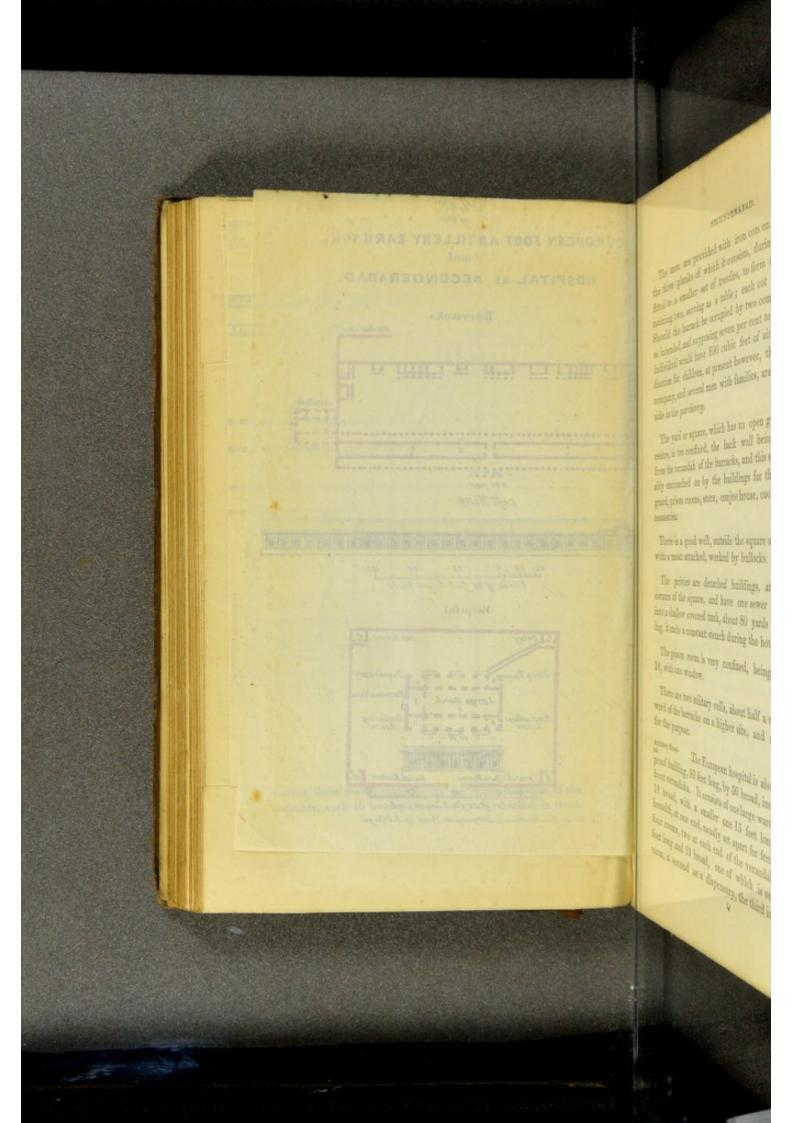
European foot Artillery barracks. the elevated ridge, opposite the native infantry lines; they were built in 1826, and consist of two wings, each 280 feet long and 22 feet broad, having arched bombproof roofs, with a verandah on each side 11 feet broad. They form one long building, with an entrance in the centre, each side or wing of which, can accommodate a complete company.

The barracks are airy, though there are no ventilators in the roof, each wing being provided with 46 windows, and 6 doors; a plan of the building is annexed. In the barrack square, there are 10 quarters for the accommodation of the scriptants, each 16 feet by 10, with a small verandah in front.









# SECUNDERABAD.

The men are provided with iron cots on trestles; and of the three planks of which it consists, during the day one is fitted to a smaller set of trestles, to form a bench, the remaining two, serving as a table; each cot is 6½ feet by 2½. Should the barrack be occupied by two complete companies, as intended, and supposing seven per cent to be married, each individual would have 690 cubic feet of air, making no deduction for children, at present however, there is only one company, and several men with families, are permitted to reside in the *parcherry*.

The yard or square, which has an open gutter through its centre, is too confined, the back wall being only 42 yards from the verandah of the barracks, and this space is considerably encroached on by the buildings for the serjeants, the guard, prison rooms, store, conjee house, cook rooms, and necessasaries.

There is a good well, outside the square at its western end, with a most attached, worked by bullocks.

The privies are detached buildings, at the north-west corners of the square, and have one sewer emptying itself, into a shallow covered tank, about 80 yards from the building, it emits a constant stench during the hot months.

The prison room is very confined, being only 16 feet by 10, with one window.

There are two solitary cells, about half a mile to the northward of the barracks on a higher site, and are well adapted for the purpose.

Artillery Rough The European hospital is also a pucka, bombproof building, 90 feet long, by 50 broad, including back and front verandahs. It consists of one large ward,72 feet long, by 18 broad, with a smaller one 15 feet long, and the same breadth, at one end, usually set apart for females; it has also four rooms, two at each end of the verandahs, measuring 13 feet long and 11 broad, one of which is occupied as a store room, a second as a dispensary, the third is a bathing room,

and the fourth is for the medical subordinates on duty. The building is surrounded by a wall 13 feet high, and 20 yards distant, and within the square, in the angles, are the cookrooms—dead-room, commissariat store room, and the privy. This hospital was errected in 182°. See plan annexed.

Native Hospital. The hospital for the natives, distant 80 yards to the eastward, is a brick and chunam building, with a tiled roof, and is 50 feet long and 20 broad; it has a verandah on the north and south sides, 8 feet broad.

Tables of diseases from No. 1 to 10, with some remarks, will be found at the end of the report.

### BOLARUM.

Relaram, descrpt. The cantonment of Bolarum is situated about 12 miles north of the city of Hyderabad, and about 5 north of Secunderbad, through which the road to it passes.

Though at so short a distance from Secunderabad, and but little more elevated, it has been remarkable, from its first occupation by the Nizam's troops, in the year 1815, for its greater salubrity, and exemption from the periodical visitations of fever, experienced in the neighbouring cantonment.

The granitic ridge on which the station stands, is 1890 feet above the level of the sea, and about 50 or 60 feet higher than Secunderabad. This ridge though of considerable extent, and forming an open plain on the higher and eastern side of the cantonment, of six or eight miles in circumference, is bounded on all sides by paddy fields, and there are several small tanks scattered about the vicinity. The gardens produce all kinds of European vegetables, some of them in great perfection, and besides the common Indian fruits, there are the finest sorts of mangoes, and also grapes, strawberries, and pinc apples; a few peaches have been grown in some of the gardens, but of indifferent quality.

The range of the thermometer throughout the year may be stated at from 49°, to 90° in the shade, though in the hot neuro no receive and i section rise made higher in an in a section rise made higher in the section for all sections of section in the section for all sections and section receive hereafter lines for two beam made descriptions for section all section a made descriptions for sections at a made description here, and side at a made is in an sity standard, and and greep conscience for the arcoard and the here are solidow more than of and the section terminet.

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# CANTONMENT OF JAUL

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# BOLARUM AND JAULNAH

months it sometimes rises much higher. In June, July, August and September, the winds are westerly ; during October, November, December, January and February, they blow from the east; and in March, April, and May, the northwesterly breezes are frequent.

The station has military lines for two battalions of infantry, a rissallah\* of irregular horse, and 250 artillery.

The hospital is in an airy situation, and well raised, having every convenience for the accommodation of 150 sick, but there are seldom more than one third of that number under treatment.

The annual fall of rain may be taken at from 25 to 30 inches, which occurs principally in the south-west monsoon, or between June and October. In the north-east monsoon 4 or 5 inches have been known to fall during the month of December, but this is unusal and only happens occasionally.

With respect to salubrity, Bolarum may be considered amongst the most healthy stations in the Deccan, and invalids consequently resort to it for change of air, particularly from Secunderabad, and often with the most decided benefit. No rank vegetation is permitted to spring up within the limits of the cautonment, the hedge rows are cut down annually to a certain height, and the place is consequently open and in a great measure free from the sources of noxious exhaltaions, which besides being a nuisance, are the frequent causes of sickness at large military stations.

### CANTONMENT OF JAULNAH.

General description of Jaulnah, is a considerance count and is the statistic station, in the province of Aurungabad, and is the The cantonment is situated in north latitude 19° 50", and east longitude 76°; it is 263 miles, travelling distance, north-west from Secunderabad, and about the same from Bombay, and lies between the • A body consisting of about 200 horse.

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# BOLARUM.

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Nizam's military stations of Aurungabad and Hingolee, being 90 miles west of the latter, and 40 east of the former-the distance to the sea on the castern coast in a direct line, is 210 miles.

Roads. The roads throughout the country, in the dry season, are tolerably good, but become nearly impassable in the rains, from being intersected by nullahs, and from the nature of the soft, black cotton ground, over which they run.

Hills and Jungle. The surrounding country is hilly, but not mountainous, and is intersected in all directions with numerous ravines; the hills are chiefly composed of trap rock, which in many places is in a state of decomposition, and above it, is found a layer of red gravel, of a lateritious character, mixed with lime ; irregular hilly ranges, with extensive tracts of waste stony land covered with long grass, characterize the general aspect of the district; and its surface is singularly barren and dreary. The usual jungle met with is low and scattered, consisting chiefly of the babool, except near Soonar, 30 miles eastward of Jaulnah, where it is high and thick, and composed of a variety of trees. Jungle exhalations are considered most noxious in October and November.

Soil and Produce. The soil is of that description called cotton. ground, interspersed here and there, with patches of red gravel-it is capable of the highest degree of cultivation, though often impregnated with saltpetre, which is collected in considerable quantities by some of the villagers, and large tracts of country are reserved for pasturage :--Quartz, carbonate of lime and detached pieces of silex of various tints, many of which are combined with copper and iron, are found in the ravines and nullahs, besides which a brownish. othre used by native painters, is also very common.

The principal grains and plants, cultivated in the neighbourhood, are rice, bajeery, jouary, chenna, oil plants and cotton. Both the large and small descriptions of plough, in use throughout the country, are here common, and are worked either by 2 or 4 bullocks, according to circumstances ;

NUT VIE in much , but plotphed in our line arms out they have and a seed a new birs passed once over, the operation brinding has well is clicify resourced to tion of gradiest, or for a few risk fields in . this of its van; when, and grain of random talk and rallable

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JAULNAH.

the ground is, first ploughed in one direction, and then across, and freed from weeds, when the seed is sown-and the harrow being passed once over, the operation is completed.

Irrigation from wells is chiefly resorted to for the cultivation of gardens, or for a few rice fields in the immediate vicinity of the water; wheat, and grain of all kinds being watered from tanks and nullahs.

Breed of Horses In the neighbouring villages horses of a good description were formerly bred, and some of them were well adapted for the cavalry, but of late years the breed has become deteriorated ; draft bullocks and buffaloes are also numerous, the neighbouring downs affording fine pasturage; and milk and butter are of an exceeding good quality ; good working bullocks for carts, or carriages may be purchased for twenty rupees per pair; and excellent milch cows at from seven to ten rupees; but milch buffaloes bring about twenty rupees each. Great numbers of the latter, being esteemed a superior breed, are sent for sale to Hyderabad, Sholapore, Dharwar, Hoobly and many other large towns to the southward. Sheep and goats, are in abundance, the mutton being of a superior description and flavour ; and butchers meat will generally bear a comparison with that in any part of southern India, and is moreover cheap. Poultry on the contrary is sold at high prices.

Climate and The climate is considered to be one of the most plesant and salubrious in southern India; during the greater part of the year a fresh invigorating coolness is experienced in the mornings,-yet convalescence from serious attacks of disease, and more especially hepatic affections, is almost invariably slow and imperfect, and a change of air, especially to the sea coast, is generally found requisite for the restoration of health. The hot season includes March, April, May and June, and is decidedly the most healthy period of the year,-the heat in the middle of the day is intense, the thermometer ranging between 90° and 100°, but it becomes comparatively cool towards morning, the prevailing winds in these months are westerly.

The monsoon months embrace July, August, September and October,-but in September a partial cessation of the rains generally takes place. During September and October the exhalations from the soil, when partially dry, are regarded as deleterious,-and fever then becomes very prevalent. The average fall of rain is 32 inches.

November, December, January and February comprise the cold season, the variation of temperature at this time, is very great and sudden, the mornings are bitterly cold, and the days hot, the thermometer ranging between 40 ° and 80°, and ice has been known to form on plants. The winds at this season are northerly and easterly, and when due east are particularly cold and piercing. Fogs and dews prevail most in December and January, which are both very healthy months; and English vegetables then arrive at great perfection.

# Town and Fort of Jaulnah, and Military Cantonment.

Old Jaulnah. The town of old Jaulnah contains a population of about 10,000 persons, of these about 2,000 are mussulmans, the rest are composed of different sects of hindoos, such as brahmins, rajpoots, gentoos and mahrattas. The town 'now in a great measure deserted, and in ruins, is of considerable extent ; but, from the superior construction of its small fort, situated on the bank of the Jaulnah river, and of the houses which are built many of them of hewn stone, it has evidently been a place of great opulence. An extensive trade was carried on here in grain and silks, which has now greatly declined, but a manufacture of silk cloths, for native use, is still kept up, which are chiefly exported to the upper Mahratta country. The reduction in the population, which was formerly much more numerous than at present, is attributed to the oppression and extortion of the native government.

Khaderabad. On the opposite side of the small river Koondulka, is the town of Khaderabad, which is surrounded by a high stone wall, and contains about 7000 inhabitants; 1000 are mussulmans, and the remainder hindoos; marwarries among

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he opposite side of the small over Low in summer Kindershal, which is not made by consists about 700 additions, 200 the mainter balor comissions JAULNAH.

the latter are a prominent class, who labour assiduously in their vocation, as soucars and shroffs. There was formerly an industrious race of parsees at this place, but they have much degenerated of late, and their numbers have now diminished to about 40.

A large and flourishing trade was carried on here; as well as in Jaulnah, about 25 or 30 years ago, in silk and cotton, which afforded employment to 4 or 5000 weavers, and beautiful fabrics of silk were manufactured, and sent to all parts of the country ; cotton cloths and muslins, of different textures, were also extensively made, and met with a ready market, but from various causes, such as the great influx and cheapness of English manufactures, the taxation of the Nizam's government, and the exaction and rapacity of the public servants, the trade has greatly declined, and the numbers of these industrious artizans, have now diminished to 3 or 400, who are principally employed in making saarees, pugrics, kummurbunds, coarse muslins, and the coarser kinds of cotton cloths. The cotton raised in the neighbourhood is chiefly used for home consumption, and is of a superior quality.

A beautiful description of scarlet dye is prepared and sent to Bombay, where it is much prized for the brilliancy of its colour.

Wood is scarce and dear, teak-wood being in greatest estimation ; it is brought from the jungles of Nirmul and Massuck, and is used in building, and making furniture.

The streets in the towns of Jaulnah and Khaderabad are very narrow ; the houses are tiled, and those belonging to the wealthier natives, are often ornamented with figures representing subjects of hindoo mythology. Some consist of three or four stories, with a corresponding number of verandahs and balconies. The ground floor is sometimes made of stone work, overlaid with burnt brick, and chunam, and the houses generally, have a cleanly appearance.

Clothing. The pugry, ungrekah, and dhoputtah, are the description of clothing in use with the men, and in the cold

weather, a quilted ungrekah, cumbly, and mahratta shoes, are always worn ;- the usual cholie, and saaree, constitute the dress of the female.

Charpoys are in very general use, and all classes endeavour to possess them. Firewood and charcoal are brought from a distance of 20 miles, the former with dried cow-dung, is used for cooking, and fires of charcoal are kept burning by the more wealthy natives, in the cold weather, in their apartments.

# Use of oplum. Opium is freely indulged in by the marwarries and mussulmans; and all castes and denominations give it to their children, till they are five or six years old, for the purpose of assuaging pain, and also to promote sleep, in order that their occupations may not be interfered with, by attendance on them. Opium is not however taken to excess by these people, and intoxication from the abuse, or too free indulgence in the drug, is rare.

state of Medi- There is a strong dislike to European medicines and medical attendance ; and even native doctors, are frequently not consulted, till disease has made great advances, but when once sent for, advice is invariably followed. In fever, purgatives, chereyta, and abstinence, are recommended; in inflammatory affections of the spleen, liver and intestines, as also in rheumatism, the actual cautery is applied, and borne with fortitude, and with the utmost belief in its good effects.

The poor are not numerous, and work can readily be obtained by all labourers desirous of employment. It is computed that a labouring man can support himself for about one rupee and a half monthly, the few coarse articles of raiment required, included. For some years back there has been but little sickness amongst the resident natives, and the chief disease seen is fever of the intermittent form. The visitations of cholera were formerly frequent and severe, and the consequent mortality very great, but of late years it has seldom appeared.

UTENE they so not applicable as not the a printing, a manimum, above from any or doord talents cases, where spin in and rise although infirms, we will halk, and (and half finding on thesise long anning a sel mainin manes, orig

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There are some aged inhabitants among the population, one in particular, a mussulman, whose years amount to 95-there are others of different castes, whose ages vary from 80 to 90, and who although infirm, are still hale, and in the enjoyment of good health. Females are likewise long lived, and many mussulman as well as hindoo women, octogenarians, may be seen.

River water is always preferred by the na-Water. tives when procurable for culinary purposes,-but although Jaulnah is abundantly supplied from wells, every garden possessing one, the water is seldom good, being highly impregnated with nitrate of potash. In the cantonment there are but two or three wells, the water of which is drinkable ;- but even in the driest seasons, there is no scarcity.

Sugar-cane is raised in the neighbourhood in Vegetable proabundance, but the coarsest description of sugar

only, and that known under the name of "jaggery" is manufactured, the finer sorts, being brought a considerable distance from the Berar country. Wheat and jowaree, are raised in great quantities ; the former when cheap is preferred to all other descriptions of grain, and during the harvest season, forty seers of the best quality can be obtained for a rupee, and sixteen wheaten loaves of the best description, are also to be had for a rupec. Chenna is raised in large quantities, but the description of grain called " cooltie" is not in much estimation, and is but little cultivated, the former is procurable during the harvest at from 60 or 65 secrs per rupee.

The climate of Jaulnah is admirably adapted European vege-table and fruits.

for the purposes of horticulture-most European vegetables are raised in great perfection; figs, grapes, peaches, and strawberries, are all excellent in the season, the latter rival in size any met with in England, but are somewhat deficient in flavour; there is also a great variety and abundance of excellent European vegetables, such as peas, beans, R



cabbage, knolkole, carrots, parsnips, turnips, celery, onions, potatoes and cauliflowers, as well as the more common country vegetables, of every description.

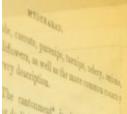
Cantonment The cantonment is situated on a gently sloping declivity, a small range of hills in front, from one to two miles distant, forming a sort of amphitheatre. The cavalry lines are on the south-cast,those of the horse and foot artillery on the north-west, and the infantry in the centre. The town of Khaderabad lies within half a mile of old Jaulnah, and within two miles of the cantonment, in a southwesterly direction. The small river Koondulka, separates the towns of Khaderabad and Jaulnah, and forms the boundary of the cantonment.

The cantonment is capable of affording accommodation to one troop of European horse artillery, one regiment of native cavalry, and three regiments of native† infantry, having barracks, hospitals, store rooms, &c. for each; they were built in 1827, under the superintendence of an experienced Engineer.

Officers' houses. The houses in the officers' lines, are well built, having spacious compounds with good gardens, out houses and stabling, attached to them. The range of hills in the neighbourhood, does not deserve the appellation of mountain land, their height above the neighbouring country, scarcely reaching 150 feet; they are flat, or tabular on their summit, a formation peculiar to this part of the Deccan; a few are detached, solitary and conical, and all are extremely bare of vegetation, having merely a few stunted bushes here and there. Their sides slope gently, and a precipitous ridge is seldom to be met with.

Hiver Koonduka. The river Koondulka has its rise near "Tuperan" and "Rajore," two small villages situated about 16 miles to the northward. In its course, it receives several tributary streams, and empties itself finally into \* See plus annexed.

\* Two of the lines for native corps are at present unorcupied, and in a ruinous con-

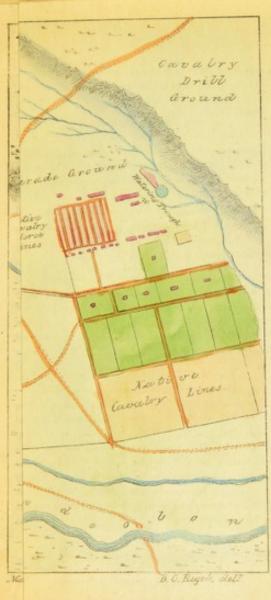


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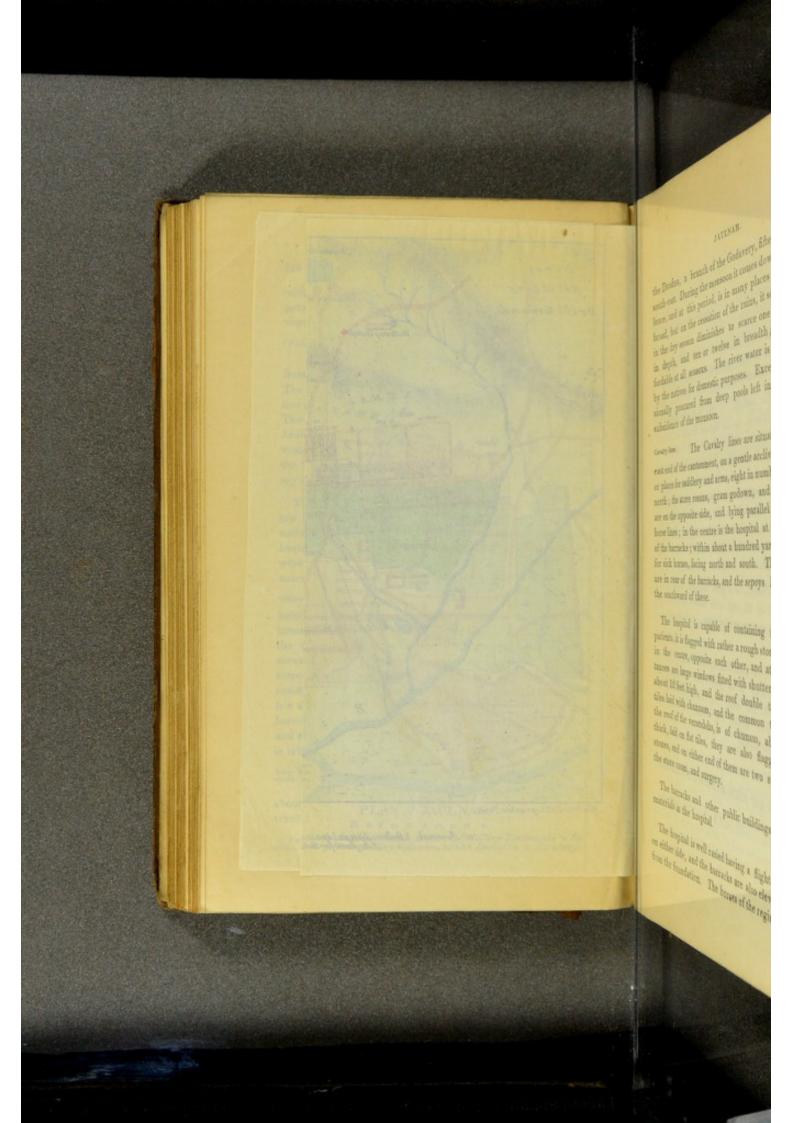
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### JAULNAH.

the Doodna, a branch of the Godavery, fifteen miles to the south-east. During the monsoon it comes down with great violence, and at this period, is in many places a hundred yards broad, but on the cessation of the rains, it soon subsides, and in the dry season diminishes to scarce one foot and a half in depth, and ten or twelve in breadth; it is generally fordable at all seasons. The river water is much esteemed by the natives for domestic purposes. Excellent fish is occasionally procured from deep pools left in its bed, on the subsidence of the monsoon.

Cavatry lines. The Cavalry lines are situated on the southeast end of the cantonment, on a gentle acclivity, the barracks or places for saddlery and arms, eight in number, facing to the north ; the store rooms, gram godown, and standard yards, are on the opposite side, and lying parallel with them the horse lines ; in the centre is the hospital at the extreme end of the barracks ; within about a hundred yards, are the lines for sick horses, facing north and south. The officers houses are in rear of the barracks, and the sepoys huts 200 yards to the southward of these.

The hospital is capable of containing from 80 to 100 patients, it is flagged with rather a rough stone, has two doors in the centre, opposite each other, and at convenient distances are large windows fitted with shutters; the walls are about 12 feet high, and the roof double tiled; that is, flat tiles laid with chunnam, and the common tiles over them; the roof of the verandahs, is of chunam, about four inches thick, laid on flat tiles, they are also flagged with square stones, and on either end of them are two small apartments, the store room, and surgery.

The barracks and other public buildings, are of similar materials as the hospital.

The hospital is well rasied having a flight of several steps on either side, and the barracks are also elevated about a foot from the foundation. The horses of the regiment are watered

from a well in the lines, the water being raised by means of a bullock puccotta, and flowing into a large trough.

Infantry Hospitat and Rines. The hospital is airy, commodious, and capable of containing fifty bedsteads.

The sepoys huts are laid out in rear of the hospital, in regular streets, one for each company, and admit of a free circulation of air through them.

European Artiltery barracka. The barracks of the horse artillery are unexceptionably situated, on the highest ground in the cantonment, between the lines of two infantry corps, (one of which is now unoccupied), the ground in front being open for several miles; a little to the right, and in front is the arsenal, the only building in advance of the lines. A branch of the river Koondulka, runs close to the left; and the barracks, serjeants quarters and store rooms, form the east and west sides of an oblong square, the north end of which is occupied by the cook rooms and godowns.

Hospital. The hospital is a good building, close to the barrack, 60 feet by 21, and holds twenty cots, the east verandah forms a surgery, and the western one is appropriated as a female ward.

Drainage. From the ground having a natural slope towards the river, the drainage in all parts of the contonment is good; the roads are easily kept in repair, and the locality is in every respect well chosen, and favourable to the health of the troops.

# REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of the general table No. 1, for European troops disease. Includes the sick of H. M.'s regiments, and the H. C.'s Foot Artillery at Secunderabad, and also a Company of Horse Artillery at Jaulnah; it shews the number of admissions into hospital, and the amount of mortality from the TRUES OF THE STURIE THE TRUES OF THE STURIE THE INCOME STORE OF SHITTER INCOME STORE OF SHITTER INCOME STORE OF SHITTER INCOME STORE STORE IN THE PROOF INCOME STORE STORE IN THE PROOF INCOME STORE STORE STORE IN THE INCOME STORE STORE STORE IN THE INCOME STORE STORE OF SHITTER INCOME STORE STORE STORE IN THE INCOME STORE STORE STORE STORE STORE STORE INCOME STORE STORE STORE STORE STORE STORE STORE INCOME STORE STORE STORE STORE STORE STORE STORE STORE STORE INCOME STORE STOR

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REMARKS ON THE GENERAL TABLES.

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most important diseases each half year, for the usual period of ten years, from 1829 to 1838. The annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength, are also given, as in the preceding reports, the average of these, as exhibited in the abstract table No. 2, being 217-230, 2-895, and 6-289 respectively.

The admissions were considerably above the average in 1833, 1834 and 1835, especially in 1834, the increase each year being almost wholly occasioned by fever; the ratio of mortality was nearly doubled in 1834 and 1837, in the latter year, the result exclusively of dysentery, and in the former, partly occasioned by hepatitis also.

During the ten years the total admissions have been 22,983, and the total deaths in hospital 664, from an aggregate strength of 10,557 men. The most prevalent diseases have been fevers, dysentery, hepatitis, venereal affections, rheumatism, diarrhoa and thoracic diseases ; the mortality has chiefly resulted from dysentery, hepatitis, and fever, but particularly dysentery, one half of the whole number of deaths, having been occasioned by that disease.

Malarious dysentery of a low typhoid character, has prevailed to a great extent in the several European regiments, which have from time to time occupied the barracks at this station, since they were erected in 1804. The mortality from this disease, 335 deaths, shown in the abstract table No. 2, and which as already mentioned, includes the sickness and deaths amongst the Artillery at Secunderabad and Jaulnah, will be seen from the following tables to have occurred almost exclusively amongst H. M.'s troops at Secunderabad. The per centage of deaths to strength from dysentery alone, amongst the Royal troops is 4.047, while the per centage of deaths, from all diseases amongst the Artillery, is only 4.052.

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# JAULNAH.

No. 11.— Table exhibiting the number of Admissions and Deaths amongst the European Horse Artillery at Jaulnah, from 1829 to 1841, exclusive of 1831 and 1835.

	Age		te str 1919.	engti	Des	the f	PORD V	each.	dimissions well class.	deaths .		to strength.		the to sick.
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,, Cutis	12	9	11	0	12		11	0	23	0	1	-886		000
Other diseases	429	0	434	0	429	0	434	0.	853	0	70	795	0 .	070
Total	568	18	1875	21	1568	18 1	875	21 3	443	29	282	444	1.	122

Of this number were Phioposis.... 140. Ulcus 41. Norm.-Per centage of deaths to strength.... 3 200

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133 REMARKAS ON THE GENERAL TABLES.

H. M.'s Regiments, and the H. C. Artillery at Secunderabad contrasted.

H. M./s R. Aggregate Str From 1809 to 1839 e	meth.	756L	1883.		Agg	H. C. Artillery. Aggregate Strength, 1582. From 1829 to 1840 inclusive					
Table No. 12 and 13.	Admitted.	Died.	Per contage of sick to strength.	Per centage of deaths to sick.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to shek.			
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Cholera	75	28	0.991	37 333	6	.3	0.434	50-000			
Diarrhua	851	11	11-255	1-291	#14	3	16-208	1.339			
Dysenteria acuta	2004	253	26-504	14:021	293	23	18:513	8 076			
. chronica	96	13	1-269	13-541	2	0	0-144	0 000			
Ilepatitis acuta	1203	78	15-884	5-990	236	8	17-076	3-389			
_ chronica	280	11	2-909	6-363	3	1	0-217	33-383			
Catarrhus	872	2	3-648	0.782	27	1	19.3	3/703			
Homoptysis	14	2	0-185	14-285	3	0	0-217	0.000			
Asthma	23	0	0-304	0.000	2	1	0.144	50 600			
Phihisis pulmonalis	27	. 9	0-257	33-833	1	1	0-072	100.000			
Pneumonia	185	5	2-445	2 702	15	0	1.085	0.000			
Apoplexia	20	3	0-264	\$5-000	0	0	0	0			
Epilepsia	58	1	0-767	3-448	6	1	0.434	16-665			
Paralysis	25	5	0-330	\$2.005	4	0	0-287	0.000			
Amentia	11	1	0.145	9490	0	0	0	0			
Mania	6	1	0-079	10.605	3	001	0-217	33-333			
Ebrietas	197	0	1.619	0.000	69	1	4-907	1-449			
Delirium tremens	188	3	2-485	1-595	- 59	1	4 \$59	1.694			
Anasarca	39	9	0.515	23 006	4	0	0-289	0.090			
Ascites	14	1	0-185	7-142	3	1	0.217	33-333			
Rheumatismus acutus	547	1	6-930	0 190	180	0	13-024	0.000			
chronicus	205	3	2-724	1-456	0	0		0			
Syphilis ke	1863	5	\$1.639	0 263	146	0	17-800	0.000			
Morbi oculorum	473	1	6-255	0.211	30	0	2-170	0.000			
., cutis	81	0	1.084	0 0,00	11	0	0.795	0.000			
Other diseases	2150	24	41 661	0.761	1078	7	74-781	0.680			
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nion and Deality, ring the period of

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Dysentery usually increases in severity and in extent, amongst the troops occupying the Infantry barracks, soon after the commencement of the monsoon, and Committees of Medical and Military officers have been appointed, at different times, to enquire into the probable exciting causes of the disease, but as yet without arriving at any satisfactory result.

Some of the best Medical authorities have attributed the disease to an endemial malarious condition of the atmosphere, occurring at a season when the vicissitudes of climate and the diurnal ranges of temperature are very great; whilst others have supposed it to be occasioned more, by the ill chosen situation and faulty construction of the barracks, than by climate.

In 1838, the barracks underwent a considerable alteration and improvment, the walls were raised, and ventilators made in the roof, additional doors opened, and verandahs erected all round, provided with venetians, and the drainage was also greatly improved. Subsequent to these alterations the barracks were occupied by the 1st Madras European regiment, and that corps suffered comparatively but little from dysentery ; still it was the most fatal disease and from which 28 deaths, out of 65 in two years, (1840 and 1841) were occasioned. This regiment however it must be noticed, consisted of old acclimated soldiers, and arrived from Nagpore. H. M.'s 4th regiment, the next corps which occupied the barracks, on the contrary suffered as severely as any that preceded it ; in 1843 this regiment buried 80 men from this disease, from an aggregate strength of 882 and in 1844 no fewer than 41 deaths from dysentery are recorded ; thus shewing that the barracks alone, were not in fault.

