

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

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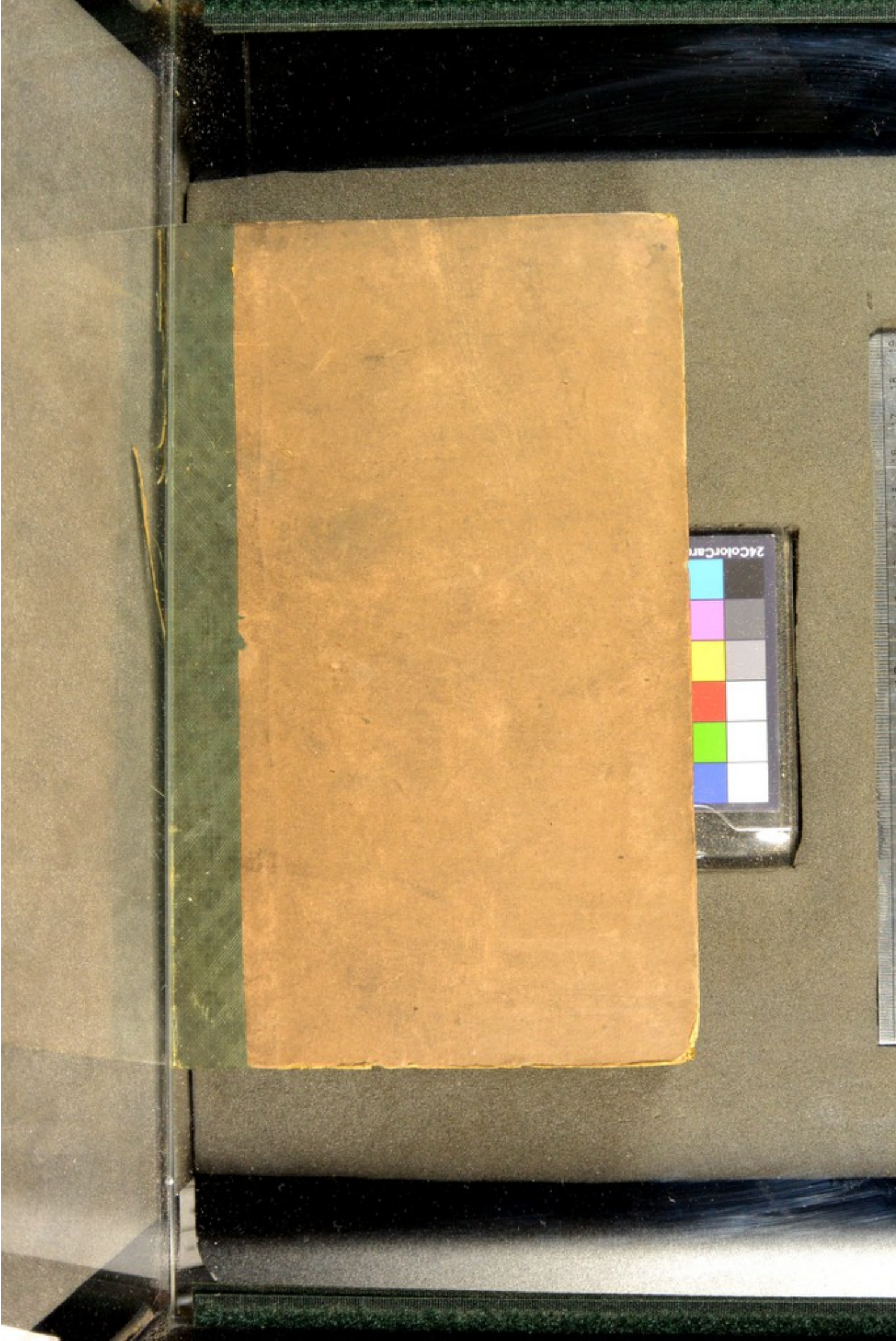
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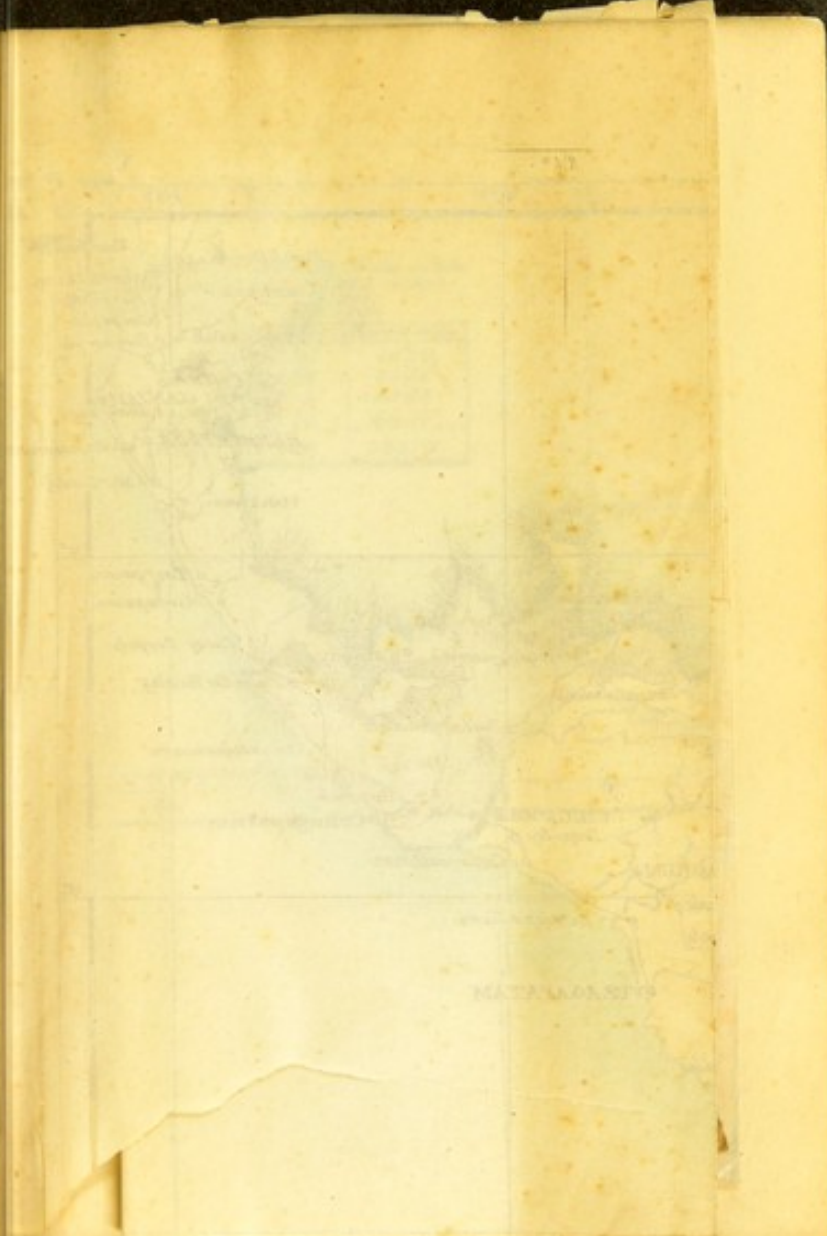


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MEDICAL TOPOGRAPHY
NORTHERN, HYDERABAD, & EASTERN
DIVISIONS, THE TENASSYR PROVINCE
1842

REPORT

ON

**THE MEDICAL TOPOGRAPHY AND
STATISTICS**

OF

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

COMPILED FROM THE RECORDS

OF THE

MEDICAL BOARD OFFICE.

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1844.



REPORT

THE MEDICAL DEPARTMENT

INDIA

BY THE MEDICAL OFFICERS

OF THE ARMY AND NAVY

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NORTHERN DIVIS

Geography. This division of the arm
of the eastern coast of the peninsula
between the 16th and 19th degrees of north latitude
possesses of the East India Company, is
divided into five districts, formerly known as the
"circars," four, viz. the collectrates of Masulip
tam, Vungaspattan and Ganjam, are com-
prised in this division,—the fifth, Cuttack, lying south
having been annexed to the Centre Division
for which it is described.

It extends to contain an
area of square miles, and a population amounting
to millions.

The division is bounded on the east, in
part by the bay of Bengal; on the west by a
peninsula, on the southern part, from the
Nizam, and on the north, from that
which is but little known to the British;
bounded by the Kishnah, which separates
it on the north by the Chilka lake, and
from the Goussour Rajah.

The general aspect of the southern portion
including Masulipattan and Rajahmundry,
is a level plain, (not little elevated above the
sea) rising gradually towards the ghats, which are
at a distance of from 50 to 60 miles from the coast.
The country is irregularly hilly, between the coast
which approach considerably nearer to it, it
being every where found between the hills
and the coast, though hot and oppressive, from
the want of sea breezes, may be said to be generally salubrious, from
the advantage of the cool sea breeze, and

NORTHERN DIVISION.

General 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-

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.

Boundaries and appearance of the country.

The district is bounded on the south-west by 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.

T OF MASULIPATAM.

district, or collectrate of Masulipatam, undergoes several changes, so reports in first came into the possession of the East it is only necessary in this report, to we now fixed.

miles in length, by 100 in breadth, contains of 4,800 square miles, and contains a po

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

will be the intention of the authorities to discontinue its entire length, but the new canal of this at present. The only canal of any consequence, if the Poolair does not come under its name, which opening from the sea, about a mile and a half from the fort of Madhupatam, at its mouth, through the swamp, with which it joins the Kistnah about 12 or 14 miles inland, is sufficiently deep to admit small vessels, with a bar of hard sand, close to the surf, and which completely prevents the passage of boats, shipping in the creek.

Lake. The Colair, the only lake in the district, situated between Ellore and Madhupatam, the former than the latter town, and, during the rainy season, it covers upwards of twenty square miles, the communication between Madhupatam and Ellore is principally by the Beizwarrah road, a permanent outlet, except that which joins the river, a short distance from the sea. About the water runs so high as to force a new passage through it is closed up annually during the dry season, and becomes open in the monsoon. These waters are rich in fish, and the shores with wild fowl.

Canals. There are numerous all over the district, there are none worthy of particular notice, the source of the sea, the chief dependence for the water of which is in general very good.

Hills. There are no hills within less than 10 miles of Madhupatam. The nearest are the hills at which place, as well as at Condapally, in the west, they rise to a considerable height; but the highest hills in the district, they do not exceed an elevation 1,700 feet. They are principally hard, small grained, dark coloured granite.

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 lake. 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. 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.

Hills. There 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.

Roads. 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 productions. Granite, sienite, marble of various kinds, slate, 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.

Soil. The soil is mostly alluvial, and is very productive, 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 productions. Dry grains, are produced in abundance; tobacco, cotton, oil seeds and chay root, are also raised. The chay is

MASULIPATAM.
much used by the native dyers, and cloth prepared by their red colours. All the native, and European vegetables, may be reared, and good cabbage, peas, cabbage, lettuce, celery, and produced in the gardens at Masulipatam, and there is no doubt but the supply in the district is regular and abundant, if the number of persons was sufficient to create a demand for them.

The proportion which the agricultural produce of the whole population, is calculated to be about one-fourth of the whole. Some of them are in easy circumstances, 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 general, and in some years, has been often the case.

Houses. The houses of persons of the better rank, built of brick or mud, of a convenient height, with small windows, they have bamboo and palm-leaf, or tiled; but the poor are generally constructed in a conical form, with palm-leaf, resting on the ground, or on a mud wall, with an entrance on one side, the same of a hole than a door. In these dwellings, the dwellings of the wealthy it is not uncommon to see chairs, and other European articles of furniture.

The lower parts of the collectorate are open country free from jungle, and rocks. Topes of various descriptions, some of which are esteemed for their virtues, as well as for the quality of the water, the banks of the Kistnah, is of importance for the health of the people, and the employment of the poor is afforded, and the employment is g

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.

Native dwellings. 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 animals. 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 $16^{\circ}. 9'$, and east longitude $81^{\circ}. 12'$;—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.

Swamp. When under water, the swamp extends beyond 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,

one of these bunds ran along the beach, and close to the fort, where it joined the second passed from the plain on the other side, to the rising ground near the post, partly skirting out the sea from that part of the river. The one was called the eastern, the other the western; in each of which for the end of the water, collected wild mussels. These bunds have long been neglected; indeed the greater portion of the western part of the eastern dykes, have since the sea has now free ingress at all quarters, is higher than the sea at low water, and usually high spring tides that it is flooded, occasions, the tide is confined to the river, small channels branching from it, in all of which. Formerly there was a free passage for water passing under the causeway, but it has been closed up, the advantage gained however from the sea water, is nearly counterbalanced by the rains, which, from the lowness of the swamp, and the want of any other outlet except ponds, well absorbed or evaporated.

During the dry season, some parts of the swamp stand grain.

Mirage. The mirage* is a common phenomenon, and frequently the resemblance to water and ripples, is so perfect, that it is not distinguishable from a real lake or sea, until close gradually vanishes; on looking round, the sea is distinctly seen on the ground just as that if unaware of the cause, a person might puzzle, to account for having passed the water, without its being observed.

Behind the pettah there is another mirage. * The mirage, or water of the desert, is it is called by some.

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 *Sahr-ab*, or water of the desert, 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.

Fort. 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.

Cantonment. The ridge on which the pettah and 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

bounded on the south-west by the native town, and on the north-east by the salt swamp; on the north-east by that of the cantonment, and usually dry; and partly by the fresh water morass, which is a north-east extremity of the cantonment, except in rains. The cantonment is irregularly laid out, and a regular road runs parallel with the beach, at the foot, so it passes westward through the fort, and is again crossed at two or three places within the cantonment into several irregular

streets. The public buildings are the military court, the collectors cacherri, the two native regiments, and a chapel. Several buildings containing a theatre and ball-room, and a public subscription, it is now however partly occupied as a mess house.

The lines and hospital of one regiment are on the edge of the salt swamp, but the boundary hedge on the north-east; those are in the centre of the cantonment, near the jail, and are in dry, but during the rains and for some time are many pools near them, which cannot be drained, water is gradually absorbed by the light soil, public buildings, as well as private dwellings, between 40 and 50 in number, are surrounded by prickly-pea hedges, which with numerous and other trees, naturally obstruct the air, and produce at certain seasons, an accretion of vegetable matter. The water is chiefly from wells containing mixture of soda, and in much larger proportion, in some wells than in others.