The swampy ground on the south west, the range of rocky hills on the north east, intercepting the free current of air from that direction, and the more crowded condition of the Infantry barracks, have all probably contributed to produce

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by increases in security and in cross a scorpting the later to a solution of the score of the s eracti d'un annue, tal Gattine stary officers have been optimal, a dd prin into the probable carring man of is yet without string at any minimum

Medical authentics have stational demial malarious condition of the strana season when the vicinitales of clinite ges of temperature are very great; while and it to be occasioned more, by the II I finity construction of the harmole, then

racks underwent a considerable elteration the walls were niged, and ventilation d, additional doors opened, and veraround, provided with venetices, and the greatly improved. Subsequent to these racks were eccepted by the las Mains , and that corps suffered comparately otery ; still it, was the most faid discov 18 deaths, out of 65 in two years, (194)

minued. This regiment hoverse it and d of old acclimated solfiers, and arrived M.) the regiment, the seat corp which its, on the contrary affired as second a at in 1863 this regiment build 80 ma

from in aggregat strongs of 88 ml date 11 double from fractory or rening that the human alon, was to a and on the world work the may direct and the new residence of the second distance of the second s Ann al probably constrained to probat

issions and Deaths, from luring the period of

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) 1210	193, -566	2 -513	4 -876
 }1181	184 -674	1 -971	3 -640
1090	175 -321	3 ·087	5 -412
991	249 -344	2 -509	6 -256
 758	333 -905	3 -042	10 .158
 884	260 -972	2 -537	6 -674
1102	212 -159	2 -651	5 -626
}1124	195 -797	6 -238	12 -177
3994	202 -615	3 -128	6 -338



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al number of Admissions, and Deaths, &c. from

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►397	17-836	0-104	0	5/115	9 867	0-028	20-005	5-323	0-018	16-245	41/725
0	5-310	27-27:	0	0-185	0-281	33-333	0-142	3-202	0	0.251	1-407
	0.967	0-028	0	0.009	0-033	0-009	0.088	0-170	0	0-047	0.587

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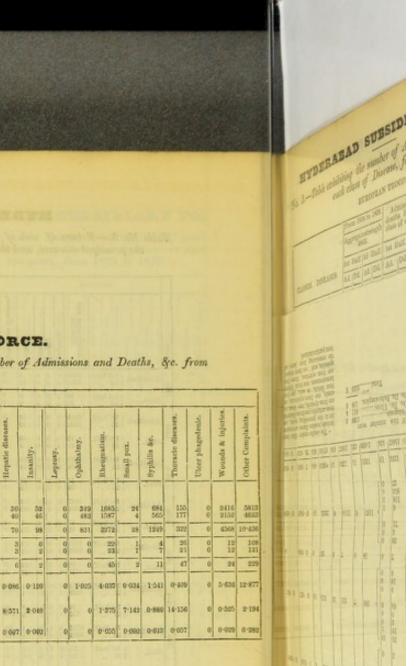
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y Admissions and Deaths, from emic, during the period of

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nber of Admissions and Deaths, &c. from

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No. 5.—Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.

EUROPEAN TROOPS.

THE PARTY	From 1834 to 1838.		No. of Lot of Lo	224 2	. *
	Aggregatestrength 4862.	deaths from each class of disease.	tentest ach el ach el ach el	age p	the st
ASSES. DISEASES.		but Half, 12d Half.		Aver allag to st	teat)
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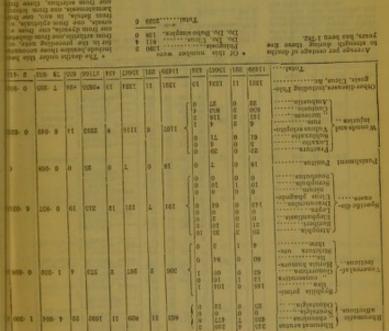
er of Admissions and Deaths, Sp. Jon

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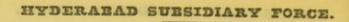


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No. 6.—Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.

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		-	egate	4 to 18; 9 streng 744	-		ons each disea	class	of	h el	deaths chass.	Average Jer entage of sick	an test	the of	the Alch.	The states		1. T	Admile
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CLASSES.	DISEASES.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Total	Post 1	A						100	- IL
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flections.	Per- cent- age.	8-453 0-243 0-020	4-604
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		n n n n n n n n n n n n n n n n n n n	Tarreport Troops, STRENGTH, 10,507, of deaths to sick tree of deaths to strength Native Troops, Stransactur, 81,042 Percentage of sickto stree of deaths to sick tree of deaths to sick tree	L. E.	No. 8.—The following Table shears	Europeans. Total Admissions	
	11 2 2		3315 4334 4334	Ad, & deaths. Per- cent-	shee	234 43 377	Ad. & deaths.
			2-216 18-376 0-407 0-994 46-774 0-994	Per- cent- age.	the		Prop.
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No. 7.- Table exhibiting the admissions and dis the ten years, from 185

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abyrdes shoulded With respect to the comparative immun oppring by the mattery, there are as the dense open and elevated position of ndo stad, alide sejectiv construction o and to preserve the next in beach ; althout stars, we pedage and adopted fully to an Effernite citizited in the tables.

The analabriairons during each half nearly equal, his the numbers under th dramory, are most autoerous during the se period, while as the same time it will be a accessin the number of deaths, during this whelly committed by these diseases, and h most for doubs have taken place from the Laroyean troops in this division ; it oc ensus in 1830, 1882 and 1833. In J Walns European regiment list 6 men at of 30 meters; the left wing of the same senior 1812, shile maching from Mass mention Buttacks; and in May 1853, 19 t an, or of 5 mided.

A diver Aroops. STRENGTH, 36,744. "ercentage of sick to strength" of deaths to sick	European Troops. STRENOTH, 4562. ercentage of sickto strength " of deaths to sick			o. 10.— Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of deaths to sick amongst European and Native troops.	otal Admissions	European Troops. otal Admissions			o. 8.— Table shereing the amount of Admissions and Deaths from the principal classes of disease for the period of five the proportion of Admissions from each to the total of sick treated, and of deaths to the t
16717	3768 40	Ad. & deaths.	Fevers	per cent	15717 208	3768 40	Ad. & deaths.	Fevers.	ound of . the pr
42.774	77-498 1-061 0-822	Per- cent- age.	75.	fo age	uri 43	əl-+l-	Prop.	7	dalmia
17 89	200	Ad. & deaths.	Cho	Admi	390 171	8	Ad. & deaths.	Cholera.	n fo tuo
1-061	1-31	Per- cent- age.	Cholera.	stone	+1-2]-	2(-월)~	Prop.	TP.	ad De
421	6 1591 0 235 4 235	Ad. & deaths.	Dys	from U	421	1591 235	Ad. & deaths.	Dysentery.	atha J ions fr
421 1-145 61 14-489	1-316 1691 32-723 12-500 235 14-770 0-164 235 48-33	Per- cent- age.	Dysentery.	diviong	tl>2 -		Prop.	And in case of	the more
5 1260	1113	Ad. & deaths.		t Euro	1260	937 11	Ad. & deaths,	Abdominal complaints.	e prine A to th
3:429	19-271 1-173 0-226	Per- cent- age.	Abdominal complaints.	to fo s	21-61-	11-21-	Prop.	-	ipal cle e total
18 32	1 932 62 62	Ad. & deaths.		he same classes of disease to the streng amongst European and Natice troops.	- 22	932	Ad. & deaths,	Diseases of the Liver.	or and
0-087	19-169 6-852 1-275	Per- cent- age.	Diseases of the Liver.	o the sities to	81-21-	a-21+	Prop.	-	diseas treate
273	9 290 2 10 5 10	Ad. & deaths.		brength cops.	40	290	Ad. & deaths.	Diseases of the Lungs.	e fur ti d, and
0.742	5-964 3-448 0-205	Per- cent- age.	Diseases of the Lungs.	, of de	z1-81-	£1-51-	Prop.		of dea
171 12 16	5 13 13	Ad. & deaths.		the to	171	502	Ad. & deaths.	Diseases of the Brain.	od of Las to L
9.04	10-3	Per- cent-	Diseases the Brain	sick	리-티	Line and the second	Prop.	es of	fies he to

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of deaths to strength.

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# SECUNDERABAD SUBSIDIARY FORCE

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Tailes No 3 and 4, show the amount train, free the same diseases, which have the rates maps it Secondershal and J tenial of an pure. The total unraber 6,03, of 120 dails have accurred neuri d'al 192 neu ; de srenge per 

135 REMARKS ON THE GENERAL TABLES

the baneful results, and appear to justify the situation being altogether abandoned.

With respect to the comparative immunity from dysentery experienced by the artillery, there seems to be little doubt that the more open and elevated position on which their barracks stand, and the superior construction of them, contribute much to preserve the men in health ; although these circumstances, are perhaps not adequate fully to account for the great difference exhibited in the tables.

The total admissions during each half yearly period are nearly equal, but the numbers under the heads fever and dysentery, are most numerous during the second half yearly period, while at the same time it will be observed, that the increase in the number of deaths, during this period, has been wholly occasioned by these diseases, and hepatitis. Comparatively few deaths have taken place from Cholera amongst the European troops in this division ; it occurred to a limited extent in 1830, 1832 and 1833. In January 1830, the Madras European regiment lost 6 men at Secunderabad, out of 30 attacked ; the left wing of the same regiment in November 1832, while marching from Masulipatam, buried 9 men from 31 attacks ; and in May 1833, H. M.'s 45th lost 2 men, out of 26 attacked.

Tables No. 3 and 4, shew the amount of admissions and deaths, from the same diseases, which have occurred amongst the native troops at Secunderabad and Jaulnah, during a period of ten years. The total number treated has been 46,478, and 1,207 deaths have occurred in an aggregate strength of 81,042 men; the average per centage of sick to strength has been 57.351, of deaths to sick treated 2.596, and of deaths to strength 1.489.

Fevers, rheumatism and bowel complaints, have occasioned the most numerous admissions, and the mortality has resulted principally from these diseases and cholera. The admissions were considerably above the average in 1834, 1835, and 1838; and the mortality it will be observed, was greater than

HYDERABAD.

usual in 1833, 1834 and 1838, in consequence of the greater prevalence of fever and cholera.

During the second half yearly period, as amongst the European troops, the number of admissions especially from acute disease, exceed those in the first half yearly period ; the mortality also preponderates in a corresponding degree, from the greater prevalence and severity of fever, bowel complaints and cholera; the latter disease having appeared more or less in an epidemic form in 1830, 31, 32, 33, 37 and 1838; and it is worthy of remark that except in 1831, when in the month of January, the 50th regiment N. I. lost 28 men, out of 55 attacked, on the march from the northern divison, all these outbreaks of cholera, occurred amongst the troops while stationary at Secunderabad and Jaulnah. Thus in June 1837, 65 cases of cholera with 25 deaths, occurred in the 34th and 37th regiments N. I., at Secunderabad, and in July 1838, the 20th regiment buried 48 men out of 146 attacked, at the same station.

In the tabular statements Nos. 7 and 8, the comparative prevalence of the principal diseases amongst both European and native troops and mortality are contrasted, as in the reports of the preceding divisons; they afford at one view much interesting information on several points.

The other tables Nos 5 and 6, exhibit the admissions and deaths, from each disease, in the various classes, as in the former reports, during the five years from 1834 to 1838 inclusive; — the total sick from each class is also shewn, with the mortality, and the per centage of admissions to strength, and of deaths to sick treated. Amongst the European troops the greatest number of admissions have been from *fevers*, *bowel complaints*, including *dysentery and hepatitis*, *renereal affections*, *diseases of the brain and rheumatism*; and the most fatal have been *bowel complaints*, *fevers*, and *diseases of the brain*. The total admissions amount to 11,347, and the deaths 399, from an aggregate strength of 4,862 men, giving as the average per centage of sick to strength 233 381, TREATS OF THE GRATERAL TH TREATS OF THE GRATERAL TH TREATS OF THE GRATERAL TH States to sick traded \$506, and of it \$26, being in these response considerability from a day prediag table for two peaks from a day prediag table for two peaks in a sile Xa 6, for Xaire troops, the ratio handline: ad the gratest martality it from, doles, hered emploids, diseases of form, doles, hered employeds, from an aggree \$7.10, his is being entings of sisk to extrem \$7.10, his is being entings of sisk to extrem \$7.10, his is being tables for the state of the \$7.87, spring in these respects pretty of entits from it table Xu, 4, for two peaks.

The ubdate statements No. 9 and 10, his from these two estares, as usual; and the tier, the projection and percentage of admifrom the principal classes of disease, both a report and notice traps.

To three following utiles exhibit the sickna which have accurated anongst the officers, the children of H. M.'s regiment, at Seconde period of the para.

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Arpennin 14 and 1508, in consequence of the process

ad half yearly period, as an expected to be need those in the first half yearly period propositions in a corresponding topol proposition as a second possible for proposition as a second possible of proposition and weren'ty of form, based sholers; the hence foreas having upped sholers; the hence foreas having upped at the second form in 1930, 83, 82, 83, 83, 84, 84, which of remarks that encopy in 1931, admin any the olith regiment N. Li bar 20 means the march form the sections drives all sholers, occurred amongs the topological deviders, occurred amongs the topological devided and Jasinds. Thus in Jan 1930, a with 25 beats, secured in the 368, 84 are been been been of 193 analysis and hurred 45 means of of 193 analysis, and an

# statements Nos. 7 and 8, the comparise principal diseases amongst both European and mortality are contrasted, as in the coding divisions; they afferd at one view domination on several points.

Nas 3 and 6, exhibit the attaining and disease, in the varies does, a write ring the fire year fra. ISE to ISE is list, from each class is the streng with the per entropy of attaining a streng of a method. Amongst the Economic streng is method. Amongst the Economic streng is attaining dynamic streng of attaining of the firent and releasants, so the interference streng of attaining attaining of the firent and releasants, so the interference streng of attaining total attaining strengs of the streng is total attaining at streng of the streng is a streng of a streng of the streng is a streng of a streng of the streng is a streng of a streng of the streng is a streng of a streng of the streng is a streng of a streng of the streng is a streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the streng of the streng of the streng is a streng of the stre

# REMARKS ON THE GENERAL TABLES.

of deaths to sick treated 3.516, and of deaths to strength 8.206, being in these respects considerably above the average shewn in the preceding table for ten years.

In table No. 6, for Native troops, the numbers of admissions have been greatest from *fevers*, *bowel complaints and rheumatism*; and the greatest mortality has resulted from *fever*, *cholera*, *bowel complaints*, *diseases of the lungs*, *dropsies* and *rheumatism*. The total admissions into hospital have been 27,116, the deaths 655, from an aggregate strength of 36,744 men; the per centage of sick to strength being 73.933, of deaths to sick treated 2.411, and of deaths to strength 1.782; agreeing in these respects pretty closely, with the results given in table No. 4, for ten years.

The tabular statements No. 9 and 10, have been framed from these two returns, as usual; and they exhibit at one view, the proportion and percentage of admissions and deaths, from the principal classes of disease, both amongst the Euroropean and native troops.

The three following tables exhibit the sickness and mortality, which have occurred amongst the officers, the women, and the children of H. M.'s regiment, at Secunderabad, during a period of ten years.

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HYDERABAD.

TABLES OF DEPENSE.

SECUNDERABAD

No. 11 - Falle middling the reclarest and the WOMEN of H. N.'s Reprinted being a prior of the parts, from 185 and of 1851

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# SECUNDERABAD.

No. 14.— Table exhibiting the sickness and mortality amongst the OFFICERS of H. M's Regiments at Secunderabad, during a period of ten years, from 1829 to 1839, exclusive of 1833.

Aggregate strength 271. CLASSES. DISEASES.	Admissions.	Deaths.	Total Admissi- ons from each class.	Total deaths from each class,	Per centage of sick to strength.	Per centage of deaths to sick
Fevers Febris int. quot remittens com. cont.	0000	10 14 0	} 182	4	65 -423	2 . 197
Cholera	1	1	1	1	0 -361	100 -000
Diseases of Disenteria the Abdo- minal vis- orra	48 23 8 4 9 1	050000		5	A	and the second
(Hepatitis	41	0	41	-	14 -961	4 -878
Diseases of the Lungs Hemoptysis		0000	80	0	£9 -197	0 -000
Do. of the Brain Delirium Tre- meas	311	100 0	} •	1	2 -189	26 -855
Anasarca	1		1	0	0 -361	0 -000
Variola	1	1		1	0 -361	100 -000
Rheumatismus,	33		33	0	12 .043	0 -000
Venereal af- fections Hernia humor Strictora ure- thrae	13 25 1	0000		0	15 -308	0 :000
Morbi oculorum	з	.0	3	0	1 .094	0 -000
eutis	6	0	6	0	8 -180	0 .000
Other diseases.	151	0	151	0	55 -109	0 -000
Total	639	14	639	34	233 -211	2 190

Norg .- Per centage of deaths to strength, 5 109.

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TABLES OF DISEASE.

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# SECUNDERABAD.

No. 15.—Table exhibiting the sickness and mortality amongst the WOMEN of H. M.'s Regiments at Secunderabad, during a period of ten years, from 1829 to 1839, exclu-sive of 1833.

Aggregat D CLASSES.	e strength. 285. DISEASES.	Admissions.	Douths.	The Later interiment	from each class.	Total deaths from each class.	8	sick to stresgin.	Per centage of deaths to sick	2
A CONTRACTOR OF A	Yebris intermit quot	154 19 133 97	1068	1	403	9	37	142	2.	233
	Cholera	14	7		14	7	1	-290	50	000
Diseases of the abdo-; minal vis- cers	Diarrhees Dynesteris Peritonitis Colles Dyspepsis Obstipatio Haesorhois. Spämilis Enteritis I epatitis	81 181 15 16 16 10 9 3 85	5 25 4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		. 372	36		-285		677
the Lungs	Catarrhus Dyspaces Asthma. Phthisis pulm Hemoptysis	20 4 11 6 1			. 42	7	3	-870	16	055
Diseases of the Brain.	Epilepsia. Paralysia Hysteria. Tetauns. Delirium trem. Ebrietas.	113103	0		23	а	2	-119	13	043
Eruptive fe-	Variola Varioella Rubeola Erysipelas	1000	0		15	1	1	-382	6	-695
-	Anasarca				3	1	0	-276	33	-338
	Rheumatismus	2			82	0	2	-188	0	000
Peculiar discases	Amenorrhagia. Menorrhagia. Parturitio. Abortio. Scirrhus	11 m		D D I	} 41		4	-053	2	-270
	Morbi oculorum	3	3	o]	35		3	-215	0	-000
	cutis		2	0		1	0	-184	0	-000
	Other diseases.	12	7	2	127	1	11	-765	1	-574
	Total.	119	a (	0	1110	6	2300	-95	5	-753

NOTE .- For centage of deaths to strength, \$ 359.

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HYDERABAD.

# SECUNDERABAD.

No. 16 .- Table exhibiting the sickness and mortality amongst the CHILDREN, of H. M.'s Regiments at Secunderabad, during a period of ten years, from 1829 to 1839, ezclu-sive of 1833.

Aggregate strength. 1543. CLASSES. DISEASES.	Admissions.	Deaths.	Totaladmissions from each class.	Total deaths from each class.	Per centage of tick to strength.	Per centage of deaths to sick.
Fevers Febris intermit quotid	350 177 257	2 12 14	784	\$8	58 -376	\$ -570
Cholera	7	3	3	8	0 -591	42 -857
Diseases of the Abio- minal view eera Disenteria Obten Collea Collea	203 169 7 10 4	130000	309	79	29 -709	19 -795
(Hepatitis	7	1	7	1	0 -581	14 -286
Diseases of Cynanche the lungs. Pneumonia Pertussis	19 58 3 12	3321	} 80	9	6 -329	10 -588
Diseases of Convulsio the brain. Hydrocephalas. Phrenitis	50 1 5 1	88 0 5 1	} 57	41	4 -214	77 -197
Eroptive fe- vers	94 33 30 4	3031	1 91	7	6 -773	7 -692
Vermes	2	0	2	0	0 -148	0 -000
Morbi oculorum	77	0	77	0	5 783	0 .000
Cutis	29	1	29	1	2 -159	3 .418
Other diseases	93	2	93	8	6 -924	2 150
Total.	1631	174	168:	174	121 -444	10 668

Norz .- Per centage of deaths to strength, 12 206.

SASTIST

# NAGFORE.

tension? The extensive country sul el Super, a presidi Malentra prince, e ef oraciel latin abet Beruz-und includen

Generated which the city of Nagro "Channes plan, and Chandels. It is someway shape, the base being torands the province Bengel, mit für söles tewards the Hyderabe the musity of Orissa.

It is between the parallels of north latit 17° 27, mi between 78° and 83°, of east bounded on the north by Allahabad ; on th wet in Hydenhad, from which it is Work and Godavery rivers, and on the ent, by Bahar and Orissa, the Maha-mudd being is natural boundary throughout a of the entern confines. The general starfue is ingularly nontzineos and hilly; but entenive lighly entireted plains, and also t form, owered with long connet grass, which attains a beight of 14 feet.

ton The principal rivers are the Words-The Midsensky takes its rise in peried the Chroneybur Centrel, and reards and then in an entrop direction, after an an count, and maining many televitry stream un, 50 mins beire Curacia. The Woods ties is the activation part of Berner, ine of brazing beners the Nuppers ann an anna 13 anntais, antas vith die Godanney ut Sol venue fo. Though a great part of the out was land, and their j project, jung) there a the a Tana and a state 

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SECUNDERABAD

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NAGPORE.

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# NAGPORE.

Generaldeseription. of Nagpore, a powerful Mahratta prince, embraces that part of central India called Berar—and includes the provinces of Gundwanah,—of which the city of Nagpore is the capital, "Chotees-ghur, and Chandah. It is somewhat of a triangular shape, the base being towards the province of Allahabad, in Bengal, and the sides towards the Hyderabad territories, and the country of Orissa.

It lies between the parallels of north latitude 22° 40', and 17° 20', and between 78° and 83°, of east longitude—and is bounded on the north by Allahabad ; on the west and southwest by Hyderabad, from which it is separated by the Wurda and Godavery rivers, and on the east and southeast, by Bahar and Orissa, the Maha-nuddy or great river, being its natural boundary throughout a considerable part of the eastern confines. The general surface of the country is irregularly mountainous and hilly; but there are many extensive highly cultivated plains, and also tracts of jungle or forest, covered with long coarse† grass, which in various places attains a height of 14 feet.

Rivers. The principal rivers are the Maha-nuddy and Wurda—The Maha-nuddy takes its rise in the mountainous parts of the Chotees-ghur district, and running first southerly, and then in an eastern direction, after an extremely tortuous course, and receiving many tributary streams, opens into the sea, 50 miles below Cuttack. The Wurda as before noticed, rises in the north-eastern part of Berar, and forming the line of boundary between the Nagpore and Hyderabad countries, unites with the Godavery at Serlouncheh.

Vegetable Prodoctions. Waste land, and thinly peopled, jungly tracts, other portions • The 26 Forts, or Charries. • Called Elephant grass.

# NAGPORE.

are highly cultivated and extremely fertile, producing luxuriant crops of wheat, rice, cholum, ragghy, cotton, and sugarcane, with several kinds of plants from which oil is obtained.

Articles of Export, &c. and grain, which are exported in considerable quantities, the former to the Bombay market, and the latter to the southern provinces; being transported chiefly on bullocks, the only carriage in use, and these bring back salt, cocoannts, and cocoannut-oil, spices, betel,&c. Timber,both for building and for firewood, is floated down the river Kunnan at the termination of the rains, and is also sometimes dragged up the stream by manual labour, but water carriage does not appear to be employed for any other purpose.

Political occur. A considerable body of troops, called the Nagpore Subsidiary Force, has occupied this country since the year 1817, when in consequence of the treachery of the late rajah, Appah Sahib, in attacking a small force attached to the British resident at his court, he was dethroned, and kept some time in confinement, but ultimately escaped from his guards, and fled the country.

On the present prince, named Rajogee the Third, being placed on the musnud, an additional contingent force, consisting of 3,000 irregular or Mahratta horse, and two regiments of native infantry, officered by Europeans, was agreed by treaty, to be kept up for the preservation of the general peace. In 1830 however, an arrangement was entered into between the two governments, for disbanding the rajah's contingent, on condition of the payment of a certain annual tribute.

<sup>Subsidiary</sup> The subsidiary force consists of one regiment force, of native cavalry, one troop European horse artillery, a battalion of foot artillery, one regiment of European infantry and four regiments of native infantry,---who are stationed at Kamptee, ten miles east of the city of Nagpore.

# Station of Kamptee.

Kamptee Kamptee being now the only station occupied by the Company's army, throughout the Nagpore country,

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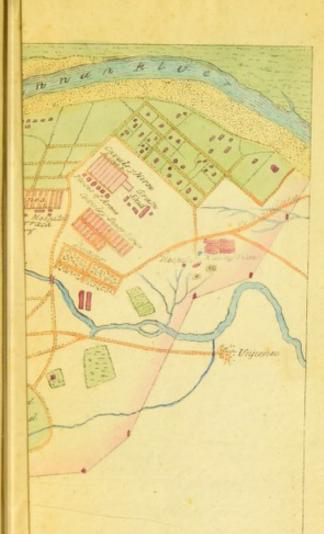
TUTUE and and extended fords, produced in-best, rice, dollan, regin, adda, and ages and a second s timbs of plans from which of it should staple productions may be said to be come are experied in constendie quaties, be asbuy market, and the latter to the sychem transported chiefy on ballocity, the star al these bring back sale, escannes, and ors, betel der. Timber hoth for beilding sei for d down the river Kneam at the terrinand is also sometimes imaged up the arran but water curriage does not appear to be other purpose.

usiderable body of troops, called the Nap-Subailinry Force, has accepted this country. 17, when in consequence of the trackery Appah Sahih, in attacking a smill form ritish resident at his court, he was letteretime in confinement, but ultimately escaped and died the country.

prince, named Rajogee the Third, being and, in additional contingent from outiesular or Malentin horse and two regimens of Evered by Europeans, was apreed by image the preservation of the present pass. In uningenest was estimi into heres da , for Salarding the right analysis, a arfinent of a certain stand prints

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Lithographed by B.C. Rever

4 LISTTL as abrancia has been proceedide by the where to the general statistics of the provident which reduces to Kampine includenced its income Europeer is district from Madeus 722 mile used from Secondended \$14, from Housed Calcula 18, and from Bombay 517 milles. tash There are four principal road coming from, or returning to the Company by Charlish, ulong the Godavery, Jeading Epoper touris Berhanpere; and two to the not dont route by Narmal, the other The raid by Chantah is in good order almost but supplies are scarce, and there bei healthy jungle to pass through, it is seldo very nucly during the tainy, or cold sea of the rank and entensive jungle, from 1 within four stages of Ellore. The Nirmal safe during several menths, and troops show it, from the lat of Jame, till the lat of Jame midde of August all the beginning of I not duprots period, but the journey in posting, som in these months, without mone the time is securied, being less than five day The read by Hingsize is somer open, and ei fr fie fre, which pass through Se works he call of the year, site torsally seent b Epperer is used by the regiments coming for they monity have the Numbers division in Ja and a state of the said of March. The por shop to marine, to within about 3 Abalyon, but transferra proceeding to Calcutt vit Vicayon, at loss times form the G no partorien nels torols the Nether ag balance in a solution of the other to Julio and the other to Juli ag is housing out, in out, in account, in account of the second out, in a se KAMPTEE.

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no information has been procurable by the Medical Board, relative to the general statistics of the provinces, except that which relates to Kamptee itself, and its immediate neighbourhood.

Kamptee is distant from Madras 722 miles, (travelling distance,) from Secunderabad 324, from Hoosingabad 178, from Calcutta 733, and from Bombay 577 miles.

Roads, There are four principal roads used by troops coming from, or returning to the Company's country-one by Chandah, along the Godavery, leading to Ellore ; one by Ryepore towards Berhampore; and two to Hyderabad, one the most direct route by Nirmul, the other by Hingolee. The road by Chandah is in good order almost the whole way, but supplies are scarce, and there being a most unhealthy jungle to pass through, it is seldom travelled; and very rarely during the rainy, or cold seasons, on account of the rank and extensive jungle, from near Chandah, to within four stages of Ellore. The Nirmul road also, is unsafe during several months, and troops should not be sent by it, from the 1st of June, till the 1st of January. From the middle of August till the beginning of December, is the most dangerous period, but the journey is often made by posting, even in these months, without much apprehension, the time so occupied, being less than five days to Hyderabad. The road by Hingolee is sooner open, and regiments destined for the force, which pass through Secunderabad, towards the end of the year, are usually sent by it. The road by Ryepore is used by the regiments coming from Berhampore ; they usually leave the Northern division in January, and arrive at Kamptee about the middle of March. The post to Calcutta goes along the same line, to within about 30 miles of Sumbhulpore, but travellers proceeding to Calcutta, prefer the road viå Mirzapore, and from thence down the Ganges. There are two great northern roads towards the Nerbuddah, one leading to Hoossingabad, the other to Jubbulpore, but both are unsafe from August till December, on account of the jungle T

### NAGFORE.

to be traversed. The roads to Ellichpore and Jaulnah, are not considered unhealthy at any time, but the black soil during the rains, renders them extremely difficult to travel over.

Cantonment of On the termination of the last Mahratta Kamptee. war, a cantonment for the subsidiary force was formed close to the British residency at Nagpore, at the foot of the celebrated Seetabuldee hill. The situation however proving unhealthy, it was abandoned after a few years, and a new site for a cantonment, ten miles east-ward of the city, selected on the bank of the Kunnan river.

The cantonment of Kamptee is situated in north latitude 21° 10", and east longitude 79° 50," and occupies an extent of four miles and a half, along the right or south bank of the river Kunnan, which here pursues a tortuous course from west to east.\*

The soil of the cantonment is the common black earth, of this part of the Deccan, interspersed with a very large proportion of the calcarious nodules, commonly called kunkar, its depth being in most places considerable. The surrounding country, for many miles in extent, is flat, destitute of wood, much intersected by ravines, and is only under cultivation during the cold and rainy seasons.

The ground is elevated, undulating and in some parts near the bazaars, and close to the river, much broken up into ravines, and nullahs.

The principal roads in the cantonment, are kept in good order, and those leading to the surrounding villages, afford sufficiently easy means of communication.

The officers houses, are for the most part situated close to the bank of the river, having spacious compounds, with excellent gardens.

The first range of houses on the bank of the river, is intended for field officers, and for the general staff, (the hospital \* This river takes its rise in a range of hills about 120 miles distant to the northwest, and empties itself into the Wyne Gungah, 54 miles below Kamptee, near Bundaria.

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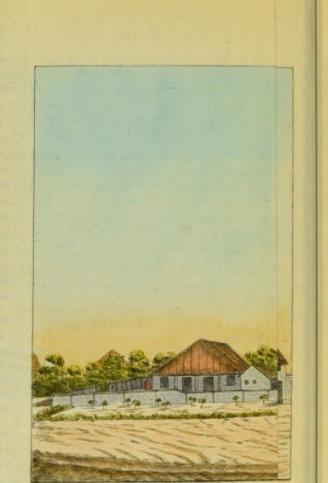
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which in the contentions, we kep in good lading is the surrounding riles, the sans of communication

nees, are for the neet part simple dee a niver, having spacies responds with

Descending towards the river, are the three European nos-The houses are all thatched, and require some repairs annually, before the rains, and the grass is renewed about once in four or five years.



VIEW of the RIGHT V

intended for field officers, and for the general staff, (the hospital \* This river takes its rise in a range of hills about 120 miles distant to the northwest, and empties itself into the Wyne Gingsh, 54 miles below Kamptee, near Bundarts. Exerces. does d be raine corps, pror the centre of best does also back of the triot) the host or large and scenarioss, with centrasire, or large and the principal read rans also manual. In first of these are the captains for central. In first of these are the captains for central. In first of these of the subalteral separating then first three of the subalteral separating then first three of the subalteral

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The places of series of the carely are on stilles, and the hespital is at the extreme ea

In the scence of the contrament are the despende provid, the min piquet, and if with home, to which a bridge thrown across leads. The leaser is of considerable eatten and shape of all descriptions and sizes, and Preservisions, coming every thing that coeither by mines or Europeans.

And the second design of th

# KAMPTEE.

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of one of the native corps, near the centre of the cantonment, being also on the bank of the river) the houses in this range are large and commodious, with extensive grounds attached to them, and the principal road runs along their whole extent. In front of these are the captains lines, another road separating them from those of the subalterns.\*

A road intervenes between the sepoys huts, regimental bazaars, and the officers houses; the hospitals of the several native regiments, and the places of arms being parallel to, and in front of their respective regiments; the exceptions being that before mentioned, and the hospital of the native corps at the west end, which stands by itself, near the commencement of the European lines.

The places of arms of the cavalry are on a line with the stables, and the hospital is at the extreme east end.

In the centre of the cantonment are the Parsee's shops, the parade ground, the main piquet, and further south the sudr bazaar, to which a bridge thrown across a large ravine, leads. The bazaar is of considerable extent, having houses and shops of all descriptions and sizes, and as well as the Parsee's shops, contain every thing that can be required, either by natives or Europeans.

European Bar- At the west of the lines, are the European barracks, which are commodious, lofty and situated on high ground, surrounded with excellent enclosed verandahs,<sup>a</sup> and calculated to accommodate 1000 men. The barracks of the horse artillery adjoining them, are built in a similar manner, and enclosed at one end with a gate, having an open square in the front, they likewise are lofty and airy. In the same line further west, are the foot artillery barracks, consisting of two long ranges of buildings. A small, but well ventilated hospital, and places of arms, complete for a troop of native horse artillery follow next; and at the extreme east end, are several buildings for the use of the commissariat. Descending towards the river, are the three European hos-

NAGPORE.

pitals, and the officers racket court ; the hospitals are on well raised ground, open at all sides ; that of the European regiment is situated about half a mile from the barracks, the artillery hospital being only half that distance from their barracks.

BARRAT. The European bazaar lies between the barracks and the river, and is well stocked with supplies of all kinds.

Public Buildings With respect to public buildings their construction is eminently calculated to afford comfort, and preserve the health of the troops,-The lines of the native corps too, are for the most part on elevated ground, and the officers quarters, are perhaps the best to be found through the Madras presidency, though many of the buildings are not sufficiently raised, to render them free from damp in the rainy season.

River, banks of Though the banks of rivers are by some good authorities thought objectionable, as the site of camps or cantonments, no fault can be found with the ground at Kamptee on this account ; the banks of the Kunnan being perfectly bare of every kind of wood and vegetation, except crops of dry grain, usually cultivated throughout the country ; and the bed of the river is chiefly sand with rocks, though some muddy banks are left on the subsiding of the waters.

Neighbouring For a more probable source of malaria and con-Jungles the sia. sequent disease, the tracts of jungle both dense and extensive, by which both Nagpore and Kamptee are encompassed, may be looked to-This fruitful source of fever is distant from the north-east point of the city of Nagpore about 20 to 30 miles, but though the cantonment at Kamptee is ten miles nearer the heaviest part of the jungle, than the lines formerly occupied by the Madras troops, the Europeans as well as natives, are found to have generally suffered less from sickness, than in the position first taken up. It may therefore be presumed that the deleterious principle of the jungle atmosphere, becomes diluted or dissipated, in the open country, lying around the lines of the new cantonment.

# XINTEE.

This climbe is remerkable as some boil for the extremes of heat and nada yez is naturally desided into three rol, be and ning. The transitions are nightal, along is adopted to a larsty a read prints. The cold scaron the like October, and continents till the mit Decades and January, being the coldest to

Tienia a considentile diamal range tis prist, with is extremely perjodi elizione, and to such as have been debility. eder most ; unless great unterstion be pub neuros, sub a apropriate clothing;-reg him; saturing regular exercise, in the o ad coming.

There are usually heavy dews, which an for animitaral purposes; and in the early for provil - nore particularly along the where moldure exists to a greater extent plain. The mean temperature at this time 69% in the house, the lewest observed outer been 309" For ; and the highest 1109, from

The hot senson includes from the min shout the 16h Jane, the greatest intensity the inter cal of April, till the first full of this the first through the second trange, in hoor, shat up, bet willout talt, in very i eberned on many occupients, not to that may be stand at inter S6º to 104° Far, for in larger brown simed, it mages from 820 post enable, the theranester has been

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KAMPTEE.

This climate is remarkable among the Madras Climate. stations, both for the extremes of heat and cold experienced ; and the year is naturally divided into three seasons, viz. the cold, hot and rainy. The transitions are generally regular and gradual, and may be anticipated to set in almost uniformly, at certain periods. The cold season commences about the 20th October, and continues till the middle of March ;---December and January, being the coldest months.

There is a considerable diurnal range of temperature at this period, which is extremely prejudicial to weak constitutions, and to such as have been debilitated by disease or other causes ; unless great attention be paid to precautionary measures, such as appropriate clothing;-regularity in diet and habits; and taking regular exercise, in the open air, morning and evening.

There are usually heavy dews, which are highly beneficial for agricultural purposes ; and in the early part of the season fogs prevail - more particularly along the ravines and nullahs, where moisture exists to a greater extent than in the open plains. The mean temperature at this time, may be stated at 68° in the house, the lowest observed outside at sunrise, has been 36°\* Far ; and the highest 110°, from noon to 3 P. M.

The hot season includes from the middle of March, till about the 10th June, the greatest intensity of heat being from the latter end of April, till the first fall of rain in June ;-at this time the thermometrical range, in an ordinary sized house, shut up, but without tats, is very limited, having been observed on many occasions, not to vary 10 degrees, and may be stated at from 96° to 104° Far, from 12 to 4 P .M .;in larger houses tatted, it ranges from 82° to 90° ;- but exposed outside, the thermometer has been observed to rise to 140°.

The rainy season next succeeds, making the third period, and the first fall of rain almost invariably occurs, about the

 Hear frost is occasionally seen with this pellicles of ice on small pools, but this ar benecounted for, by the effect of evaporation lowering the temperature to the may be account freeizng point.

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## NAGPORE.

fourth of June, there is generally an interval of some days fair weather, after the first showers, before the monsoon is regularly established, during which the air is close, and extremely unpleasant. The greatest quantity of rain falls in August and September, the average for the year being 40 inches, but in the year 1838, it was less than 22 inches.

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The equinoctial periods also, are marked by atmospherical disturbances, such as heavy squalls of wind with rain, and thunder and lightning, preceded generally by distressing sultriness, which often induces languor, restlessness and general malaise, with a sensation of great exhaustion, feelings which depend probably upon electrical influences, as they vanish almost immediately upon a changed condition of the atmosphere occurring. Occasional storms happen in almost every month of the year, which may be regarded as contributing to the general salubrity of the climate.

The prevailing winds are north and north-east, and west and south-west, the former blowing during the cold season, and the latter during the hot. The westerly wind sets in, early in the forenoon, and blows several hours during the day with considerable force, constituting what is commonly called the hot land wind, and it certainly is appropriately denominated. It commences generally about the latter part of April, and continues until the rains, during this time however, houses may be kept pleasantly cool by wet tatties, which often reduce the temperature as low as 76°, though, generally not lower than from 80° to 86°.

Officers' houses The dwellings of the Officers, are as before stated, thatched bungalows, which are both commodious and comfortable, having glass doors and windows; and the compounds are usually laid out as gardens, the climate during the cold season, being favorable to horticulture. The supply of water from wells is plentiful ; and excellent oranges, peaches, figs, limes, lemons, pumplemose, and plantains are produced in great abundance, as also many flowering trees and shrubs ;- most of the kitchen garden vegetables such as peas, beans, cabbage, cauliflower, broccoli, spinage,

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is her show 70 miles distant, situated on had loving in open space of ground free fit sentit, if then \$1 miles in circumference, par accepted by the village ; and it is said nge, 10 degrees cocher than Kamptee.

The climits has been much praised, by takes refige there from the great heat en put and Kamptee; as during the hottest visiton are able to keep their doors open sent there is only one good bungalow at the p two stars, which night be put into repu pens; they are now the property of the abays at the service of any person recommend

Supplies are said to be abundant, and meting supporty buildings, are close as

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periods also, are marked by unsephrical as heavy separate of wind with min, and sing, preceded generally by discussing the induces languar, radioness and prosensation of great exhaustor, forting ability upon electrical infraences, as they distributy upon a changed continue of the tag. Occasional attents happen in shows year, which may be regarded as control al substributy of the direct.

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carrots, parships, turnips, celery, parsley, radishes, asparagus, artichokes, lettuces, beet, potatoes and knolkole; as well as also, all the common bazaar vegetables are to be had.

# SINDWARRA.

The station of Sindwarra, which was occupied by a part of the Rajah's auxiliary troops, until that force was reduced in 1830, claims particular notice here, as being a place much resorted to by valetudinarians, and other visitors from Kamptee, during the hot months, or from March till June.

It lies about 70 miles distant, situated on an elevated table land, having an open space of ground free from jungle, on the summit, of about 41 miles in circumference, exclusive of that part occupied by the village ; and it is said to be on an average, 10 degrees cooler than Kamptee.

The climate has been much praised, by those who have taken refuge there from the great heat experienced at Nagpore and Kamptee ; as during the hottest part of the season visitors are able to keep their doors open all day. At present there is only one good bungalow at the place, but there are two others, which might be put into repair at a small expense ; they are now the property of the Rajah, but are always at the service of any person recommended by the resident.

Supplies are said to be abundant, and the materials for erecting temporary buildings, are close at hand.

The elevation of Sindwarra has been ascertained to be 1000 feet higher than Nagpore, which is 930 above the level of the sea; and about 50 miles further to the north-east, there is another and still more lofty range, the most elevated point of which is said to be upwards of 2000 feet higher, known as the Mahadeo or Puchmaree hills ;--they also have been visited by persons from the neighbouring stations in Bengal, and the climate is said by some, to be the most delightful to be found in almost any part of India.

NAGPORE.

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# REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

150

As already mentioned, the troops composing this force, European and native are all located at Kamptee, and the tables of disease appended, will shew the nature and amount of sickness and mortality, which have occurred amongst both bodies of men, during the period of ten years, from 1829 to 1838, inclusive.

Amongst the European troops, the total of sick have amounted to 23,092, and the deaths to 337, from an aggregate strength of 9574 men, giving 241, as the annual number of admissions for every 100 men, and 1.632, as the average annual per centage of deaths to sick treated, whilst the per centage of deaths to strength, has been 3.937. The admissions were greatly above the average in 1834, and 1835; and the mortality was considerably increased in 1831, 1833, and 1837, from the greater prevalence and severity, of fever and dysentery, and also of cholera.

It will be seen from the general abstract table No. 2, that a considerable increase of sickness, but more especially of mortality, has taken place during the second half yearly period, which includes the wet and cold seasons ; the latter as already mentioned, is most prejudicial to health, and fever and bowel complaints are not only more numerous, but also more severe, and generally more fatal, during this season of the year.

Fevers of the various types, but especially the intermittent, and remittent, dysentery, diarrhaa, hepatitis, rheumatism and syphilis have occasioned the greatest number of admissions, and the mortality has chiefly resulted from the same diseases, and from cholera and thoracic complaints. The per centage of admissions from these diseases, to the strength, and of deaths to the sick treated, are given in the table No. 2.

The following extracts from the medical reports by Superintending surgeon Adams, long resident at Kamptee, will

# TADPORE

# ON THE GENERAL TABLES.

directly acceled, the troops compared nce, Europeas and astre or al local in tables of Gaussie appendiel, will show the of sciness and metalog, which have so th lodies of men, during the period of an

optan troops, the total of nick have anothi-

the deaths to \$57, from an approprie men, giving 241, as the motel number of ny 100 men, and 1452, as the some of deaths to sick treated, while the per strength, has been 3907. The admission the average in 1814, and 1815; and the sidentity increased in 1831, 1833, and ater prevalence and severity, of fever and of cholers.

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# Admissions and Deaths, from mic, during the period of

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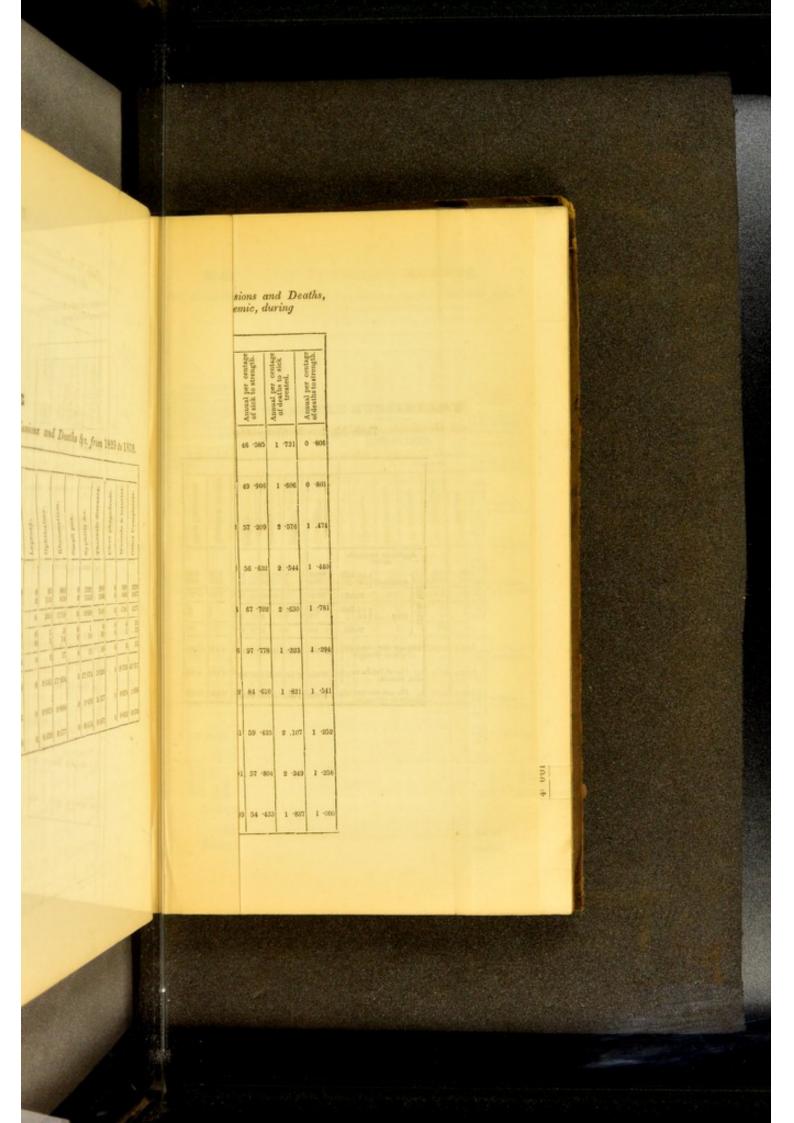
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NABPORE SUBSIDIARY

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# NAGPORE SUBSIDIARY FORCE.

No. 5.—Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years. ILAN-

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Percentage of sick to strength n of deaths to sick ..... of deaths to strength... No. 9.- Table shearing the ann otal Admissions Buropean Treeps, STRENGTH, 5070. STRENGTH, 23,498. 10 .- Table exhibiting the per centage of European Troops. Deaths. ..... Natice Troops Admissions .... 12,376 Deaths. Native Troops 16,554 10,255 188 301 Ad. & Ad. & deaths. and of Admissi 3912 49 3912 the Fovers. deaths. Fovers. 126 49 Per-1-232 Prop. al out a centage. Ad. & deaths. Ad. & deaths. Admissions from the same Cholera. 500 Cholera. 12 68 0 3 and Deaths Per-"Aduration 0-927 19.148 0.177 ===-핀-Prop. centage. Dysentery. Ad. &: Ad. & 494 32 Dysentery. deaths. 128 494 deaths. Trong Per-9-743 6-477 0-631 Prop. m-HIcentthe ought Euro age. Ad. & deaths. complaints. Ad. &: complaints. Abdominal 932 18 32 18 deaths. 18:382 1-931 0-355 Per-Prop. -----cent-age. agldistribe Diseases of the Inver. Ad. & deaths. Ad. &: the Liver. 15 15 deaths. Natice troop to the strength, of deaths . 11-972 2-471 0-295 Per-월[#왕] -Prop. cent-age. 티~희~ Diseases of Dise the Lungs. the the Lungs. Ad. & deaths. Ad. & 107 EN0 318 318 deaths. 171 Per-6-272 133 2-201 2 0-138 2 Prop. 리~31period of deaths to age: Ad. & deaths. Ad. & 10

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# NAGPORE SUBSIDIARY FORCE.

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# REMARKS ON THE GENERAL TABLES.

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shew the deadly nature of fever in some seasons, at that station, and point out the treatment best adapted for it.

" Adverting to the general plan of treatment pursued in the several hospitals under this superintendence, I have nothing very important to offer for the consideration of the Board, I may observe that Surgeon Anderson of the M. E. regiment, inclines more to the practice of blood letting in fevers, than any of his predecessors, and I am myself an advocate for that mode of treatment, which if adopted at all, should be early, and repeated according to symptoms, and the constitution of the patient. I think after a copious bleeding, which may be followed up by leeches when necessary, a good dose of calomel joined with opium, say ten to twenty grains of the former, and at least two of the latter, by determining freely to the skin, as well as clearing out the bowels, in a mild but effectual manner, tends more to induce a perfect intermission, than any thing I know. Bark or quinine of course, to be resorted to as soon as admissible."

"In relapse cases of fever however, which are by far the most numerous, we have to deal with, I am of opinion that general bleeding is not advisable, and would even employ leeches as sparingly as possible, on such occasions."—Dated 31st December,1835.

"Remittent fever became exceedingly prevalent in the months of May and June, attacking chiefly the new comers to the station, such as officers in the prime of life; the European soldiers were also sufferers to a considerable extent from the same disease, though proportionally less than the officers."

"Apoplectic attacks were frequent among the soldiers, and one or two cases were brought in moribund, or died on the way from the barracks to the hospital, there being eight deaths from apoplexy, which greatly swells the list of European casualties."

" In some of the apoplectic cases, the most prompt and efficient bleeding from the arm, failed in saving the patient

## NAGPORY

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whilst others were past recovery before assistance could reach them."

" In fever the most successful plan of treatment seemed to be early vascular depletion, general or local, or both according to the symptoms and condition of the patient and when from any circumstances this was not at once practised, and repeated when necessary, the result was too often fatal in spite of every exertion."

" Next to depletion full doses of calomel and opium, (calom. grxx, opii grii) given at night and followed by some mild purgative in the morning, were very beneficial-The anodyne and diaphoretic effects of the calomel and opium, were tranquillizing through the night, and prepared the bowels to be favorably acted upon by the aperient, which if the stomach would bear it, was the common purging mixture of senna and salts, and afterwards the mixture recommended by Sir A. Cooper, leaving out the tinct : opii ; viz. mist : ammon : acetat : 3 vi, magnes : sulph : 3 i, given in doses of 3 iss, with a little water, every two or three hours, till sufficient effect was obtained; or a mixture composed of pulv: rhei 3ss, or  $\exists$  ii, magnes: sulph : 5ss, aq : 5 vi, tinct cardam : 3 iii, which was given in doses of 3 iss or 3 ii and repeated according to circumstances. Sometimes a dose of rhubarb and magnesia, made into a draught, with the addition of spt. æther: nitrici 3 ss would be retained, and act favorably when the stomach rejected every thing else .- Besides the night dose of calomel and opium, the same medicines in smaller doses, were given at proper intervals during the day, taking care to relieve symptoms of irritation, whenever they arose by timely local depletion ; in some cases, Dovers powder was advantageously substituted for the pure opium, and vice versa."

" Quinine, after mercurials and aperients had taken due effect, was generally found safe and highly serviceable, also blisters to the back of the neck, or other parts, according to indications, and frequent sponging of the surface; cold lotions to the shaved head, gave much relief."

# TECHNES OF THE CONTAIL

- la pratricad conclusione front debil ad initiated size of borels, and night say rid war light hier infinite surveyed a - The investigity monthly month the of the form, has had no perallel since this o accepted by Madra traps, from Decen unsen the internation 109, and the deaths I, and from have procee limit, either is England or the coast."

- In the trainent of fevers, whether noires, there is one presention which I unded to, viz when pain as initiability of a the use of energies, especially turturized and mullest quartity, should be arounded, leeche heirg in suit cases necessary." - Dated SU

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### 153 REMARKES ON THE GENERAL TABLES.

" In protracted convalescence from debility, with a relaxed and irritated state of bowels, and night sweats, the nitric acid, with some light bitter infusion answered well."

" The lamentable mortality among the European officers of the force, has had no parallel since this cantonment was first occupied by Madras troops, from December 1824, to the present time; the number of commissioned officers being 109, and the deaths 7, and four have proceeded on sick certificate, either to England or the coast.'

" In the treatment of fevers, whether in Europeans or natives, there is one precaution which I think should be attended to, viz. when pain or irritability of stomach is present, the use of emetics, especially tartarized antimony, even in the smallest quantity, should be avoided, leeches to the pained part being in such cases necessary."- Dated 30th June, 1837.

Superintending surgeon Stevenson remarks thus

" The officers of the force, have enjoyed a striking immunity from disease this season. The fevers appeared to put on two distinct forms, the one characterized by high vascular action, intense heat of surface, acute headache, and in some cases, irritability of stomach ; the other was chiefly of an asthenic nature, marked by stupor, small, frequent, contracted pulse, heat not much above the natural standard; the disease in this form ran its course very gradually, much resembling typhus. The men of the B. Troop horse brigade, were the principal subjects of the first class, being robust young men, who were rendered more liable to be attacked with fever, from exposure on the long march they had to this station, at rather an advanced part of the season; and on arrival here, they had to encounter the hot weather, which was of great intensity. They were also attacked with influenza, but although it was accompanied with febrile symptoms for some days, it was a mild disease. In these cases, bleeding, both general and local, was imperatively required, with large doses of calomel and active purgation.'

"The men of the 3d Battalion artillery and Madras European regiment, mostly exhibited the low continued form of

LOSALISE OF THE GENERAL TAR menter, both for the European and native straines samps the Estapean proper nd 188 datis have skin place, from an ay of 2010 men ; the per contrage of administers 14102, d both to sid torated, 1519, strength, \$108; orining in three respec with the could given in the table for ten ye

The corresponding table No. 6, for the ma 10448, as the much mimber of admission nen, and 1918 deaths per cent on the six the per outlage of deaths to strength, during has been 1480; the total admissions being deale 30, ins a aggregate strength of 23

The tabilit statements Nos. 7, 8, 9 and 10 view, the propertion and per centage of deris, for the most important discusses, an cipil classes of disease, both amongst the Eu COURSE.

The three following tables have been draw the minime headliness of the horse and for of the Mairus European regiment, which com pear part of the Subilitary force.

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NAGPORE.

the disease, in them, general bleeding was very rarely had recourse to, but determinations to particular organs, such as the head, stomach, or liver, were treated by active leeching and blisters, cold lotions to the head, and leeches and blisters to the nape of the neck, were found of great use when that organ was much effected ;--the affusion of cold water on the head, was tried in several cases with advantage ; in one or two instances the powers of life were overwhelmed on the onset of the disease, the patient being in a state of collapse and sinking, as if from cholera."-Dated 30th June, 1838.

Tables No 3 and 4, in like manner shew the amount of sickness and mortality, amongst the native troops, for the same period of ten years. The total number treated has been 30765, and 619 deaths have occurred, from an aggregate strength, of 49313 men; thus giving 62:387 admissions into hospital for every 100 men, and 2.012 deaths per cent on the number treated, and 1.255 deaths per cent on the strength; these averages have been pretty uniform, during the entire period.

As amongst the European troops, the admissions and deaths have been most numerous, during the second half yearly period, and were caused by fever, cholera and bowel complaints.

The most numerous admissions have been from fever (nearly one-half of the whole number admitted, were from intermittent fever) rheumatism, bowel complaints, cholera and syphilis ; the mortality has resulted principally from fever, cholera, rheumatism, thoracic diseases and bowel complaints.

Cholera prevailed, but to a limited extent, amongst the European troops, in 1831, 32, 33 and 1834, and amongst the native troops, in 1831, 32, 33 and 1837; and on all these occasions, whilst both bodies of men were stationary at Kamptee; the greatest number of cases, and of deaths, occurred in the months of June, July, August and October.

In the large and more comprehensive tables Nos. 5 and 6, for five years, the diseases have been classified in the usual

# REMARKS ON THE GENERAL TABLES

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manner, both for the European and native sick. The total admissions amongst the European troops, amount to 12376, and 188 deaths have taken place, from an aggregate strength of 5070 men ; the per centage of admissions to strength, being 244.102, of deaths to sick treated, 1.519, and of deaths to strength, 3.708; coinciding in these respects, pretty closely, with the results given in the table for ten years.

The corresponding table No. 6, for the native troops, gives 70.448, as the annual number of admissions for every 100 men, and 1-818 deaths per cent on the sick treated, while the per centage of deaths to strength, during the same period, has been 1.280; the total admissions being 16554, and the deaths 301, from an aggregate strength of 23,498 men.

The tabular statements Nos. 7, 8, 9 and 10, exhibit at one view, the proportion and per centage of admissions and deaths, from the most important diseases, and from the principal classes of disease, both amongst the European and native troops.

The three following tables have been drawn out, to exhibit the relative healthiness of the horse and foot artillery, and of the Madras European regiment, which composed the European part of the Subsidiary force.

a, general identing was very norty had or analista () perioda (open, via a or line, was brand by wire looked ations to the head, and letter and like the arch, were forced of great service de effected i-the effected of old water to in second cases with advertige just set of over of the wave overviewed as the , the patient being in a state of ollope am chalers." - Dated Mat Jose, 1818

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4, in like manner show the server of ity, amongst the native troop, for the eura. The total number tented ha been with have occurred, from an approprie nen ; thus giving 62:387 admissions into (0) men, and 2012 deaths per cent on the d 1 200 deaths per cent on the strength; been pretty uniform, during the entire

# popean troops, the admissions and deaths erous, during the second half yearly ped by fever, cholera and bowd compliants

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l, but to a limited extent, margin for 1811, 32, 33 mil 1834, mil monys de 11, 22, 57 and 1517; and m all these sense tion of mon wore estimate a Karper; of cases, and if deaths, accord in the

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## NAGPORE.

	_			
Aggregate strength 6353.	Admissions.	Deaths.	Per centage of sizek to strength.	For centage of deaths to sick.
Fevers	4,703	55	73-080	1-109
Chotera	123	27	1.926	\$1-951
Diarrhma	426	14	6-673	3-186
Dysenteria acuta	757	44	11-859	5-812
., chronica	123	4	1-936	3-252
Hepatitis acuta	417	15	6-532	3-597
" chronica	251	3	3-938	1-193
Catarrhus	156	5	2-443	3-205
Remoptysis	2	1	0.031	50-000
Asthma	8	1	0-125	12 500
Phthisis pulmonalis	3	1	0-078	40-000
Pneumonia	124	3	1-941	8-419
Apoplexia	17	12	0-266	10-588
Epilepsia	65	0	1.033	0.000
Paralysis	40	2	0-626	5-000
Amentia	4	1	0 062	25-000
Mania	22	1	0.314	4:545
Ebrietas	411	1	6 -438	0-245
Delirium Tremens	83	1	1-300	3-504
Anasarca	20	2	0.313	10-000
Ascites	19	6	0-297	31-578
Rheumatismus acutus	656	4	10:277	0-609
" chronicus	402	7	6.297	1.741
Syphilis Ste	1956	9	30-613	0-250
Morbi oculorum	131	0	2-052	0-000
cutis	40	0	0.625	0.000
Other diseases	3,610	32	56 556	0.836
Total	14,512	252	2:8-293	1-789

No. 11.—Table exhibiting the number of admissions and deaths, in the 1st Madras European regiment at Kamptes, from 1829 to 1839, exclusive of 1831. THE OF STREET

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No. 14.—Table cabalities the monter dealer, in the European flow archite From 1989 to 1009 lacksain.

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Norg .-- Per centage of deaths to strength, 3-947.

TABLES OF DISEASE

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Address Europees of additions and Medress Europees organical at Europees (2, exclusive of 1851)

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No. 12.—Table exhibiting the number of admissions and deaths, in the European foot artillery at Kamptee, from 1829 to 1839 inclusive.

Aggregate strength. 9179.	Admissions	Deaths.	Fer centage of sick to strength.	Per centage of deaths to sick,
Pereze	1050	14	48 187	1 -383
Cholera	18	10	0 -826	55 555
Diarrhosa	193	4	8 -857	2 -073
Dysenteria acuta	<b>2</b> 80	11	12 -819	3 -948
" ebronica	1	0	0.045	0:000
Hepatitis acuta	255	8	12 -207	3 .002
" chrosica	9	1	0 -613	11 -111
Catarrhus	81	. 0	3 854	0 -000
Hamoptysis,	3	0	0 -137	0 -000
Asthma	7	0	0 -021	0 -000
Phthisis pulmonalis	0	0	0	0
Pneumonia	41	0	1 -881	0.000
Apoplexia	5	4	0 -229	80 .000
Epilepsia	8	0	0 -367	0 -000
Paralysis	5	0	0 -229	0 -000
Amentia		0	0 -091	0 .000
Mania	2	0	0 -091	0 .000
Ebrietas	499	3	22 -900	0 -601
Delirium Tremena	110	2	5 -045	1 .818
Anasarca	16	0	0 734	0.000
Ascites	0	0	0	0
Rheumatismus acutus	290		13 -084	1 -351
" chronicus	63	1	2 .795	1 -635
Syphills &c	. 503	2	27 -214	0 .337
Morbi oculorum	43	0	2 -053	6 -000
cutis	6		1000	
Other diseases	1115	1 7	51 -170	de la crea
Total	_	-		

Nove. -- Per centage of deaths to strength, 3-258.

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#### NAGPORE.

Aggregate Strength 1287,	Admissions.	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick,
Ferers	1037	18	83-619	1.735
Cholera	14	3	1-112	21-428
Diarzhœa	118	1	95.6	0-817
Dysenteria acuta	151	8	19-177	5-298
" chronica	0	0	0	0
Hepatitis acuta	203	4	16:370	1-970
" chronica	5	0	0-103	0.000
Catarrhus	23	0	1.854	0-000
Hæmoptysis	0	0		0
Asthma	1	0	0-080	0-000
Phthisis pulmonalis	1	0	0.080	0.060
Pneumonia	32	0	2 580	0.000
Apoplexia	2	2	0-161	100 000
Epilepsia	3	0	0:241	0.000
Paralysis	11	0	0-887	0.000
Amentia	4	1	0-322	25 000
Manla	0	0	0	0
Ebrictas	55	0	4-435	0.000
Delirium Tremens	25	0	2-016	0.000
Anasarea	1	0	0.080	0.000
Ascites	7	0	0.561	0-000
Rheumatismus acutus,	193	0	15-564	0.000
" ehronieus	27	0	1-774	0-010
Syphilis &ce	358	0	28 609	0.010
Morbi oculorum	36	0	2-903	0.000
Cutis	5	0	0.403	0-000
Other diseases	795	2	64-132	0.251
Total	3102	8)	250-161	1-857

No. 13.—Table exhibiting the number of admissions and deaths, in the European horse artillery at Kamptee, from 1829 to 1839, inclusive.

Norn .- Per centage of deaths to strength, 3:145.

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	12	mak lasse .mizak asy .mizak asy .misik asy .msik lasse .vesk lasse .vesk	Nil         Nil         Nil         Nil         O         D	56.30         55.30         75.37         81.3         65.44         71.45         13.49         54.64         10.9         54.64         10.9         54.65         10.9         54.65         10.9         54.65         10.9         54.65         10.9         54.65         10.9         54.65         10.9         54.65         10.9         24.65         10.9         24.65         10.9         24.65         10.9         24.65         10.9         24.65         26.9         25.9         2	28-13 28-12 28-12 28-17 20-9 70-4 70-4 20-4 70-4 20-4 70-4 20-4 70-4 20-4 70-4 20-4 70-4 20-4 70-4 70-4 70-4 70-4 70-4 70-4 70-4 7	26.00 26.05 87.9 20.3 84.1 7.6 6.90 6 26.0 26.0 78.9 20.1 72 17.6 5.2 6	59-2 65-1 21-9 49 69 29-1				

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KAMPTEE.

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	110	210	no	x [	Inches.	Days.	A. M.	P. M.
January	1.08	63-6	5-12	16.4	4-25	74	×	N. P.
Pebruary	5.18	9-19	1. 22	0-22	0		N. E.	R
Mareh	1-18	102	1.82	15-8	00.5	-	R.	N. W.
April	100-6	12	25	25-22	0	8	W.	W.
May	103-0	82.4	5 26	19.5	0.00		W.	S. W.
June	100-5	68-4	1.15	11	6.9	4	W.	M
July	82.9	15-6	4 22	1.2	18 -60	24	S. W.	S. W.
August	0.98	100	82 -1	1. N	6.50	10	W.	W.
September	89.6	12	5. 22	14.6	10	-2	W.	w
Oetober	8-68	7:	e 08	17.5	3 -40	+	N.E.	N. R.
Nøvember	88.7	6.03	22.3	8. 10	0		N. W.	W.
December	81-1	48.5	8- 99	20 6	0	0	W	a N

TENASSERINI PROVI

REPORTED TRAILINGS

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there are the entry face of the country and covered with dense jungle to the top pair - ad it's bet thinly inhibited. The an area for pela el ary essent to be forant a trac so the solution of the solution of the solution of the solution of the principal to Salmes, Gras, Attras, and the Tarry The prological features of the country have and second and a second s

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## TENASSERIM PROVINCES.

General description The Tenasserim provinces, which include the districts of Amherst, Tavoy and Mergui, were ceded to the East India Company by the treaty of Yandaboo, at the conclusion of the Burmese war, in 1826.

These districts comprise a tract of country upwards of 250 miles in length, lying along the eastern coast of the bay of Bengal, and south of the kingdom of Pegue; the breadth however is inconsiderable, and imperfectly defined, but may be stated as varying, from 25 to 50 miles.

Boundaries, Sc. They are bounded on the north by Pegue, from which they are separated by the Martaban or Salween river; on the east lies the country of Siam, separated by lofty ranges of mountains, running from north to southnearly parallel with the coast, at a distance of from 30 to 40 miles inland, though approaching nearer to the sea at the southern extremity. On the south they adjoin lower Siam, and the Malayan peninsula; - and the entire of the western face is washed by the bay of Bengal, a chain of islands, called the Mergui archipelago, lying along the coast, distant from 15 to 30 miles.

General aspect The entire face of the country is mountainousof the country. The entire face of the country is mountainousand covered with dense jungle to the tops of the highest peaks ;—and it is but thinly inhabited. There are no roads, or even foot paths of any extent to be found, all communications being kept up by water, and villages are only to be met with on the banks of the principal rivers, such as the Salween, Gyne, Attaran, and the Tavoy river, and some others of less importance.

The geological features of the country have been as yet but imperfectly explored, some remarks however on this subject

will be found in the particular description of each of the provinces, as far as the subject has been investigated.

Population. The original inhabitants are a tribe of Burmese, who have from time to time, been under different rulers, having been conquered both by the Peguese and Siamese ; -but since the provinces came into the possession of the East India Company, numbers of Chinese, as well as natives of Burmah proper, have settled at Moulmein, where a mixed population, consisting of various castes of people from India, with a numerous and increasing race of Burmo-britons, and Burmo-chinese, is now to be found. The population in 1839 was as follows :---

Town and District.	Houster.	Males.	Pemales.	Burntese and Tablens.	Biamore.	Chinese,	Malays.	Kayens and Toung-theos.	Natires of India.	Miscellansous,
Moulmein Town	\$565	8789	8153	14297	0	540	74	0	2012	
Do. District	6909	21218	20511	31237	0	105	5	11353	119	0
Tavoy Town	1953	5205			0		33			0
Do. District.	4256	12500		23173		54	50	1616		
Metgul Town.	1358	3751 5389	3541 5058	6.71	28	150	15 837	1501	55	258
Do. District	1783	0030	0000	0101	1340		0.90	1001	1	440
Total	18,951	56,955	55,459	92,242	1425	1497	1533	13,003	2317	4.80

Animals, wild The domestic animals to be met with on this coast, are almost limited to the buffalo, pig and the pariah dog-neither sheep,-black cattle, nor horses being bred ;poultry, of various kinds, is however abundant.

Of wild animals the principal are the royal tiger, elephant, cheeta, bear, wild hog, and several different species of deer. Of birds there are pea-fowl, a species of pheasant, jungle fowl and snipe, in great abundance at certain seasons of the year. Several of the mamalia and birds however, common to India, such as sheep, oxen, hares, jackalls, foxes, partridges, &c. are not to be found, the extreme moisture of the climate, appearing to be inimical to them ; and both sheep and oxen soon get out of condition, even with the greatest care and attention.

The chief exports of the provinces consist of Exports. teak-wood, rice, hides, horns, elephant's teeth, tin, bird's\* nests, betel nut, cardamoms and bee's wax. · Edible nests for the Chinese market.

TANGARIN PROTECTION Estensive foreits of test-re in, we to be found along the entire s relative mole is tight, is carried or lage california, z slich nambers employed, least loge up in the interior the purpose of billing and preparing the tra it is found here by the times.

no none Sereni dip bedding establi opention, it ise backs of the Salween riv ef which us at a phase called. Namoo, dis and at Tares-me, three miles below Meeh of benefiel structure, and of 4 or 5.10 tone ware in propres at these places. Consider uni-real inv sie, of late, been sent dire

manyer The principal stations in Merinen, or Manimein the head qui petrie opposite to the bormese town of Solvers fire-Anherst a station for a troos, at the nonth of the river. 28 miles Troy 136 miles south of Amherst, or Mergui about 100 miles south of the latter

The approch to the Texasserine conhighly plourages, forming an outline regular fails, to the methward and east w the low had to the Rangoon shore, its of alls at sea to stratch from poeast in the back gravit -- and present

The send town of Amberet lies at the also inc. it a point of land reasoning was, that pening which, the view of the prince of the back of the back in vilago ad lata of a very lating nne. The jurgle appointions drive to the a organ investore, to be seen have and th the series, re series since the share, they

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Tesh-wood Extensive forests of teak-wood of the largest size, are to be found along the entire of the coast, and a valuable trade in timber, is carried on at Moulmein; large establishments, at which numbers of elephants are employed, being kept up in the interior of the country, for the purpose of felling and preparing the timber, from whence it is floated down by the rivers.