Native town. The native town is situated at the north-east end of the cantonment, and occupies the remaining part of the ridge, giving little more than three miles in length, by the census of 1837, and of this number 24,029 were hindoos, and

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.

Public buildings. The public buildings are the provincial and zillah courts, the collectors catcherry, 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.

Native town. The native town is situated at the south-west of 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.

Robertson's Pettah. There is only one large square, for which, and 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 Manufactures. 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

MASULIPATAM.
considerable, and of late are said to be in
manufacture of cotton alone, including we
bleaching, washing and dressing of the various
such as table linen, novels, ginghams, tartans,
large a proportion of the inhabitants, of
appears to have influenced the character of
people, for as where is a better dressed, or
looking native community to be met with.
among the better classes, most of whom
money in trade, seems to be carried to a fault
to report they exercise their charity to the re
alone. The poor and indigent, as in all m
are however numerous.

Climate. The seasons may be divided into
and cold; the first commences in March, and
first week in June; the second lasts from Jun
of October, the greatest fall of rain occur
west monsoon; the annual average being
The third or cold season commences in
terminates about the end of February; at th
is generally clear, with a cold breeze blowing
east, and the mornings are usually cold and
thermometer ranging from 54° at sun rise, t
noon temperature being from 65° to 75°, at
months of November, December, and Januar
the thermometer ranges from 66° to 81°; in
to 80°, and in April from 80° to 92°. Durin
months, which are the most disagreeable thro
the wind is frequently from the south-west,
relaxing and debilitating character. In May
ries to 90° at noon, and sometimes even as h
hot or land winds rising in petty regularly,
10th of the month, but the excessive heat
the sea breeze, which at this period usually se
afternoon. These winds in general, continue
until towards the end of the month, when
clouds begin to accumulate in the south-w
evenings north-western, with thunder showe

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, gingham, 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.

Climate. The seasons may be divided into the hot, rainy 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 south-west 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 north-east, 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 81°; 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° 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

Snakes. not numerous, there are several kinds of snakes to be found; some few of which are venomous, but they are for the most part harmless. Lizards, centipedes and

small scorpions are also found, the sting of which is painful, but never dangerous; a thick paste of rice and water, laid over the wound, is the best

The native doctors state, that the fever seldom terminates in the other kind, a large proportion of the cases terminate in continued fever, are fatal, give mercury and decoctions of various kinds in the latter, they appear to place the most dependence on abstinence, which with the use of opium for weeks, should the patient recover, is frequent, and, according to the native doctors, in the hot climates, they suppose that they are drinking too much water. In these affections, mercury, opium and spices;—cholera, they treat with—Belloni, and dropsy, they treat with, both in their nature, and in the mode of treatment is nearly the same in all these cases, but not very different. The treatment prescribe rest, and other preparations of mercury, and sulphur, their favourite remedy seems to be given three or four times through a mass of pepper and given to the extent of three or four times daily; but this, they acknowledge is not the stomach. Treat-Book was frequently used in these disorders, but lately it has been discontinued, in consequence as it is supposed, of preparing it. Rheumatism is also a common disorder, treated with hot spices, and decoctions, often not with, and is said to be a tedious disorder, but the native doctors believe that it is almost always cured, such as fever, &c., to which it is frequently been subject.

Native women suffer much after part

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.

Native treatment of disease.

The native doctors state, that intermittent fever 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 dependence on abstinence, which with the use of decoctions, is strictly enjoined for weeks, should the patient survive so 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 extent of three or four ounces several times daily; but this, they acknowledge is not always retained on the stomach. Treack-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.

MASULIPATAN.

JAIL OF MASULIPATAN

No. 11.—Table exhibiting the number of Admitted and Discharged Criminal Prisoners, from each class of the Jail, from 1829 to 1858 inclusive.

CLASS OF PRISONERS.	1829 to 1838.				1839 to 1848.				1849 to 1858.				Total.
	Admitted.	Discharged.	Admitted.	Discharged.	Admitted.	Discharged.	Admitted.	Discharged.					
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
1. Convicted for Theft
2. Convicted for Burglary
3. Convicted for Robbery
4. Convicted for Murder
5. Convicted for Rape
6. Convicted for Assault
7. Convicted for Drunkenness
8. Convicted for Gaming
9. Convicted for Vagrancy
10. Convicted for other offences

* From charts.

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.

CLASSES, DISEASES.	1829 to 1838.				Admissions & deaths from each class of diseases.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.	
	Aggregate strength 3863.												
	1st Half.		2d Half.		1st Half.		2d Half.						
Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.						
Fever,	Febrile phenomena	33	0	53	1								
	intermit quot.	132	9	296	18								
	tertiana.....	2	0	30	0	198	16	291	25	584	41	15.117	7.039
	remittens....	17	4	3	2								
com: cont....	5	3	9	4									
Cholera.....	17	10	57	31	17	10	57	31	74	41	1.915	55.400	
Diseases of the Abdominal viscera.....	Diarrhoea.....	22	9	53	8								
	Dysentery acuta et chronica	39	4	71	15	72	17	124	21	196	26	5.073	19.387
	Obstipatio.....	1	0	0	0								
	Hepatitis.....	1	0	0	0	1	0	0	0	1	0	0.025	0.000
Diseases of the Lungs	Catarrhus.....	46	2	26	2								
	Asthma.....	4	2	3	2								
	Phthisis pulmonalis.....	2	2	1	1	54	6	34	7	88	15	2.278	14.772
	Pneumonia.....	1	0	3	2								
	Palpitatio.....	1	0	0	0								
Dyspnoea.....	0	0	1	0									
Diseases of the Brain.	Apoplexia.....	1	0	2	1								
	Epilepsia.....	0	0	3	1								
	Amentia.....	0	0	1	0	6	1	10	5	16	6	0.414	27.300
	Paralysis.....	3	1	3	2								
Paracitis.....	2	0	1	1									
Eruptive fevers.....	Varicella.....	24	7	0	0								
	Varicella.....	81	0	0	0	106	7	0	0	106	7	2.743	6.886
	Erysipelas.....	1	0	0	0								
Anasarca.....	51	13	53	12	51	13	53	12	104	25	2.692	24.028	
Rheumat acutus et chronicus.	34	2	00	1	34	2	60	1	94	3	2.433	3.191	
Venereal affections.....	Syphilis primitiva.....	2	0	3	0	2	0	5	0	7	0	0.181	0.000
	Gonorrhoea.....	6	0	2	0								
Specific diseases.....	Atrophia.....	1	1	0	0								
	Berberis.....	12	4	21	12								
	Dracunculus.....	2	0	0	0								
	Elephantiasis.....	0	0	1	0	19	7	39	13	58	20	1.501	34.482
	Scrophula.....	1	0	1	1								
Ulcus phagedenicum.....	2	0	5	0									
Diseases of the eye.....	Morbi oculorum	12	0	15	2	12	0	15	*2	27	2	0.698	7.407
I.D., Skin.	Cutis.....	5	0	2	0	5	0	3	0	8	0	0.207	0.000
	Other diseases.....	360	2	227	5	360	2	227	5	532	7	13.771	1.315
Total..		877	81	1018	122	877	81	1058	122	1805	203	49.035	10.712

* From cholera.

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.

CLASSES. DISEASES	1829 to 1838.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.				
	Aggregate strength 685.															
	1st Half.		2d Half.		1st Half.		2d Half.									
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.								
Fevers.....	Febris int. quot.		2	0	6	2	}		3	1	8	3	11	4	1-655	35-363
	... teriana.....		0	0	1	0	}									
	... com. cont.....		1	1	1	1	}									
	Cholera.....		3	2	6	2	}		3	2	6	2	9	4	1-313	44-444
Bowel complaints...	Diarrhoea.....		8	4	4	2	}		17	7	17	8	34	15	4-963	44-117
	Dysentery acute et chronica		9	3	13	6	}									
	Catarhus.....		2	0	0	0	}		2	0	0	0	2	0	0-291	0-000
Eruptive fevers.....	Variola.....		42	11	2	0	}		97	11	2	0	99	11	14-452	11-111
	Varicella.....		25	0	0	0	}									
	Anasarca.....		6	4	2	1	}		6	4	3	1	9	5	1-313	55-555
	Rheumat acutus et chronicus.		4	1	1	0	}		4	1	1	0	5	1	0-783	30-000
	Syphilis primitiva.....		0	0	3	0	}		0	0	3	0	3	0	0-427	0-000
Specific diseases.....	Beriberi.....		2	0	2	2	}		4	0	2	3	13	3	1-897	23-076
	Dracontiasis.....		1	0	0	0	}									
	Scrophula.....		1	0	0	0	}									
	Morbi oculorum		0	0	0	0	}		0	0	0	0	0	0	0	0
	.. cutis....		0	0	0	0	}		0	0	0	0	0	0	0	0
	Other diseases..		12	1	12	6	}		12	1	13	0	25	1	3-649	4-000
	Total..		148	27	62	17	}		148	27	64	17	210	44	30-656	20-262

Remarks on the preceding tables.

The average annual strength of the convicted prisoners has been 386, and the annual admissions 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.

MASULIPATAM.

Table with multiple columns and rows, likely a continuation of the data or a detailed breakdown of the statistics. The columns include various numerical values and percentages, similar to the main table on the left. The text is partially obscured and difficult to read due to the image quality and angle.

NORTHERN DISTRICT
JAIL OF MASULIPATAM

Showing the number of Admissions and Deaths of the Jail, from each class of diseases for ten years, from 1829 to 1838 inclusive.

Year	1829		1830		1831		1832		1833		1834		1835		1836		1837		1838		Total	
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.
1829	41	27	17	0	32	0	35	0	15	0	107	16	15	0	64	0	69	0	25	0	64	41
1830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1831	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1832	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1833	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1834	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1838	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The average annual strength of the convicted prisoners has been 385, and the annual admissions to 1830, or 49,055 per cent on the strength; the mortality has averaged 20 annually on the strength; the total admissions have to 1838, with 283 deaths, from an average strength of 385.

Prisoners waiting for trial have been comparatively few in strength during the ten years averaging 10 admissions into hospital have been 110, or 28-56 per cent on the strength, and the deaths 44, or 6-42 per cent on the strength.

MASULIPATAM.

Disease	1829		1830		1831		1832		1833		1834		1835		1836		1837		1838		Total	
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.
Fever	41	27	17	0	32	0	35	0	15	0	107	16	15	0	64	0	69	0	25	0	64	41
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	41	27	17	0	32	0	35	0	15	0	107	16	15	0	64	0	69	0	25	0	64	41
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2803												
Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2803												
Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2803												
Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2803												
Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2803												
Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Total admissions and deaths	150	81	207	13	179	85	222	30	255	41	252	32	119	7	218	12	187	20	195	20	195	202
Strength each year	398	349	389	603	513	576	485	509	419	2												

In table No. 13 are exhibited the annual admissions and deaths from six of the principal diseases, viz. *fever, cholera, diarrhoea, 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.*

"The mortality amongst the prisoners at the year 1832, has been unprecedentedly great, the excessive prevalence of disease, and the massive population was reduced by the late a through the diet and clothing allowed to the p faint protection against these evils, a great numerical strength at this period, was made down, whose health and strength were, in a far reduced previous to confinement, that no b from the food and clothing, which this secure the care and comforts of the hospital. In t first half year, cholera, small pox and chicken- is, and although the latter disease was in ev no less than 25 cases of the other two ter during the second half year, beriberi, cholera ty, dysentery and fever were the prevailing of them were more or less fatal; 31 having by these disorders."

"The debilitated state of the sick priso resident stimulants and cordials a useful c without which the proportion of recoveries r small indeed. In beriberi they were especi Dropsy was very fatal, and stimulants only aff relief. The usual and most convenient form punch, made of starch, and given three or m

"In comparing the proportion of fatal cas mental strength, they will be found to be throughout the whole year; but the propor admissions, is much greater in the second th *Dated 31st December 1832.*

"The number admitted from anasarca is 3 berii it. Under the former head are includ cases, though the effused fluid was not cellular membrane, if neither numbness, nor ty of the legs were observable on admission

"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 œdema, 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 beneficial, 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

is but little hope of recovery; in one instance
ry takes place after a second v. s. If however
for the blisters and internal remedies to take
reason to hope for recovery, the medicines gen
we first of digitalis and squills, each 20 drop
of camphor mixture, every two or three ho
the emergency of the symptoms, and afterwar
the qualities of this medicine are not confined
effects—in some instances there is but little pro
may prove successful. If bleeding fails, no
be of much use." Dated 31st December 18

"The number of deaths to the admissions
especially when compared with the rate of m
tary hospitals, but in the latter there are few
from age and infirmity, or diseases consequ
this account the rate of mortality among pri
higher than amongst sepoys. To this cause
prevalence of disease may be imputed the p
of mortality, as more than half of those who t
ed in years." Dated 31st December 1838.

With regard to the diseases amongst the
this station the following table has been fram
pose of exhibiting the most prevalent, and m
and the difference in these respects amongst
prisoners.

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 sepoy. 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 sepoy and prisoners.

No. 14.—Table exhibiting the number of admissions and deaths amongst the Native Troops stationed at Masulipatam from 1830 to 1840, exclusive of 1832.

CLASSES. DISEASES.	Aggregate strength. 13,910.				Admissions and Deaths from each class of Diseases.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.....	Febrisephemera	567	4	1192	2	2729	36	4465	45	7185	81	52	590	1	127
	intermit quot.	1921	22	3102	25										
	tertiana.....	189	1	281	0										
	remittens.....	35	5	19	3										
com: cont.....	7	0	11	2											
Cholera.....	5	3	8	3	5	2	8	2	13	6	0	995	48	120	
Diseases of the abdom- inal vis- cera.....	Diarrhoea.....	59	4	86	6	34	11	290	34	631	25	4	619	5	546
	Dysentery.....	46	5	101	15										
	Obstipatio.....	108	1	134	1										
	Dyspepsia.....	25	1	61	1										
	Hæmorrhoids.....	6	0	8	1										
Hepatitis.....	4	1	3	0	4	1	3	0	7	1	0	501	14	285	
Diseases of the Lungs	Catarrhus.....	26	1	34	4	54	2	92	11	146	13	1	998	8	904
	Asthma.....	17	0	45	0										
	Phthisis pulmo- nalis.....	3	0	8	4										
	Pneumonia.....	7	1	3	1										
Dyspnoea.....	1	0	2	2	1	0	2	2							
Diseases of the Brain.	Apoplexia.....	0	0	0	0	10	2	17	3	27	5	0	197	18	519
	Epilepsia.....	0	0	2	0										
	Paralysis.....	6	0	10	2										
	Amentia.....	1	1	1	1										
	Mania.....	2	0	4	0										
Tetanus.....	1	1	0	0	1	1	0	0							
Eruptive fe- vers.	Variola.....	3	0	0	0	27	0	23	0	50	0	0	364	0	000
	Varicella.....	13	6	3	0										
	Rubeola.....	10	0	20	0										
Erysipelas.....	1	0	0	0	1	0	0	0							
Dropsies....	Anasarca.....	11	3	22	4	13	5	39	5	58	10	0	380	19	230
	Ascites.....	2	2	7	1										
Rheumatic affections.	Rheumat acutus et chronicus..	410	2	469	8	410	2	469	8	879	11	6	434	1	251
	Syphilis primi- tiva.....	103	0	109	0	170	6	159	6	329	0	2	408	0	000
consecutiva.....	8	0	7	0											
Gonorrhœa.....	45	0	24	0											
Hernia humora- lis.....	9	0	18	0											
Stricture ure- thrae.....	5	0	1	0											
Specific dis- eases.....	Dracunculus....	58	0	14	0	109	6	165	21	274	27	2	906	9	854
	Atrophin.....	17	1	21	4										
	Scrophulis.....	1	0	0	0										
	Scrophulis.....	7	0	7	0										
	Berberi.....	22	5	108	17										
	Elephantiasis..	3	0	1	0										
Leprosia.....	1	0	4	0	1	0	4	0							
Diseases of the eye....	Morbi oculorum	28	0	45	0	28	0	45	0	73	0	0	534	0	000
	Do. „ Skin.	359	0	425	1	359	0	425	1	784	1	5	812	0	125
Other diseases..	805	4	910	4	805	4	910	4	1715	8	12	554	0	468	
Total.....	4965	72	7210	125	4965	72	7210	125	12175	198	89	128	1	626	

* Of this number were Phlogosis 787 and Ulcus 352 with 2 deaths.

Per centage of deaths to strength 1-449.

Effect of the climate of Masulipatam on the

The fact of Masulipatam having been un-
der the command of the 18th Regiment since 1838, and an unusual mortality
of medical officers was appointed to enquire
thereof, and the substance of their report is
following. Dated 14th October 1833.

The 6th marched from Bangalore, on
the 15th of February 1833, and
arrived at Chittoor, on the 1st
of March, a camp colour man who preceded
the 6th, was attacked with cholera
at Kelghery, he was attacked with cholera
and died. Dated 14th October 1833.

From Chittoor to that place, a distance
of 100 miles, the disease manifested itself with the
loss of two officers, one hundred and forty six
men and eighteen children, having been attacked
with cholera, one officer, thirty-two men, six women
and children died.

The topographical features of the whole
country from Kelghery to Woijelly, seem peculiarly
favourable to the production of malaria, in as much as it runs
along the base of mountains, which are in many parts
overgrown with jungle, encroaching so close on the road,
that the appearance of a mountain pass. The village
are said to have been free from disease, which
is proved, but to have suffered from cholera, and
malaria.

On the 18th April, the regiment arrived
at Woijelly, and was encamped on a part of the swamp
the north-west of the fort, all the morning of the 19th
when the barracks were occupied.

MADRAS DIVISION

Showing the number of admissions and deaths among soldiers at Masulipatam from 1833 to 1849, and the rate of 1832.

Year	Admissions		Deaths		Rate of 1832
	No.	%	No.	%	
1832	1000	100	100	100	100
1833	1200	120	120	100	100
1834	1100	110	110	100	100
1835	1300	130	130	100	100
1836	1400	140	140	100	100
1837	1500	150	150	100	100
1838	1600	160	160	100	100
1839	1700	170	170	100	100
1840	1800	180	180	100	100
1841	1900	190	190	100	100
1842	2000	200	200	100	100
1843	2100	210	210	100	100
1844	2200	220	220	100	100
1845	2300	230	230	100	100
1846	2400	240	240	100	100
1847	2500	250	250	100	100
1848	2600	260	260	100	100
1849	2700	270	270	100	100

Number with Cholera 70 and Fever 20 with 1000.
The average of deaths is rough 100.

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."

MASCIPATIN.

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

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

"The whole are substantially built of brick, the walls raised one foot eight inches from the ground, and covered with coarse red sand stone. The roof, of the apartments, and their construction, in the hospital and barracks are similar, with this difference, in the hospital range, there are but eight rooms—a passage being left as a passage to the privies—while in the barracks, there are ten rooms. The width of the hospital, besides a verandah to each range, is one hundred feet, its height thirteen and a half, and it is built with walls, having arched doors in the centre, and four windows, except the end rooms, which are six feet four inches high, by four feet six inches wide, with iron bars to the street, and shutters for ventilation."

"The rooms in the hospital are capable of containing each, three of the barracks, two hundred men, or two hundred in each range; and for the sick in hospital, men on duty, and the remainder of the garrison, it is considered sufficient for the accommodation of 500 men."

"The hospital is partly shut in by the officers' barracks, having the main entry in the centre, and the main range of barracks, by ten feet meeting two others at right angles, on the north side, which the whole is enclosed."

"The hospital and eastern range of barracks"

"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

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 occasioned 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 35 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 disease of the wet season at Masulipatam, also derives its origin from malaria, modified or influenced, by the effect of heat and moisture."

MASULIPATAM.

"It would appear that dysentery occurs chiefly from the termination of the monsoon, until the rains, or of the swamp; from which time commencement, is the most healthy period; the well at the later season being said to be the only water which is not infrequent during the generally caused by unguarded exposure to the sun."

"Hepatitis is also a prevalent disease, in this, but cases are met with at all times."

"Etiolation is most frequent during the seasons and natives suffer alike from it; the former from beriberi, and from dropsy, during the dry season, though the climate is said, on the whole to be healthy."

"The state of health of a company of Europeans of the Madras European regiment, stationed at the former in the penit, from 1st March 1833, and the latter in the fort, from 1st June 1833, is exhibited in the following table."

COMPANY OF ARTILLERY.

Average strength		Average deaths in month	
at Masulipatam in the penit	116	Apoplexy	.....
at the fort in the fort	237	Fever	.....
at the fort in the fort	91	Hepatitis	.....
		Etiolation	.....
		Dysentery	.....
		Beriberi	.....
		Cholera	.....
		Other diseases	.....

EUROPEAN REGIMENT.

Average strength		Average deaths in month	
at Masulipatam in the penit	47	Fever	.....
at the fort in the fort	200	Hepatitis	.....
at the fort in the fort	71	Etiolation	.....
		Dysentery	.....
		Beriberi	.....
		Cholera	.....
		Apoplexy	.....
		Dropsy	.....
		Other diseases	.....

" 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 ephemeral.—Apoplexy which is not infrequent during the hot weather, 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.

		Average diseases and deaths for 12 months.	
		Diseases.	Deaths.
Average strength.....	105	Apoplexy.....	1..... 1
do admissions to do per cent.	217	Fever.....	9..... 0
do deaths to admissions...	44	Hepatitis.....	31..... 2
do do to strength do....	9½	Rheumatism.....	6..... 0
		Dysentery.....	26..... 3
		Diarrhoea.....	12..... 0
		Cholera.....	2..... 2
		Other diseases.....	141..... 2

EUROPEAN REGIMENT.

		Average diseases and deaths for 12 months.	
		Diseases.	Deaths.
Average strength.....	497	Fever.....	138½..... 8
do admissions to do per cent.	282½	Hepatitis.....	69..... 4½
do deaths to admissions do.	34	Rheumatism.....	91..... 6
do do to strength do....	7½	Dysentery.....	108½..... 12½
		Diarrhoea.....	60..... 1½
		Cholera.....	18½..... 5
		Apoplexy.....	1½..... 11
		Dropsy.....	3½..... 1
		Other diseases.....	622½..... 2½

"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 comrades; which circumstances predisposed them to suffer from the effects of climate."

"The total sick in hospital at the conclusion of the March—amounted to fifty eight, of twenty nine were cases of cholera; this disease prevailed, to the extent of from one, to five daily, till the 26th April, when it ceased; a captain of one case on the 3rd, and two on more occurred till the 19th of the same date, till the 26th, ten cases were admitted; the 27th and 28th May. On the 20th and cases occurred, in men labouring under dysentery and there was one admitted from the barracks."

"Dysentery commenced on the 25th April, one, two, or three have been admitted contained fever, from one to six were admitted since the 17th April; a great increase however on the 21st May, thirty having been admitted which the hot winds commenced; thirty se cases on the 23rd, and ten on the 24th."

"Apoplexy made its appearance on the eight cases occurred in three days: two were on the 23rd April; one on the 2nd May; two on the 26th to 28th May there were eleven cases; seven, and 5 deaths."

From 16th April till Oct
sins and deaths in the regi
margin."

"The result of an inquiry, instituted for determining how far the constitution of the reference to the number of elderly or infirm to the sickness, proved this to have exerted considerable effect."

"Inquiry was also particularly directed to ed to the troops, which were found to be of the water for their use, brought from Good."

"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."

Admissions.	Deaths.
Officers... 37..... 9	
Men... 329..... 25	
Women... 109..... 9	
Children... 141..... 29	

"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, diarrhoea 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 rupees."

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

"That the latrines and privies, in the barracks, be removed."

"That when practicable, the natives be transferred, their habitations being filthy, and their occupations for positions."

"The committee did not concur in opinion with the suggestion, that the height of the ramparts be so much raised, as to admit, that in most parts the elevation of the air within the fort walls, is so high, that there are many open spaces, and the air is so vitiated; on the sea face, the wind of a free air was considerably felt; and the hospital and other buildings, being of a rectangular form, are necessarily close in some parts."

"The exterior of the fort, more particularly the ramparts, are a deposit for all kinds of filth, brought from the hospital and streets, which is thrown out along the walls; and the whole of that line is rendered unwholesome, from its being resorted to by the native population."

"Considering the prevalence and severity of dysentery at Masulipatam, during the month of August, the committee suggested, that when the rains should take place in the cold season, in order that the troops should become acclimated before the rains commence."

The following table exhibits the comparative mortality at Masulipatam, from 1813 to 1833; and some other particulars, which were submitted to the Government Medical Board, and transmitted to Government."

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

" 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.

Years.	CORPS.	Number of months at the station.		Admitted.						Total admissions.	Died.	Average annual numerical strength.	Proportion of admissions to numerical strength.	Proportion of deaths to numerical strength.
		For 3 months.	For 6 months.	Cholera.	Dysentery.	Fever.	Hepatitis.	Other complaints.						
1813	*H. M.'s 86th Regiment...	For 3 months	For 6 months	0	67	7	182	366	6	783	46.7	0.7		
1814	" "	" "	" "	0	337	343	62	838	500	64	862	198.9	7.5	
1815	" "	" "	" "	0	159	228	23	629	639	28	623	179.5	6.3	
1816	" "	" "	" "	0	134	127	63	578	905	25	427	211.9	6.0	
1817	" "	" "	" "	0	170	152	39	652	1014	24	638	161.4	3.8	
1818	" "	" "	" "	0	39	37	19	205	399	8	766	42.4	1.1	
1819	No European Corps stationed at Masulipatam.													
1820														
1821	Madras European Regt...	For 10 months	For 10 months	50	107	945	37	548	987	62	834	118.9	6.2	
1822	do.	" "	" "	33	171	616	61	946	1837	56	1086	169.1	5.1	
1823	do.	" "	" "	11	46	182	27	337	603	16	782	77.1	2.0	
1824	2d European Regt...	" "	" "	1	21	89	18	144	264	10	293	90.1	3.4	
1825	No European Corps stationed at Masulipatam.													
1826	† European Regt...	For 6 months	For 6 months	1	1	98	146	67	1107	1419	61	515	275.0	11.8
1827	do.	" "	" "	0	62	163	53	1188	1428	60	631	299.1	10.6	
1828	do.	" "	" "	0	134	118	75	1094	1421	24	624	227.7	8.7	
1829	‡ Madras European Regt...	" "	" "	43	107	87	46	373	656	35	400	164.9	6.7	
1830	do.	" "	" "	53	157	135	101	517	963	35	451	213.9	7.1	
1831	§ do.	" "	" "	10	73	119	30	666	898	11	421	213.3	2.6	
1832	¶ H. M.'s 45th Regt...	For 9 months	For 9 months	118	281	369	61	518	1357	103	899	235.0	25.8	
1833	|| H. M.'s 62d Regiment...	For 9 months	For 9 months											

* The Europeans belonging to the garrison, including the detachment of artillery, 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 chief victims of disease. Of the 61 deaths during the year, 51 occurred in the last 6 months.

‡ With the exception of cholera, of which 20 died, the regiment was free from any severe disease.

§ 7 died of cholera.

¶ Few 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 detached on foreign service, and after its return, proceeded in a few weeks, to Secunderabad. H. M.'s 45th 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.

MASULIPATAM.

"The average annual proportion of deaths strength of all the European regiments serving the presidency, for 7 years, from January 1813 to 1819, was 5.630 per cent; and the average annual proportion of deaths to numerical strength, of the European regiments at Masulipatam, from 1813, to 1832, 3.100 per cent."

"The rate of mortality having been somewhat throughout the rest of the presidency, for given reason to conclude, that the station contained in ordinary circumstances, as under the cases which have led to the extraordinary H. M.'s 62d regiment, from the period of its being stationed at Masulipatam, it is not necessary to enter subject having been reported on at length, committee, appointed for its investigation. Board have only to observe, that the period of sickness prevailed, was more unhealthy than in the greater part of the presidency, that the cholera, from which the 62d suffered on the 2d arriving at Masulipatam, predisposed the men that the great drought, and intense heat, consequent on the rains, were also productive sources on former occasions have been known to be fatal sickness at this station."