Ship balling. Several ship building establisments, are in full operation, on the banks of the Salween river—the principal of which are at a place called Namoo, distant eight miles, and at Tavoy-zoo, three miles below Moulmein; and vessels of beautiful structure, and of 4 or 500 tons burden, are always in progress at these places. Considerable quantities of teak-wood have also, of late, been sent direct to England.

More thanks and the matter shows and the south of the force, and the mouth of the mouth of the force, and the mouth of the burmese town of Martaban, on the Salween river—Amberst a station for a company of native troops, at the mouth of the river, 28 miles below Moulmein;— Tavoy 150 miles south of Amberst, on the coast ; and Mergui about 100 miles south of the latter place.

The approach to the Tenasserim coast from the sea, is highly picturesque, forming an outline of chains of irregular hills, to the northward and eastward; and although the low land on the Rangoon shore, is not visible, ranges of hills are seen to stretch from north-west to southeast, in the back ground:—and present a bold undulating appearance.

The small town of Amherst lies at the mouth of the Martaban river, on a point of land running out to the northwest, after passing which, the view along the river becomes dreary, the banks possessing but little interest, and the few villages and huts to be seen, having a wretched appearance. The jungle approaches close to the slimy banks, and except a few cances, to be seen here and there, either crossing the stream, or stealing along the shore, there is no appearance

e particular description of ends of the poen onlying has been increased. In original inhabitant are a time of the sen time entires, been relate differentiation tends both by the P Options and Second provinces come ratio the possible of the positions come ratio the possible of the second both by the P Options and Second provinces come ratio the possible of the second both by the P Options and Second positions come ratio the possible of the second both by the P Option and Second positions come ratio the possible of the second both by the P Option and Second positions come ratio the possible of the second both possible of the possible of and increasing rate of Demochristic of a second to be found. The population

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of life, until arriving off the ship building station of Namoo, situated on a small promontory on the right bank of the river, where it forms a bay.

A few miles further up the stream, on the opposite side, is the village of Tavoy-zoo, and which may now be said to form the commencement of the town of Moulmein.

Ships anchor immediately off the town, but owing to a high embankment intercepting the view, the military cantonment, cannot be seen from the river.

Station of Moul- Moulmein, lying in north latitude 168 39, and east longitude 97º 38", is situated on a bend of the river-Formerly there was a populous walled town, on the site of the present cantonment, and the remains of the wall are still to be seen, forming the bounds of the military station, and separating it on the west and north sides, from the native town, which extends along the edge of the river, for about two miles and a half, most of the houses are built on posts, on the bank of the river, and over ravines, with the water flowing under them.

On the east side, a hilly ridge rises from the north angle, extending southward, and on the highest part at the southeast angle, it is surmounted with a large burmese pyramidal temple, adorned with gilding, and filled with numbers of colossal statues of idols, the principal building being surrounded by a number of small pagodas, of various dimensions.

The height of the ridge at this part is about 124 feet above the level of the cantonment. It stretches southward for several miles, and a road leads along the summit, on every high point of which, is a temple. The officers houses are built on the western slope, and at the base of this ridge, and in front of them are the barracks, and the parade ground.

Multary canton. The distance, from the foot of the hill, to the river, is about half a mile, and from right to left of the cantonment, the ground forms a series of gentle sweeps.

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on at the spings. The water is family

CANADANA PARTICIAL e off the ship building takin it News promotions on the right bink of the

ter up the stream, as the oppoint site. any and which any new by said to ment of the town of Monimeia.

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arin, lying in north latitude 164 34, and 8°, is situated on a bend of the timea populous walled towa, an the size of ent, and the remains of the wall are still the bounds of the military station, and cest and north sides, from the native town, the edge of the river, for about two miles the houses are built on posts, on the and over ratines, with the water firwing

hilly ridge rises from the parts age, and on the highest part at the southcontrol with a large horness promited adding, and filled with remiers of lick the principal building being unt of mail people, of vision down

ridge it this part is about 124 for about abanant. It stratus and rai in read loads along the sameth, in rear a strappin. The aftern beam on but and a dre beerd die nige with a barnels, and the parale grand sensors, from the for of the bill, when a mile, and is in sight to be different former a rectas of grade source



The river, opposite the town, is about a mile wide, and is navigable for vessels drawing 12 feet water. The tide rising 18 feet at the springs. The water is fresh in the rainy season

## TRUSTER POTOTS The remains of an old first, a work ter to be rand, family in ablorge head, and rates under half a mile a nates site is the maps of bills, the o using blass is the river, is protected b which this quar are the lines of the artille regiment, and me mattre infinitry corpa same and other north. The reads through ure in enseine order, and the intermediat upon, form a benefitiel green sward. eran. The first is considered by som

of the Participante, but it may with more pr posed to have been the capital, or strong hal by which people the country was held als 1125 221.

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front of them are the barracks, and the parade ground.

Military canton. The distance, from the foot of the hill, to the river, is about half a mile, and from right to left of the cantonment, the ground forms a series of gentle sweeps.

The remains of an old fort, a work of great labour are here to be traced, forming an oblong, of about a mile in length, and rather under half a mile in breadth. On its eastern side, is the range of hills, the opposite side terminating almost in the river, is protected by a double ditch; within this space are the lines of the artillery, the European regiment, and one native infantry corps, with the commissariat and other stores. The roads throughout the cantonment, are in excellent order, and the intermediate spaces, not built upon, form a beautiful green sward.

out fort. The fort is considered by some, to be the work of the Portuguese, but it may with more probability, be supposed to have been the capital, or strong hold, of the Taliens, by which people the country was held about two hundred years ago.

Jul Outside of the fort, the ground descends, and a little to the west is the jail, a large enclosed building, capable of containing from 12 to 1400 prisoners; and on the crest of a small rising ground, are the lines of the Talien corps, a local battalion, officered by Europeans.

The houses are all constructed of wood, raised on posts, and thatched with the leaves of the Neepa-palm.

The ground on which the barracks and hospitals are situated, is of a sandy nature, and slopes towards the river, so that the rain quickly runs off, or becomes absorbed.

For eight months in the year, the surface is covered with grass, but during the other four, it is dried up, and brown.

A dense jungle covered the cantonment, when it was first occupied by the British, in 1826, but when clearing it many large trees were left standing, which contribute much to the beauty of the scenery.

The river, opposite the town, is about a mile wide, and is navigable for vessels drawing 12 feet water. The tide rising 18 feet at the springs. The water is fresh in the rainy season

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but always turbid, at other times it is brackish. The shores are generally muddy, and there are sand-banks and mud flats, opposite the station, visible at low tides.

Native Town. The native town, built along the river, is chiefly composed of bamboo houses, erected on posts and thatched. These dwellings are generally spacious and airy, but the ground beneath, is often muddy and overflowed by the tide. The principal street however, is well raised and dry, and kept clean. To avoid the danger of fires in hot weather, the thatch is stripped off, but this has not prevented sudden and extensive conflagrations.

The adjacent country, in the north-east direction, consists of extensive alluvial plains, intersected by three great rivers, the Salween, Gyne, and Attaran, and by numerous creeks, and belts of jungle. The plains are mostly uncultivated, covered with coarse grass, and are overflowed at spring tides, and also in the rainy season. Several abrupt crags rise in them almost perpendicularly; and their altitude is considerable, that at Trokla, which forms a most picturesque object, has been ascertained to be 2600 feet. They are chiefly composed of limestone, and caves are found in many of them, some of which pass completely through the hills, forming extensive tunnels, appropriated to religious purposes. To the south-east the country is hilly, and covered with jungle, some plains of limited extent intervening ; the hills are of moderate height, and of a rounded form; they are composed of sandstone, and in one of them, a vein of sulphuret of antimony has been found.

Bot wells. Near the old town of Attaran, there are several hot springs, the temperature of which has been found to be 136° of Far ; the water is tasteless, but deposits a calcarious crust, containing carbonate of iron.

lake of measures. In the south-west direction, is the island of Baloogeoun, or "the isle of monsters", in the rich alluvial plains of which, much rice is cultivated, the crops yielding 120 fold.

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tense of the life stated by persons who the river, fat the Attance, which winds t indo into deser teals forests, and a test country; fast, shout 60 miles from More a corror, with banks from 30 to 40 with the diric billings, abrost shart out the ? tive Gre lais tirrigh a more open the weight of the set a allege. His iner, is unigable in st ale intries atein, adding in backs, print, are to be found the facest teak forces not see With the exception of the for en the backs of the time, the whole inter vidences, indicate of inholicator i-th More two busined non employed in the of and property is for safety of the factored The process adapted, is as fail the tree

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MOULMEIN.

Buffaloes, of a large and fine breed, are used for agricultural labour, and are sufficiently numerous for the wants of the people ;- these animals require no care, are never housed, and have always abundance of pasturage in the marshy grounds ;- the natives of the country never use their milk, a universal prejudice existing against it as an article of food.

On the north bank of the river, is an open passage to the sea, wide but shallow, and only navigable for boats ; the sea breeze, which blows through it in the hot months, is cool and pleasant.

Province of Martaban To the north of this channel, is the district of Martaban, belonging to the burmese; It is generally mountainous covered with jungle, and is said to be very unhealthy. The summits of the hills, are crowned with numerous pyramidal temples, which, when viewed across the broad expanded waters, form a scene of great beauty, not equalled by any thing to be seen in India, unless perhaps the harbour of Bombay.

Interior of the district. It is stated by persons who have explored the rivers, that the Attaran, which winds to the south east, leads into dense teak forests, and a totally uninhabited country; that, about 60 miles from Moulmein, the river is narrow, with banks from 30 to 40 feet high, which with the thick foliage, almost shut out the light of day. The river Gyne leads through a more open country, passing through-plains, and along its banks are a considerable number of villages. This river, is navigable for small boats for 180 miles into the interior, and along its banks, at the most distant point, are to be found the finest teak forests.

Teak forest. With the exception of the few villages met with on the banks of the river, the whole interior is a complete wilderness, destitute of inhabitants ;-there are generally about two hundred men employed in the forest felling wood, and preparing it for rafts, to be floated down the river. The process adopted, is to kill the tree by barking it w

all round, three years previous to its being felled ; during this period the wood becomes dry, and light enough to be floated, which the recently cut tree is not. The unfair traders however, dry the fresh cut trees, by burning them at one end, but, the timber so prepared is considered to be of inferior quality. To convey it to the waters edge, the assistance of elephants is necessary ; and those who from want of capital are unable to procure these useful animals, are obliged to cut the logs into short lengths, for the facility of transport. Wood, the produce of the lower part of the country, does not appear to be of much value, as an article of commerce.

Gealogy. Stratified sandstone is the prevailing rock throughout the district, having a dip to the north-east, as may be seen along the ridge of hills, southward of the pagoda of Moulmein. It is intersected with veins of quartz, and crystals of great brilliancy, are found in the interstices, which are formed by the burmese, into mock diamonds, like the Bristol stones.

Vesicular iron stone or tufa, is the next most prevalent rock formation. It is the same as that, which is found on the coast of Malabar, called "laterite," and appears on the surface in several places, forming a good material for roads.

Below the rocks, bituminous schale is found, in digging wells, some of which would serve for crayons and is used by the Siamese, for writing upon coarse white paper.

No granite is seen in the neighbourhood, but at Amherst harbour, there is a reef of granite rocks, which is covered by the tide, but is bare at low water. Pipe clay is dug up from between strata of sandstone, and is of that description used by soldiers, for cleaning their belts. Limestone is obtained readily from the crags, in the plains to the north-east, and it is well adapted for the purposes of building, and may be brought down at little expense, by boats or rafts, from Damath and Cogoon.

The soil in the cantonment, is light, sandy and answers pretty well for gardening, but requires abundance of manure: and

Impess regrables are recreatedly calibre The year is Guided, accordin all pacifies into time ments the cold from Novem has from Much to July, and the rainy set Normher; bet the runs generally begin April, and medicate a part of the hol season Liter the senal equines, enclosely w

STATISTIC STATISTICS

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During this time, the siz is so loaded w. funiture becauses mouldy, the glue, as also books give way, ious attracts rest, with repidi their regetting properties, taless kept i stopped. The bereneter at this season seld inches, and smally mages within two point; and the sin falls in Increase, accompany particularly a the commencement and east

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European vegetables are successfully cultivated, during the cold months.

The year is divided, according to the natives, Climate. into three seasons; the cold from November to March, the hot from March to July, and the rainy season from July to November; but the rains generally begin about the end of April, and moderate a part of the hot season.

After the vernal equinox, southerly winds, which are loaded with watery vapour, prevail, and continue to blow, varying from south to south-west, till the autumnal equinox sets in. During this season the air is clear and transparent, and the sun's rays are so very powerful, that men accustomed to exposure in the Carnatic, cannot bear it here. The natives even, generally use umbrellas.

The vapours accumulating, soon however, form into clouds, and intercept the sun's rays, and after the month of May, it very seldom shines out, till the end of the rainy season.

During this time, the air is so loaded with moisture, that furniture becomes mouldy, the glue, as also the binding of books give way, iron attracts rust with rapidity, and seeds lose their vegetating properties, unless kept in bottles closely stopped. The barometer at this season seldom rises above 30 inches, and usually ranges within two tenths below that point; and the rain falls in torrents, accompanied with thunder, particularly at the commencement and ending, of the southwest monsoon.

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160-63	0-35	2-13	7.08	17.82	37.45	41-85	34.39	17-04	1-14	0.23	0.03		Average fall in each month for 12 years.

After the autumnal equinox, variable winds and sultry weather prevail, for four or five weeks, until the north-east wind sets in, which it generally does after the first week of November, when the atmosphere becomes dry, and hazy. The evaporation of water, in an earthern pot, at this time, sinks the thermometer from 16° to 20° below the temperature of the air ; the barometer stands above 30 inches, and varies from that to 30.2. The sun's rays be-

Venior is generally procurable in the perk, inde, dates, turble's eggs, fish, pur or dried next, eurod by the hunters, in long of the country republies common in India, and also a great variety of wild herbs and fr the acid acts, which are prized by the burns the processorst qualities of mappee, the usual The int

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MOULMEIN:

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The bazaar supplies are abundant, and gene-Basaar supplies. rally good ; and the soldiers are victualled by the commissariat. Excellent bread is made from Ava wheat; beef the usual animal food, is tolerably good ; the cattle being brought from the country of the Shans, lying to the eastward, they are too small for draught purposes, but the flesh is of good quality.

Venison is generally procurable in the market, as also pork, fowls, ducks, turtle's-eggs, fish, prawns, and mætha, or dried meat, cured by the hunters, in long shreds ;--several of the country vegetables common in India, are to be had, and also a great variety of wild herbs and fruits, particularly the acid sorts, which are prized by the burmese, as correcting the putrescent qualities of napee, the usual condiment eaten with rice.\*

Bice. Rice is here always kept in the husk, and is beaten out as required for use, in this way it is better preserved from damp, mouldiness and weevils.

The sheep are all imported, and require much care, particularly during the rains, when unless kept on boarded floors, they die in great numbers.

The price of a good gram fed sheep, varies from 12 to 20 rupees.

Goats appear to thrive somewhat better than sheep, but are not always procurable; and if the long legged black goat of India, was introduced in sufficient numbers, so as to be within the sepoys means, it would be a great desideratum.

Pigs are reared by the chinese,-poultry, which are abundant in the wild state, are domesticated by the kareens, and burmese ; and ducks and geese, which thrive well, and are principally imported from Rangoon. \* Nagee is made either of shrimps, which is the best sort, or of small fish in a half putrid state.

The forests, particularly on the banks of the river Gyne, abound with deer and wild hog, from whence they are brought to the market.

The only kinds of fish to be found in the market, are those taken in the river, as the cockup, which grows to a great size, the murrell, the mangoe fish, with several species of prawns and cray fish.

Fruit and vege-Tables. Gourds, pumpkins, plantains, water-melons and sweet-potatoes, are to be had in abundance; among fruits, is the pine apple, from June to August, small mangoes, oranges, guavas, with some wild fruits peculiar to the country. Rice is usually cheap, but many other articles of ordinary consumption, such as d'hall, ghee, pepper, chillies, cocoanuts, and even tobacco, are imported. The betel nut is exposed for sale, in its fresh state, covered with the husk.

Manufactures. The chief articles of native manufacture, consist of silk and cotton cloths, and the former though of coarse texture, are much prized on account of their durability, and the beauty of their colours. Lackered boxes, in considerable variety, and daws or large knives, which are used both for domestic purposes and as instruments of war, carved cocoanut shells and ivory ornaments, such as handles of knives, &c. are also manufactured; and the principal native merchants deal in precious stones, such as rubies, diamonds, and sapphires, brought from the eastern parts of Ava and Siam; they are however exorbitantly dear, the prices usually asked for them, being much above their intrinsic value.

Natives of India, soon become addicted to intemperance in this country, being in a great degree loosed from the restraints of caste; Europeans also, appear to obtain spirits with greater facility, than at most Indian stations.

Wster. The water used by the troops, is taken from wells, in different parts of the cantonment, the best being on the parade ground. The supply is abundant and good, even in the driest weather, though some of the wells fail at that time. The depth from the surface, varies from 30 to 30 voitants be sensing to similar, and de senson o consult proces deir wire dy boos, y stress inte, a ise a de bie wil early i bit inte al der bit inte al der bit dies and der interes is biede inte inter dasse, u apper to be de derives, de Taliens, ar andred dissensibilit in the expression of andred dissensibilit in the expression of interest an is much in the Taliens, interes an is much in the Taliens, interes an is much in the Taliens, interes de sensi ad unit base, appear interes de sensi ad unit base, appear in Engen soutenes.

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feet, according to situation, and the season of the year. Ships occasionally procure their water by boats, which ascend the Salween river, as far as the tide will carry them, where they find it fresh and clear.

Manners and customs of the inhabitants. The native inhabitants of this province, are divided into three classes, the Kareens who appear to be the aborigines, the Taliens, and the Burmese-They are all of short stature, but of a robust make, though a marked difference, both in the expression of the countenance, and conformation of the body, may be observed in them ; the Karcens are less muscular than the Taliens, while the prominence of the nasal and malar bones, approximates more to the European countenance.

In colour all classes of the inhabitants are of a light bamboo, none are black, and the women are usually much fairer than the men. The young men have their beards, and hair on the breast, carefully pulled out ; but that on the head is long, and of a jet black. They soon become old looking, few are long lived, and a man of 45 or 50, is said to be aged ; although some are to be found, of 90 years.

The burmese are an indolent vain race, and from their wants being few, and the price of labour high, they only work so as to procure the simple necessaries of life. The expenses of a family do not exceed three rupees a month, and it is not an uncommon thing, for those who have procured a sum of money, to remain idle whilst it lasts, amusing themselves with the sports of the country. They are principally engaged as sawyers, and labourers about the docks ; and few, or none, enter into commercial speculations.

They eat almost every thing in the way of food, but, their general diet consists of vegetables, with condiments, and the preparation of fish called "Napee" or " Balashang ;" their religion forbids them to shed blood, but any animal, from the elephant downward, which dies, is immediately cut up and eaten, without reference either to the description of animal, or to the disease of which it may have died ; fish is much used by them, as in its death, no blood is shed.

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Marriages. Judging from the number of children to be seen, they must be considered a prolific race ; marriage is a civil contract, easily broken, and no disgrace is incurred by the separation of man and wife, and their contracting new domestic engagements ; like all eastern nations they marry young.

Dress. The dress is gaudy, that of the men consists of a plaid, of cotton cloth, wrapt round the loins, much like the hindoos, but one end of it is thrown over the shoulder ; their dress on occasions of festivals, is a silken plaid, of bright red and yellow colours, and the head is generally ornamented with a gaudy coloured handkerchief, the hair being worn tied into a knot, on one side.

The dress of the women consists of a narrow petticoat, open in front, and secured about the loins, and under the arm pits; it passes across the bosom, but the shoulders are left bare, and it is of such narrow dimensions in front, that at every step, the knee and lower part of the thigh are exposed ; when engaged in domestic occupations, the bosom in elderly females is exposed, but that of the young female is invariably covered-They also frequently wear a loose jacket, reaching to the hips ; most of the women have silk clothes, for festival occasions, but the upper part, which covers the bosom, is always of red cotton.

Although subject to the British for nearly 20 years, the energies of the people have been turned to no practical account, for they neither take employment as sailors, nor soldiers, save a few Taliens, who often desert their corps. A few are employed as peons, and mahouts, by the commissariat, but the bulk of the labouring community, are either natives of Bengal or Madras. The burmese enjoy our protection, but give little in return.

The men are all tattooed, with a dark blue pigment, from the loins to below the knee, and the operation is performed with considerable skill, giving the appearance of the person wearing dark lower garments ; some are also tattooed over the shoulders, with a red pigment. The women are never tattooed.

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MOULMEIN.

The poorest of the burmese have curtains to defend them from the attacks of mosquitoes, from which they seem to suffer as much as strangers, these insects being extremely troublesome throughout the rainy season.

Use of Tobacco The practice of smoking tobacco is universal, from the child to the most aged person. Opium is also used, but not in great quantity, except by the chinese, it being considered a disreputable habit; and the name of opium eater and thief, are synonymous in the language of the country.

Disease of the Rheumatism is the most common of the diseases seen, but it is not of great severity.

In the highlands both of Siam and Ava, bron-Bronchorele. chocele is frequent, but the enlarged gland does not attain any great size, nor is it accompanied by cretenism ; it is attributed to the quality of the water by some, and by others to the use of earth salt.

Small pox. Small pox, has been a dreadful scourge to this country, and inoculation is practised to a considerable extent, to lessen its severity. In the treatment, the burmese keep the patients cool, and water is sprinkled over the body occasionally; in Siam the patient is bathed several times a day in cold water, from the time the eruption first makes its appearance.

Vaccination failure of All attempts at permanently establishing vaccination have failed, in consequence of the extreme dampness of the climate, destroying the specific qualities of the virus, to transport and preserve which, every possible expedient that could be thought of, has been tried.

Cholera. Cholera has occasioned great mortality from time to time, in some districts; in 1824 and 25 it raged with great violence in the burmese army above Prome ; and sporadic cases occur annually.

Unhealthy sea-The periods considered most unhealthy by the natives, are the commencement and termination of the X

rains in May and October, particularly the latter, when fevers are common in the inland villages, and in the forests; and in 1839, nearly all the wood cutters were obliged to come into Moulmein, on account of fever. The intermittent is the usual form of the disease, though remittents, and even continued fevers, are not unknown.

Framberaia. Frambœsia, or the yaws, is not uncommon among the native population, and is called by them " tongo ana." It is classed with venereal affections, and considered infectious. The remedy chiefly relied on for its cure, is the smilax china.

Aphtha. Aphtha, and inflammation of the tongue and fauces, extending to the stomach and intestines, are not uncommon, and prove obstinate and intractable.

Trismus nas-Infants, in the cold season, are subject to trismus, which carries off many of them, but after they are a few months old, they are usually healthy, and thrive well.

Leprosy. Lepra is of frequent occurrence, both among the burmese and chinese. It is divided into ten varieties, all of which are considered contagious, and the subjects of it are obliged to live apart from the rest of the community.

Absence of Hy-Hydrophobia, is said, never to have been known on the Tennasserim coast, or indeed on any part of the Malayan peninsula. At Rangoon however it does occur, and a cure is reported as having been performed there, by an old priest, who prescribed tobacco and stramonium in large doses; on a late enquiry however, it was found that the priest was dead, and that the monastery in which he lived, had been burnt with all his records. The truth of the statement was however confirmed by respectable authorities, and is on that account noticed here.

Diseases of The warm season of 1839, was considered unusually hot, and the cattle which came from the Shan counryy in March, brought with them a disease which spread erssinif # Kolmin, and pound exer is made commend in start in a man, al a to imprinted eye w a fire the mind appeared dail, the clea were seen to mill and the backs to become a ireath was decred to be offensive, and th with a firstly deduce issuing from the m sup, the for as a mach swaller, that the an wilk, and is pulsibly becomes emainited. from briding, by the state of the mouthgenerally entired, and the circulation quick Gener usally proved fidal, in 'about three first commencent -- From 7 to 800 head during the year.

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extensively at Moulmein, and proved exceedingly destructive.

It usually commenced its attack in a most insiduous manner, and to the inexperienced eye was not obvious, at first the animal appeared dull, the clefts of the hoofs were seen to swell, and the heels to become spongy, next the breath was observed to be offensive, and the gums spongy, with a frothy discharge issuing from the mouth. At this stage, the feet are so much swollen, that the animal can hardly walk, and it gradually becomes emaciated, being prevented from feeding, by the state of the mouth-The bowels were generally confined, and the circulation quickened ; and the disease usually proved fatal, in 'about three weeks from its first commencement .- From 7 to 800 head of cattle, died during the year.

Several " post mortem" examinations were made, and except in a few instances, in which there was ulceration and softening, of the mucous membrane of the stomach, the principal morbid appearance, was inflammation of the lungs.

Diseases of Ele- In this year also, an extensive mortality occurred amongst the government elephants, which commenced in June, after the other epidemic had ceased, though the elephants throughout the provinces were dying in great numbers, a short time previous thereto. " Post mortem" examinations showed, that this disease was also an affection of the lungs, which were seen in various stages of congestion, and infiammation.

In one case suppuration was present, in another tuberculous deposits existed, and generally, one side of the chest only was affected, the other being healthy; in those who died at its first outbreak, the lungs were black throughout their whole substance, and resembled the spleen in structure, and when cut into, a frothy purulent matter exuded. The liver was always healthy, but the spleen was found to be soft, and engorged with blood.

The symptoms observed in this disease, are very indistinct, the animals continue to eat their food to the last, when they suddenly fall down and die ; and they perform their work till within an hour of death .- One animal apparently in good health, on going out to the farm, suddenly fell down and died in half an hour, and another when bringing in forage, died in the same sudden manner.

Millitary force. The troops consist of one Queen's regiment of foot, two regiments of Madras native infantry, one company, of European artillery, and a local baltation called the Talien corps, the whole being under the command of a Brigadier.

European har-The European infantry barracks, erected in 1827, are built in open column of ranges, ten in number, running north and south, having a space of 45 feet between each ; they afford sufficient accommodation for a complete corps, each range being calculated for 80 men. They are constructed of teak wood, and raised on piles three feet from the ground, with boarded floors, and are thatched with the Neepa palm ; each range is 100feet in length, by 251 in breadth, and 11 feet 9 inches in height, with an open verandah 12 feet broad all round;-there are two doors, and eight unglazed windows with wooden shutters, on each side, and one door and two windows, in each end,-besides which the lower plank in the walls, is on hinges opening outwards, thereby affording ample means of ventilation.

Hospital. The hospital is situated, within a few minutes walk of the barracks, on the north-east side, the locality is objectionable in some respects, the ground being rather confined, and lying between two public roads, which are only shut out by a wooden fence .- It consists of three ranges of, buildings, and a ward for the women and children, a surgery, medical stores, serjeants quarters, dead house &c. the whole, enclosed in an oblong square, measuring 395 by 265 feet, and surrounded by a teak palisading, 9 feethigh .- The length of each range is 100 feet, the breadth 19 feet 4 inches; and the height of the walls 9 feet 4 inches ; - having four doors, and

# ROTEXTER

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er troops consist of our Queen's report of ats of Madras antise infastry, the suspan nery, and a local balaxies collect the Taken being under the command of a Brighter.

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#### MOULMEIN.

fourteen unglazed windows, with wooden shutters in each, with an open verandah 6 feet broad all round, they are constructed in a similar manner as the barracks, each ward is capable of containing 36 patients, allowing five feet for each .---The same means of ventilation are adopted as in the barracks.

The privies belonging to the barracks, are situated too near the cook-rooms, they consist of a deep trench with wooden seats, those of the hospital are connected by covered ways, leading from the verandahs ;-every attention is paid to cleanliness, and quick lime is constantly thrown into them.

Antillery lines The artillery lines and barracks, are perhaps more eligibly placed, than those of any other corps at this station, they face an open grassy esplanade, of considerable extent, bounded by the low mound, the remains of the fort, and a line of houses, which runs along the bank of the river, as it sweeps round the north west angle of the cantonment,

The hospital is at a short and convenient dis-Hospital. tance from the lines, and possesses all the advantages, of an airy, commodious, edifice, constructed like the other public buildings ; it can accommodate 30 Europeans, and 50 natives, exclusive of a ward for women and children.

Native Enes at The lines of one of the native corps, are situated near Tavoyzoo, half a mile from the village of the same name, and two and a half miles east of the fort, a range of high hills, covered with low jungle, running immediately in their rear. The ground selected for the huts, is elevated and dry, the soil being chiefly laterite, but in the lower situations, it is a tenacious chalky loam; abundance of good and wholesome water is obtained from wells, and from natural reservoirs formed by the hill streams .- Previous to 1838, it was a complete jungle, but has since been cleared, and good roads leading to the fort and bazaar, have been made ; stone bridges have also been erected where required. There is a small bazaar in the lines, and another at the village, in the vicinity.

Sepors lines. The huts for the sepoys are in lines, each hut being 18 feet by 12, and intended to accommodate 7 or 8 inmates ;

they are not raised from the ground, but the men sleep on bamboo frames, elevated 4 or 5 feet. These buildings are not considered as well suited to the climate, as those used by the natives of the country, which are all so well raised as to allow a free circulation of air underneath them, to carry off the damp exhalations arising from the ground.

The principal diseases of the sepoys, are caused by inattention to their food and comforts, as the men, from habits of penuriousness, deprive themselves of wholesome\* food.

The baneful practice of opium eating, has also been known to exist, in some of the native corps, to a considerable extent.

Native lines in The lines of the other Madras native corps, are within the limits of the old fort, not far from those of H. M.'s regiment, on elevated ground, near the base of the hills, and are very eligibly situated.

Diseases of the The diseases most prevalent at Moulmein amongst the troops, are fever, dysentery, diarrhœa, hepatitis, ulcers, and rheumatism. Catarrhal and pulmonic complaints, also prevail at certain seasons; the sepoys are subject to atrophy, beriberi and dropsy; and some Europeans have been found to suffer from a scorbutic diathesis. There are generally between 4 and 5 per cent in hospital; the deaths are 3½ per cent per annum in Europeans, and about 1½ per cent in natives.

Fever. Fevers are most commonly of the class of intermittents, as might be expected from the vicinity of swampy plains, and jungles, and the muddy banks of a river overflowed by the tide, and exposed to the influence of a tropical sun. That fevers are not more frequent and severe, is perhaps attributable to the accommodation for the men being good, the situation of the cantonment being on sloping ground, which is of an absorbent nature, and the easterly winds being screened off by the hills.

Fevers have become milder, and less frequent every year, since the station was first occupied, showing that the effect . They are now furnished with ratices, and a great improvement in their health has in consequence taken piece. server depend page a net experienced, this depend The ness area cars her counted at it The set area; and at Andreas herbox is the takines; and, at Andreas herbox is the takines; at A

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MOULMEIN

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of clearing jungle is not experienced, till some years have elapsed.

The most severe cases have occurred at Baloogeoun island, in the teak forests; and, at Amherst harbour.

The men employed in cutting teak timber, suffer very much at the commencement of the rains, and when once attacked, are generally obliged to quit the forests for a time, as they do not recover whilst they remain there. When the rains have fairly set in, fever is less to be feared than at other times, and this is the season usually chosen for floating down timber rafts.

Dysentery and liver diseases are the most Desentery. fatal complaints amongst Europeans ; and prisoners confined

Searsy in the solitary cells, generally men of dissipated habits, have suffered from a scorbutic diathesis; the subjects of this affection always require a removal from the climate, neither diet nor medicine being found of benefit, when once it has been established; and on this account, the punishment of solitary confinement, during the rainy season in particular, is unsuited to the climate.

The asthenic diseases, from which the native troops suffer. also require a speedy removal from this climate.

It is worthy of remark, that the prisoners, and public followers, not employed on night duties, are exempt from many of the low forms of disease, from which the troops suffer.

Scrophula. The climate is thought to be inimical to strumous diseases, and to complaints occurring in a scrofulous habit of body; and glandular swellings, which run into suppuration, are very difficult to heal.

Pulmonary dis- Pulmonary complaints were at one time thought to be very prevalent; and that a residence here was highly dangerous, for persons having a phthisical tendency, but this idea seems to be over-rated, as many circumstances are in favour of the consumptive ; such as the mildness of the climate.

TTA MARTIN FRANKLER al form the proved, but he was long a ernend 4 or 5 feet. These indices or and noted to the closely as they and a de atry, which are all no well related as to all and ar underseath them, to carry of the bary

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the absence of hot winds, and the slight variation, in the daily range of temperature.

Ulcers. Ulcers are difficult of cure during wet weather.

Hepatie dis-The climate is supposed to be unfavorable to hepatic complaints, and in a few instances this opinion has been borne out, but the cases were those of men, who were supposed to have previously laboured under organic disease of the liver.

The diseases have some reference to the seasons, viz., fevers prevail most, from the latter part of February till May; bowel complaints occur in the rains, particulary at their commencement ; and pulmonary complaints during the cold season.

The resident mussulman and hindoo inha-Health of the Hindoo and Muttulman rebitants, appear to enjoy good health, and sidents. amongst the natives, there are few diseased persons to be seen, and no mendicants.

Health of Con- In the jail for four years, the average deaths to strength, were as follows :

	Years		Mean Strength.	Died.	Proportion of death to strength.
1835 § 1st	Half yea	ır	540	11	1 in 49
0.5.1	0.0		670	16	1 in 41
$1836 \begin{cases} 1st \\ 2d \end{cases}$	do.		750	14	1 in 67
22d	do.		850	12	1 in 70
1837 { 1st 2d	do.		890	17	1 in 52
2 24	do.		930	24	1 in 40
1838 { 1st 2d	do.		1006	22	1 in 47
	do.		1050	28	1 in 37
1839 1st	do.		1130	20	1 in 37
		Total	7216	174	or 1 in 41,04

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AMHERST.