"In a general report on the health of the European troops, dated 25th March 1809, the Medical Board at Masulipatam, though considered an unhealthy in local situation, the averages of mortality, at Fort St. George; fever however is the prevalent disease at Masulipatam, though not the one from which other stations for European troops. The rate of mortality, and casualties, is higher in 1808, than what cause the Medical Board are at a loss from the previous droughts, by which the

"vicinity of the fort, which it has been so much an object of government 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.

Cantonment. A small and shallow river, the bed of which is 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 north-east 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 sepoy

ELLORE.

houses are well situated, dry and commodious in the town are generally well constructed, description than those usually seen in Indian is much foliage around, from the streets usually planted on either side,—and there extensive shady tops in the vicinity, the circumstances, besides which there are several gardens, which though swampy, and obstructed, are not considered to be prejudicial to the inhabitants.

Climate. The climate of Ellore does materially from that of Masulipatam, although from being about 30 miles inland, the benefit of the refreshing sea breeze;—a particular during the months of April and May, is usually close and oppressive; the land breeze during May, blows with great violence, and has been known to rise to 110° in the house of 120° in officers tents.

The following account of a visit to Mullavayal village in this district, near to which the road is crossed from the journal of Dr. I. through the northern circuit, in January 18 the "Madras Journal of Literature and Science"

"The road to Mullavayal, lies along a sandy plain, is swampy during the heavy rains the village the plain is bestrewn with blocks of a very hard conglomerate sandstone, some are of a purplish color. There are also some granitic grains, in a state of decomposition; these shew a most, although refined pieces of covering of a ferruginous clay, or carbonate with the conglomerate sandstone, are scattered

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

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 prejudicial 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 circular 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-hornstone—carbonate 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 calcareous 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

and limestone, are not only varnished, as ferruginous coal, but it penetrates into this kunkar contains not a trace of quartz or siliceous matter; and that in some, in the vegetable soil, and alluvium, is more friable than that surface of the ground.

"It is in this alluvial detritus that the diamonds were taken from a heap, on the last excavation, made five years ago. From that heap, as many as 100 diamonds, as many as 1000, as might fill the hollow of the palm, other excavations has taken place since.

"All the pits are of an irregular form; general and soil to be not more than ten feet deep; and uncertain, on account of the water, with water partly filled.

"The owner who appeared an interested person, gave me the following information: he always presides over the pits, and decides whether they are formed, or are worked by the Niam. The diamond is never found in any way, attached to any of the pebbles, which are usually associated in this locality. I found loose, mixed with the other little stones, a quantity of kunkar, he said the diamonds are attached to that substance. On enquiring, which pebbles most commonly associated with it, and the indications of the existence of the diamonds, he said, from the heaps of detritus, the following are, hornstone and the kunkar.

"Notwithstanding the prodigious quantity of kunkar in this locality, the water did not appear to be saturated with it; and the substances used even in the pits.

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.

NORTHERN DIVISION

containing some water; being surrounded by the soil, in a circular manner, it has long been once a lake. The banks are formed of a sandy soil, prevailing all round the plain. A river or rivulet flows, and the pits, in the month of March, when the rains commenced, and not before.

I could see in the vicinity lie the skeletons of two or three hundred feet above the plain, and with underwood, interspersed with large trees beyond these hills, runs another range of hills, having however, the same direction.

The pits are in general excavated at the north end of the hill, and the soil that surrounds the hollow. Judging from the dry, the deepest could not be more than 14 feet deep, whatever their depth was, they were hard mass of rock. The strata penetrated for diamond, are, first, a gray, clayey, red, and a foot or two thick; below this is a bed of the following pebbles, (not including which have evidently undergone attrition, and been worn off; sandstone, similar to the one described—quartz—siliceous iron-limestone—feldspar—conglomerate sandstone, and a variety of kunkar, or concretionary limestone. From the nature of the rock, we must say a little more than is usual is obvious, namely, that the gem is the same as the calcareous stone.

numerous pieces of this concretionary rock, on the surface of the soil, and also intermixed in the diamond alluvium, it seems probable we might call them, in a horizontal position, and in the diamond alluvium, and in the pits in chalk. Many of the pebbles of quartz

"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.

General description of the district.

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 Rajahmundry.

The town of Rajahmundry is situated on the left, or northern bank of the river Godavery, in latitude $16^{\circ}, 50''$ north, and longitude $81^{\circ}, 53''$ east. 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 brah-

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mans.—The streets on the east side of the bazaar are very irregular, consisting of houses of the same size, occupied by persons of various castes, but of various opinions.

The population of the town, is about from 15 to 20,000 souls, of these are brahmins, and the remainder gentoos, musarees, and the remainder from the smallest are comparatively a poor race; numerous mosques are still standing, which show that formerly there have been both numerous and wealthy.

The distance from the sea by the river is in a direct line only 38.

The Godavery at this part runs east and south, having high banks on both sides, and a mile in breadth opposite to the town; during the monsoon, it is generally filled from bank to bank with a beautiful expanse of water, running with great rapidity, and carrying down in its course, large quantities of debris, with numerous trunks of trees, &c. depending on its banks, depends the fertility of the soil, as it is the only way of communication between the town and the country lying between the town and the river, is watered; numerous small islands are formed in its course, by the deposit left on the banks; and as they are very valuable, from the richness of superior quality, which is grown upon them, proprietors of the ground on either side, are in the habit of planting a species of grass, in the bed of the river, a view to their formation, as the grass obstructs the water in its course, and shoots up immediately from year to year, until it lengthens an island in five or six miles to the southward, the river divides into two forming a rich delta.

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.

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forming the diamond stream, most have hills north, the only ones near this place, the continuation of the sandstone range, only from Bangampally, Coosapally and of which identifies the matrix of the granite sandstone."

STATE OF RAJAHMUNDRY.

Rajahmundry, an extensive, and for the most a very fertile district of the southern coast, is the collectorates of Manipalim on the north.—Its eastern side being the bay of Bengal on the one side, and the Bay of Bengal on the other. It comprises 1000 square miles, and has a population amounting to 1,000,000. It is intersected by the river Godavery, which divides into two branches, a short distance from the chief town, and about 80 miles to the southern branch running into the bay of Bengal, and the northern one at Injaram.

The town of Rajahmundry is situated on the northern bank of the river Godavery, in latitude 16° 58' north, and longitude 81° 58' east. It is built on a high and fertile ground, and consists of two principal streets in length, running nearly due north and south, and is the chief bazaar. The houses on each side are very built of mud, and tiled; from the river there are several narrow lanes, running from the west proceed to the bank of the river in the same direction, and consist of seven lanes in all, with here and there a large open square, and a variety of the remainder of the district, and the inhabitants, who are principally brahmins.

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, cholera 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 necessities 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

by a calm. In April and May, the wind is e or west-westerly, very hot, and loaded with June it again becomes more southerly, and is influenced by the river coming down, for which occurs earlier or later, the river is expected to rise, which generally happens about June. The wind continues southerly with the October, when the north-east monsoon sets in, which the river begins to subside, and from March, the station is particularly healthy.

Fort and garrison buildings. The fort is situated to the north and is in the form of a square, the walls, and a ditch now partially filled up, are guarded by two companies of the native regt at Sambantah; the barracks, hospital, jail, lines of the detachment, are within the fort. The barracks, are situated in the south-east corner, and consist of a mud building, with a tiled roof, and is only of one story; it is 88 feet long by 18 wide, and has three doors, and five small windows.

The hospital, close to the barrack, is a building, erected on slightly rising ground under the wall of the fort; it is open and a number of trees stand in the north-west corner to give shelter to it during the rainy season.—It is 18 broad, and 18 feet high, is built of mud, and a verandah of 7½ feet wide on the west side, narrow verandah on the east, or that looking towards the barrack. There is a small confined room in the middle, which is used as a surgery, and is about 10 feet by 10 feet, immediately in front of the barrack, the interior description, and placed in a confined room, the detachment is relieved every third month, and in consequence erect good houses, or care is taken to give more comfortable, as they must be con-

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.

Fort and public buildings.

The fort is situated to the north of the town, 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 $7\frac{1}{2}$ 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 $7\frac{1}{2}$ 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 losers

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 14½ wide, having five windows and two doors, the windows being 4 by 2½ 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 13½ 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 23½ feet by 13½, 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 14½ 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 2½ 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.

Within the fort is the court-house, and a
cells for European officers.

In the following tables are shown the
es and amount of mortality which have
both classes of prisoners, during the period
1842 to 1858 inclusive; they also exhibit
feet, and point out the per centage of
deaths in sick-treated.

The average annual number
of prisoners has been 137, and
hospital 100; or 73-542 per cent; the
deaths yearly has been exactly 20, or 14
per cent.

Amongst the prisoners waiting for trial
strength of 817, not more than 428 ad-
missions, being 52-386 per cent on the
deaths have occurred, being 14-198 per

The most numerous admissions among
prisoners, have been from *fever, cholera,*
eruption fever, anasarca, atrophy, and
pusant mortality has been produced by
as the table No. 17 will clearly shew
at one view the annual admissions and
of the principal diseases, viz. *fever, ch-*
ventry, anasarca, atrophy and beril-
trated and mortality each year are also
corresponding table for the Manipal
of shewing the great proportion of the w
by these diseases; no less than 73-5 out
the whole mortality.

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.

Remarks on the tables. The average annual numerical strength of 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, eruptive 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, diarrhoea, 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.

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 barracks hospital and lines would be much improved if the walls were taken down. The magazines are small native temples, built of large slabs of sandstone and well adapted to its present use.
 The jail is a square building in the centre of the fort erected in 1806, and underwent little alteration, when two new cells were added, each 44 feet wide, having five windows and two doors, each 4 by 24 feet. The walls are 12 feet thick and proof. The old jail contains in all of 228 cells, surrounded by a wall of 12 feet in height, with 14 wards or apartments, and a enclosure for the sepoy, and press on duty; each cell with walls 18 feet high—and two four windows. The windows are 4 feet from the floor, and by 2—there are also several small cells or cells, thereby causing free ventilation. There are cells similar to those described, each 25 feet by 13 feet high, built on a level space, about 4 feet from the others, at the end of which, and under the same roof, are two small cells firmly appropriated for the same level, and on the north end, is a small room adapted as an hospital, with one door and two windows, 19 feet by 9, and 14 feet high. There are also of the same dimensions occupied by the press—and a cell 13 feet by 12, with two venetian blinds, for the confinement of civil prisoners.
 The barracks for the military guard and press, is a square building, 30 feet broad. There are two large tanks which are now useless from being out of repair.
 The fort is calculated to hold about 400 men, allowing each man a cubit of the most substantial materials, the floor is paved with large flat stones. The building is built of wood in its construction, except the walls. The situation is well raised and dry.

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.

CLASSES. DISEASES.	1872 to 1882. Aggregate strength. 1,372.				Admissions and Deaths from each class of Diseases.				Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.								
	1st Half.		2d Half.		1st Half.		2d Half.												
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.											
Fever.....	Febris int. quot.	114	6	148	7	123	6	158	11	281	27	20	481	6	049				
	" tertians.....	4	0	4	0														
	" remittens.....	5	0	2	0														
" continua.....	0	0	4	4	Cholera.....	13	7	6	4	13	7	6	4	19	11	1	384	27	624
Diseases of the abdo- minal vis- cera.....	Diarrhœa.....	45	11	20	36	86	20	210	62	296	82	21	574	27	703				
	Dysenterias acuta et chronica...	41	9	117	25														
	Hepatitis acuta et chronica...	0	0	6	0														
Diseases of the Lungs	Catarrhus.....	6	0	0	0	7	1	0	0	7	1	0	510	14	285				
	Phthisis pulmo- nalis.....	1	1	0	0														
Diseases of the Brain.	Paralysis.....	1	1	0	0	1	1	0	0	1	1	0	072	100	000				
	Amentia.....	0	0	0	0														
Eruptive fe- vers.....	Variola.....	12	1	18	3	41	1	21	3	62	4	4	518	6	451				
	Varicella.....	29	0	3	0														
Dropsy.....	Anasarca.....	9	7	22	11	9	7	22	11	31	18	2	259	56	064				
Rheumatic affections.	Rheumat acutus et chronicus..	21	3	18	1	21	3	18	1	29	4	2	242	10	255				
Venereal af- fections..	Syphilis primi- tiva.....	2	0	3	0	2	0	4	0	6	0	0	437	0	000				
	Hæmorrhoids.....	0	0	1	0														
Specific dis- eases.....	Atrophia.....	25	18	92	36	47	21	111	60	156	61	11	526	38	607				
	Berberi.....	12	3	19	4														
Diseases of the eye...	Morbiloculorum	3	0	2	0	3	0	2	0	5	0	0	364	0	000				
Do, .. Skin.	Cutis.....	4	0	3	0	4	0	3	0	7	0	0	510	0	000				
	Other diseases..	28	1	63	2	28	1	63	2	91	3	6	632	3	256				
Total..		385	68	624	131	385	68	624	131	1009	207	73	542	20	019				

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JAIL OF RAJAHMUNDRY.

No. 16.—Table exhibiting the number of Admissions and Deaths from each class of Diseases.

CLASSES. DISEASES.	1872 to 1882. Aggregate strength. 1,372.				Admissions and Deaths from each class of Diseases.				Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.								
	1st Half.		2d Half.		1st Half.		2d Half.												
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.											
Fever.....	Febris int. quot.	114	6	148	7	123	6	158	11	281	27	20	481	6	049				
	" tertians.....	4	0	4	0														
	" remittens.....	5	0	2	0														
" continua.....	0	0	4	4	Cholera.....	13	7	6	4	13	7	6	4	19	11	1	384	27	624
Diseases of the abdo- minal vis- cera.....	Diarrhœa.....	45	11	20	36	86	20	210	62	296	82	21	574	27	703				
	Dysenterias acuta et chronica...	41	9	117	25														
	Hepatitis acuta et chronica...	0	0	6	0														
Diseases of the Lungs	Catarrhus.....	6	0	0	0	7	1	0	0	7	1	0	510	14	285				
	Phthisis pulmo- nalis.....	1	1	0	0														
Diseases of the Brain.	Paralysis.....	1	1	0	0	1	1	0	0	1	1	0	072	100	000				
	Amentia.....	0	0	0	0														
Eruptive fe- vers.....	Variola.....	12	1	18	3	41	1	21	3	62	4	4	518	6	451				
	Varicella.....	29	0	3	0														
Dropsy.....	Anasarca.....	9	7	22	11	9	7	22	11	31	18	2	259	56	064				
Rheumatic affections.	Rheumat acutus et chronicus..	21	3	18	1	21	3	18	1	29	4	2	242	10	255				
Venereal af- fections..	Syphilis primi- tiva.....	2	0	3	0	2	0	4	0	6	0	0	437	0	000				
	Hæmorrhoids.....	0	0	1	0														
Specific dis- eases.....	Atrophia.....	25	18	92	36	47	21	111	60	156	61	11	526	38	607				
	Berberi.....	12	3	19	4														
Diseases of the eye...	Morbiloculorum	3	0	2	0	3	0	2	0	5	0	0	364	0	000				
Do, .. Skin.	Cutis.....	4	0	3	0	4	0	3	0	7	0	0	510	0	000				
	Other diseases..	28	1	63	2	28	1	63	2	91	3	6	632	3	256				
Total..		385	68	624	131	385	68	624	131	1009	207	73	542	20	019				

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.

CLASSES. DISEASES	1879 to 1888.								Total Admissions from each class.	Total Deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
	Aggregate strength 817.				Admissions and Deaths from each class of Disease.							
	1st Half.		2d Half.		1st Half.		2d Half.					
Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.					
Fevers.....	24	1	29	0	24	1	29	0	53	1	6.487	1.886
Cholera	10	4	28	15	10	4	28	15	35	20	4.651	57.894
Diseases of the Abdominal viscera.....	20	11	17	4	63	25	46	17	109	41	13.541	38.538
	Diarrhœa.....	43	14	29									13
Catarrhus.....	1	1	0	0	1	1	0	0	1	1	0.122	100.000
Eruptive fevers.....	5	2	32	5	24	2	39	5	63	7	7.711	11.111
	Varicella.....	19	0	7									0
Dropy.....	7	5	2	2	7	5	2	2	15	8	1.825	53.333
Rheumat acutus et chronicus..	5	0	1	0	5	0	1	0	6	0	0.734	0.000
Venereal af. fectious....	5	0	5	0	5	0	6	0	11	0	1.266	0.000
	Syphilis primitiva.....	0	0	1									0
Specific dis. cases.....	14	2	15	10	47	20	34	13	81	33	9.914	40.710
	Beri-beri.....	33	12	19									3
Morbi oculorum	1	0	1	0	1	0	1	0	2	0	0.244	0.000
.. cutis....	0	0	1	0	0	0	1	0	1	0	0.122	0.000
Other diseases..	32	0	16	2	32	0	16	2	48	2	5.875	4.172
Total..	219	58	309	56	219	58	309	58	428	116	52.326	27.190

	1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.		Total.	
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.
Convicts																						
Fever.....	93	1	27	1	11	2	25	3	82	6	6	1	2	13	0	0	0	0	37	1	251	17
Cholera.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery.....	5	1	2	0	4	1	17	4	94	34	2	0	0	0	0	0	0	0	7	1	138	47
Diarrhoea.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anasarca.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ascites.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases.	29	8	40	4	24	16	51	22	91	47	848	97	38	7	23	7	61	2	60	5	785	159
Total admissions and deaths.....	43	8	72	8	41	11	67	28	179	51	375	98	50	9	49	7	76	2	71	5	809	305
Strength each year.....	136		145		96		127		272		269		116		75		73		72		1372	
Under Trial																						
Fever.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cholera.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea.....	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anasarca.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ascites.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and deaths from these diseases.	1	1	4	2	1	0	38	24	65	29	90	32	19	2	44	11	12	1	24	4	256	106
Total admissions and deaths.....	4	1	12	4	7	0	64	25	131	25	94	32	19	2	47	12	13	1	28	4	478	116
Strength each year.....	45		64		54		112		306		318		40		78		26		59		817	
Admissions and deaths amongst both classes of prisoners.....	47	9	84	12	48	11	131	48	318	66	649	130	69	11	87	19	83	3	100	9	1427	218
Total strength each year.....	171		209		159		449		578		377		156		99		99		101		2189	
Per centage of deaths to strength.....	5	261	5	741	7	331	19	277	11	418	31	482	7	651	19	191	3	130	8	913	14	527
Per centage of sick to strength.....	27	485	40	669	32	600	37	610	55	617	74	658	44	620	87	878	83	838	99	969	65	646
Per centage of deaths to sick treated.....	19	148	14	117	22	216	36	441	40	724	27	718	15	242	21	272	3	114	9	936	22	134

Table No. 17 Fall of Rajahmundry.

No. 18 - Table exhibiting the number of Admissions & Deaths amongst the Native Troops of Rajahmundry, inclusive.

CLASS OF DISEASE	Admissions & Deaths from each class of Troops.			
	1st Batta	2nd Batta	3rd Batta	4th Batta
Cholera				
Dysentery				
Diarrhoea				
Ascites				
Beriberi				
Admissions and deaths from these diseases				
Total admissions and deaths				
Strength each year				
Per centage of deaths to strength				
Per centage of sick to strength				
Per centage of deaths to sick treated				

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

CLASSES, DISEASES.	Aggregate strength 2,213.				Admissions & deaths from each class of diseases.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.	
	1st Half.		2d Half.		1st Half.		2d Half.						
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.					
Fever.	Febrisephmera	0	0	1	0								
	intermit quot.	102	1	124	6								
	tertiana.....	2	0	12	0	109	2	150	11	259	13	11.659	
	remittens.....	2	1	7	0								
	continua.....	1	0	6	5								
Cholera.....	9	5	13	4	9	5	13	4	22	9	0.983	40.959	
Bowel com- plaints. ...	Diarrhoea.....	1	0	6	0								
	Dysentery acu- ta et chronica	10	0	12	0	11	0	18	0	29	0	1.304	0.000
Diseases of the Lungs	Catarrhus.....	2	0	7	0								
	Asthma.....	2	0	4	0	4	0	12	0	16	0	0.719	0.000
	Phthisis pulmo- nalis.....	0	0	1	0								
	Paralysis.....	1	0	0	0	1	0	0	0	1	0	0.044	0.000
Eruptive fe- vers.....	Variola.....	0	0	2	0	2	0	2	0	4	0	0.179	0.000
	Varicella.....	2	0	0	0								
Dropsies... Anasarca.....	Ascites.....	2	0	7	1	3	1	8	1	11	2	0.494	18.181
	Rheumatismus..	46	0	42	0	46	0	42	0	88	0	3.959	0.000
	Venereal af- fections...	Syphilis primi- tiva.....	28	0	30	0							
consecutiva..		0	0	1	0	83	0	41	0	74	0	3.328	0.000
Herma humo- ralis.....		5	0	9	0								
Stricture ure- thrae.....		0	0	1	0								
Specific dis- eases.....	Dracunculosis..	0	0	1	0								
	Atrophia.....	1	0	5	0								
	Scorbutus.....	1	0	0	0	10	1	37	2	47	3	2.114	6.382
	Berberis.....	8	1	30	2								
Diseases of the eye...	Morb oculorum	1	0	7	0	1	0	7	0	8	0	0.359	0.000
Do. „ Skin.	„ Cutis.....	12	0	4	0	12	0	4	0	16	0	0.719	0.000
Other diseases..		84	0	58	2	84	0	58	2	142	2	6.387	1.408
Total..		325	9	392	20	325	9	392	20	717	29	32.250	4.044

* Of this number were Phlogosis 13, ulcers 27.
Per centage of deaths to strength 1301.

General description. Samulcottah, a town and military station in the Rajahmundry district, is situated in latitude $17^{\circ}, 4''$ north, and longitude $82^{\circ}, 17''$ east, being 404 miles in a north-east direction from Madras, and $28\frac{1}{2}$ 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.

Roads. The road to Cocanada passes through a cultivated 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.

Half a mile beyond the village of Peddapore, west of Samulcottah, is a small hill called *Samula*, which consists of a rock about 100 feet in diameter, rising abruptly from the level of the plain. To the northward of Samulcottah, at a distance of 30 miles, on the line of hills, called the *Samulcottah hills*, which rise to the height of 2000 feet, several ghats or passes, are chiefly derived from the Rajahs who are in possession of them, but in some instances have originally taken the name of the objects.

These hills are extremely fertile, and cultivated by the natives of the coast; the people are a well civilized race, and some mahoms who have lately been met with in the plain speak a word of Hindostanee, or were intelligent in language, so much had it become corrupted with the aborigines; like other hill races, of course, but muscular and well formed.

There are no rivers or lakes of importance near the river to the eastward of the cantonment, except in the monsoon, when it is full from the rains, though at all times fordable.

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

Wells are numerous, but there are only a few of them, the water of which is drinkable, and some of them being even offensive to the taste, usually found at a depth of from 30 to 40 feet.

The soil is alluvial, generally good, and adapted for both wet and dry cultivation, and is

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

Eastern ghauts. 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 Hindoostance, 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 eastward 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.

Soil. 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.

Animals. 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

from diseased spines and dropsy. Venereal
great extent in the village, and second
common. Berberi is an endemic disease of
inhabitants are not so subject to it as the
of the natives do not even know the name

Baracks. The barracks or place of arms
small side of the cantonment, were erected
are built of brick and chaman, the whole being
roof. At the western extremity is a small
regimental store room, and about 200 yards
is a tank, the water of which is used by the
are a little further on, in the same direction;
built on hard gravelly and elevated ground;
has been judiciously selected, as the force of the
south-west monsoons, are broken upon the et

The following are the dimensions of the
4½ feet—length 18½ by 18½, with a verandah
wide; it has 4 windows—and 6 doors. The
space of ground, the original square of the
which are formed by the officers quarters
ground is large enough for maneuvering a
western side is the powder magazine, a box

The officers houses generally run in a north
direction, and open to the full force of the monsoon
windows of which must be kept constantly
side from which the monsoon blows. For
Elsewise to the glare and heat of the rising sun
as well as for the other reasons stated, this
judicious arrangement in a tropical country

There are fourteen houses for the officers
of these size are the private property of the

They are generally of an inferior description
built, the usual material being mud walls,
roofs. There is only one tiled dwelling

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.

Barracks. The barracks or place of arms, situated at the 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 elevated 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 $8\frac{1}{2}$ feet—length $162\frac{1}{2}$ by $18\frac{1}{2}$, 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 manœuvring 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;

No. 19.—Table exhibiting the number of admissions and deaths amongst the native Troops at Samulcottah, from 1831 to 1841, exclusive of 1832.

CLASSES. DISEASES.	Aggregate strength 7612.				Admissions and Deaths from each class of Diseases.				Total Admissions from each class.	Total Deaths from each class.	Percentage of sick to strength.	Percentage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.	Febrisephemera	57	6	71	0	681	11	617	11	1298	22	17	0.69	16	949
	„ Intermit quof.	560	7	491	3										
	„ remittens	16	0	15	0										
	„ rem. cont.	45	2	19	3										
	„ com. cont.	9	2	18	5										
Cholera	13	4	13	5	13	4	12	5	25	9	0	0.341	31	615	
Diseases of the abdominal viscera.	Diarrhoea	23	2	56	1	80	5	121	5	201	10	2	0.610	4	975
	Dysentery	25	2	25	4										
	Obstipatio	13	0	17	0										
	Dyspepsia	7	1	22	0										
	Hæmorrhoids	1	0	2	0										
Hepatitis	2	0	1	2	2	0	1	2	3	2	0	0.010	65	866	
Diseases of the Lungs	Catarrhus	7	0	19	1	20	2	38	4	56	6	0	0.761	19	341
	Phthisis pulmonalis	0	0	4	3										
	Pneumonia	3	0	6	0										
	Dyspnoea	2	0	4	0										
Diseases of the Brain	Apoplexia	1	1	1	1	11	0	12	1	23	3	0	0.302	13	043
	Epilepsia	1	0	0	0										
	Paralysis	1	0	3	0										
	Asentia	4	1	2	0										
Mania	4	0	6	0											
Eruptive fevers.	Varicella	21	2	9	1	50	3	34	1	84	4	1	1.403	4	73
	Rubeola	22	0	4	0										
	Erysipelas	7	1	20	0										
Diopsies	Anasarca	5	1	6	0	7	2	9	1	16	3	0	0.210	18	750
	Ascites	2	1	3	1										
Rheumatismus	217	1	289	1	217	1	230	1	456	2	5	0.989	0	438	
Venereal affections.	Syphilis primitiva	109	0	91	1	143	0	143	1	285	1	3	0.756	0	349
	„ consecutiva	2	0	7	0										
	Gonorrhoea	20	0	21	0										
	Hernia humoralis	10	0	23	0										
	Stricture urethrae	1	0	1	0										
Specific diseases.	Dracunculosis	1	0	4	0	29	2	92	11	121	13	1	0.589	10	743
	Aitrophia	2	1	14	1										
	Scrophula	2	0	5	0										
	Herberia	21	1	68	10										
Lepra	1	0	1	0											
Diseases of the eye.	Morbi oculorum	19	0	35	0	19	0	35	0	54	0	0	0.709	0	000
	Do. „ Skin.	198	0	138	0	198	0	138	0	336	0	4	0.413	0	080
Other diseases.	655	0	495	3	495	0	495	3	991	3	12	0.512	0	312	
Total.	1936	32	1987	45	1936	32	1987	45	3923	78	51	0.535	1	948	

* Of this number were Phlogosis 818.
Ulcus, 144 and 1 death.
Per centage of deaths to strength 1.924.