The above statement, includes men of all ages, many of whom are confined for life ; they are under strict discipline, are well fed, and not overworked. Each man is allowed a basket of rice, containing 54 lbs, and one rupee in cash, monthly, besides firewood, and the prisoners are divided into messes of 50. Each individual contributes 12 annas for bazaar expenses, the remaining 4 annas being expended as they please.-Breakfast consists of vegetable curry with rice, and dinner of d'holl curry, with fish occasionally.

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General De-scription and si-tuation. The small station of Amherst, is situated on a narrow neck of land, at the mouth of the Martaban river, and is the extreme north-western point of the Tenasserim provinces.

A bold range of wooded hills, rises within a short distance, on the inland side of the town, leaving a limited space of level ground, but partially cleared of jungle,-between them and the sea on one side, and the river on the other.

Amherst is about 28 miles from Moulmein by the river, but the distance by land, is considerably less, there is however no road either for carriages, or cattle of any description. a path way running through swamps, and over rugged hills, being the only land communication, and this is only made use of on particular occasions, for foot runners, chiefly to convey intelligence to head quarters in hazy weather, of the arrival of ships off the river.

Troops. A detachment consisting of a company, from one of the native corps at Moulmein, under a subaltern officer, occupies the little town, the chief importance of which is, its Pilot station being a convenient pilot station, no ships of any description, being able to proceed up the river, in consequence both, of the rapidity of the stream, and the danger arising from numerous banks and shoals, without an experienced pilot.

When the Tenasserim provinces were first ceded to the East India Company, in 1826, it was contemplated by

Sir, A. Campbell, Commander in Chief of the Rangoon expedition, to establish the head quarters of the British force at Amherst, the limited extent of open ground however, and also an apprehension that it might prove unhealthy, from the immediate proximity of hills covered with dense jungle, caused him to abandon the original intenion, and finally to select Moulmein ; and as Amherst was for some time found to be very feverish, from May till near to the end of the year, or during the rainy season, it was considered fortunate that it was not made the head quarters of the provinces.

Much of the jungle in the immediate vicinity, has of late years been cleared away, and the station has consequently become more healthy, and during the hot and dry months, of February, March and April, it is now resorted to by invalids from Moulmein, as well for the benefit of change of air, as to enjoy the cool sea breeze, and salt water bathing. European soldiers are also frequently sent there, at the same season, and men suffering from chronic complaints, or general debility, the consequence of acute disease, are found to derive great benefit from the change.

Sugar cano Plan-A considerable part of the cleared land in the vicinity, is at present under sugar-cane plantations, a company of European merchants having established a manufactory at Amherst, where sugar of excellent quality is made for the Calcutta market ; and the speculation is likely to turn out well, the soil and climate, being both favorable to the growth of the cane.

## DISTRICT OF TAVOY.

General des-cription. Tavoy lies between the districts of Moulmein and Mergui, being in length from north to south, about 140 miles, and in breadth about, 40 miles. It is very hilly throughout its whole extent, the hills, and also the valleys and plains, with few exceptions, being covered with dense jungle; the hills run in ridges, generally in the direction of north and south, separating the district, from

is coming distant, and some of them exten There is not me near of any important on feet alles de locación riva, à rises in the m behale it? St. and after a southerly conning and mild to the set cost, and t tion is earning so in airth hairbole 10 shillow, brail her a rocky bod, and is full and hashs, adju not savigible for vessels. note that then or twenty miles from its and a set when much of links burdens, second when he as without differency ; through the tile estente a light as 50 miles. Besides tive, which items a portion of the eastern b disting there are also a few small and insight

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the country of Siam, and none of them exceed in elevation 4500 feet.

There is only one river of any importance in the district, called the Tenasserim river, it rises in the northern part, in latitude 14° 8", and after a southerly course of about 70 miles, nearly parallel to the sea coast, and not very distant from it, enters the sea in north latitude 13 ° 30". It is shallow, broad, has a rocky bed, and is full of islands and sand banks, and is not navigable for vessels of any size, for more than fifteen or twenty miles from its mouth. Small junks, and other craft of little burden, ascend as high as 30 miles, but not without difficulty ; though the influence of the tide extends as high as 50 miles. Besides the Tenasserim river, which forms a portion of the eastern boundary of the district, there are also a few small and insignificant streams, of little use even for the purposes of irrigation.

The Tavoy valley, through which the river flows, is open to the south, bounded on the west by a range of hills extending along the sea coast, the highest of which attains an elevation of about 1800 feet; and on the east by a series of ranges, the most easterly of which are the highest. This valley, the principal situation in which rice is cultivated, is at its broadest part, a few miles above the mouth of the river, about 10 miles across, but becomes gradually narrower to the northward, until shut in by hills.

Geology. The principal geological formation of the district, is granitic. The hills along the sea coast, consist almost entirely of granite ; on the east side of them, there is abundance of micaceous iron ore, and clay iron stone, a good deal of the former being magnetic ; and there are extensive low rice grounds, along both banks of the river, the soil of which is chiefly stiff clay; the banks and bed of the river are also clayey, but occasionally a rocky stratum of laterite is seen. The first hilly undulations to the eastward, are composed of laterite, clay and sandstone ; they gradually

increase in height, and are then believed to become granitic ;- among these hill streams tin, in great abundance and of good quality, is found ; hot springs are also found in different parts of the district.

Amongst the vegetable products, is much valuable timber of various kinds, and wood oil is obtained from a tree which is in great abundance. The tse, which makes an excellent black varnish, indestructible by moisture, is also a vegetable juice, caoutchoue trees are very numerous, and there are also a few gamboge trees; the fruits are various, and many of them of good kind. There are several kinds of rice, which yield their crops almost without labour ; the fields being watered most plentifully by the rains.

But little fish is to be had either from the sea or rivers.

Climate. The climate seems to agree as well with strangers, as with the natives of the province ; and the changes which take place, are very gradual. The atmosphere is never close or oppressively hot; and the temperature throughout the year, is very equable, the annual mean being about 80° in the shade ; and the greatest range of the thermometer, in the shade, about 30° ;- the lowest observed temperature being 65°, the highest 95°. The mercury in the barometer fluctuates but little, its greatest range being 5 of an inch ; during the rains it is about 2 tenths lower, than in the dry months. The rainy season, which sets in either in April or May, is the pleasantest time of the year, and likewise the healthiest. The rains continue more or less heavy, until the latter end of September or October, and some years even till the middle of November ; when a slight change takes place, and some sickness occurs, but the east wind soon sets in, bringing with it health and freshness. The wind is strong during the months of December and January, it then abates and alternates with the sea breeze, either from the north-west or west, until the south-west monsoon again brings its floods. The greatest quantity of rain measured in any one year, was 220

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The products of the country are print beel, rease, and the fruit called the doris

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inches in 1838 ;- the fall of rain during the south-west monsoon in 1831, was as follows.

		of each nth.
	Inches.	Tenths.
N	23	S
May	36	4
July	01	2
August September	28	7
October	24	5

As regards internal communications, little can be said, there being no such thing as a road in the district, and the Tavoy river, affords the only means of intercourse.

The products of the country are principally rice, cotton, betel, ratans, and the fruit called the dorian.

The population is said to amount to about 50,000 souls, the greatest portion of whom, are distributed in straggling villages along the banks of the river, and in small creeks.

Tavoy, the chief town of the district, contains about 20,000 inhabitants, and is situated on the left bank of the river, 30 miles from the sea, in north latitude 14° 50\*, and east longitude 98°. Its site is low, but slopes gently towards the river, by which all accumulations of stagnant or offensive matters are prevented. It includes an area of about three miles in circuit ; on the west it is flanked by the river, and on all other sides by paddy-fields, which are so low that at spring tides in the monsoon, they are but little above the level of high water. The highest point of the ground, on which the town stands, is 14 feet above high water mark.

The town is studded with fruit and other trees, of various kinds, under the shade of which the houses are built ; they are for the most part constructed of wood, raised 5 or 6 feet above the ground, and are all constructed after a fixed

model, from which little deviation is ever observed ;-light is carefully excluded, and air is only admitted through the thin partitions, which are usually of bamboo; they are clean, neat, commodious and comfortable dwellings. Each family lives, detached from all others, with a small fenced spot of ground, surrounding the residence. The town, which during the rains, used to be almost under water, has lately been drained, and the roads, if such they could be called, which were quite impassable, have been laid with brick.

The inhabitants of the town consist of burmese, and taliens, with a good many chinese; the latter set a good example of industry to the lazy burmese, but the few natives from Bengal and Madras, on the contrary, are extremely indolent. The burmese are a healthy people, stout, and well made, but under-sized, they are fair and cleanly in person, and apparently subject to but few diseases ; they are intelligent looking, and appear to be happy, are not quarrelsome, nor are they easily depressed or elated. They are quiet and orderly in their amusements, sober and well behaved, but are considered to be heartless, and indolent, and their morals do not bear scrutiny.

Their chief food consists of rice, eaten with gnapee, but numerous vegetables are also used, as they eat almost every leaf, root, and fruit, apparently with impunity, though colic is said occasionally to be the consequence ; every description of animal food is also eaten.

The dress is light, clean and gay looking, and although the love of gold is universal, they readily part with it, in presents to the poonghees, or priests; to feast their friends ; or to give poces, a theatrical amusement in which they delight.

The person who happens to be in immediate authority amongst them, although he may have been a convict in irons the day before, is the object of the greatest respect and reverence. No mendicants are to be found, except the priests, who subsist upon the voluntary offerings of the pious and

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charitable; they live in a state of celibacy, secluded from the world, in kyoungs or monasteries, and are the instructors of the young ; almost every burman can therefore read and write.

TAVOT.

Polygamy is not permitted, but divorce is easily procured.

Women, though obliged to work, whilst the men sleep, eat, or amuse themselves, are nevertheless not ill used. They have intelligent, though not handsome countenances, are cleanly in their dress, and are allowed free liberty to go about ; they are prolific, and fond of their children, whom they suckle for three, four or even five years.

The town, and surrounding country are re-Diseases. markably healthy, the prevailing diseases being intermittent fever of a mild form, and catarrhs, chiefly occurring at the setting in of the south-west monsoon. About six years since, small pox carried off a great many of the inhabitants.

Cholera, also made its appearance about the same time, but was confined to the burmese .- They are averse to applying to Europeans for medical assistance, the cause of which is not understood, every encouragement has been held out to them, but hitherto they have not often availed themselves of it, and some of those who have applied for aid, were unfortunately in the advanced stages of disease, so that their confidence could not be gained, by effecting cures.

Millitary force. The detachment of troops, consists of about 40 European infantry and artillery, and 200 sepoys.

The fort, within which the barracks for the troops, and the various public buildings are situated, is in the centre of the town, extending one thousand yards from east to west, and eight hundred from north to south .- The walls are of brick, having an entrance at each face, and they are partly surrounded by a deep trench. The extent of the fort, bears the proportion of about one-third, to the rest of the town.

The European infantry barracks, occupy the best spot of ground, on a mound formed by the ruins of an old pagoda,

they are built of wood, not raised from the ground, but the floor is laid with bricks. It is an oblong building, with verandahs on the south, west, and north sides ; its length 84 feet, breadth 51, and height 12 feet, and it is well ventilated, clean and capable of holding 30 cots ; five small rooms are partitioned off, for married men.

Artillery har-On the same line, and a little detached, are the artillery barracks, similar in construction, but of smaller dimensions, being in length 63 feet, in breadth 48, and in height 12 feet. The gun-shed stands a little in front, and to the right, these and two guard rooms, being the only buildings on the mound.

Magazine. The magazine, is about 80 feet in front of the gun-shed, a public road which runs at the foot of the mound, separating it from the parade ground.

Hospital. On the opposite side is the hospital, which is a large and very good wooden building, raised 5 feet from the ground, and divided into a European and native ward, by a passage, in which the guard is stationed; this building is 104 feet in length, in breadth 41, and in height 11 feet ; the European ward is capable of holding 20 patients, it is clean, well ventilated, and surrounded by a verandah 6 feet wide, the surgery is in one corner, and a room for hospital clothing in another. The native ward is also commodious, the verandahs on two sides, having been taken in, and it is capable of holding 40 patients ; on the north side the verandah is partitioned off, for the use of the medical subordinates. There is a privy attached, but no dead house.

Native barracks The native barracks, or place of arms, are at the foot of the brick mound, on the left ; the native lines being immediately in the rear, occupying a small piece of ground, which is rather too confined.

Officers' houses. The Officers' houses are at a short distance rom, and within sight of the barracks.

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Wells are numerous, and the water is good.

The bazaar is almost adjoining the right of the barracks.

The small detachments stationed at Tavoy, Health of troops have in general been remarkably healthy, and there has been nothing, as regards their state of health, to call for particular remark.

## MERGUI.

Mergui, the most southern of the Tenasserim General descripprovinces, formerly belonged to the Siamese, but it having been invaded by the Burmese in 1785, was given up to them, by a treaty of peace concluded between the two powers, in 1793, and the Burmese retained possession of it, till after the war with the British.

It is bounded on the north, by the province of Tavoy; on the cast, by the Siamese territory; on the south, by the Pachan river; and on the west, by the bay of Bengal.

Mergui Archi-The Mergui archipelago, consisting of numerous small islands on the coast, belongs to this province.

Appearance of The surface of the country is mountainous, and much intersected by streams; two principal ranges of hills, varying generally, from four to fifteen hundred feet in height, traverse the centre of the province, from north-cast to south-west, running parallel with each other, and separated only by the river Tenasserim, which winds through the valleys between them, until it arrives at the old town of Tenasserim, where it is joined by a stream from the eastward, called the little Tenasserim ; it then pursues a westerly direction, passing through a gap in the range of hills, and reaching the low land bordering the coast, divides into several channels, which flow into the bay of Bengal.

The line of coast is very irregular, and for several miles inland, but little raised above the level of the sea ; it consists for the most part, but particularly to the southward of Mergui, of low uncultivated mangrove islands, here and there however,

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small plains, of fertile land adapted for the growth of rice are found, with occasional hills of moderate elevation, upon which there are gardens of the areca palm, and plantain.

The whole face of the country, unless where cleared for cultivation, is densely clothed with luxuriant vegetation, and towards the interior, and in the more elevated situations upon the coast, forest trees arrive at the largest size. After passing the mangrove limits, towards the interior, a gradual elevation of the surface is perceptible, and the country becomes mountainous, even to the bank of the river. After passing the town of Tenasserim, situated about 38 miles east of Mergui, at the

Tenasserim junction of the rivers, it becomes suddenly changed, the river flowing through an alluvial valley, varying in breadth from 5 to 20 miles, having a horizontal or slightly undulating surface; the banks are here generally very high, and nearly perpendicular, in some parts however, the course of the river is through low lands, and there are many islands in its bed, giving to the scenery a picturesque character. The channel in some situations, is so narrowed as to occasion rapids, which are passed with difficulty, at certain periods. The river is navigable for large boats up to the town of Tenasserim, but beyond that, even those of small size, cannot proceed far, without much difficulty. The influence of the tide, is felt for about 10 miles above Tenasserim.

The climate of Mergui is agreeable, and remarkable for its salubrity, the heat during the months of March, April, and May, being moderated by the land and sea breezes ; the latter usually commences to blow, between the hours of 9 and 12, in the day, and continues till 6 or 8 in the evening, soon after which the land breeze sets in, and continues with delightful coolness, till morning-During the rainy months, from June to the end of October, the sun is seldom visible, and the air is in consequence so cool, that many persons prefer this season to any other, as there are frequent intervals of fine weather. The months of November, December, January and February, are cool, and Europeans like the comfort of a blanket at night. During

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the year 1840, from observations taken three times daily, the extreme variation of temperature, was found to be only 25°, the highest range of the thermometer, in a room about 100 feet above the level of the sea, having been 93° at 2 r. M., in April, and the lowest 68°, in November and December, at sunrise ; though the Mercury occasionally falls below this, as in January 1842, when it was down to 63° at sunrise. Northerly winds, veering from east to west, prevail from December till March, during the remainder of the year, they are from the south-west; in the rainy season, violent storms of wind and rain, from the N. W. occur, and continue for many days together. Thunder storms, accompanied by torrents of rain, are of frequent occurrence in the months of April and May, and also at the change of the monsoon, in October and November. The transitions in the state of the weather, are often observed to be very regular, in their recurrence ;- for example, it frequently commences raining at a certain hour in the day, continues perhaps for several hours, and is succeeded by an interval of fine weather, this occurring several days in succession ; when a sudden and complete change may occur, and storms of rain, which previously came on daily in the evening, now happen at noon, or, some other stated period, of the 24 hours. It also often happens, that storms recur during several successive days, but on each occasion, an hour earlier or later, than the previous one.

The most obvious peculiarity of the climate, is the great humidity of the astmosphere, dew is deposited in great quantity, during the north-east monsoon, and volumes of misty clouds, obscuring the sun's rays, which are not dispersed before 9 or 10 o'clock, may be also seen hanging over the face of the country, especially in the interior. In the year 1840, there were 207 days upon which rain fell, and no month passed without rain, in which respect, Mergui is favoured beyond the other parts of this coast; and the climate, is thereby rendered more agreeable, and healthy. About 180 inches of rain fall annually.

Diseases of the With regard to the diseases of the province, they are, with few exceptions, very mild. The most common

complaints among Europeans, and particularly those who have been some time in the country, are affections of the mucous membrane of the bowels, which seems to predispose to attacks of subacute inflammation, in the form of gastro-enteritis, diarrhœa and dyspeptic complaints; but whether they are occasioned, as has been thought, by the impurity of the water, which is much impregnated with the muriatic salts, or by the defective supply of animal food, neither mutton nor good beef being procurable, has not been determined, the probability is, however, that both these circumstances influence the health of strangers resident on this coast.

For Europeans debilitated by the climate, or diseases of India, the place offers several advantages, and in many cases, a residence here of 6 or 8 months, would it is believed, supersede the necessity of a return to Europe.

Health of native The native troops are less healthy than the Europeans, and the proportion of sick, is usually greater than in India ;- they are particularly liable to skin diseases, also to diarrhos, rheumatism, remittent and intermittent fevers, beriberi, atrophia and various forms of dyspepsia, the three last mentioned diseases often proving fatal, or rendering a return to their native climate requisite. A peculiar form of ulceration, which affects both Europeans and natives, is very common, it breaks out in different parts of the body, becomes as large as the palm of the hand, and spreads in one direction, as it heals in another ; the sore presents a white sloughy bottom, with ragged edges, surrounded by a ring of a reddish or copper colour, and is attended with great pain and emaciation. Some cases of this disease have been cured, by a course of the arsenical solution, with sarsaparilla.

Government of The commissioner of the provinces, usually visits Mergui four times a year, for the purpose of holding a sessions, and hearing appeals, but the immediate charge of the province, is in the hands of one of the assistants, to the commissioner, who has a court for deciding police and other cases,

d nine inpense, in which he is solited The provins is drived into several distric I TOTAL TRADUCT unde i diegen, or lead contable, wh verse, and realists the business of the village The subge are thinly statistic, and o from the printer; the spit being selected scientings, mi three er four houses are aller wher is used potential.

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of minor importance, in which he is assisted by the *tsik-kai*, or native magistrate.

The province is divided into several districts, each of which is under a *thoo-gyee*, or head constable, who collects the revenue, and conducts the business of the villages in his charge.

The villages are thinly scattered, and consist usually of from 20 to 50 houses; the spot being selected for some local advantage, and three or four houses are always clustered together for mutual protection.

Itabitations of Among the burmese, one family only occupies each house, but some of the kureens are social, many families, consisting perhaps of 50 or 100 individuals, live under the same roof.—The house consists of a long room, with a common central passage, running from end to end, on each side of which are apartments, separated by bamboo mats, but opening towards the public passage ; the villages, and houses are almost invariably built upon the banks, or within a short distance of some navigable stream, with which the country is intersected in all directions.

Population. The population of the province is about 30,000, and from the returns of the village authorities, the births it appears, exceed the deaths, in the proportion of 560 to 256, or more than double.

It is scarcely possible to enter the country, unless by a few beaten tracks, or by water, from the impenetrable nature of the jungle, and it has consequently, been but imperfectly explored.

Geological features. The more westerly islands of the Mergui archipelago, are composed entirely of the primary crystalline formations, chiefly varieties of granite and porphyry, whilst those near the main land, apparently belong to the transition series, and consist of sandstone, gray wacke, and conglomerate ; and in the composition of the latter, iron forms an important constituent. The geological features, of the main land, near the

shore, do not differ materially from the last mentioned islands; but at a distance of from 15 or 20 miles in the interior, the secondary stratified formations predominate, and of these, the old red sandstone is most common, the town of Tenasserim being built on a rock of this nature. On ascending the river, the formations are seen to belong to the tertiary series, having often the character of fresh water deposits, found lying upon an extensive horizontal bed, of reddish, sandy marl ; in many parts, the river having perpendicular banks, 20 or 30 feet high, through which thin beds of blue marl, and gravel are interspersed ; and towards low water mark, there are frequent beds of argillaceous, and nodular iron ore. Several large beds of lateritious, or ferruginous clay, exist along the banks of the river, having the usual peculiarity of laterite, that of hardening by exposure to the air, and it is used by the burmese in constructing their large idols.

The coal lately discovered in this valley, appears to occupy a very extensive tract, having been already found exposed on the surface, in five distinct localities ; from experiments which have been made, it would seem to be well adapted for steamers, it has a low specific gravity, burns with a brilliant white flame, and leaves but a very small proportion of ashes ;- it is believed to be what Jamieson calls, " foliated or cubical coal," and belongs to the independant coal formation of Werner.

In mineralogy several important discoveries have been made, the chief of which are tin and iron ;-copper ores have also been found, in small quantity, and gold is scantily distributed in the beds of the mountain streams, particularly those issuing from the castern range. The siamese occasionally bring it down to Mergui for sale, from a place which is described, as being ten days journey inland from Tenasserim, it is procured by washing. Ores of manganese and iron, exist in considerable abundance.

Hot springs. The following account of the thermal springs, on the Palouk river, between Mergui and Tavoy, is given by Captain MacLeod.

VIRGIE. The sping we situated up the Fall similar the a de verteen side of a high ins many long the restor, or right a Tensors, chinesh which is about 50 m a in more the first wide, but annows higher riber divisit, ad one the passing the n a plane any ballow, and a recording of ray net. Hering netabol as far as I could in a sur un draged on regist, I performed the l somer is ind a margame of the rise fulley, and the replies or fulles getting strengt however, I instraled the stream, the whole hambourd. The bills, which from Palouk tides of the first, are by so means high, but this juge of high trees ; there are two grings show themselves, one immediately d the tiver, (have about 100 feet wild the tion 'hell, and the others about two wilk to the northward, inland ; aroun nomi d' circle stras, el vations : together will havined elay, having the stone, the whole of this mound had ext appearants, and in some places, small circu been formed, by springs now dry. All faving, at doe to the waters edge, or they into his under the miles, through the ordina as very small, and not all deep, and a ferminister being dipped into to 1997 Fee. Their height shows that a short 36 int. The springs a little and deeper, day are situated in a small over must be about in at 40 building up, along Best by 20, the largest being at the month nd for unit for the largest spin. and half fast damp, and two fast in disput alores half dat for, is hold the therasened of 1949, the provid stellar bettern, in of a da her ad these reschiling the colour of the

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MERGUL.

" The springs are situated up the Palouk river, which takes its rise on the western side of a high range of mountains, running along the western, or right bank of the river Tenasserim; at its mouth, which is about 50 miles from Mergui, it is about 700 feet wide, but narrows higher up, towards the village of Palouk, and soon after passing the village, it becomes in places very shallow, and a succession of rapids and falls are met. Having ascended as far as I could in a small canoe, which was dragged over rapids, I performed the latter part of the journey by land, in consequence of the river becoming too shallow, and the rapids or falls getting stronger ; in returning however, I descended the stream, the whole way, on a small bamboo raft. The hills, which from Palouk, range along the sides of the river, are by no means high, but are covered with thick jungle and high trees ; there are two spots where the springs show themselves, one immediately on the right bank of the river, (here about 100 feet wide,) with some in the river itself, and the others about two or three minutes walk to the northward, inland ; around the former a mound of circular stones, of various sizes, was caked together with hardened clay, having the appearance of stone, the whole of this mound had externally a black appearance, and in some places, small circular basons had been formed, by springs now dry. All the springs now flowing, are close to the waters edge, or in the water; they issue from under the rocks, through a sandy bottom, the orifices are very small, and not above two inches deep, and a thermometer being dipped into the hottest, rose to 196º Far. Their height above the sea I estimate at about 200 feet. The springs a little inland, are larger and deeper, they are situated in a small open space, and there must be about 30 or 40 bubbling up, along a line of about 50 feet by 20, the largest being at the northern extremity. I took the water from two of the largest springs, one about three and half feet deep, and two feet in diameter, and the other about half that size, in both the thermometer indicated a heat of 1949, the ground at the bottom, is of a dark shining colour, here and there resembling the colour of brick-dust, the trees

and grass grow luxuriantly around, and in the open space the marks of hogs, deer, &c. are seen-The springs are situated in about 13° 20" north latitude, and 90° 19" east longitude. Though vapours rise from them, no disagreable smell pervaded the atmosphere, nor had the water a very disagreeable taste .--There are other springs, in a north-west direction from these, at a place called Pe, and there is nothing in this neighbourhood that I know of, indicating volcanic agency." In reference to the latter remark however, it may be observed, that Banen island in the bay of Bengal, forms the northern extremity of a great volcanic band, including Sumatra, Sunda, the Malacca and the Phillipine islands, completely surrounding the Malayan peninsula seaward ; many volcanoes along this tract, are even now in active operation, among which is Banen island ; and at the time of a violent earthquake, which occurred about three years since at Ava, the shock was plainly felt at Mergui, and other places on the Tennaserim coast. A rough analysis of the water of these springs, showed them to be strongly impregnated with sulphuretted hydrogen, and to contain also, a small proportion of iron, and carbonate of lime, the latter substance, being deposited in a tufaceous form, upon the surface over which the water runs.

## Bodanical pro-

Collections have been made in botany, both by Dr. Helfer, and Mr. Griffiths, but comparatively little has however yet been done, and an extensive field is still open for research. Couchouck, tannin, and gums, are abundantly produced ; from the dammar tree, a resin, applied to various purposes is obtained ; and from the wood oil tree, a material in great quantity, to the amount sometimes of 5 or 6 gallons. from a single tree, which is used by the burmese for making torches, and instead of paint, to preserve timber; and which from its abundance, is exceedingly cheap. Bamboos, and cotton trees of several kinds, are plentiful, and also the theugan " hopea adorata", an excellent timber tree, used for building. Ratans of several kinds abound ; palms occupy a very conspicuous place, and among them the attap palm " cocosnypa", is perhaps the most useful; from it toddy and sugar are obtained, and its leaves are used for roofing houses, for

XILOIL which perpendices are well adopted, the raid ideas size hery nite, and from being tions while it has not readily deal nus It's anyben stress," the most u a incern a creat abradance in is a sind make of expans, from the parts the fait were, the principal are th ungoten see pour, country, area,

culer, instante mi punglenose ;-- th many independent local tores in the forests, it is believed, might be much improved by ( eventry day produces rice of several kinds, ever postur, chiller, sesanan, black pep tities, when, pice apples, melous, gourds at

The minule net with, at tier, dincerns both deable and single ha in billine, herr, hog, elk, deer of sever pine, amailie and doth. Dr. Helfer papers, "I live had an opportunity of tivity, the enistence of the "tupines malay British bombries, in Istitude 11º 37º, i Mergel, though I have not been so forth sprimes of it, it is well known to the native gent pip" Wares have been reported normhins is its interior, nevertheless the america desicial, as Dr. Helfer observe casis, has no expressioning in the county prote, a in a line street," It has לקרו ה לש מישו ארוע אונה, מענ incases, has havene assured littly, p to be the case, but such occurrences size an said to being with which they dotate her ad ober minde way account for The thinstoop is connect, and much dress aligners, igners, a ling born listed Sania mpila at tata

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MEROUI.

which purpose they are well adapted, forming an impervious defence against heavy rains, and from being furnished with a silicious coating, it does not readily decay, lasting three years. The "cesalpinea sappan," the wood of which is used as a dye, grows in great abundance in the interior, and is a chief article of export, from the port of Mergui. Of Prests. fruit trees, the principal are the doorean, jack,

mangosteen, mango, papaya, cocoanut, areca, guava, mulberry, cashew, lime, orange and pumplemose;—there are besides many indigenous fruit trees in the forests, some of which it is believed, might be much improved by cultivation. The country also, produces rice of several kinds, plantains, yams, sweet-potatocs, chillies, sesamum, black pepper in small quantities, tobacco, pine-apples, melons, gourds and cucumbers.

The animals met with, are the elephant, Animals. tiger, rhinoceros both double and single horned, wild cattle, the buffaloe, bear, hog, elk, deer of several kinds, the wild cat, monkeys and squirrels of several varieties, the rat, porcupine, armadillo and sloth. Dr. Helfer says in one of his papers, " I have had an opportunity of ascertaining positively, the existence of the " tapirus malayanus", within the British boundaries, in latitude 11° 37", in the province of Mergui, though I have not been so fortunate as to obtain a specimen of it, it is well known to the natives, who call it the great pig." Wolves have been reported to be seen, in the mountains in the interior, nevertheless their existence seems somewhat doubtful, as Dr. Helfer observes " that the genus canis, has no representative in the countries trans-Burhampooter, so far as I am aware." It has been said that the tigers on this coast never attack man, one or two melancholy instances, have however occurred lately, proving the contrary to be the case, but such occurrences are undoubtedly very rare, and the facility with which they obtain their prey, such as deer and other animals, may account for this circumstance. The rhinoceros is common, and much dreaded by the natives.

Reptiles. Saurian reptiles are numerous, the chief are alligators, iguanas, a large brown lizard, very similar to the

latter, and a large spotted lizard, frequently found in the roofs of houses, called by the natives "Touk-tai", the small house lizard, also several varieties of the chamelion lizards, or blood-suckers. Ophidian reptiles, both land and water species, abound, they are not generally venomous. Of the chelonian reptiles, turtles are most common, and at a certain season, they resort in great numbers to particular sandbanks on the river, where they deposit their eggs. These banks are rented by Government. Tortoises are also common; and three species of the batrachian family are seen, one of which is the chunam frog of India.

Birds, In ornithology some collections have been made, the feathered tribes of the province, nearly all migrate, for a shorter or longer period ; few are remarkable as songsters, but the plumage of several is very beautiful. Of crows there are two kinds, very similar though not precisely like those of India ; jungle fowl, of the same type as the common domestic fowl, but smaller, are very plentiful in the woods, and afford abundance of amusement to the sportsman ; after the rice harvest, they are in excellent condition, and scarcely inferior in flavour, to the English pheasant. Pea fowl, black, brown and argus pheasants, a species of partridge, and quails, are pretty common; -a large kind of duck, which rests upon trees, teal of two kinds, snipe, golden plover, and a small gray duck are also abundant.

Insects. Insects are met in great variety, and splendour, the luxuriance of the vegetation, together with the heat and moisture of the climate, being conducive to their propogation ; musquitoes, sandflies, eyeflies, and ants of various kinds, are not less troublesome than abundant;-of ants there are it is believed, not less than 100 kinds, of bees, hornets, and wasps, there are also several varieties, one of the latter is particularly troublesome, from the circumstance of its appearing only after sunset, and like the moth, being attracted by light, it continues fluttering about the candle or lamp till burnt, when becoming irritated, it is apt to sting persons near.

The colongence instance of scially read Scall bara surplus and contipedes, are Among the matrice is found the taran transitid large syntaet spiller. Mogni se " Byile", standa the same same, is the principal month of tim, which goes into the sea about two m and about one is the work of the town; it is 100 35°, mi est herrinde 95° 80°. The vessels of 18 list decayles of water, which can as what, and the side closes 17 feet in the spring. the town we have graved, but towards the sea , some fistmer, a said bank of some considerable config for when. The town consists of all house, beatles the barracks for the troops, A Street

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The coleopterous insects, are especially remarkable for their number and beauty.

MERGUI.

Small brown scorpions and centipedes, are very common.

Among the arachnidæ is found the tarantula, and also a beautiful large spotted spider.

Mergui or "Byite", stands on an island of Town. the same name, at the principal mouth of the Tenasserim river, which opens into the sea about two miles to the north, and about one to the south of the town; it is in north latitude 10° 36", and east longitude 98° 30". The harbour admits vessels of 18 feet draught of water, which can anchor close to the wharf, and the tide rises 17 feet in the springs, the banks near the town are hard gravel, but towards the sea, mud flats extend some distance, a sand bank of some considerable length showing itself at low water. The town consists of about 1500 native houses, besides the barracks for the troops, and other public buildings.

The barracks stand on the summit of a small Barracks and hill, around which is the town, and the houses of the officers are situated upon open ground, on its north-western face, all the buildings are raised upon posts.

The native houses, generally consist of two Native houses. rooms and a small verandah, the flooring, is made of split bamboos, and elevated about eight or ten feet from the ground. The sides and partitions of the houses, are either of the leaves of the neepa palm, or of a large description of reed, which being soaked in water to prevent insects attacking it, it is then opened out, and wove into mats.

Officers houses. The officers houses are either constructed of the materials above mentioned, or with sides and floorings of plank ; the European and native barracks and hospitals, are planked. The small hill upon which they stand, is about 100 feet high, of an oblong form, having on its western or sea face a pretty steep ascent, but on the other sides a gradual slope; and from its summit is a fine view of the sea, and the islands forming the opposite shore, about a mile distant seaward.

Cesanty in the Winnity of the town. The ground in the vicinity of the town is undulating, covered with a low jungle, with here and there bare spots of pasturage, and on the south and eastern sides, are salt and fresh water swamps, through the centre of which runs a large nullah, which enters the river about half a mile above the town ; the swamps are covered by a low brush wood of mangrove trees, and other plants, which thrive only within reach of salt water.

The health of persons residing in this vicinity, does not appear to be injured thereby. About half a mile north-east of the town, and 5 or 600 yards from the river, is a fine open rising ground, in every respect well adapted as a site for barracks, which it is to be regretted was not originally selected for that purpose.

The prevailing soil near the town, is a reddish marly loam, of from 3 to 20 feet in thickness, lying upon a substratum of gravel, composed of quartz and felspar pebbles, and on the north side, within a few minutes walk of the town, are two freshwater tanks, or lakes, which in the driest seasons, are four feet deep.