NORTHERN DIVISION
 exceedingly moderate, 15 Rupees per annum
 monthly charge.
 The ground gradually rising towards
 the eastward, from whence there is an
 view of the sea, the building is situated in an
 objectionable situation.
 The hospital was erected about the year 1796,
 and is built of burnt brick and chert,
 roof. The ground from the front of the
 gradually to its eastern angle, and in view
 of the rain water from the square, sweeps
 moreover rather close to the officers quarters,
 over the men lines and barracks. It contains
 10 patients, and a surgery. The following are
 height 8½ feet, length 56, and breadth, 16;
 and 2 doors; the surgery is 14½ long, 16
 high, and has one door and a window.
 can accommodate 30 patients, and is situate
 so badly situated, none of the sick have
 other any disease, which could be attended
 About 150 yards to the north, stands a well
 two rooms, each for one prisoner.
 round is to the north of the regimental lines
 from them by a road; it is open, has a
 is well adapted for the purpose, being sufficient
 to the barracks and the officers quarters.
 table shows the nature and amount of the
 mortality which have occurred amongst the
 during a period of ten years, from 1831 to 1841.

miles, near the village of Wootadah. The Sharadah, rises in the hills west of the Vizianagram district, and runs south-east 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 Vizianagram, and runs east to Bimlipatam, where it joins the sea. The Chin-pavuttah 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 Dhurmavaram. 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 miles 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.

Months.	Average height of Thermometer.	Average height of Bar.	Remarks.
January.....	70° 0'	29° 0'	The temperature is at the lowest about the 16th, the wind being generally from the north-west, and the weather serene, with heavy dews, weather serene, rain and lightning, almost unknown. Not so cold as January though pleasant. Heavy dews, and occasional fogs throughout the month, the sky very clear, squally or lightning, wind north-east, with frequent changes to the south-east.
February.....	73° 0'	29° 1'	The along-shore or north-east wind sets in during this month, and renders the air damp and sultry. Sky continues clear, little or no rain, the south-west, and blows with considerable violence, and continues, with heavy gales, throughout the month. Land winds blow for about three days in the month, and usually alternate with the sea breeze. The south-west rains begin to set in about the first week and become more frequent towards the end of the month, and the sky is generally cloudy. Large masses of flying clouds seen in every direction. No sea breeze. Lightning and thunder occasionally.
March.....	79° 0'	29° 0'	Wind more westerly, and the rains are heavier. Thunder and lightning occur more frequently. The heat is much reduced, but the calms peculiar to this month, are very frequent. The heat is much reduced, but the calms peculiar to this month, are very frequent. The heat is much reduced, but the calms peculiar to this month, are very frequent.
April.....	82° 0'	29° 0'	The north-east rain and appearance of the weather, continue the same as in August, until about the 13th, when the north east rains set in partially, and become heavy towards the end of the month, thunder and lightning are frequent; oppressive calms still occur.
May.....	87° 0'	29° 9'	The north-east rains continue with great force throughout this month. The wind blows very fresh, sometimes amounting to a gale, and the weather is very serene. Thunder and lightning occur in every direction. The clouds assume a heavy appearance. The common code about the middle of this month.
June.....	87° 0'	29° 8'	The sky assumes a clear and serene appearance, and the weather becomes pleasant. The wind still from the north-east and east. The sky has a clear and tranquil aspect.
July.....	82° 0'	29° 9'	Rain and lightning are seldom known, but towards the latter end of the month heavy clouds are often seen.
August.....	85° 0'	29° 9'	
September.....	83° 0'	29° 9'	
October.....	79° 0'	29° 0'	
November.....	77° 0'	29° 1'	
December.....	75° 0'	29° 1'	

Vegetable Products. The 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 a dye called Vapuntagoondah, grow wild on the hills, in great abundance.

Manufactures and trades. The manufactures are chiefly punjums, and coarse cotton cloths—and from the latter, tents of



- a. Arsenal.
- b. Zillah Court House.
- c. Pay Office.
- d. Magazine.

VIZAGAPATAM.

of a superior description are made; the exports however of late years fallen much into disrepute being superseded by cloth from the East India Company to a small extent is also manufactured.

Vizagapatam has long been celebrated for its manufactures, in silver, ivory, and brass, metal boxes, jewellery and other articles being made up in considerable quantities.

Numbers of cooly emigrants to the Madras Presidency are furnished from this district, and it has for its landy race of palanquin bearers, for the Madras Presidency are chiefly supplied with servants.

The only Military stations in the collection are the residence of the principal civil officers, and Vizagapatam; which is usually and occasionally by two native regiments of Godevans or native foot artillery.

The station of Vizagapatam is on the coast, in north latitude 16° 40', longitude 83° 40', in a small bay, the eastern part of which is bounded by a remarkable hill, so high in height, called the "Dolphin's nose;" at the base of this hill is the village of Wallair; the bay being about six miles; see plan annexed.

The station consists of a fort, situated in the western part of the bay, being separated from the sea by a small river, which forms a bar, and is not possible for vessels of from 100 tons to pass during spring tides. Within the fort are the quarters for the European troops, the officers' quarters, and various public buildings. The fort is in great want of repair, the ramparts being partly undermined by the sea, and

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.

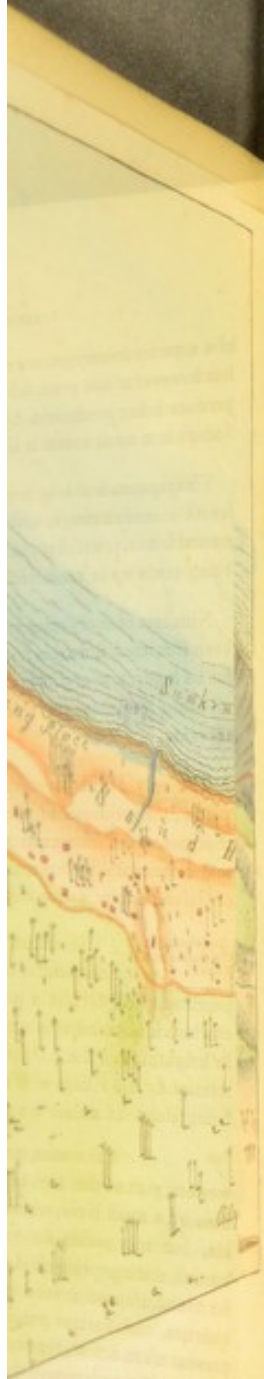
Vizagapatam has long been celebrated throughout India for its manufactures, in silver, ivory, and buffaloe-horn; ornamental boxes, jewellery and other articles in great variety, being made up in considerable quantities.

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 and Town. The station of Vizagapatam is situated on the coast, in north latitude $17^{\circ} 41''$, and east longitude $83^{\circ} 42''$, 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 across the bay being about six miles; see plan annexed.

Fort. 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



*General
Zillah Court House
Jury Office
Magistrate*

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 upstairs 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 *Regimental lines.* 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 sepoy's 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

the year; on the west is the village of *Chilisa* washing ground, and the principal one that used by the natives for the purpose

The soil in the immediate vicinity on the higher ground, is barren, and principally a reddish gravel, with here and there large hard disseminations of grey granite, but in low and unproductive loam.

The barracks and hospital are on the same line, at the upper part of the former in the centre, and the latter 53. The barracks contain four apartments, appropriated for the regimental stores, one as treasury, and the other two, as places of art

The hospital consists of one long ward, enclosed by an elevated open verandah ten feet being partitioned off for a surgery. The ward is 14½ in length, and has six doors; there are also two small ventilators placed near the roof, which is sloping and it is capable of containing about 50 patients; accommodation is insufficient for the sick period for their use.

The jail first occupied as such was merely a Dutch factory; it is situated within enclosed site. Some time ago (in 1839) a building was added for the accommodation of the convicts, and is now used exclusively as the jail. It is situated on the north-west side, with a row of cells originally here prisoners, but which have been two cells, one for female prisoners, the other for hospital. The dimensions of the cells are 10 feet by 8, with four windows, two 22 feet by 10, and one 12 feet by 22, with

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.

Soil. The soil in the immediate vicinity of the station, 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 hospital. 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 14½ 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.

Jail. 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

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 occurred 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 907 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.

JAIL OF VIZAGAPATAM

Table exhibiting the number of Admissions and Deaths from each class of Disease amongst the convicted Prisoners, for a period 1833 to 1841 inclusive.

CLASSES OF DISEASE	Aggregate Strength			Admissions and Deaths from each class of Disease		
	1833	1834	1841	1833	1834	1841
Smallpox	10	15	20	10	15	20
Measles	20	30	40	20	30	40
Scarlet fever	5	10	15	5	10	15
Dysentery	15	25	35	15	25	35
Diarrhoea	10	20	30	10	20	30
Cholera	5	10	15	5	10	15
Typhoid	10	20	30	10	20	30
Other diseases	10	20	30	10	20	30
Total	1143	1109	44	27.025	3.486	

* Of the number were Philop...
 ...
 ...
 Total...
 Per centage of deaths to strength...

JAIL OF VIZAGAPATAM.

No. 20.—Table exhibiting the number of Admissions and Deaths amongst the convicted Prisoners, for a period of nine years, from 1833 to 1841 inclusive.

CLASSES. DISEASES.	Aggregate strength 1843.				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.							
Fever.	Febtilisphemera	66	2	77	1	102	5	174	2	286	7	24	196	2	50
	" Int. quot.	24	1	105	0										
	" remittens.	1	1	1	1										
	" con. cont.	1	1	0	0										
Cholera	1	0	9	3	1	0	9	3	10	3	0	571	30	100	
Diseases of the Abdominal viscera.	Diarrhoea	15	3	28	2	27	6	66	9	103	15	9	911	14	563
	Dysenteria	18	2	25	6										
	Dyspepsia	4	1	8	0										
Diseases of the Lung.	Catarrhus	2	0	3	1	7	2	7	1	14	3	1	221	21	423
	Asthma	4	2	4	6										
	Pneumonia	1	0	0	0										
Do. of the Brain.	Epilepsia	0	0	1	0	1	0	2	0	3	0	0	202	0	000
	Paralysis	1	0	1	0										
Eruptive fevers.	Varicella	0	1	11	1	42	1	12	1	54	2	4	781	3	703
	Varicella	47	0	1	0										
Anasarca	1	2	4	1	1	2	4	1	5	3	0	437	69	000	
Rheumatismus	31	1	30	1	31	1	30	1	64	3	5	509	3	125	
Venereal affections.	Syphilia prim.	4	0	4	0	6	0	10	0	16	0	1	399	0	000
	" Consecutiva	1	0	1	0										
	Gonorrhoea	0	0	2	0										
	Hernia humor.	1	0	2	0										
Stricture urethrae	0	0	1	0											
Specific diseases.	Atropia	4	1	1	1	8	2	7	4	15	6	1	312	40	000
	Serofidula	1	0	1	0										
	Berberi	3	1	5	3										
Diseases of the eye.	Morbi oculorum	6	0	11	0	6	0	11	0	17	0	1	487	0	000
	Do. Skin	45	1	47	0										
Other diseases.	205	1	231	1	205	1	231	1	436	2	28	145	0	456	
Total.	495	21	614	23	495	21	614	23	1100	41	97	525	3	957	

* Of this number were Phlogosis... 185
 " " Ulcers... 67
 " " Pusilio... 156

Total... 317

Per centage of deaths to strength... 3.96

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.

CLASSES. DISEASES.	Aggregate strength 432.				Admissions and Deaths from each class of Diseases.				Total Admissions from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
	1st Half.		2d Half.		1st Half.		2d Half.				
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.			
Fever.....	Febris ephamera	14	1	14	0						
	intermit quot.	3	0	0	0						
	remittens.....	0	0	2	0	16	2	17	0	25	2 7/325
	com. cont.....	1	1	0	0						
	Cholera.....	3	2	0	0	3	2	0	0	3	2 0/351
Diseases of the abdominal viscera.....	Diarrhoea.....	7	0	2	1						
	Dysenteria.....	4	1	0	2						
	Hæmorrhoids.....	1	0	0	0	13	1	7	3	20	4 4/625
	Dyspepsia.....	1	0	0	0						
Diseases of the Lungs.....	Asthma.....	0	0	1	0						
	Phthisis pulmonalis.....	0	0	1	1	0	0	2	1	2	1 0/452
Diseases of the Brain.....	Paralysis.....	0	0	1	1						
	Amentia.....	2	0	3	0	2	0	4	1	6	1 1/388
Eruptive fever.....	Varicella.....	1	1	3	1	19	1	6	1	25	2 5/287
	Varicella.....	18	0	3	0						
	Anasarca.....	0	0	1	1	0	0	1	1	1	0/231
	Rheumatismus.....	2	0	5	0	3	0	5	0	8	0 1/351
	Syphillis primitiva.....	2	0	1	0	2	0	1	0	3	0 0/294
Specific diseases.....	Atrophia.....	8	1	3	2	9	1	9	6	14	7 4/168
	Berberi.....	1	0	6	4						
Diseases of the Skin.....	Morbi cutis.....	26	0	18	0	26	0	18	0	44	0 10/185
	Other diseases.....	25	0	13	1	25	0	19	1	44	1 10/185
Total.....		118	7	89	14	118	7	89	14	207	21 47/419

* Of this number were Phlogosis 3, Ulcus.... 17 and 1 death. Per centage of deaths to strength 4 861.

No. 22.—Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Vizagapatam, for nine years, from 1833 to 1841, inclusive of the 1st half yearly period of 1831, and the 2d half year of 1841.