Introductors of The town has nearly 8,000 inhabitants, consisting of people of various nations; such as english, americans, french, portuguese, chinese, burmese, siamese, malays, bengalees, madrasites and cingalese; —and there are two american baptist missionaries, and one french priest, belonging to the roman catholic mission of siam, established here.

Troops. The troops consist of one company of native infantry, and 30 Europeans, commanded by a captain and subaltern respectively.

Trade. Mergui is tolerably supplied with articles of grocery, and other necessaries, from Calcutta, Moulmein and Penang, the principal trade being carried on by chinese, and the best artizans, also belong to that nation. There is a post office establishment here, and opportunities for sending letters to Moulmein and other places, by a government vessel, generally occur about once in six weeks. REPORT Excellent break, better med baken sinder down the Malous prizes, the m baken sinder down the Malous prizes, the m baken sinder down the Malous prizes, the do excellent and probable is been down and foreis, are and free and and, is in great variety and the presents a periodice is excellent, error present, we do to be preceded, in the series present, we do to be preceded, in the series

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Market. Excellent bread, butter and milk, are to be had, at a little above the Madras prices, the market is also well supplied with vegetables ; beef, though of an inferior description, and good pork can be had occasionally,but mutton is not procurable ; geese, ducks and fowls, are plentiful—fish, both fresh and salted, is in great variety and abundance, and the pomfret in particular is excellent, crabs, oysters, and prawns, are also to be procured, in the season.

Exports. The chief exports are, sappan-wood, neepa palm leaves, or attaps for roofing, rattans, yams, gnappee, dried fish, ivory, tortoise shell, sea slugs, shark's fins, and edible nests.

Ivory is chiefly brought to Mergui, from the interior, by Siamese hunters

Sectors, or matreams. The Seclongs, a miserable race of savage fishermen who inhabit the neighbouring islands, have no fixed habitations, and live chiefly in their boats in which they rove from island to island in quest of food, they gain a precarious livelihood by collecting tortoiseshell and pearls, some of the latter being of good size and quality ; they also gather sea slugs, honey and some other trifling articles. This singular race of people are almost amphibious.

Edible nests. Edible nests, are exported principally to Penang and Singapore, for the chinese market;—they are the nest of a small swallow, and composed of a glutinous substance, which when cooked, has very much the taste of vermicelli. They are found in caverns in several of the islands on the coast, adhering to the rock. Government derives a revenue from the sale of them, of about 4,000 rupces per annum; nests of good quality selling for very high prices.

Constitutions remarks. Mergui offers great advantages to settlers, the soil being exceedingly fertile, and grants of land may be obtained on liberal terms; plantations of cocoanut, and areca trees, would probably yield the most certain profit, the climate being favorable to their growth; coffee, cloves, and nutmegs, would also, it is believed, succeed well.

# REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease. The usual tables of disease as for the nine preceding divisions of the army, are appended. Table No. 1 for Europeans, includes the sick of H. M.'s regiment, and the Hon. Company's Artillery at Moulmein, and also of the small detachments at Tavoy and Mergui ; it shews the amount of sickness and mortality, from the most important diseases each half year, during the period of ten years, from 1829 to 1838 inclusive, along with the annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength; the average of these, as shewn in the abstract table No. 2., being 143-488, 2.606, and 3.739 respectively.

The admissions, but especially the mortality, were greatly increased in 1834, owing to the sickly state in which H. M.'s 62d regiment, arrived from Masulipatam that year; and amongst whom dysentery and fever, were remarkably frequent and severe.

In the abstract table No. 2, it will be observed, that the total admissions have been 13,046, and 340 deaths have occurred, in an aggregate strength of 9092 men. The most prevalent diseases have been fevers, dysentery, diarrhaa, hepatitis, thoracic diseases, rheumatism and syphilis ; and the most fatal have been dysentery, fever, hepatitis and thoracie diseases ; the per centage of admissions and deaths from each of which is noted in the table.

It is worthy of remark, that except in 1838, the column under the head cholera, is nearly blank.

The corresponding tables No. 3 and 4, for the native troops, comprise the sick of the military at Moulmein, and of the detachments at Tavoy and Mergui. The total number treated has been 9,921, and 204 men have died, from an aggregate strength of 14,716. The average per centage of sick to strength, has been 67-416, of deaths to sick treated 2 056, and of deaths

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reports; they establish the admissions and specific disease, in each of the variants classes d'ân you, înu 1814 to 1838 înclusive ; î end das, is the sheers with the mortality, tage of advisions to strength, and of deaths

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## 205 REMARKS ON THE GENERAL TABLES.

to strength 1-386. The most numerous admissions have been from fevers, rheumatism, bowel complaints and syphilis ; and the mortality has resulted principally from bowel complaints, fever, rheumatism, and thoracic diseases. During these ten years, only seven cases of cholera are recorded, and one death.

The tables No. 5 and 6, for European and native sick respectively, are drawn up similarly to those for the preceding reports; they exhibit the admissions and deaths from the specific diseases, in each of the various classes, during a period of five years, from 1834 to 1838 inclusive ; the total sick from each class, is also shewn with the mortality, and the per centage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, table No. 5, the most numerous admissions have been from the classes of fevers, abdominal complaints, diseases of the lungs, venereal and rheumatic affections, and diseases of the brain ; and the most fatal have been fevers, bowel complaints, especially dysentery, and diseases of the lungs. During these five years the per centage of sick to strength, has been 149.326, of deaths to sick treated 2.966, and of deaths to strength 4.430

In the table No. 6, for the native troops, the greatest number of admissions it will be seen, have been from the classes of fevers, rheumatism, bowel complaints, cutaneous and venereal affections, and diseases of the lungs ; and the greatest mortality has been occasioned by fevers, bowels complaints, rheumatism and diseases of the lungs.

The tabular statements No. 7, 8, 9 and 10, exhibit the proportion and per centage of the admissions and deaths, from the most important diseases, and the principal classes of disease, both amongst the European and native troops, and give at one view, much interesting information on several points.

ACCOUNT RELEVANCE

ON THE GENERAL TABLES. he unul ables of dance as for the ins along divisions of the entry, we straight

anapeza, indade the six of H M Hon. Company's Artillery a Mardanianal etarbances at Troy and Merge is then mess and metality, from the new loops alf your during the period of hes years from nive, along with the annual per outage of deaths to sick treated, and of deaths to age of these, as shewn in the obtain 145 488, 2406, and 2739 respectively.

but especially the motality, were greatly owing to the sickly state in which H. M.) tived from Muniputan that year; and sentery and fever, were remainly 25-

able No. 2, it will be observed, that the ve been 13,046, and 540 deaths have so nate strength of 9002 men. The most perbeen ferers, dyantiey, darries, byatis, constitute and applicate and the most first 1. feber, bepetitis and elevate disease, buissians and deaths from each of which week, that except in 1858, the calma

e milier No. 3 and 4 for the anise room.

Take million at Montheria and other da

and Nergal The and party road All and here had, has a sproper The areas of contract of the second south to the state of the sold state

ing is much high

206

# H. M.'s Regiment, and the H. C.'s Artillery at Moulmein, contrasted.

ins and Dealis, from 19 the period of

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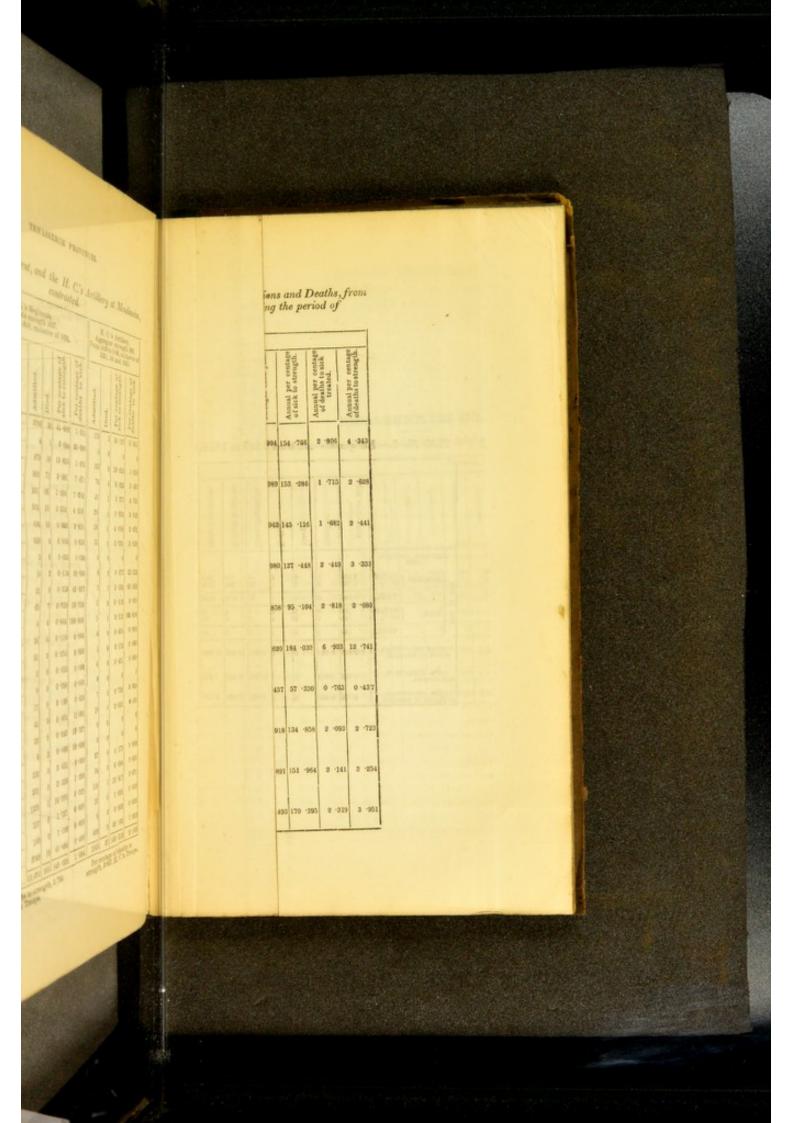
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H. M.'s Aggregate From 1849 to 18	streng	th 90	07.		From	519 L	's Artille te strengt o 1940, end 12 and 18	th 895. clusive of
Table No. 11 and 12.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sitk.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.
Føvers	3706	50	41 -009	1 -511	170	5	19-157	2 -941
Chotera		1	0 -014	25 -000	0	0	0	0
Diarrhora	979	10	10 -833	1 -011	165	1	18 -623	1 .818
Dysenteria acuta	900	71	9 -981	7-871	24	4	8 -352	5 -405
chronica	861	26	3 -994	7 .202	- 21	1	2 377	4 -761
Repatitis acuta	\$33	15	3 -302	4 -930	25	1	2 -931	3 .816
" chronica	405	12	4 -492	2 -955	35	1	4 -258	2 -631
Catarrhos	628	4	6 -949	0 -616	33	1	3 724	3 -600
Hemoptysis	1 3	0	0 -003	D-000	0	Ó	0	0
Asthma	10	2	0-110	20.000	6	2	0 -677	83 . 533
Phthisis pulmonalis	21	9	0 -232	42 -857	2	2	0 -335	66-666
Pneumonia	63	7	0 .719	10 -700	1	0	0 -112	0 -000
Apoplexia	4	4	0 -014	100-010	1	1	0 -112	100-000
Epitepsia	10	0	0-116	0.000	4	0	0 -451	0.000
Paralysis	23	2	0 -254	8 -006	1	0	0 -112	0.000
Amentia	5	0	0 -005	0.000	4	0	0 -651	0.000
Mania	9	0	0 -099	0-000	0	0	0	0
Ebrietas	17	0	0 -185	0.000	7	0	0-790	0-000
Delirium Tremens	42	5	0.454	J1-501	38	0	2 -031	0.000
Anasarca	22	3	0 -243	28 -727	0	0	0	0
Ascites	e	3	0 -055	50 -000	0	0	0	0
Rheumatismus acutus	330	0	8 -651	0.000	\$7	0	4 -175	0-000
" ehronicus	231	3	2 .556	1 -295	54	0	6 -094	0.000
Syphilis &c	1329	3	14 -706	0 -225	149	1	16-517	0.671
Morbi eculorum	157	0	1 737	0 -000	36	0	1 .505	0.000
eutis	100	0	1 -106	0 -000	8	0	0 -502	0.000
Other diseases	3749	15	41 -485	0 -400	409	3	45 162	1-222
Total	13,472	253	148 -522	1 .884	1245	27	140 -519	9-168
Per centage of deaths H. H.'s T	to streat	igth,	2.799.	,	Per ce trength,	atar	e of death	Troops.



# AST.

umber of admissions and Deaths &c. from 1829 to 1838.

any Administration and Deaths, and or Emission, during

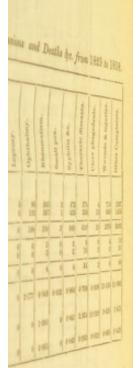
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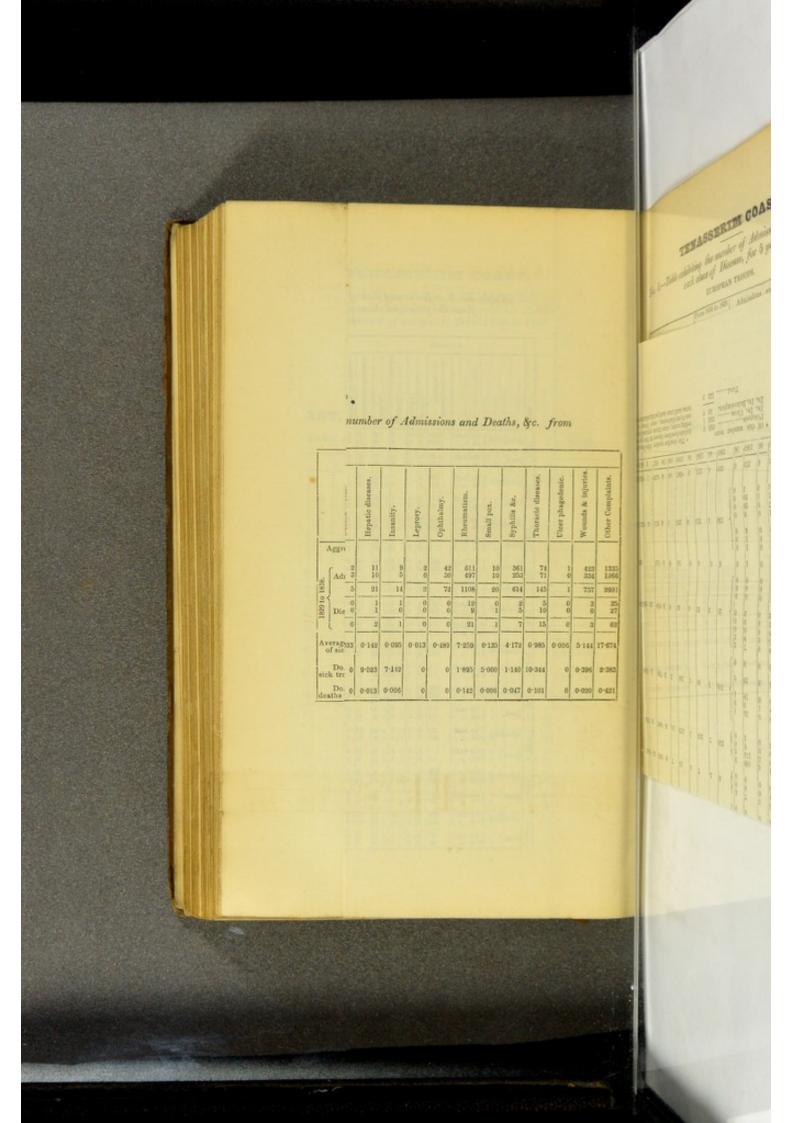
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	1		-	-		_	_					
	Guines Werm.	Hepatic diseases.	Insanity.	Leptosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilia &c.	Thoracie diseases.	Ulter phagedenic.	Wounds & injuries.	Other Complaints.
90100		_	47	0	96 102	943 307	21	473 433	974 336	4 13	718 660	1367 1459
2	0	541	11	0	198	550	3	905	610	19	1378	2806
49	0	11 18	0	0	0	33	0	22	8 16	0	4 9	19 21
3	0	29	0	0	0	6	0	4	21	2	6	40
18	•	5-160	0.150	0	2.177	6-049	0-032	9-964	6.709	0-208	15-156	31-082
17	0	5-360	0	0	0	1.090	0	0-441	3,931	10-526	0-435	1-415
12	0	0-318	0	0	0	0.055	0	0-043	0-263	0-022	0-065	0-439



arly Admissions and Deaths, nic or Endemic, during

Thoracio diseases.	Ulter phagedeald,	Wounds & Injuries.	Other complaints.		Strength each year.	Annual per centage	of sick to strength.	Annual per centage	treated.	Annual per centage	of geature to actrength.
0 10 0	000	86 26	190 200 8	1	1923	103	-610	1	-756	1	820
0 05 01	0 00 00	0 111 00	3 185 170 4 7	) }	1477	68	-151	2	-217	1	963
30 00	00 00	0	194 172 2 4	}	1450	79	-306	1	-034	0	-622
100 00		-58	200 211 3 3	}	1540	65	-805	1	-309	0	-861
43 03	00 00		137 122 4 2	}	1394	67	-3514	1	-583	1	075
00 03	0	34	73 88 0 1	3	1299	49	-884	1	-851	0	-933
1110 00	0	0	4	}	1175	41	-501	1	-844	0	76
81	0	54	58	}	1284	54	-183	9	-295	1	-241
10 11	0	120	31	R	1079	42	-204	4	-982	2	-101
-		30	121	}	1817	61	-143	3	-050	1	-87



	TENASSERIM COAST.	
and the second s	No. 5.—Tuble exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years. EUROPEAN TROOPS.	
	[Prom 1851 to 1838.] Admissions and 2221.41 21 1	
e of Administrations and Deaths, by: from	Total 313 2	
	Accurate per contage of deaths Accurate per contage of deaths to survey to	
atterne a	Scale         Compact quession         111         40         1031         24         11411         40         1082         24         11411         40         2032         3         313         4         513         4         513         4         513         4         513         4         513         4         513         4         513         4         513         4         513         513         4         513         51         513         513         51         503         513         513         513         513         513         51         503         51         1.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         50         61         11.60         60         61         11.60         60         61         11.60         60         61         11.60         60         61         11.60         60         61         11.60         60         61	
Entransidity Lagrantery Lagrantery (cglastrandi additional additional entransis (cglastransis (cglastransis) (c	10.0 [11.1] (11.	
ana Mar Mar Mar Mar Mar Mar Mar Mar Mar	Function         Function         5         0         1         0	
	Reserve         Discutioning         1         0         0         31         53         6         12         60           Reserve         Statementaria         0         0         0         0         0         12         12         10         12         10         12         10         12         12         10         12         12         10         12         12         12         12         10         12	
(10) 142 146 128 128 128 128 148 148 148 148	f 0 0 0 0	
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# TENASSERIM COAST.

No. 6.—Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.

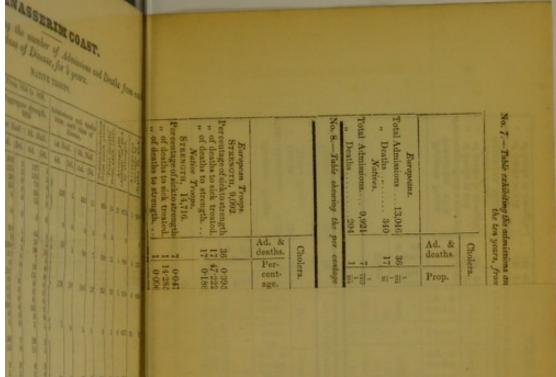
				NAT	rive	TR	001	8.								
		and the second second	-	4 to 18		Ada	minei	ons	and d	and he	1 B d	le ž	1	8	-	-
		100	6	stren 955	gth.	fr	tin .	each	Cians	of	122	deaths ch class	12	of sk	to per	s sfel
CLASSES.	DISEASES.	lat E	-	2d. 1	falf.	11	a Ili	alf,	24. 1	alf.	thadmi	32	Average	to stre	wrag	centage eather to
		Ad.	Dd.	Ad,	Dd.	A	d.	DdL	Ad.	DdL	Total	from .	2	E ST	2	2 and
Fevers	Febrisephemera intermit.quot. bertiana remittens continua.	1:25	27000	197 194 72 94	1	18	533	0	432	11	965		13	-874	1	-654
	Cholera	0	0	15		10			-							
	Dysenteriancuta	60	1	44		10	0	0	0	0	0	0		0		0
	Diarrhau.	9 100 31	0 (14)	15 96	3 10	-	60	5	59	7	118	12	1	-540	9	-275
Diseases of the Abdo- minal via- cera	Hormorrheis.	6 12 0 0	01000	7 16 13 0 0	0000000	-	178	10	185	12	363	22	5	-219	6	-000
	Dyspepsia. Hepatitis acuta ,, chronica	28 0 1 30	400 1	53 2 1	2 0 1	;	1	0	3	1	4	1	0	-007	25	0
Diseases of the Lungs and Heart	Asthma Phthisis pulmo- malis Homoptysis, Pleuritis Pocumenia Carditis, Palpitatio Dysporea	16 2 1 0 0 0 1 0	0 9100001	25 11 4 1 0 1 0 0 3	91 NOOOOOD		55	4	46	5	102	10	1	-452	9	-901
Diseases of the Brain.	Apoplexia. Epilepsia Paralysis. Cephalalgia Phrenitis. Amentia Amentia Mania. Hydrophobia Delitriam Tre- mens. Ebrictas.	012200110 30	000000000000000000000000000000000000000	0011-00240 00	000000000000000000000000000000000000000		22	3	12	0	34		0	-453		823
biscases of f	Morbi oculorum	12	0	4	0		12	0	4	0	16	0	0 .	230		
Do. Shin.	., cutis	187	0	85	0		187		85	0						1
(	Variola Varicella	37	0	9	1			1	0	-	-272	1	4.	910		0
Ters	Rubeola	0	0	130	0		11	0	13	1	24	1	0 -	345	4 -	165

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TRASSERING COAST.

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12-879 0-631 0-068 2-780 1-546 0-042 m 1834 to 1838 inclusive, with the proportion relativy. 386 Venereal complaints. Prop. -12-12 -12-15 complaints -juso Peratrength, 194 564 194 100 Ad. & Ad. & adresb deaths. 6-887 2-505 0-172 8-769 0-781 0-068 Riteumatic affections. Rheumatic 2 Prop. -12-10 -tuso Per--(--)denths Per-Per-Ad. & Ad. & Ad 479 384 479 384 Ad. & deaths. 13 0-186 7 53-846 7 0-100 23 0-525 7 30-434 7 0-159 5 Dropaics. Prop. -12-15 -15-12 and Dropsics. - 18 2 14 Ad. & deaths. k treated, 9488 3-823 3-823 2-380 ain. 5 4 Prop. -读-19 -值-读

ſ	European Troom. STRENOTI, 4579. Percentage of sickto strength of deaths to sick of deaths to strength. Strensorn, 6656. Percentage of sickto strength of deaths to sick n of deaths to sick		Baropean Troops. Deaths	No. 9.— Table she	NOTINEIN. Sa Ha Laboritan da sian o MOTINEIN I A region
	opra. 1414 32-290 34 0.776 594 13-564 10.09 24-183 268 6-120 283 6-462 168 5 atrongth. 29 2-000 16 47,058 84 14-1141 111 1-038 9 3-33.8 12 4-240 14 5 trength. 29 0-662 16 0.365 84 14-1141 111 1-0351 9 0-205 12 0-264 4 5 atrength. 905 13-874 0 0 128 1-940 363 5-219 4 0-047 101 1-452 34 6 isk 16 1-658 0 0 12 9-375 22 6-060 1 25-000 10 9-901 3 1 trength. 16 0-230 0 0 0 12 0-172 22 0-316 1 0-014 10 0-143 3 6	Ad. & deaths. By Per- cent- age.	Fevera.         Cholern.         Dysentery.           Ad. & deaths.         Prop.         Ad. & deaths.           1414         Prop.         Ad. & deaths.           29         +         Ad. & deaths.           97.6         *         0           16         *         594           16         *         594           12         14         *           97.6         0         0           12         *         128           *         *         128	<b>TENASSERIM PROVINCES.</b> No. 9.— Table shearing the amount of Admissions and Deaths from the principal classes of disease during fice years, fro of Admissions from each to the total of sick treated, and of deaths to the total m	And a second sec

MOULMEIN.

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# MOULMEIN.

No. 13. - Table exhibiting the sickness and mortality amongst the OFFICER'S of II. M's regiments at Moulmein, from 1829 to 1840, erclusive of 1833 and 1834.

Aggregs CLASES.	to strength. 225. DISEASES.	Adminsions.	Deaths.	Totaladmissions	from each class.	Total deaths from each class	Der großannaf	sick to strongth	Fer centage of	deaths to sick
Fereza	Pehris intermit. quotid	11 12 60	0 13	3	92		28	-302	4	-347
	Cholers	0	0		0	0		0		9
Dispasses of the abdo- minal vis- cera	Diarrhea Dysenteria Obstipatio Dyspepsia Hepatitis	23 17 15 34 26		1	\$1 26	1	28 8	-000	1	-008 -600
Diseases of the lungs.		31	000	}	34	·	30	-461	0	-000
Diseases of the brain.	Paratysis	1	0	3	2	1	0	-615	50	-010
	Anasarca	1	1		1	1	0	-307	100	-000
	Rheumatismus.	21	0		21	0	7	-385	0	-010
Venereal af- fections	Syphilis prim., Gonorrhosa Heroia humora- lis Strictura uro- thrm	3 15 6 2	00 0 0	]}	31	U	9	-538	0	·000
	Morbi oculorum	8	0		8	0	3	-461	0	.000
	cutis	2	0		2	0	0	-651	0	-000
	Other diseases	140	0		140	0	43	-076	0	-(40
	Total	431			150	- 9	1:15	702	1	-195

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TENASSERIM PROVINCUS.

# MOULMEIN.

No. 14.— Table exhibiting the sickness and mortality amongst the WOMEN of H. M.'s regiments at Moulmein, from 1829 to 1840, exclusive of 1833 and 1834.

Aggregate strength 788. CLASSES. DISEASES.	Admissions.	Deaths.	Total admissions from each class	Total deaths. from each class.	Per centage of sick to strength.	Fer centrare of deaths to sick.
Fever Febris intermit quotid "remittens "com. cont	17 20 165	0 0 1	} 205	1	26 -015	0 -487
Cholera	1	0	1	0	0 -135	0-000
Diseases of the abdo- minal vis- cera	63 46 14 18 59 1 2 1 20	00000000000	20	10	25 -889	4 -901
Diseases of Catarrhus the Lungs Pneumonia	24	000	} 29	2	3 -632	0 -000 6 .895
Diseases of Epilepsia the Brain. Hysteria Tetanus	11111	1011	1 .	а	0-507	75 -000
Erysipelas	1	0	1	0	0 -125	0-000
Rheumatismus,	8	0	8	0	1.015	0.010
Peculiar diseases Prolapsus uteri. Parturitio		00100	} 53	1	8-218	1 -533
Morbi orulorum	20	0	10	0	1 -262	0 000
". eutis	2	0	2	0	0 -253	0.000
Other diseases	94	1	94	1	11 -528	1 -053
Total	643	18	643	18	61 -508	12 -790

Nors .- Per costage of deaths to strength, 2-85.



NICINET.

MOULMEIN.

JEA THEFTIX LEVILLE

MOULMEIN.

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AC COM DISTANT

> in the CONTRACTOR.

elabiting the sickness and norshify emory of H. M.'s regiments of Malmon, from exclusive of 1850 and 1844.

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1 10 1 140 130

2 4 6 5 100 200 e reining 151100

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# MOULMEIN.

No. 15. – Table exhibiting the sickness and mortality amongst the CHILDREN of H. M.'s regiments at Moulmein, from 1829 to 1840, exclusive of 1833 and 1834.

Aggregale strength 938. CLASSES. DISEASES.	Admissions.	Deaths.	Totaladmissions from each class.	Total deaths from each class.	Per centage of side to strength.	Per centage of deaths to sick.
Ferers Febris internit quatid	8 40 99	0 10 0	} 117	10	16 -189	6 -530
Cholera	0	0	0	0	0	0
Diseases of the abdo- minal vise cera	128 35 4 5 4 1	9101010	} 178	20 0	19 -603	11 -235 0 -000
Diseases of Cynanche the lungs. Pneumonia	3 45 4	002	} 55	2	6 -057	3 -635
Convulsio	18	17	18	17	1 -182	24 -444
Varicella	1	0	1	0	0 -110	0 -000
Dentitio Vermes	5	1	} 35	3	3 -161	8 -323
Morbi oculorum	19	0	19	0	2 -012	0 -000
Cutis	12	0	12	0	1 -321	0 -0.0
Other diseases	51	2	51	2	5 -616	3 -921
Total	518	54	518	54	57 -048	10 .424

Norn .-- Fer centage of deaths to strength, 5 947.

EASTERN SETTLEMENTS.

## PENANG

General descrip-Prince of Wales island, or Pulo-Penang, as it is called by the Malays, is situated between 5° 15", and 5° 29", of north latitude, and in 100° 19" cast longitude. This island was transferred to the Honorable East India company in 1786, by the king of Queddah, through Mr. Light, master of a country vessel; at which time it is said to have been entirely covered with jungle, and destitute of inhabitants, with the exception of a few Malays, who gained a livelihood by fishing. After the cession of Penang to the British, persons from the neighbouring countries, attracted by the encouragement held out to settlers, and the inducement of living under a mild and just government, by which their property would be secured, flocked to the place in considerable numbers.

This beautiful island, which is clothed with perpetual verdure, is separated from the Malayan peninsula by a strait, at its narrowest part, about 2 miles in breadth; it is in shape pentagonal, the two longest sides are of pretty equal length, running nearly north and south,—its greatest length is 16 miles, from north to south, and its greatest breadth 12 miles, containing 165 square miles, of which a considerable portion is under cultivation, and the rest covered with thick and lofty jungle.

The island is divided into two nearly equal portions, by a high chain of hills, running from north to south, with low flat land on either side, the chain being most elevated to the northward, and decreasing in height toward the southward. The plain, on the eastern side of the hills, is the most thickly inhabited part, and at the most eastern part of it stands, Fort Cornwallis, some of the outworks of which have at different times, been undermined by the sea.



A TO SLOT IN SCOTLAS

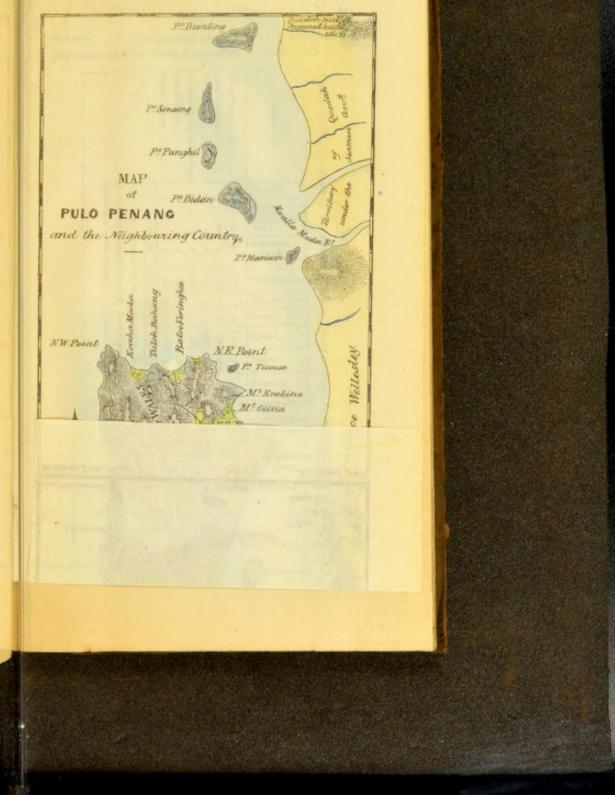
# FENANG

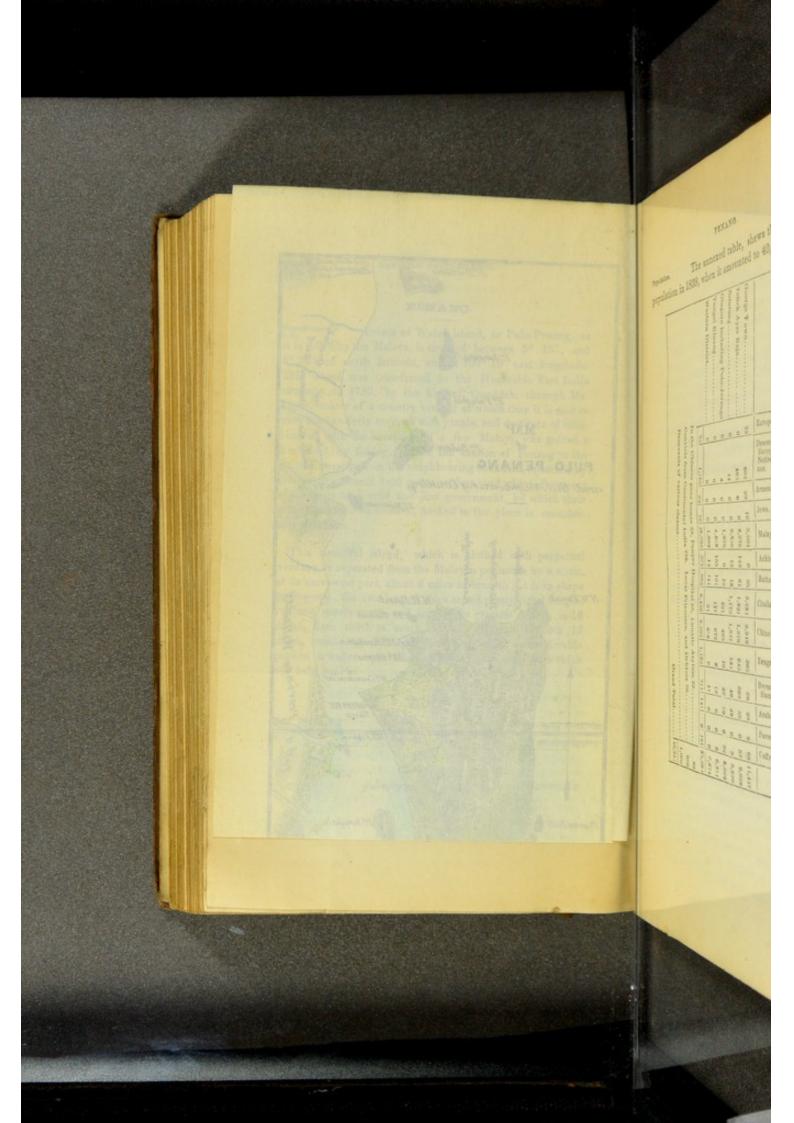
ance of Wales island, or Fels Percept or Mary, is strand leaves to 10°, ed hinds, and is 100° 10° one bejonds transferred to the Househile Las Isla by the king of Queldal, through Me a constry read ; at which time is a set to covered with jungle, and desitute of islaexception of a few Maleys, who point a ing. After the othins of Pring to the on the neighbouring countries, exceed by held out to settlers, and the informet old and just government, by which their secured, focked to the place in consider-

island, which is clothed with perpetual ted from the Malayan peninsula by a strat, et, about 2 miles in breadth; it is in shape to longest sides are of gretty equal length, th and acath,—in greatest length is 18 to south, and its greatest branch 12 165 square miles, of which a consideraile dification, and the rest covered with thick

ided into two nearly optal perions, by a running from sorth to study, with lar ile, the chain being most element in the creating in bright wourd the authorit stern side of the hills, is the rase thicky at the most eastern part of it rands, Feel the currently of which law a lifetim

and by the sea





PENANO.