CLASSES. DISEASES.	Aggregate strength 700.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
	1st Half.		2d Half.		1st Half.		2d Half.				
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.			
Fever.....	Febris ephamera	14	1	14	0						
	intermit quot.	3	0	0	0						
	remittens.....	0	0	2	0	16	2	17	0	25	2 7/325
	com. cont.....	1	1	0	0						
	Cholera.....	3	2	0	0	3	2	0	0	3	2 0/351
Diseases of the abdominal viscera.....	Diarrhoea.....	7	0	2	1						
	Dysenteria.....	4	1	0	2						
	Hæmorrhoids.....	1	0	0	0	13	1	7	3	20	4 4/625
	Dyspepsia.....	1	0	0	0						
Diseases of the Lungs.....	Asthma.....	0	0	1	0						
	Phthisis pulmonalis.....	0	0	1	1	0	0	2	1	2	1 0/452
Diseases of the Brain.....	Paralysis.....	0	0	1	1						
	Amentia.....	2	0	3	0	2	0	4	1	6	1 1/388
Eruptive fever.....	Varicella.....	1	1	3	1	19	1	6	1	25	2 5/287
	Varicella.....	18	0	3	0						
	Anasarca.....	0	0	1	1	0	0	1	1	1	0/231
	Rheumatismus.....	2	0	5	0	3	0	5	0	8	0 1/351
	Syphillis primitiva.....	2	0	1	0	2	0	1	0	3	0 0/294
Specific diseases.....	Atrophia.....	8	1	3	2	9	1	9	6	14	7 4/168
	Berberi.....	1	0	6	4						
Diseases of the Skin.....	Morbi cutis.....	26	0	18	0	26	0	18	0	44	0 10/185
	Other diseases.....	25	0	13	1	25	0	19	1	44	1 10/185
Total.....		118	7	89	14	118	7	89	14	207	21 47/419

* Of this number were Phlogosis 3, Ulcus.... 17 and 1 death. Per centage of deaths to strength 4 861.

No. 22.—Table exhibiting the number of Admissions and Deaths amongst 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.

DISTRICT DIVISION
 TABLE OF VIZAGAPATAM
 Exhibiting the number of Admissions and Deaths amongst 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.

CLASSES. DISEASES.	Aggregate strength 7200.				Admissions & deaths from each class of disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.	
	1st Half.		2d Half.		1st Half.		2d Half.						
	Ad.	De.	Ad.	De.	Ad.	De.	Ad.	De.					
Fever.	Febris ephemera	101	0	356	2								
	.. intermit quot.	218	0	614	6								
	.. remittens	12	0	40	0	357	7	1065	9	1422	16	19.436	1.125
	.. com. cont.	5	1	3	0								
Cholera	21	0	45	1									
Cholera	19	13	23	10	19	12	21	10	41	22	0.500	53.858	
Diseases of the Abdominal viscera.....	Diarrhoea	19	0	33	0								
	Dysenteria	25	4	50	5								
	Obstipatio	8	1	11	0	69	5	134	5	200	10	2.773	4.928
	Dyspepsia	17	0	37	0								
	Splenitis	0	0	3	0								
Hepatitis	7	1	3	1	7	1	5	1	10	2	0.136	20.000	
Catarhus	28	0	19	1									
Asthma	9	0	19	3									
Diseases of the Lungs.....	Phthisis pulmonalis.....	1	0	1	1	48	2	70	5	118	7	1.612	5.932
	Pneumonia.....	3	1	8	1								
	Dyspnoea.....	7	1	25	0								
Diseases of the Brain.....	Apoplexia.....	1	1	5	2								
	Epilepsia.....	0	0	1	0								
	Paralysis.....	3	2	7	0								
	Amentia.....	1	0	0	0	10	5	26	4	35	9	0.491	25.000
	Mania.....	2	1	10	0								
Tetanus.....	1	1	2	1									
Hydrophobia.....	0	0	1	1									
Eruptive fevers.....	Varicella.....	4	0	4	0	35	0	12	0	47	0	0.610	0.000
	Varicella.....	30	0	7	0								
	Rubecula.....	1	0	1	0								
Dropsies.....	Anasarca.....	7	2	4	4	10	4	6	6	16	10	0.218	82.500
	Ascites.....	3	2	2	2								
Rheumatismus.....	179	2	277	2	179	2	277	2	456	4	6.219	0.877	
Venereal affections.....	Syphilis primitiva.....	83	0	109	1								
	.. consecutiva.....	9	0	5	1								
	Gonorrhoea.....	30	0	34	0	148	0	177	2	325	2	4.439	0.615
	Hernia haemorrhoidalis.....	21	0	25	0								
Stricture urethrae.....	5	0	4	0									
Specific diseases.....	Dracunculosis.....	2	0	1	0								
	Airphia.....	17	0	8	2								
	Scorbutus.....	0	0	2	0	30	1	28	7	58	8	0.792	13.723
	Serophulia.....	4	0	1	0								
Berberi.....	5	1	16	5									
Lepra.....	1	0	0	0									
Diseases of the eye.....	Morbi oculorum	19	0	74	0	19	0	74	0	93	0	1.270	0.000
Do. „ Skin.....	„ Cutis.....	176	0	191	0	176	0	191	0	367	0	5.013	0.000
Other diseases.....		329	1	570	6	329	1	570	6	899	7	12.281	0.773
Total.....		1635	40	2635	57	1436	40	2655	57	4091	97	55.887	2.371

* Of this number were Phlogosis 260 and 1 death.
 Ulcus... 317
 Per centage of deaths to strength 1.925.
 1

No. 23.—Table exhibiting the number of admissions and deaths amongst the Veteran in the Carnatic European Veteran Battalion from 1829 to 1841 inclusive.—Stationed at Vizagapatam.

CLASSES. DISEASES.	Aggregate strength 2937.]				Admissions and Deaths from each class of Disease.				Total admissions from each class	Total deaths from each class	Per centage of sick to strength	Per centage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.	Febris ephemera	29	0	26	1	81	4	73	3	154	7	5	242	4	543
	„ intermittens	39	1	38	0										
	„ remittens	12	2	4	1										
	„ continua	10	1	5	1										
Cholera	10	7	13	8	10	7	13	8	23	15	0	783	65	217	
Diseases of the abdominal viscera.	Diarrhoea	29	4	25	0	419	38	426	30	845	68	28	770	8	683
	Dysenteria acuta et chronica	130	23	90	21										
	Obstipatio	2	0	8	0										
	Dyspepsia	211	9	267	2										
	Hæmorrhoids	44	2	31	2										
Splenitis	3	0	4	0											
Hepatitis	49	2	66	4	49	2	66	4	115	6	3	915	5	217	
Diseases of the Lungs & Heart.	Catarrhus	11	2	9	0	45	9	71	8	1	6	3	949	14	655
	Asthma	13	2	44	5										
	Phthisis pulmonalis	4	4	2	2										
	Pneumonia	12	1	8	1										
	Dyspnoea	7	0	8	0										
Diseases of the Brain.	Apoplexia	10	4	17	13	235	31	184	25	409	44	13	925	11	245
	Epilepsia	6	0	5	0										
	Paralysis	37	3	47	9										
	Delirium trem.	18	5	20	1										
	Ebrietas	152	9	92	1										
	Mania	2	0	0	0										
Hydrophobia	0	0	1	1											
Eruptive fevers.	Variola	1	0	1	0	1	0	3	0	4	0	0	136	0	000
	Erysipelas	0	0	2	0										
Dropsies.	Anasarca	11	2	11	2	15	2	24	7	39	9	1	287	33	075
	Ascites	4	0	13	5										
Rheumatismus acutus et chronicus.	129	2	119	3	130	2	119	3	239	5	8	157	2	092	
Venereal affections.	Syphilis primitiva	17	1	13	1	83	1	66	1	155	2	5	277	1	290
	„ consecutiva	3	0	3	0										
	Gonorrhoea	57	0	26	0										
	Hæmorrhoids	8	0	7	0										
Stricture urethrae	5	0	7	0											
Specific diseases.	Draconculus	1	0	0	0	23	6	46	10	69	16	2	349	23	188
	Atrophia	8	1	18	2										
	Scorbutus	2	0	1	0										
	Berberi	12	5	30	7										
Lepra	0	0	1	0											
Diseases of the eye.	Morb oculorum	2	0	8	0	8	0	8	0	16	0	0	544	0	000
	Do. „ Skin.	11	0	27	0	11	0	24	0	33	0	1	183	0	000
Other diseases.	287	4	284	9	287	4	294	2	511	6	17	398	1	174	
Total.	1383	96	1346	101	1383	96	1345	101	2728	197	92	813	7	225	

Per centage of deaths to strength 6.707.

VIZAGAPATAM.

CANTONMENT OF VILIAN

Vizianagram is situated in the... longitude 83° 32'; being 12 miles... The garrison at present consists of... and a detachment of foot at

At the distance of one mile from the... ground sloping gently to the... village of Vizianagram, and by... which contains water at... The inhabitants of the village are... and the fort is entirely... of the Rajah. The... the most of which... with the corajin leaf... The... by private for

The surrounding country... under cultivation, and the soil is a deep... The crops raised are chiefly rice... of the other ordinary productions of the... to be had.

The climate is generally... are less so than... in a northerly direction... connected with the eastern... fever is always very... with trees, but as... patches of scrub

The climate from September till March... so much so, as to... and Vizagapatam... The intervening... being visible in

CANTONMENT OF VIZIANAGRUM.

Description of the cantonment. Vizianagram is situated in north latitude $18^{\circ} 2''$, and east longitude $83^{\circ} 32''$; 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 Vizianagram, 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 tolerable state of repair. The roads in the vicinity are excellent, being kept up by private funds.

Soil. 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

NORTHERN DIVISION

Showing the number of admissions and deaths amongst the Carnatic European Veterans Battalion from 1812 to 1820.—Stationed at Vizagapatam.

Admissions (except 1812)		Deaths from each cause of disease		Total	Average of Admissions	Average of Deaths
No. Adm.	No. Disch.	No. Adm.	No. Disch.			
1812	100	100	100	100	100	100
1813	100	100	100	100	100	100
1814	100	100	100	100	100	100
1815	100	100	100	100	100	100
1816	100	100	100	100	100	100
1817	100	100	100	100	100	100
1818	100	100	100	100	100	100
1819	100	100	100	100	100	100
1820	100	100	100	100	100	100

The average of deaths is amongst 1/100.

No. 24.—Table exhibiting the number of Admissions and Deaths amongst the Native Troops stationed at Vizianagram, from 1829 to 1840, exclusive of 1830 and 1831.

CLASSES. DISEASES.	Aggregate strength 1833.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Total Deaths from each class.	Percentage of sick to strength.	Per centage of deaths to sick treated.	
	1st Half.		2d Half.		1st Half.		2d Half.						
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.					
Fever.	Febris ephemera	362	1	822	0								
	" Int. quot.	1861	29	2360	17								
	" remittens.	59	7	179	10	2143	40	3424	33	5083	73	47-771	1-307
	" com. cont.	9	3	33	5								
Cholera.	72	29	72	29	72	29	72	29	144	58	1-100	40-277	
Diseases of the Abdominal viscera.	Diarrhoea	54	4	64	0								
	Dysenteria acuta et chronica.	89	8	141	10								
	Ostipatio.	18	0	87	0	277	15	440	12	717	27	5-462	3-705
	Dyspepsia.	103	3	190	1								
	Hemorrhoids.	2	0	0	1								
	Splenitis.	5	0	2	0								
Hepatitis.	5	1	13	3	5	1	18	3	18	4	0-127	22-222	
Diseases of the Lungs.	Catarrhus.	18	1	36	1								
	Asthma.	29	2	50	2								
	Phthisis pulmonalis.	3	3	6	3	57	9	111	7	168	16	1-297	9-523
	Pneumonia.	6	3	2	0								
Dyspnoea.	3	0	12	1									
Do. of the Brain.	Apoplexia.	0	0	4	3								
	Epilepsia.	4	0	2	0								
	Paralysis.	4	1	6	1	15	3	24	5	39	8	0-928	10-512
	Mania.	0	0	3	0								
Tetanus.	6	1	8	0									
Tetanus.	1	1	1	1									
Eruptive fevers.	Varicella.	13	0	2	0								
	Varicella.	95	0	15	0	117	0	27	0	144	0	1-163	0-400
	Erysipelas.	6	0	5	0								
	Rubella.	4	0	2	0								
Dropsies.	Anasarca.	9	0	0	0	13	2	7	2	20	4	0-152	29-000
	Ascites.	4	2	2	2								
Venereal affections.	Rheumat. acutus et chronicus.	453	2	594	13	453	2	594	13	1047	15	8-021	1-432
	Syphilia pris.	111	1	140	8								
	" Consecutiva.	0	0	4	0								
	Gonorrhoea.	39	0	66	0	186	1	246	4	432	5	3-209	1-157
Hernia humor.	29	0	33	0									
Siccitas urethrae.	7	0	3	1									
Specific diseases.	Dracunculosis.	6	0	2	0								
	Atrophia.	14	2	21	8								
	Berberi.	170	18	268	32	144	20	325	40	469	60	3-593	12-737
	Lepros.	1	0	1	0								
Scrophula.	3	0	3	0									
Diseases of the eye.	Morbi oculorum.	58	0	103	1	58	0	103	1	161	1	1-233	0-601
	" cutis.	416	0	343	1	416	0	342	1	758	1	5-827	0-131
	Other diseases.	946	2	1075	6	946	3	1075	6	1021	9	15-483	0-445
Total.	4909	175	6813	156	4908	125	6813	156	1172	211	80-7-5	2-397	

* Of this number were Phlogosis... 594 and 2 deaths.
 Ulcus... 351 " " "
 Per centage of deaths to strength... 2-152.

GANJAM DISTRICT.

General description of the district.

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 $18^{\circ}15'$, and $20^{\circ}15'$ 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.

Population and Extent.

The country lying between the coast and 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.

Rivers and Water.

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

GANJAM DISTRICT.

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

The Chilka lake may be considered to be about 50 miles in length, by a narrow neck on the north-west side of which, the channel abruptly terminates; and on its eastern side it is separated from the sea by a long narrow isthmus nearly a mile in breadth.

The entrance through this bank from the bay of Masikipatan on the northern side, is about a mile wide, the ferry is however unsafe, especially during the north-east monsoon, when the waves usually prefer the circuitous route to the borders of the lake.

This extensive sheet of water is divided into several beautifully wooded islands, which abound in the vicinity of the coast, and which, before Ganjam became so unhealthily as to be wholly deserted, was the frequent resort of the British, during the hot months, houses having been erected on its margin.

The great northern road from Masikipatan, runs through the entire length of the district to the coast, and is in general within a short distance of the sea.

The civil and military stations are Masikipatan, Bhataspore, Rasool-coudah, and Ichaspore; Ganjam from which it is separated by a narrow channel, having been completely deserted since the

malignant epidemic fever broke out, which carried off a large proportion of its inhabitants, both European and native, and in consequence of which, the courts and establishments, were removed from thence to

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.