211

Pepulation The annexed table, shews the extent of the population in 1839, when it amounted to 40,242 souls.

	0	1		Western District	Tungel Klaung	Singure including Pulo-Jerango	Selutong	Tellek Ayer Baja	George Town	DISTRICTS
100	INNE	-	늰		0	0		•	2	Europeans.
flenevanta of various classes	Convicts from Continental India 795.	in the Chinese poor house 39, Pauper Hospital 25, Lunatic Asylum 22	1,160	0	0	4	11	465	8	Descendants of Europeans and Native christi- ans.
tions	optio	oor b	3						12	Armenians,
clas	rata	sense	¥		0			0	16	Jews.
aqu	India	30, Pa	18,000	1,803	4,812	1,975	2,856	4,275	2,501	Malays & Bugis
-	786	uper	2	=	In		=	ŭ		Achinese.
		Hon	SM	10	101	tz	=	2	8	Battas.
	Local Prisoners, and Debtors 70	pital 25	6,436	12	1/1	450	1,175	1,301	3,031	Chulias,
	internet, i	Lunst	8,507	618	973	495	1,587	1,379	3,919	Chinese.
	und De	ie Asy	1,161		N	5	181	643	-	Bengalies.
Orand Total	biors 7	hum 22.	111	10	12	13	-	2002	2	Bormete and Siamese.
Tes		-	141			33	0	E	12	Arabs.
1	-								-	Parsees.
	-		161	1	-	12		-	8	Coffrees.
10,00			35,30	2,674	6,21	3,009	0.68%	9,009	11,417	Tyte

## EASTERN SETTLEMENTS.

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The Artillery to the number of 50 or 60 are quartered in the fort, and accommodated in good barracks, built upon the ramparts; and in it also, is an arsenal, with a powder magazine.

To the south-west along the shore extends George town, and about 6 miles further south, is a small collection of native huts, to which the name of James' town has been given. To the westward of the fort, extending for about a mile and a half along the beach, there is a succession of good houses, inhabited by the military and gentry resident on the island. At about 150 yards from the fort, is the hospital for the European artillery, calculated to contain 14 beds, the sick occupy the upper story, the lower part of the building being used as a gun shed ; a good ward on the ground floor, is also allotted for the sick of the golundauze.

Immediately adjoining, are the barracks of the golundauze, built of brick and chunam, with tiled roofs, and furnished with wooden sleeping trestles.

Native infantry About 21 miles to the N. W., are the sepoy lines, capable of accommodating a complete native regiment, situated in a large open space, which in fair weather, is dry and healthy, but becomes somewhat swampy during the rains. The huts are neatly arranged in parallel rows, with a sufficient distance between them ; they are built of the atap leaf, and have hitherto been erected at the expense of government.

Native infantry To the rear of the lines is the regimental hospital, a good two storied building; the upper story, which consists of a long centre room, with two smaller ones on each side, is occupied by the sick ; the length of the building is 55 feet, breadth 38, and the wards can contain about 80 beds. On the ground flour are the dispensary, and bathing rooms. The situation is good, being a slightly raised and dry spot, and the space around is well cleared and open.

Government hill. Proceeding about two miles to the north-west, the road commences, by which the great hill, or "government hill" as it is called, is ascended, it is about three miles in nephania ride bet steep ; and is ralidy y ern to the bill for the benefit of change to instance braniel spin a third by cool nd shill; here beseden nuch less tim the manual of the ball, secondly \$500 feet the strate and the bightest inhubited aport of for hughes, too of which are the pro and, the legar being the residence of the neniu, ce les consistel visite to this station mildle whe ranked by invalide. But been built on some of the lesser bills, but al have been abandrated, in consequence of t ferer, which accounts in families formerly a eiten un silocuiteally occupied and get

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length, and is wide but steep ; and invalids, who frequently resort to the hill for the benefit of change to a cool and bracing climate, can be carried up in a chair by coolies, in about an hour and a half ; but on horseback much less time is required. On the summit of the hill, nearly 2500 feet above the level of the sea, and the highest inhabited spot on the island, are four bungalows, two of which are the property of government, the larger being the residence of the governor of the straits, on his occasional visits to this station ; and the other is available to be rented by invalids. Bungalows have also been built on some of the lesser hills, but of these two or three have been abandoned, in consequence of the mortality from fever, which occurred in families formerly residing there ; the others are still occasionally occupied, and generally considered healthy.

Cultivation of The hills appear to be of primitive formation, consisting almost entirely of a fine grey granite, the debris of which, combined with decomposed vegetable matter, composes the soil of the low lands, which, with the exception of some swampy patches of mangrove, are mostly under cultivation ; the parts inundated during the rains, are laid out as rice grounds, the rest chiefly for rearing spices, for which both climate and soil have been found to be well adapted.

Good water is procurable in all parts of the island, a few feet from the surface, except in very dry seasons; and also, from excellent springs at the foot of the hills.

The botany of the island has not yet been Botanleal profully investigated, though it would well repay the labour and risk attending its examination, particularly in ferns and parasitical plants, which are extremely abundant; of the great variety of trees met with, many are much prized by the natives, on account of the various uses to which they are applied. Fruit can be obtained in great abundance at all seasons of the year, among the best kinds of which may be enumerated, the mangoosten, ramboosten, oranges, jack fruit, the tampoone, ramboi, doorian, and many others. - Pine apples grow wild,



## EASTERN SETTLEMENTS.

covering large patches of ground, and are considered to be of peculiarly fine flavour.

Insects. The entomology seems exceedingly rich, and this department of natural history, would probably yield a richer harvest than any other in the island. Large collections have of late been made by several individuals, attracted by the great beauty and variety, more especially of the lepidopterous insects, to be met with ; but they have not it is believed, been yet scientifically arranged, or described.

Animals. The indiginous animals are but few in number ; - the malayan clk, a diminutive species of deer, with some varieties of the quadrumana, a few species of the squirrel tribe, and some few other unimportant animals, constitute the mammalia to be met with.

Climate and its The peculiar position of Penang, its insular effects upon health. situation and local features, combine to render the climate essentially different from that of all other Indian stations. It is comparatively but little influenced by the causes which produce the regularity of the seasons, throughout our other eastern possessions.

The moonsoons, though felt to a certain extent, are not ushered in by the great changes elsewhere observed, which seems to be owing in some measure, to the influence which the island of Sumatra, and the peninsula of Malacca exercise, in changing the direction of the currents of air. Whatever may be the cause, the distinction between the dry and rainy seasons, is but imperfectly marked, for except in unusually dry years, a month does not pass, without more or less rain, and the excessively humid atmosphere, conjoined with great heat, renders the climate relaxing and enervating.

The ground is kept constantly covered with water by the heavy rains, and it is perhaps owing to this circumstance, that malignant fevers seldom occur, though some parts of the island, more especially in the vicinity of the hills, are pro-

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ductive of fevers, whilst the cultivated and inhabited parts, are exempt from them, but no cases of fever, of a similarly fatal character to that described by Dr. Ward, have been seen for some years past.

The quantity of rain varies much in different years, and usually ranges from 60, to 90 inches, January and February being the driest months. From the great moisture, and the relaxing effects of the climate, some peculiarities in the diseases of the island are observed ; the acute forms of disease of drier localities, not being here seen, and ulcers and other affections, are characterized by a want of action and vigour in the constitution; and even in acute cases, topical depletion is in general sufficient to arrest their course.

The atmosphere is felt to be particularly oppressive, both before and after rain, when the damp heat is to many almost insupportable; and this condition of the air, often alternates with strong squalls, by which the perspiration is checked, causing many of the diseases met with.

The climate is therefore a trying one to the European constitution, from there being no cold season to invigorate the system after the oppresive heat ; and in almost all cases, after attacks of severe disease, either a change of climate, or residence on the hill, becomes necessary for recovery.

As the air is always mild, even in the N. E. monsoon, the climate is in many cases, well suited for persons labouring under a diseased or irritable state of the lungs or bronchiæ ; though instances are seen, in which coughs are attended with profuse expectoration, arising from a relaxed condition of the mucous membrane. Excessive discharges particularly in European females, from the genito-urinary passages, are likewise met with, arising from the same cause.

The evenings and nights are cool throughout the year, and when the sky is clear, a copious deposition of dew takes place, rendering the air chilly. Fogs so prevalent on the C.2

opposite coast of Province Wellesley, do not occur, except at the base of the hills.

The direction of the winds, as above mentioned, is very irregular, but the westerly is by far the most common. The chain of hills prevents its direct influence on the lower country, and deflects it so much, that at the north end of the island. it becomes a northerly, and at the south, a southerly wind ; and were it not that the high land intercepts the sea breeze, the climate would be much more agreeable than it is found to be, a refreshing sea breeze often prevailing on the opposite shore of Province Wellesley, whilst on the island, it is close and oppressive.

The southerly wind is considered to be unhealthy, and is usually excluded from the houses, by the older inhabitants, as much as practicable, but it is fortunately of rare occurrence ; during the continuance of this wind the skin feels dry and harsh, headaches, with feverishness and general malaise occur ; and domestic animals have been known to die in great numbers during its prevalence.

The most refreshing and pleasant wind is the northerly, which blows for four or five months, it veers from north-west to north-east, during the monsoon ; on first setting in, it often occasions catarrhs, slight fevers, and rheumatism, but this is certainly the most healthy, and agreeable season of the year ; the effect of the north-east monsoon, is usually felt in September, and the south-west as early as March or April.

Circumstances, which formerly influenced the type of disease, there is reason to suppose, have become greatly modified, as at the time Dr Ward's report was written, many tracts of land were undergoing the process of clearing for cultivation, the ground being turned up for the first time, which is believed to be a productive source of miasm. Persons were also more in the habit of residing on, or near the newly cleared lands than at present ; experience has also taught the residents, the danger of exposure to the sun, and shooting and boating parties, are now less frequent than formerly.

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The most prevalent diseases, are fevers , rheu-Prevailing dismatism, ulcers and derangement of the intestinal canal-Amongst the native troops, men frequently fall into low spirits, sicken, become emaciated and die, without any appreciable symptom of local disease. In these cases, a longing to return to their native country, is the most marked feature of the complaint.

The cases of fever, are usually either ephc-Fevers. meral or quotidian, and fevers of a severe form, have not of late been seen.

Worms in the intestines, chiefly lumbrici, are Worms. very common.

Cases of hepatitis are rarely met with, and Hepatitis. easily subdued.

Rheumatism is the most important, and in-Rheumatism. tractable disease of the island ; and natives of India suffer more from it, than Europeans ; in many cases, no benefit has been derived from any mode of treatment, and removal from the climate becomes requisite.

Variola has occasionally prevailed in a severe Variola. form, and from the character of the climate, great difficulty has been experienced in keeping up vaccination, which for some years has not been satisfactorily established.

Acute dysentery is very rare, neither is the Dysentery. chronic form of the disease, nor diarrhea very common ; but when they do occur, they are exceedingly obstinate, recurring on the least neglect of diet or regimen. Ipecacuanha is found a most valuable medicine in these diseases, with leeching, counter irritation by blisters, anodyne enemata, and mineral and vegetable tonics, during convalescence.

Dyspepsia and hypochondriasis, are, from the debilitating effects of the climate, of frequent occurrence, and usually require a change of residence.

The number of natives in the island suffer-Hydrocele. ing from hydrocele, is very remarkable ; and it is not known whether they employ any remedies for its cure.

Lepra. Lepra is prevalent among the chinese, and a large number of patients suffering from the disease, are constantly under the treatment of the civil surgeon; and many others are seen wandering about the island.—The surgeon in charge of these patients, is satisfied that the disease is incurable, and he is strongly of opinion, that it is also contagious.

Ulcers are always prevalent, more especially amongst troops, in the first year of their residence on the island. They are not now seen in so severe a form, as when first the place was occupied, but are often troublesome and difficult of cure, are very liable to recur from slight causes, and are characterised by debility, and want of tone in the system ; they frequently commence in itch, about the ankles, which runs into sores with rounded, and hardened edges, granulations being either entirely wanting, or the bottom of the sore is sloughy. Ulcers occurring spontaneously, generally commence in some derangement of the subcutaneous cellular tissue, when the person's attention is first attracted by a sensation of pain, itching and slight swelling of the skin, which becomes red, and in the centre of the inflammed part a black spot is observed, which being detached, a small slough is found underneath ; and the pain which is often severe, is relieved after an open sore is formed.

The treatment found most beneficial, has been poulticing at first, with stimulant applications or hot dressings, till the slough is detached; then slightly stimulant lotions, such as a weak solution of zinci sulphas are used; and occasionally much benefit is derived from the black wash; should the slough be of considerable size, touching its edges with strong nitric acid, has proved useful, and in cases where the ulcers become indolent, with round hardened edges, scarifications, blistering and pressure by strapping.

The general health must also be carefully attended to, and alteratives with tonics, stimulants, a liberal allowance of beer and wine, and a generous nutritious diet are the means to be relied on.

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No. 16.— Table exhibiting the sickness and mortality amongst the native troops at Penang from 1831 to 1841, exclusive of 1833.

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Diseases of the brain.	Apoplexia Epilepsia Paralysis Mania Mania Ebrietas	1096-99	0100010		4	0-369	17 -091
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	Rheumatismus.	439	7	415	) 7	6 -804	1 -631
Venercal af- fections	Syphilis prim Gonerrhua Hernis humor Strictura ureth.	83 8 20 51 3	000	1 162		2 -700	0-000
Specific dis- cases	Lepra Atrophia. Burning of the feet. Scrophula	83 83 3	4	1 =	5 4	0 \362	11 -428
Diseases of the eye	Norbi scalorum	41	0		6 O	0 -739	0.000
Do. skin.,	entis	461	0	45	- 0	7-441	0 -000
	Other diseases	1,544				24 -815	0 .194
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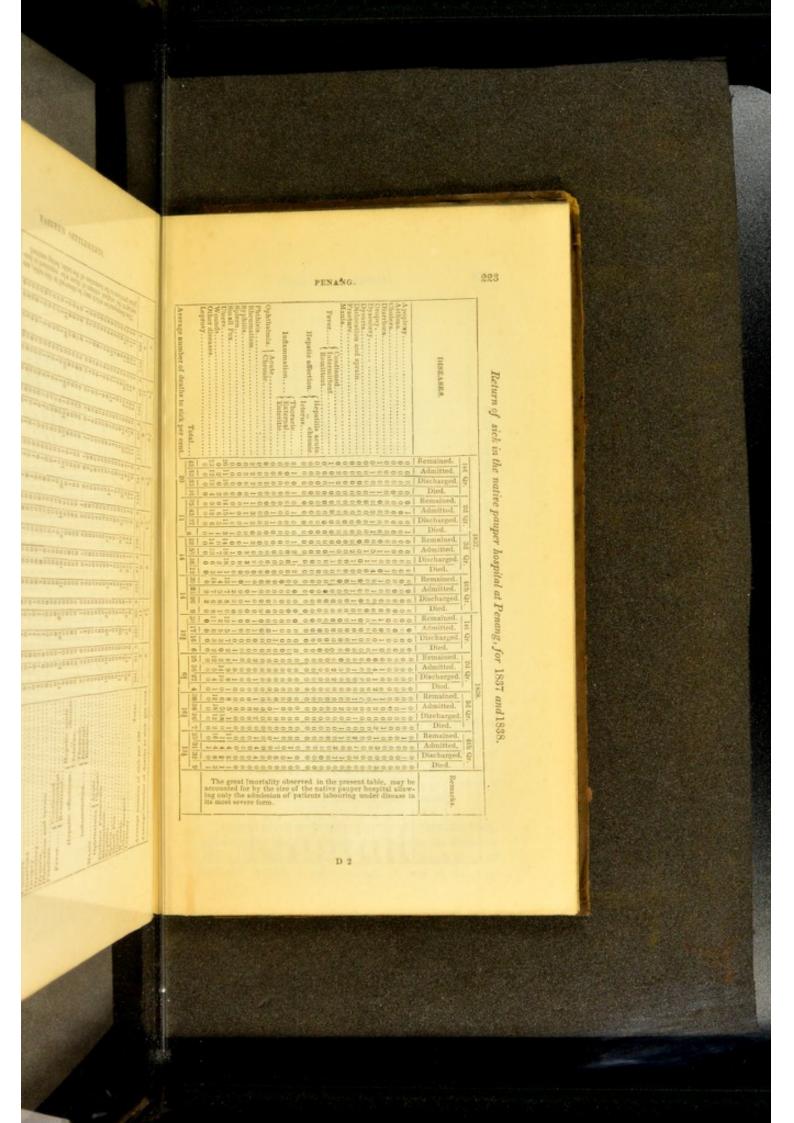
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EASTERN SETTLEMENTS.

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Abstract of the weather on the Great Hill, Penana, for the near 180

and a street a county, for the year 1829.		REMARKS		<sup>0</sup> In the early part hot and oppressive; latter	<sup>0</sup> Throughout dry and pleasant.	Monally much rain. Variable, P. Boon oppressive, see	by and rains throughout.	Coot and showers we are	Do. do. Much rain.	Gool, cloudy and pleasant.	<sup>0</sup> Monton weather ; much rain ; cool.	<sup>6</sup> Delightfully cool. Heavy rain at night.	Throughtest dry and cool. Morning brees bracing and refreshing.			21 0 Medium temperature of the year 70 he
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### PROVINCE WELLESLEY.

Province Wellesley. The following brief remarks, on Province Wellesley, are chiefly taken from the report of Dr. Ward, published in 1830; since which time, owing to its not being occupied by our troops, except at occasional short intervals, no additional information regarding the country, beyond a census of the population for 1838, has been procured.

This small province, forming part of the Queddah coast, opposite to the island of Penang, was ceded to the British in 1800, by the king of Queddah, and is in length about 30 miles, and breadth 3 miles in-land. It was at that time

covered with jungle, and very thinly inhabited, but has now a population of upwards of 50,000 souls ; and there are about 25,000 square acres of land under cultivation, with rice, pepper, sugar, spices, indigo &c.

Climate. Although the strait separating the province from Penang, is but 21 miles broad, the climate differs materially in some respects, from that of the island ; the land and sea breezes are more regular; it is not so much subject to the oppressive calms, and damp heated atmosphere ; and is therefore cooler, and the air feels fresher, and more invigorating. The medium temperature is said to be 2° lower, than on the island, the maximum heat being 87°, the minimum 791°.

The dry season includes December, January, February, and March, and less rain falls on the coast, than on the island. The prevailing diseases do not differ materially from those of Penang, but fever is more frequent and severe, and the detachments of native troops, which have occasionally been sent to aid the police, have suffered from intermittent fevers, to a greater or less extent.

### Census of the Population of Province Wellesley for the year 1838.

Jun 1				_		_	
Year.	Malays.	Chinese.	Chullaha.	Slamete.	Bengalene.	Fluctuating.	Total.
1838 1839—Estimated present population	,44,350						48,871
Estimated area of the Province-square Estimated number of square Acres in 0 with rice and other intertropical pool as sugar, spices, indigo, &c. &c.	e miles		15	0			00,000

# SINGAPORE

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The interior of the island is but little has but there is a small independent Chinese niles distantions the town, from whence as to the berry

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#### SINGAPORE.

SINGAPORE.

Singapore, an island in the straits of Malacca, General descripat the south-east extremity of the Malayan peninsula, from which it is separated by a narrow strait, is situated in north latitude 1º 15", and east longitude 104°. A british settlement was formed here in the year 1819, under the superintendence of the late Sir Stamford Raffles, governor of Bencoolen.

The island is about sixty miles in circumference, containing an area of 1,423,000 acres of land, its interior exhibiting a succession of hills and dales, covered with dense forest ; but the only hill of any considerable elevation, is Bukit Tinra, or the tin hill, near the northern coast, which is isolated, barren and about 1200 feet in height.

The interior of the island is but little known to Europeans, but there is a small independent Chinese settlement a few miles distant from the town, from whence supplies are brought to the bazaar.

Soil and geologi-The soil near the town is of a sandy nature, but in the interior, it is well adapted for the growth of the most valuable articles of oriental produce. The sub soil, is chiefly lateritious or a reddish clay, intermixed with beds of gray marl. The rocks are sandstone and conglomerate, the sandstone appearing exposed on some head lands on the coast, much broken and dislocated, by the action of some disturbing power.

Singapore being a penal settlement, the convicts sent here are employed in making roads into the interior, which when completed will lead to much improvement. The grounds near the town are laid out in gardens by the Chinese, a most industrious race, who grow abundance of vegetables and NutmegPlantations. fruit ; and have also many nutmeg plantations, situated upon the hills, from which the jungle has been cleared

away; towards the interior, some spots have likewise been cleared by them, on which they cultivate gambeer.

Creeks There are several small creeks, or inlets of the sea, throughout the island, particularly on the east side, by which the rains, that fall so abundantly throughout the year, find a ready outlet to the sea. The creeks and swampy grounds are cleared out by the rise and fall of the tide, and are thereby kept free from decaying vegetable matter, which would otherwise be a productive source of miasmata.

Measons. Both monsoons, extend their influence to the straits, the north-east commencing about the 15th October, and continuing until the setting in of the south-west, about the middle of April ;—rain is never very constant, but it usually comes on in heavy squalls, lasting from one, to five hours, the average quantity of rain during the year, is about 90 inches.

Climate. The climate of Singapore though sultry, is not unhealthy, and the vapours, or miasmata arising from the marshes and swamps, do not seem to exert an injurious influence on the health of the inhabitants.

The atmosphere is in general extremely moist, and the sky overcast; though when the sun shines out, it does so with great power, and its effects are enervating; —at night dense fogs spread over the island, and at particular seasons, the dews are heavy.

The thermometer seldom rises higher than 86°, or falls below 70°, nor does it vary more than 4° or 5°, in the 24 hours.—To the feelings, the air is agreeable, as, on account of its moisture, the unpleasant sensations caused by a high temperature are moderated, and the climate agrees well with the European constitution. Lun market A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II A manufactual adde for the year II II adde for the year III II adde for the year II II adde for the year II II adde for

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#### SINGAPORE.

A meteorological table for the year 1830, is here given.

Months.	Medium tempera- ture for the whole month.	Maximum.	Minimum.	Number of days on which rain fell.	Prevailing winds.
January	78º 31'	810	74°	25	N. &. N. W.
February	79 46	86	76	16	N. E. &. S. E.
March	80 23	88	75	17	S. &. S. E.
April	81 23	88	76	18	S. W.
May	81 29	86	77	13	W. &. S. W.
June		87	75	17	W. &. S. W.
	80 51	88	75	13	S. &: S. E.
		86	75	23	S. E. &. S.
September		85	74	15	S. & S. W.
		86	75	12	W. &. N. E.
November	76 48	85	75	21	S. &. S. W.
December		84	75	23	N. &. N. E.

Mean temperature for the year 791°.

The average maximum and minimum of the thermometer, from July till the end of December 1843, is shown in the annexed table.

Months.	Maximum.	Minimum.
July	85°	80°
August	86	80
September	86	76
October.	82	78
November	183	77
December	82	77

eases of the troops. The prevailing diseases are rehumatism, and fevers principally of the quotidian type, and these complaints are most frequent amongst the native troops, and may generally be traced to exposure on duty at night. The health of the sepoys likewise becomes impaired, from using a less generous diet, than they were previously accustomed to, mutton and beef not being procurable. Ulcers of a grave

character, are common about the changes of the monsoons, when the weather is sultry, and the frame relaxed, a condition of the atmosphere, which produces a disposition in common sores, to take on an unhealthy, and often gangrenous action ; and it is doubtless aided by the state of the constitution mentioned.

Town of Singa-The town, which is rapidly extending, stands on the south side of the island, close to the shore, where the land is only a few feet above high water mark ; the mercantile part runs along the western side of an inlet, of about 300 feet wide, which penetrates a short way inland ; across the inlet a long narrow wooden bridge has been thrown, about three hundred yards from its mouth, forming a communication with the suburbs, and a good road runs to the military lines, distant about a mile and a half.

The streets are irregular, and many of the houses are built of brick, but those in the outskirts, occupied by Chinese, Klings and other native shopkeepers, are chiefly of wood and thatched. On the castern side of the inlet, a good road runs along the shore to a village called " Campong glam," one mile and a half from Singapore, occupied by a population of about 4000 Chinese, Bugis, Malays, and Javanese. From this the road strikes a short distance into the country, and returns with a sweep to the town; on the side fronting the sea, are the houses of the principal Europeans, some of which are large and handsome buildings, and this, called the " Circular road," forms the usual evening drive.

Government house stands on the top of a hill at the back of the town, from whence there is a fine commanding prospect, a signal house is also situated on the same eminence ; and at the foot of the hill are the remains of a botanical garden, planted by the founder of the settlement, in which are several flourishing nutmeg trees. In the centre of what is called the Marina, is the institution, a handsome building, founded by Sir Stamford Raffles, and supported by charitable contributions, for the education of the different

SPELFORE um d'actre dillars. There are also B se nova, a charch, court house, and a pold The diel penductions of the and all amounts. The market is we trait, imposed chiefy from Mularca, and anguing, and the dicean, the latter a ve magnet the Kulopa ; in appendication is close and frain, be smill strongly of assulations. d in attaching site, resembling int formed on the adv recurrys, some of which a siming half a barrel of water, and from are connects ailed " Neptane's cape."

Sagaptee is well supplied nek enters, perkry and éteks; and bee te lai in die market. Sheep are brought mins is ensequently very expensive, 1 being the average price of a sheep.

Deafs buffiloes are procured from Ma free Senates and Juva.

was assue. The chief wild animals are tigen which are minertes and ferorious being imperity carried off by them ; and numerous, and of large size.

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re irregular, and many of the losses are built se in the outshirts, accupied by Clinese, r native shopkeepers, are chiefy of wood and ure to a village called "Campon gim." alf from Singspore, compied by a population Chinese, Buris, Malry, and Jourse, al strikes a sheet distance into the contry, a sweep to the town; in the side fronting the es of the principal Europeans, some of which melecute buildings, and this, and its forms the usual evening bire.

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classes of native children. There are also two jails close to the town, a church, court house, and a police office.

The chief productions of the island are pepper, Vegetable medactions. areca and cocoanuts. The market is well supplied with fruit, imported chiefly from Malacca, amongst which is the mangosteen, and the dorean, the latter a very favorite fruit amongst the Malays; in appearance it closely resembles the jack fruit, but smells strongly of assafætida. Fungous plants of an extraordinary size, resembling immense vases, are found on the salt swamps, some of which are capable of containing half a barrel of water, and from their appearance are commonly called " Neptune's cups."

Singapore is well supplied with fish, turtle, Markets. rock oysters, poultry and ducks; and beef is occasionally to be had in the market. Sheep are brought from Bengal, and mutton is consequently very expensive, 10 Spanish dollars being the average price of a sheep.

Draft buffaloes are procured from Malacca, and ponies from Sumatra and Java.

The chief wild animals are hogs, deer, and Wild Animals. tigers which are numerous and ferocious, the inhabitants being frequently carried off by them ; and aligators are also numerous, and of large size.

The white ant is of large size, and particularly White Antsdestructive.

The harbour of Singapore is safe, easily ap-Harbour. proached, and well sheltered, being an entre-port between China and the eastern Islands, and the rest of the world ; a direct trade is also carried on with many places.

The Malays and Chinese purchase large quan-Trade. tities of british manufactured goods, which they exchange for the produce of the different islands, to be re-exported to England, India and other parts of the world.

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Population. Singapore in 1840, had a population of upwards of twenty thousand souls, composed of people belonging to all the neighbouring countries and islands, the majority however being Chinese ; the Malays form but a small portion of the inhabitants, and reside in villages on the coast, or on the inlets. They subsist chiefly by fishing and piracy.

Loral Govern-The local government is administered by a Resident counsellor, who is permanently stationed at the settlement.

Military Forces. The military force usually consists of a wing of a native regiment of infantry, and half a company of native artillery.

Cantonment. The cantonment for the troops, is situated a mile and a half south south east of the town, a range of small rounded hills, separating it from the sea. The huts of the men are mere sheds, and as the floors are not raised from the ground, benches, or sleeping places, have been provided for them, to prevent the injurious effects of damp floors.

The situation of the lines is faulty, in their being nearly on a dead level, rendering efficient drainage impracticable, though a piece of gently sloping ground adjacent, used as the parade, would have afforded an eligible site.

The place of arms, guard room, and hospital are in the immediate vicinity, and are substantial brick and chunam Hospital buildings. The hospital is tiled, and very spacious, measuring 115 feet by 45, it has four small verandah rooms, one of which is used as a dispensary, and is surrounded by a strong wooden fence, forming a court within of considerable extent ; the sick are all supplied with cots.

Officers houses. The officers bungalows, are erected on the summits, of some small hills around the lines ; they are open and airy, commanding a view of the sea, from which they are distant, from a quarter to half a mile ; the jungle reaches to within about 40 yards of the lines, on the northern side, but e rong abor director the ground is the miderable disease. The articlety are stationed point or commer of the trick, near the tow whiting bener The same free soully on Weber

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in every other direction the ground is clear and open for a considerable distance.

The artillery are stationed close to the western Artillery lines. point or entrance of the inlet, near the town, where there is a saluting battery.

The naval force usually consists of a sloop of Naval force. war.

The 4th regiment madras native infantry Stekness on the 4th Regiment M. N. I. in 1843. having suffered considerably in 1843, from sloughing ulcers, and other diseases arising from an impaired state of the constitution, the following observations are extracted from the medical report of the corps for that year, as elucidatory of the nature of these complaints, and their causes.

Prevailing dis- ... Fevers of the ephemeral and quotidian types, rheumatic affections, and phagedenic ulcers, are the diseases most prevalent ; under the head of rheumatism however, are included several cases of burning of the feet, which is accompanied with a dry and glazed condition of the skin ; none of the cases of fever have presented any thing remarkable, some proved rather tedious, but yielded to the use of quinine, and other tonics."

" Many cases of rheumatism have occurred, of a Rheumatism. very troublesome description, especially when combined with the symptoms above noticed ; viz. burning sensation in the soles of the feet, and dry and glazed skin, this affection occurs either with or without true rheumatic pains, and no particular causes can be assigned, to account for it. The patient on presenting himself for admission into hospital, has an anxious expression of countenance, which is often puffy, with a yellowish tinge of the conjunctivæ, the bowels are disordered, and the appetite bad ; the skin is invariably harsh, dry and glazed, and eventually desquamates ; and no such cases derive any permanent benefit from medical treatment here, they have therefore, always been sent to Madras."

LATTER STREET appene in 1846, but a popularia of up Accused scale, orogonal of paper bland ing Chinese ; the Malaysian back and admants, and reads in rillion or the case They subiat clicity by falling and proc. he local government is administed by a or, who is permanently schemed at the so-

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" Phagedenic ulcers which have committed great ravages, commenced about the begining of the month of September 1843, and continued to increase up to the end of November, when the cases became less numerous and severe. In short, when the health of the men began to suffer from the circumstances hereafter noticed, the ulcers became numerous, and assumed a phagedenic character. The worst description of ulcer was generally situated about the lower third of the leg, or on the ankle and foot, and usually proceeded from some slight external injury, or from the pustules of itch ; on admission the expression of countenance was anxious, the tongue white and flabby, bowels irregular usually relaxed, skin cold, and clammy, pulse quick and weak, and the lower limbs frequently somewhat adematous. The patients complained of burning or stinging pain in the sore, which was usually of a round form, and excavated ; if the strength could bear it, purgatives, usually calomel and jalap, were administered on admission, soothing remedies being applied to the sores. After the intestinal canal had been cleared of its unhealthy secretions, camphor mixture, and liquor ammoniæ acetatis, with tincture of opium, and iodide of potassium (from 8, to 12 grains daily) were given. On the separation of the sloughs the strength was supported by as nourishing a diet as could be procured, with wine, beer and other tonics "

" The local remedies found most useful in promoting the separation of the sloughs, were wheat or rice flour poultices, the surface being sprinkled with pulvis cinchona, or charcoal powder ; and also the fermenting and pumpkin poultices, which appeared to answer well in many cases. The sore was occasionally washed with a solution of nitric acid, in the proportion of 1 part to 8 of water, and after the separation of sloughs, a weak solution of nitric acid in water, or a solution of some of the metallic salts, was found useful in promoting cicatrization. When the surface of the sore, was not very extensive ; many patients did well under this mode of treatment. A considerable number of sores however, fell

STRIPPLE on an indefect confiction, and the social R the is not not be splitting of on sid nucl atomage, proloning brainly Antina, al hogh à bai no the effe simpling press, or percenting its extension Ir mefel as a spillmaise in indelsent alore he applied as the surface of a profilince, or and, which beginnly juich, and used us

- Several cases advanced to a final tex KIL! tients ether inding from the effects of t tion, or being relaced to a state of excession carriel of by collegative diarrhow, after t paraled. In two cases amputation, was int paint dil well, sul has since proceed accord fiel on the fourth day after the op ucces of this, make such an unforces the minds of the men, that they would no rated upon, after wards."

"A few slight cases of diamhers and dy red, but they presented acthing worthy of a nes is the regiment are free from itch, w beed to wat of deadlanes, as well as too much of fish "

Presents. " Previews to the departy from Wadne, in April 1845, a few cases carnel, when stationed as Vepery, and comthe reason beginnents on board ship, a Suppose, up to the month of August. the prost min is way into the band te su doctr d'a laring tristed in some in arread of doors cases, for a period of at terita statisti ai jaita d'amiti big along mage is shabitants and the state instances of stim of Islan, does not

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Ulcers.

Pasgedenie viers stala instrumente a served about the beginning of the served A and continued to increase up to be red when the beath of the new began to other same breather nation, the dam becau samed a phagedenic character. The was door was generally chasted about the lower or on the sails ad lost, and saids ana digta extend injury, se fan fie paa admission the expression of concentrate origine white and failby, bowels irregular kin cold, and climmy, pulse quick and e limbs frequently survivi communibined of burning or stinging pain in the usually of a rough term, and encound; add bear it, pargainer, utily alonel administered on administr, wolling rened to the sores. After the intestinal anal of its unhealthy secretions, campber misamonio acetatis, with tincture of spins, tassium (from 8, to 12 grains daily) wire paration of the slenght the strength wa surishing a diet as could be procurel, with

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into an indolent condition, and the usual remedies lost their effect, in such cases the application of creosote was attended with much advantage, producing healthy granulations in a short time, and though it had not the effect of stopping the sloughing process, or preventing its extension, it was certainly useful as an application to indolent ulcers. It may either be applied on the surface of a poultice, or made into an ointment, with burgundy pitch, and used as a dressing for the sore."

"Several cases advanced to a fatal termination, the patients either sinking from the effects of constitutional irritation, or being reduced to a state of excessive debility, were carried off by colliquative diarrhea, after the sloughs had separated. In two cases amputation was performed, the first patient did well, and has since proceeded to Madras ; the second died on the fourth day after the operation, and the ill success of this, made such an unfavourable impression on the minds of the men, that they would not submit to be operated upon, afterwards."

" A few slight cases of diarrheea and dysentery have occurred, but they presented nothing worthy of remark ; very few men in the regiment are free from itch, which may be attributed to want of cleanliness, as well as to a diet consisting too much of fish."

" Previous to the departure of the regiment Dracunculus. from Madras, in April 1843, a few cases of dracunculus occurred, when stationed at Vepery, and continued to appear in the various detachments on board ship, and after arrival at Singapore, up to the month of August. In whatever manner this parasite makes its way into the human body, there can be no doubt of its having existed in some condition or other, in several of these cases, for a period of at least four months, previous to making its appearance externally ; dracunculus being unknown amongst the inhabitants of Singapore "

Causes of sick-ness in the regi-" That the great increase of sickness amongst natives of India, does not arise solely from the

influence of a climate, the essential characteristics of which are, its moisture, and steadiness of temperature, is evident, from no endemic diseases prevailing at the settlement."

" The food of the sepoys consists of vegetables and fish, and the consequences of this meager and deficient diet, is apparent in the emaciated appearance of the greater part of the men, accompanied in many with pains in the limbs, and puffy and unhealthy countenances, betraying a want of tone in the system, and a serous condition of the blood."

" It has accordingly been found, that triffing injuries produce sloughing ulcers, and exposure to cold or wet, fever or diarrhæa ; and although many continue to perform their routine of duty without complaint, any unusual exertion or exposure, would certainly cause them to become inmates of the hospital."

" At Singapore though fish and good vegetables are procurable, animal food is not by the sepoy, and such diet, which would in any climate be defective, if used for a continuance, is still more hurtful in a relaxing one like this."

" The Malays and Chinese are a strong and healthy race, but they use animal food of various kinds, such as the natives of India will not touch."

" From what has been stated, it will therefore be obvious, that a supply of animal food is requisite for the men, in order to keep a regiment in an effective condition, and as the sepoys means render it unattainable, it should be supplied to them, or placed within their reach; mutton and fowls might be readily furnished, the expense, would not be great, and the saving to the state, would in many ways counterbalance the outlay."

" The separation of the men from their families, exerts also a most prejudicial influence on their health. They leave large " family certificates" for their support, and become dispirited and apathetic, and with a view of saving for their

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ingly bern found, that trifing signing poerrs, and exposure to cold or wet, free although many continue to perform their thost coupling, say around contactor ertainly cruse them to become insure of

though fish and good segrables are profood is not by the sepoy, and such det, ny climate be defective, if used for a contire hurtful in a relating one like this"

nd Chinese are a strong and healthy rate, food of various kinds, such as the aution

w been stated, it will therefore be abrien. imal food is requisite far the non, in other nt in m effective condition, and a inter it mathinkle, it should be supplied el vidán their medi; mains sal frið emished, the expense, would not be prod. the state, would in many wave common

of the most fame their families, course al influence on their house. They have the second of the second SINGAPORE.

return home, many do not even spend the balance of the pay they receive."

" Out of 189 cases of ulcer, since the arrival of the regiment at Singapore, 133 occurred in young sepoys, of from one to four years service, their average ages being about 21 years ; and with respect to other diseases, the old and young, have as might be expected, suffered more than the middle aged."

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#### EASTERN SETTLEMENTS.

#### No. 17 .-- Table exhibiting the sickness and mortality amongst the native troops at Singapore, from 1835 to 1841, inclusive.

Aggregate strength. 2001. CLASSES. DISEASES.	Admissions.	Died.	Totaladmissions frees each class.	Total deaths frees each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers Fevers Fevers Fereitana remittens com: cout	238 742 111 2 170	12100	}1303	16	51 -684	1 -227
Cholera	0	0	0	0	0	0
Diseases of the abdo- minal vis- cera	196 18 70 9 2 18 5	9000001	313	9	12 ·400 0 ·198	2 -875
Diseases of the lungs. Pathas pulmo- mails. Pathas pulmo- mails.	17 12 2 2	91 11	} 33	5	1 .306	15 -151
Diseases of the brain. Direction the brain. Diseases of Amenuia. Bbriotas. Delirium Tre- mens.	1 17 6 3	10200 0	29	3	1 -148	10 -344
Eruptive fe- { Variola vers { Varicella	I I	00	} =	U	0 -079	0 -000
Dropsies Anasarea	16 2	4 2	} 18	6	0 -713	33 -332
Rheumatismus.	343	20	343	10	13 -589	2 .812
Venereal af- fections) Syphilis prim Gonorrhus Mernia humora- lis	2) 6 6	00 0	} 32	0	1 -267	0.000
Specific dis- eases	- 11 + 12	0000	} 42	8	1 -664	7 -142
Diseases of Morbi oculorum	34	0	34	0	1 -317	0 -000
Do. skin cutis	\$70	1	270	1	10 -697	€ ·370
Other diseases	593	3	593*	3	23 -497	0 .505
Total	3017	57	3017	57	119 -532	1 .889

• Of this number 138 were Phlogosis, 305 ulcus. Norm.—Per centage of deaths to strength, 2 358

MALACCA A comprised to possible account

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not missi ni bet inen stilenent presinch, bring best pollished by D Muleu Medal Establishment, in the ast considered requisite to enter into a p tion of a plan, the history of which its gives in the report alleded to ; and which and entrainity circulated, throughout Indi government of Penning.

man Milecrissituted in N. nst E. Luginde 101º 12, being distant inn Penng, and 150 from Singapore ; th eriginally in the hands of the Portuguese, wrested by the Dutch, and in the year 175 possesion of the English, by whom it has ntained. The country, in the interior, is a forest, through which there are not even food mi de bonderes of the district have not Interin fact being known of the interior, or than the mat, and the borders of the Malas

ton. The torus of <u>Mulacca runs</u> in a the as cost the houses of the botter class ur sinnel eiter quite close to, or upon t northen pat is compled by Malays, Ki The own and in both on a first study soil wood oil o be sea oile, yield inde beyo In the indice, if for small being size to b tini i locio ; tini foth dagi il in soli to the in Manual spice band, and the at talding a la sea to site of the sea bit of the sea The tora is bounded on the south by the A second a second secon

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#### MALACCA

A comprehensive topographical account of Malacca, the most ancient and best known settlement on the Malayan peninsula, having been published by Dr. Ward, of the Madras Medical Establishment, in the year 1830, it is not considered requisite to enter into a particular description of a place, the history of which is already so fully given in the report alluded to ; and which has been printed and extensively circulated, throughout India, by order of the government of Penang.

Siteation. Malacca is situated in N. Latitude 2° 14, and E. Longitude 102° 12, being distant about 300 miles from Penang, and 150 from Singapore ; the settlement was originally in the hands of the Portuguese, from whom it was wrested by the Dutch, and in the year 1795, it fell into the possession of the English, by whom it has ever since been retained. The country, in the interior, is a continued dense forest, through which there are not even foot paths to be found, and the boundaries of the district have not been laid down, little in fact being known of the interior, or of any other parts than the coast, and the borders of the Malacca river.

Towa. The town of Malacca runs in a parallel line with the sea coast, the houses of the better class of inhabitants, are situated either quite close to, or upon the beach; and the northern part is occupied by Malays, Klings and Chinese. The town itself is built on a flat sandy soil, and the gardens around and on the sea side, yield little beyond cocoanuts.

In the interior, a few small hills are to be seen, the base of which is laterite ; when fresh dug, it is soft, but on exposure to the air becomes quite hard, and the number of very old buildings to be seen, testify its great durability.

The town is bounded on the south by the sea, and on the E. and N. by the Malacca river; the old fort situated to the  $_{\rm F-2}$ 

eastward of the town, was formerly a place of strength, but was razed in 1807, and the ditch filled up, the only part left standing, being some bastions, now in a ruined conditon.

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Lend winds blow at night thereighent the · thermomet generally ranges from

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a mile school de pracipal; anno Editive, stoppedare alexis, are very com

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Malacca river. The small stream called the Malacca river, runs in a winding direction into the interior, for about twenty miles, and is navigable during the rainy season for small boats, for about fifteen miles. There is an extensive tract of rice land, under cultivation along its banks, which produces luxuriant crops, and the river is also of great service, in draining the country. The water is brackish for some miles up, and its banks are low, and in part covered with jungle ; it has always a muddy appearance throughout its whole course. The inhabitants along the banks are few in number, and are employed in husbandry, and in felling timber for the Malacca market.

Produce. Rice and cocoanuts, are the chief vegetable productions of the place. The inhabitants are composed principally of malays, portuguese, and chinese ; the two former are a lazy indolent class of people, who when they have earned a little money, live in idleness till it is spent ; and when they have again collected sufficient to keep them in food for a few weeks, will work no longer ; the chinese on the contrary are a hard working class, but are much addicted to opium smoking.

From the end of November till the end of February, the prevailing winds are northerly; it usually rains during the whole of December, but fair weather succeeds in January and February, when the rice crops are cut down. In April the S. W. monsoon commences, and is succeeded by the N. E. monsoon, in November. During August and September, heavy gales from the Sumatra coast bearing S. S. W. are of frequent occurrence.

LUTER STREET towa, was formedy a place of compluine (17, and the dist filed op, the only with some basices, now in a raised contex. the small streng called the Milaca tree direction into the interior, for short more nightle during the niny serves for and form miles. There is an extension match abiration along its backs, which protocol and the river is also of great service, a data-The water is brackish for some sales up. low, and in part counts with jungle; 2 ly appearance throughout its while occas. ing the banks are few in number, and are

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out the end of Noreaber all the end of whing winds are archedy, it usualy non of December, but his works manual February, when the tite may see as the S. W. mitsun commun, min V. E momente, in Nerender, Puise whet, heavy gula from the Someta cost are of frequent examples

MALACCA.

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Land winds blow at night throughout the entire year, and the thermometer generally ranges from 76°, to 84°.

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		gaillarm .shuire	đ	N. E.& S.W.	85 N.E.&S.W.	N. E. & S.	W. S.	8. E.	S. E. & W.	W. & S. W.	8. E.	8. 8. W.	N. W.	N. W.	N.
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Abstract of the weather at Malacca, for the year 1828.	inperature	forfar odf	lo.		801	80	821	821	10	80 8	8	2	181.8	Tot	1
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	1216			18	24	10	~	2	5	2	1	00	0	X	(i)

Endemic dis-Of the endemic diseases most prevalent here, fever may be reckoned the principal ; amongst the lower class of chinese, scrophulous ulcers are very common. The troops of late years have been healthy, and have not suffered from any particular sickness, slight fevers being the principal disease.

The most unhealthy time of the year is during the Sumatra gales, when the atmosphere is very moist.

No register of deaths or births is kept, either among the chinese, malays or portuguese.

During the months of June, July and August, a great many deaths have been observed to take place amongst dogs and poultry, but no other animals appear to suffer.

Hospital. The hospital for the troops at this place, has an upper and lower ward, with back verandahs to each, and a cook house for the men, in two divisions, each division containing ten fire places. The hospital faces N. and by E., looking towards the parade ground, an open space covered with green sward.

Barracks and lines The barracks and lines for the troops, are situated about one hundred and fifty yards from the hospital. The barracks consist of only one room, in which the arms and accoutrements are kept, it is built of brick and chunam, with a tiled roof.

The sepoys huts are built of bark, in the native manner, and covered with atap; they run in six lines, of 156 feet in length and 30 feet breadth, having 12 divisions on each side, in each of which 4 men reside. The breadth of each division is 15 feet, and its length 12; in the lines are 3 wells of good water.

The native officers are provided with bungalows, one of which contains four rooms, another two, the former is occupied by four, and the latter by two officers; both are built of brick, with tiled roofs.

The privies are situated about 150 yards from the lines, on the edge of the river, there are 15 small rooms with a door to each, for the men, and a small one at a little distance, with one door, for the native officers, the whole are washed by the stream.

The detachment at Malacca, consists of from 350 to 400 men, of the native corps at Singapore, (which has of late been

RILLICE. min the boal quarters station in the Strath tern to mire stalley. For series pairs part the spools have the shift compliant being interminent chanter, ad thereas affections. Cases ator descried by Dr. Ward, which P. anty in the Sich regiment Madres antivo and all an act are seen, through as all this case, uten are frequent and treable of the skin, bring age to run into ulteration previously semineed; viz a carbertic stat chere's by post living, the peculiar moist nat appearing the to be can durine to this disea

Beening Several but springs are for Enter about 18 miles, one of which is at Linux, and mother in the Naming dist n boh these places, me situated in swam is of a blaid or greenish tinge, and from wells air bubbles rise, emitting a strong sta hydropa ga; they have not yet been an turing a thememoter into one of them, in the space of one minute, to 1999.

These spings are very much resorted to ution, in its care of spinins, the master local fiscases, and bethe have been built Aye Permittere Schurg, also a brange nei a mai beneit for the use of the serv be so that in a mary channel cases of disc benefited by acharge from the coust, to with with me of the bat ballos.

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The hospital for the troops at this place, her en wad, with back vesselate to sel, add be men, in two divisions, each division our inces. The hospital faces N. and by L., Int. arade ground, an open spate orient with

as barrachs and lines for the troops, are altsundred and fifty yards from the hospital nist of only one room, in which the same ts are kept, it is built of brick and chrome,

s are built of bark, in the native manar, stap ; they ran in six lines, of 156 for in breadth, having 12 divisions on each site, nen reside. The breach of each driven angth 12; in the lines are 3 wile of good

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almated about 150 ranks from the lines, or rt, three are 15 mill none with a dar on, and a small out at a little linear, rad where allown, the whole are mained by the tal Malarca, consists of from 550 to 40 curpe & Sagapore (read he disk her

made the head quarters station in the Straits,) and 40 golundauze or native artillery.

For several years past the troops have been very healthy, the chief complaints being intermittent fever of a mild character, and rheumatic affections. Cases of the phagedenic ulcer described by Dr. Ward, which prevailed so extensively in the 25th regiment Madras native infantry in 1827 and 28, are not now seen, though as at all the stations on this coast, ulcers are frequent and troublesome, all abrasions of the skin, being apt to run into ulceration, from the causes previously mentioned; viz. a cachectic state of the system induced by poor living, the peculiar moist nature of the climate, appearing also to be conducive to this disease.

Several hot springs are found in the interior, Hot springs. distant about 18 miles, one of which is at Sabang, near fort Lismore, and another in the Naming district. The springs at both these places, are situated in swampy flats, the water is of a bluish or greenish tinge, and from the bottom of the wells air bubbles rise, emitting a strong smell of sulphuretted hydrogen gas ; they have not yet been analyzed. On introducing a thermometer into one of them, the mercury rose, in the space of one minute, to 130°.

These springs are very much resorted to by all classes of natives, for the cure of sprains, rheumatism, and a variety of local diseases, and baths have been built by subscription, at Ayer Punnas near Sabang, also a bungalow for Europeans, and a small barrack for the use of the sepoys ; and there can be no doubt but many chronic cases of disease, would be much benefitted by a change from the coast, to the vicinity of the wells, and the use of the hot baths.

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#### EASTERN SETTLEMENTS.

# No. 18.— Table exhibiting the sickness and mortality amongst the native troops stationed at Malacca, from 1830 to 1841, inclusive,

	strength 4612. DISEASES,	Admitted.	Died.	Totaladmission	from each class	Total deaths.	For centage of sick to strength	Per centage of deaths to sick.
Pevers	Febris ephemers ,, intermit quo ,, tertiana ,, remittens ,, com. cont	L 83	48.2		116	32	28-51	54 g -65
	Cholera	-	0	0	0			0
Diseases of the abdo- minal vis- cera	Diarrhosa Dysenteria Colica Obstipatio Il semorrhols Dyspepsia Hepatitis		954		93	15	4 -25	0 9.00
Diseases of the Lungs	Catarrhus. Harmoptysis. Asthma. Phthisis pulmo nalis Pneumonia. Dy spaces.				53	7	1 -14	9 15-09
iseases of the Brain.	Apoplexia Epilepsia Paralysis Amentia Mania Tetanus Deliriam trem	12-12-1	02001		60	4	0 -85	7 10 -000
ruptive fe- vers	Variola. Varicella. Erysipelas	104	1 0	} :	10	0	0 -21	0 -000
ropsies	Anasarea	65	22	1 1	14	26	1 -601	25 -125
	Rheamatismus, Syphilis prim.,	250	4	- 51	0	4	6 287	1 -379
evereal af- fections	donsertativa Gonoerhora Hernia humora- lia Strictura ure- thre.	8	0 0 0	}	3	2	1 -366	3 - 174
100150 G18+ 1	Lepra Bertberi. Burning of the feet. Dracupenlus	97 11 2	01 00	] .	-	18	1 -924	19-565
l	Atrophia Scorbutus Scrophula	57.5 8	17 0 0	]	-			
he eye ?	Marhi oculorum	50	0	56		0	1 -279	0.010
Do. skin.	eutis	398	1	395		1	8 -629	0 -25)
	Other diseases	867	2	867		2	18-778	0 -130

CONCERNO REVENSE The idlaring series of table in 19, company ist whole sichnes ne en comparent par mans anami monget both Enopens and Native ambraces nel daring de period of ten years embraces

rights, millig alother is a ther m which have been and preculent and most de beta belles d' met. In the tables No. 3 and 4, the number 1

el er öchenel en des ginne und th more the dieses specified in these tables notes appended to each table.

The loss to the service annually by death 1555 per out, mongst the Europeuns, an invalided, the ratio is increased to 6/882.

Amought the unlive troops No. 4, the per to strength averages annually 1404, but nored from the effective service by pension per century is augmented to \$-618.

In this table it will be observed, that the et unler the leads leptory, and shoer plong eidensity the administers ; is appears that m the former lead would have been more prothe bad proval debility, and the major under the load applicat conservation.

In our lain the following statements a the raising initiants of each of the se the may, a regula the mile of sickne death to init search, and of deather to sta

#### CONCLUDING REMARKS.

LATTER ESTIMAT

Controlling The following series of tables from No. 1, to No. 10, comprehend the whole sickness and mortality amongst both European and Native armies, which have occurred during the period of ten years embraced in the preceding reports; and they also shew in a clear manner the diseases which have been most prevalent and most destructive amongst both bodies of men.

In the tables No. 3 and 4, the number invalided, pensioned or discharged are also given; and those not included under the diseases specified in these tables are given in the notes appended to each table.

The loss to the service annually by deaths from diseases is 4.568 per cent, amongst the Europeans, and including those invalided, the ratio is increased to 6.882.

Amongst the native troops No. 4, the per centage of deaths to strength averages annually 1.604, but including those removed from the effective service by pension, invaliding &c. the per centage is augmented to 3.638.

In this table it will be observed, that the number invalided under the heads *leprosy*, and ulcer phagedenic exceed considerably the admissions; it appears that most of those under the former head would have been more properly placed under the head general debility, and the majority of the latter under the head syphilis consecutiva.

In conclusion the following statements are given to exhibit the relative healthiness of each of the several divisions of the army, as regards the ratio of sickness to strength, of deaths to sick treated, and of deaths to strength.

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CONCLUDING REMARKS.

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## European Troops.

No.	Divisions.	Per centage of sick to streagth.	Divisions.	Per centage of deaths to sick.	Divisions.	Per centage of deaths to strength.
1	Moulmein	143. 488	Ceded districts	1 -584	Mysore	2.800
2	Malabar	153 -122	Nagpore	1 .632	Ceded districts	3 -159
3	Centre	155 -773	Музоге	1 .718	Moulmein	3 -739
4	Mysore	163 -085	Presidency	2 -302	Malabar	3 -750
3	Southern	169 -737	Southern	2 .317	Southern	3-934
			Malabar			
7	Presidency	184 -374	Moutmein	2 -604	Presidency	4 -291
8	Ceded districts	199 - 467	Hyderabad	2 -835	Centre	5-570
			Centre			6-250
			Northern			10-154

# Native Troops.

No.	Divisions.	Per centage of sick to strength.	Divisions.	Per centage of deaths to sick.		Per centage	of deaths to strength.
1	Presidency	43 -137	Nagpore	2 -019	Presidency	1	-092
\$	Centre	49 -353	Moulmein	2 .056	Nagpore	i.	-255
3	Coded districts						-275
4	Malabar	57 -606	Malabar	2 .235	Moulmein	1	-285
5	Hyderabad	57 (35)	Presidency	2 -517	Mysore	1	415
6	Southern	00 -000	Hyderabad	9 -096	Hyderabad	1	489
7	Nagpore	62 -387	Southern	2 -850	Centre	1 .	-509
8	Mysore	67 -035	Northern	2 -939	Ceded districts	1	613
9	Moutmein	67, 1416	Centre	3 -120	Southern	1 .	737
10	Northern	88 -245	Ceded districts	3 -263	Northern	2 -	593

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di	uring	theo	given,	with	the	per	cen-
ta	ge of	81					

Years.		Other Complaints.	Aggregate strength each year.	Amnual per centage of sick to strength.	Annual per centage of death to sick treated.	Annual per centage of deaths to strength.
1829	Admitted	3002 2780 29 26	}11,640	169 759	2 115	3 -591
1830	Admitted	2503 2797 32 25	}11,623	156 -001	2 -062	3 -217
1881	Admitted.	2662 2676 45 40	10,863	166 -408	2 -649	4 -409
1832	Admitted	2457 2458 -31 37	} 10,680	164 -272	3 -371	5 -538
1833	Admitted	2659 2729 38 44	9,853	207 114	3 395	7 -033
1834	Admitted., Died	1.082	9,321	237 -002	2 -648	6 -276
1835	Admitted Died.,	1708 2041 22 28	9,484	193 -483	1 -725	3 -331
1836	Admitted Died	2071 1875 21 27	310,201	174 35	1 -956	3 -411
1837	Admitted Died	1730 1916 21 23		8 174 - 114	3 -114	6 -423
1808	Admitted.	1983 1676 25 16	9,79	8 177 -00	2 -18	3 878

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ncipal diseases, throughout the entire Army of Madras, te strength each year is also given, with the per cen-

Insmity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracie diseases.	Ulter physedenie.	Wounds and Injuries.	Other Complaints.	Aggregate strength each year.	Annual per centage of sick to strength.	Annual per centage of death to sick treated.	Annual per centage of deaths to strength.
17 34	000	208 392	1710	04 .	\$06 658	106 117	0	1249 1188	5502	363,697	45 -065	2 -002	1 -17
0	0	01	20 20	53	1-1-	23 19	00	6	87 89	1			
16 37	0	276 324	1400 1450	20	584 521	115 132	21	1289 1362	6247 5721	63,532	43 222	2 -358	1 -03
Per 10	0	0	26 23	6 33	35	29 28	21	85	88 88	1		a 000	1 10
65 30	00	200 390	1281 1307	10.04	652 490	82 138	00	1296 1132	59/24 51/07	1			
10.00	0	0 1	19 22	21	10.14	18 23	00	85	81 91	},58,340	46 -981	2 .838	1 -3
33	01	177 360	1130 1171	0	404 393	89 627	01	1305 1229	5452 4883	]			
20	0	11	$\frac{26}{24}$	00	13	21 23	0 1	8 8	82 105	} 57,109	40 -226	3 .073	1 -5
35	0	312 471	1173	9	572 763	366 111		1229 1136		]	-		
0100	0	1 0	23 28	10.00	1 10	25 34	00	37	105 103	\$ 67,423	58 .774	3 .780	2 .2
25 89	0		1322 1404	76	827 630	$273 \\ 334$		1312 1174		]	83 -469	0.107	
31	00	1	21 21	4 0	6	33 42	0 1		53 85	\$ 51,686	83 400	2 -167	1 -8
57 43	5-4		1536 1679		563 519	224 331		1309 1334		\$65,261	73 -541	1 -710	
31	00	1	19 22	00	2 9	40 19	00	54	60 40	5 00,201	10 011	1 710	1 2
45	13	283 806	1760 1515	23 6	638 443	311 230		1458 1236		\$ 52,746	87 -018	2 .150	1 -81
101	00	0 1	28 20	10	43	43 29	0 1		62 65	5	01 010		
30 48	20		1617 1588		530 516	251 347	04.04	1553 1294	4243 3761	51,008	65- 853	2 .848	1 8
4 00	00	1 0	22 15	0.04	1 4	31 42	0		49 66	]			
40 32	10		1684 1629		603 543	270 335		1437 1323		\$ 63,701	67 -121	3 198	2 1
20 00	00	1	20 21	64	8 2	38 33	00	37	78	1	Contraction of the		



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	" Remittent.	Guinea Worm.	Hepatic diseases.	Imanity.	Leprey.	Ophthalmy.	Rheumstism.	Small Pox.	Syphills, &c.	Thoracle diseases.	Uter phagodesic.	Wounds & Injurio	Other Complaints.
	2,032 2,304	36 19	3,798 3,453	143 131		2,949 4,100	5,285 5,401		10,4#9 11,001	3,403 3,293	5 20	7,602 7,128	22,458 22,828
	4,336	<b>ö</b> 5	11,251	274	1	7,049	10,687	12	21,450	6,696	25	14,630	45,286
Die	58 95	00		10 8	0	214	42 51	1	19 44	153 163	0 2	26 27	259 310
	153	0	545	18	0	6	93	2	63	316	2	53	599
		0	309	47	0	73	408	0	76	201	17	192	882
Tot		0	854	65	0	79	501	2	139	517	19	245	1,481
ATA	1-192	0.053	10-877	0.254	0	6 815	10-332	0.011	20-738	6-473	0-024	14,144	43-784
0	3-528	0	4.844	6-569	0	0.085	0.870	16-666	0.293	4.719	8-000	0-362	1.32
d	0-147	0-000	0.528	0-017	0.000	0-003	0-859	0-001	0-060	0-303	0-001	0.051	0.57
Pe		0.000	0.823	0 052	0.000	0-076	0-484	0.00	0.134	0 495	0-018	0-230	1.43

ssions and Deaths, also the number invalided, &c. amongst the 1829 to 1838 inclusive.

Total..2394

Table No. 4.—Abstration and the number invalided, &c. amongst usive.	So. 5-Table califiable So. 5-Table califiable
Image: strength from the strength f	

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No. 6.—Table exhibiting the number of Admissions a the period of five years, from 1834 to 1838 in the same period, and the per centag strength, and o

		From		to 183 agth 2		٨	dmissie each c		
		Ist Half.   24 Half.			talf.	1st Half.			
CLASSES.	DISEASES.	Ad.	Dd.	Ad.	Dd.	100	Ad.	D4L	4
Fever	Febrisophemera intermit quot tertiana	8,834 31,648 2,961 3,130	45 537 19 139	10,241 30,604 3,164 1,899	46 887 117 85	1	47,591	829	-
	, remittens	1.795	80		81	P			
	Cholers	907	417	1,053	1.000		907	417	
	Dysenteriaacuta	272	167	1,379	47	13	1,764	213	
	Diarrhœa Colica	2,794	131	2,364 619	8	8.1			
Diseases of the abdo-	Obstipatio	490	6	642 273	3	84			
minal vis-	Enteritis Peritonitis	19 17			5		5,618	212	ľ
	Gastritis	ii îi	0 45	17	43				i.
	Dyspepsia Hepatitis acuta	1,369	11	87	. 3	15	120	15	k
	C., chronica	26	6	-35	1.1.1.1	Ľ			ľ
	Catarrhus Asthina Phthisis pulmo-	700 200	46	429	48	1			
Diseases of	nalis. Hormoptysis	87 23	49	90 27	50				Į.
the Lungs- and heart	Pleuritis	153	35	161	25		× 1,441	158	P
	Carditis. Palpitatio Dyspnma	3 7 116	1 2 19	7		81			
	Apoplexia	35	24	29	1. 313	15			ŀ
	Epilepsia	56	4	60	13				L
	Paralysis Cephalaigia	410	8	363					Ľ
Diseases of		0	0	10	0		915	75	ł.
the Brain.	Amentia. Mania. Hydrophobia	81 116	7	60 123	2				ľ
	alentrum 176-		1000	1					Ŀ
	zbens Ebrietas	0	3	54					
Diseases of the Eye	Morbi oculorum	1,478	4	2,451	0	1	1,678	4	
Do. Skin,	eatis	6,617	3	6,450	5	ł	6,617	3	
an an an	Variola	193		64 267			6		l
Eruptive fa-	(Rubeola	1,029		in	1 1	15	1,649	14	
	Scarlatina	45		45	0				
Dropsies	Anasarea	014		341	1.0		1		
bropana	Ascites. Hydrothorax	41					361	85	
Rheumatic	Rheumat acutus		63	4,258	51	1			
			6 67		51			110	

No. 5.- Table the perio

CLASSES.

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# IERAL TABLES.

NATIVE TROOPS.

nd Deaths from each class of Disease, throughout the whole Army, during lusive ; also the number Invalided, Pensioned or Discharged during e of sick to strength, of deaths to sick treated, of deaths to f deaths and invalids &c. to strength.

aths f	e	s from each class.	Total deaths from cach class	- U U I	Total died and Invalided &c. from each class.	r centage of it to strength.	Per contage of deaths to sick treated.	er centage of deaths to strength.	er centago of athe, invalida e. to strength.	
d. 1.	Dd.	100	"g	44	E=E	Per	44	č.	Per geo	1
.234	629	94,828	1,458	176	1,634	\$5· <b>\$</b> 11	1-537	054	0-618	
.053	454	1,960	901	2	903	0,731	45-969	0-336	0-337	
616	182	3,450	405	18	413	1-288	11-739	0-151	0-157	Of the number invalided under the head
451	209								0-179	"Other diseases" are included the following: Apostena lumborum
132	13	243	31	8	30	0.690	12-810	0-011	0-024	Diabetes. 2 Dyserces. 53 Dyserces. 53 Fistula in ano. 15
674	166	3,115	253	239	500	1-163	11-300	0.13)	6-230	Hydarthros. 9 Morbus couzrius. 9 Polypus masi. 10 Uleus. 10 Uleus. 10 Malingerer. 21 Ead character. 99 Rad character. 99 Rad character. 99
813	71	1,758	140	25)	400	0.667	8.23	0-053	6 0-149	Of the admissions and dealas under the head " other diseases." Were Phlogosis
10.		1 Car	1	1				0-00	0-031	
653		3,921	1	0 205	1 226	8 1-46	7 0-25	1	1	The deaths under the head " other dis-
459	1	18,10	5	8	1	4-89	0.06	1 0.00	2 0.004	eases," include besides those account- ed for in the proceeding note vis. 85 Phlogonis &c.
488		2,13	7 2	2	0 2	1 0.79	0.96	0.00	1 0-007	8 Aneurisma. 1 Apostema lumborum. 2 Arthritis. 1 Cacnezia.
384	5	0 74	7 37	7 3	6 19	3 0.27	8 23 69	0.06	6 0 071	10 Cynambe, 1 Cystills, 3 Dishetes, 3 Dysuria, 2 Fistells in sno. 4 Fistells in sno.
901	10	2 15,94	3 21	2 73	90 90	3 5-16	8 2:35	0-07	9 0.353	2 Epistaxis. 5 Hamatemesis. 4 Hernia.

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A Disease, throughout diseated. Array, through wilded, President of Stationard and the station and transit, of Stationard and strangth.		
And Andrewski an	No. 7 Table exhibiting period of ten years, fr Europeans. Total Admissions " Deaths <i>No.</i> 8 <i>The following</i> Brazsurs, 103,4 " of deaths to sick to " of deaths to sick to	

		-		
European Troops.         Propent         Troops.         0         19836         40.589         521         1.068         7981         16.331         8712         17.856         522         7.6         1         0         10           n         of deaths to sick         296         1.441         1.42         27.255         748         9.373         129         1.480         241         4.080         172         0.4         1         1.22         0.200         748         1.29         1.490         241         4.080         172         0.4         1         1.2         0.200         748         1.29         1.490         241         4.080         172         0.4         1         1.2         0.200         748         1.530         129         0.203         241         4.080         1.72         0.4         1         1.2         0.233         241         0.403         1.72         0.4         1         1.2         0.233         1.2         0.233         241         0.403         1.72         0.4         1         1         1.2         1.2         0.233         1.1         1.0         0.3         1         1.2         0.233         1.2         0.233         2.11	Ad. & deaths. Per- cent- age. Ad. & deaths. Per- cent- cent- age. Ad. & deaths. Per- cent- cent- age. Ad. & deaths. Per- cent-	7981         1         8712         1         5262         1         3832         1           748         1         129         1         5262         1         3832         1         1           3430         1         1109         1         241         1         1         172         1         2         1         172         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         1         2         1         1         2         1         1         2         1         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         1         2         1         2         2         1	ma lumborum. is. is. he. f.	

Contraction in a