Chief Stations in the district. 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.

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 sepoy and inhabitants of the town use the river water, which is considered good for culinary purposes.

The Chicacole river or Nagglawdy.

The river has its source in the hills, near 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

CHICACOLE

chiefly composed of sand, in which there is a quantity of quick sands. There are but very few hills in the immediate vicinity of the town, but several of considerable magnitude are to be found within five miles of which are covered with rank vegetation in dry seasons, when they are almost dried up, and become sources of miasma.

The periods of the year when exhalations are most abundant, is after the termination of the monsoon, when the winds from the sea prevail. The climate is salubrious; the number of the inhabitants is about fifty thousand, the average number of houses, varying from five to fifteen.

During the cold months of the year, fogs are common in the mornings and evenings. Winds from April to September, are from the south-east, and from October to March, from the north-east; the latter is cold, and that from the sea and along the bed of the river, with it much fine sand which accumulates in great quantities about the town; to such an extent in some places that the old Mahomedan mosque has become nearly obscured.

Manufactures. Coarse cloths and muslins are manufactured, the latter of a very superior quality, and are to be met with in all the parts of the country.

The vegetables commonly in use are in great abundance, and the labour is well furnished with native labourers, who are considered skilful, though very ignorant of European medicine; and there is a class of people who bring down from the hills, honey, bees wax, &c.

The roads are of the worst quality, the exception of one, which has lately been constructed, and those in the neighbourhood

chiefly composed of sand, in which there are numerous quick sands. There are but very few tanks in 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 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.

Manufacture&c. 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 con-

tain pools of stagnant water. The building surrounded on every side, called the parade ground, the main lines being without the fort, at the distance of 100 yards in the south-west direction; the fort and regularly built.

The hospital which is intended both for the regiment, and the garrison details, stands on a level ground. It is sufficiently large and roomy to accommodate a row of cots, has a good surgery, a separate ward for the sick, and a small guard room. At the back of the building is a wall belonging to the premises running parallel with it, by which a free circulation of air in that direction, is somewhat promoted.

The jail is situated near the river, and is separated from the cantonment; it is a substantial building, and is rather low, not being more than nine feet high, and is divided into several courts, for the various classes of prisoners, and altogether consists of ten cells; their length being 24 feet by 18, and 8 feet high, with two doors to each; the whole is considered airy, and there is an ample supply of good provisions. The hospital is 30 feet by 15 feet high, and is also well ventilated. See the end of the report for diet, clothing, labour &c.

This jail was closed in December 1839, and removed to Vangapatam; but it is deemed here the usual tables of disease for the ten years 1830 inclusive. In table No. 27 are exhibited the admissions and deaths, from six of the principal diseases, *fever, cholera, dysentery, anasarca, small-pox, and measles*, and the per centage is also given for the purpose of ascertaining the state of the health of the prisoners in comparison with the others in the division. It will be seen that the number of deaths from these six diseases is 7-8ths of the whole mortality, the total de-

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.

Jail. 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 CHICAGO.

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

CLASSES. DISEASES.	1819 to 1828, Aggregate strength 1673.				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.....	Febris ephemera	0	0	0	0	178	6	241	3	419	9	25	-644	2	-147
	" intermit quot.	163	1	230	2										
	" tertiana.....	2	0	1	0										
	" remittens.....	13	5	9	1										
" continua.....	0	0	1	0											
Cholera.....	19	19	16	11	19	12	16	11	35	23	2	-602	63	-714	
Diseases of the abdominal viscera.....	Diarrhoea.....	25	2	38	4	55	8	73	12	128	21	7	-650	15	-405
	Dysenteriacuta et chronica.....	29	5	35	9										
	Obstipatio.....	0	0	0	0										
	Hepatitis acuta.....	0	0	1	0										
Diseases of the Lungs.....	Catarrhus.....	2	0	0	0	6	0	2	0	8	0	0	-478	0	-900
	Asthma.....	2	0	2	0										
	Pneumonia.....	2	0	0	0										
Diseases of the Brain.....	Epilepsia.....	2	0	1	0	9	0	7	0	16	0	0	-956	0	-900
	Paralysis.....	1	0	0	0										
	Amantia.....	6	0	6	0										
	Mania.....	0	0	0	0										
Eruptive fevers.....	Variola.....	14	3	1	1	37	3	3	1	40	4	2	-386	10	-900
	Varicella.....	23	0	1	0										
	Erysipelas.....	0	0	1	0										
Rheumatismus et chronicus..	82	1	70	6	82	1	70	6	152	1	9	-685	0	-657	
Syphilis primitiva.....	4	0	5	0	4	0	5	0	9	0	0	-507	0	-900	
Specific diseases.....	Atrophis.....	1	0	4	4	64	14	66	21	130	35	7	-770	36	-923
	Eritrherg.....	57	12	58	16										
	Lepros.....	2	1	2	0										
	Dracunculis.....	0	0	0	0										
Scrophula.....	3	1	2	1											
Diseases of the eye.....	Morbi oculorum	4	1	6	1	4	1	6	1	10	2	0	-597	20	-900
	Do " Siku " cutis....	41	0	38	0	41	0	38	0	79	0	4	-723	0	-900
Other diseases..	205	1	188	0	206	1	188	0	394	1	23	-500	0	-253	
Total..	705	46	716	50	706	48	716	50	1421	96	84	-837	6	-755	

JAIL OF CHICAGO.

No. 26.—Table exhibiting the number of Admissions and Deaths of the Prisoners under trial from each class of disease.

CLASSES. DISEASES.	1819 to 1828, Aggregate strength 1673.				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.....	Febris ephemera	0	0	0	0	178	6	241	3	419	9	25	-644	2	-147
	" intermit quot.	163	1	230	2										
	" tertiana.....	2	0	1	0										
	" remittens.....	13	5	9	1										
" continua.....	0	0	1	0											
Cholera.....	19	19	16	11	19	12	16	11	35	23	2	-602	63	-714	
Diseases of the abdominal viscera.....	Diarrhoea.....	25	2	38	4	55	8	73	12	128	21	7	-650	15	-405
	Dysenteriacuta et chronica.....	29	5	35	9										
	Obstipatio.....	0	0	0	0										
	Hepatitis acuta.....	0	0	1	0										
Diseases of the Lungs.....	Catarrhus.....	2	0	0	0	6	0	2	0	8	0	0	-478	0	-900
	Asthma.....	2	0	2	0										
	Pneumonia.....	2	0	0	0										
Diseases of the Brain.....	Epilepsia.....	2	0	1	0	9	0	7	0	16	0	0	-956	0	-900
	Paralysis.....	1	0	0	0										
	Amantia.....	6	0	6	0										
	Mania.....	0	0	0	0										
Eruptive fevers.....	Variola.....	14	3	1	1	37	3	3	1	40	4	2	-386	10	-900
	Varicella.....	23	0	1	0										
	Erysipelas.....	0	0	1	0										
Rheumatismus et chronicus..	82	1	70	6	82	1	70	6	152	1	9	-685	0	-657	
Syphilis primitiva.....	4	0	5	0	4	0	5	0	9	0	0	-507	0	-900	
Specific diseases.....	Atrophis.....	1	0	4	4	64	14	66	21	130	35	7	-770	36	-923
	Eritrherg.....	57	12	58	16										
	Lepros.....	2	1	2	0										
	Dracunculis.....	0	0	0	0										
Scrophula.....	3	1	2	1											
Diseases of the eye.....	Morbi oculorum	4	1	6	1	4	1	6	1	10	2	0	-597	20	-900
	Do " Siku " cutis....	41	0	38	0	41	0	38	0	79	0	4	-723	0	-900
Other diseases..	205	1	188	0	206	1	188	0	394	1	23	-500	0	-253	
Total..	705	46	716	50	706	48	716	50	1421	96	84	-837	6	-755	

Table No. 27 Jail of Chiconole.

	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.		1868.		Total.			
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	FV.	PI.		
Fever.....	0	0	34	0	18	0	0	0	42	0	45	0	101	0	40	0	48	0	50	0	1	410	9	
Cholera.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dysentery.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrhoea.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Amnesia.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Beriberi.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Admissions and deaths from these diseases.....	13	0	57	0	55	0	5	0	62	0	105	0	143	0	70	0	67	0	37	0	3	697	81	
Total admissions and deaths.....	21	0	119	0	162	0	14	0	109	0	155	0	206	0	150	0	175	0	137	0	4	1421	96	
Strength each year.....	150		195		108		159		81		147		250		221		160		160		122	1673		
Fever.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cholera.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dysentery.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrhoea.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Amnesia.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Beriberi.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Admissions and deaths from these diseases.....	4	0	13	0	22	0	6	0	31	0	86	0	15	0	11	0	16	0	8	0	5	2	209	91
Total admissions and deaths.....	6	0	18	0	61	0	22	0	35	0	14	0	41	0	34	0	22	0	9	0	47	2	340	180
Strength each year.....	73		88		150		71		164		214		71		65		55		45		45	1008		
Admissions and deaths amongst both classes.....	27	9	137	11	160	29	187	8	144	30	249	72	287	14	166	18	197	19	204	6	1783	201		
Total strength each year.....	203		283		358		230		245		371		321		266		215		167		2679			
Per centage of deaths to strength.....	4	433	3	986	8	100	5	478	8	142	19	107	4	341	4	545	8	837	3	502	7	502		
Per centage of sick to strength.....	13	300	48	469	65	530	81	304	58	725	67	115	89	488	58	641	91	427	132	155	65	733		
Per centage of deaths to sick treated.....	13	313	8	620	17	701	4	478	13	688	28	313	4	673	7	681	9	444	2	441	11	411		

Convicts Under Trial.

Table exhibiting the number of Admissions and Deaths from each class of disease, from the year 1832 and 1834, and the 2d half of 1835.

CLASS OF DISEASE.	1832.		1833.		1834.		1835.		1836.		1837.		1838.		1839.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhoea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amnesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admissions and Deaths from each class of disease.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* Of this number were Filagras 69 and 110.

No. 28.—Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Chicacole, from 1830 to 1841; exclusive of the years 1832 and 1834, and the 2d half of 1833 and 1840.

CLASSES. DISEASES.	Aggregate strength 4070.				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Percentage of sick to strength.	Percentage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.....	Febris septemera	202	1	433	6	1597	15	959	14	2556	32	47	108	1	251
	" int. quot.	1138	10	425	3										
	" tertian	53	0	22	0										
	" remittens	55	0	11	8										
" com. cont.	11	1	7	2											
Cholera.....	24	10	39	21	24	18	22	21	56	31	0	502	50	357	
Diseases of the Abdominal viscera.....	Diarrhœa	57	0	59	1	147	3	257	4	604	11	6	450	2	722
	Dysenteria	39	3	49	6										
	Obstipatio	19	0	27	0										
	Dyspepsia	33	0	126	1										
	Hæmorrhœis	4	0	5	0										
Hepatitis	5	0	5	0	5	0	5	0	8	0	0	131	0	190	
Diseases of the Lungs.....	Catarrhus	15	0	6	0	29	2	19	2	48	4	0	750	8	333
	Asthma	9	0	10	2										
	Phthisis pulmonalis	2	0	0	0										
	Pneumonia	3	0	3	0										
Dc. of the Brain.....	Apoplexia	1	1	0	0	20	1	5	2	35	3	0	576	8	571
	Epilepsia	1	0	4	1										
	Paralysis	23	0	0	0										
	Mania	5	0	0	0										
Tetanus	0	0	1	1											
Eruptive fevers.....	Varicella	11	3	1	0	20	3	3	0	58	3	0	873	5	560
	Varicella	29	0	1	0										
	Erysipelas	0	0	1	0										
Dropsies.....	Anasarca	6	3	5	1	7	4	6	2	12	6	0	214	45	153
	Ascites	1	1	1	1										
Rheumatismus.....	256	1	240	7	256	1	240	7	496	8	8	171	1	612	
Venereal affections.....	Syphilis prim.	46	0	43	1	64	0	66	2	130	2	2	141	1	508
	" Consecutiva	0	0	1	0										
	Gonorrhœa	4	0	6	1										
	Hæmorrh. humor.	9	0	14	0										
Stricture urethrae	5	0	2	0											
Specific diseases.....	Dracunculus	1	0	0	0	83	9	194	14	285	22	4	711	8	541
	Atrophia	15	3	20	3										
	Scorbutus	1	0	0	0										
	Scrophula	3	0	2	1										
	Berberis	47	6	174	10										
Lepra	1	0	0	0											
Diseases of the eye.....	Morbi oculorum	28	0	24	0	28	0	24	0	48	0	0	856	0	500
	Dc. of Skin	198	0	156	0										
" cutis	198	0	156	0	198	0	156	0	354	0	5	851	0	500	
Other diseases.....	531	3	456	5	531	3	456	5	989	8	16	295	0	608	
Total.....	3032	54	2431	77	3032	54	2431	77	5483	131	90	329	2	589	

* Of this number were Phlogosis 889 and 1 death.
Ulcer...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 $19^{\circ} 20''$ and east longitude $84^{\circ} 50''$, 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 ~~brush~~ wood, 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 slopes; an extensive bank of sand hills, though of inconsiderable height, running along the shore.

Nullahs.

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

BERHAMPORE.

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

The climate is more healthy and bracing, and more consistent, than most others in the month, the sky being clear, and the atmosphere heavy dew at night. The thermometer at the end of March, and continues throughout April a which period strong southerly winds prevail the only unhealthy portion of the year, when monsoon prevails. The thermometer then runs 90° ; the weather is also very sultry and oppressive, at the commencement of the rains.

The soil of the cantonment is large heaps of granitic rocks rising through all directions, especially towards the north which is the most elevated part, the average range being from 40 to 50 feet above the bounding plain.

A plentiful supply of good spring water throughout the year, in wells of from 10 to

Vegetable products. The vegetable products of rice and a variety of other grains, and oil seeds. The principal trees are the *cashew*, *cashew-nut* and the *acorn*. Of *we have in considerable numbers, chetals, jackals, hares, &c.*

The officers houses though built of mud walls, and thatched, are comfortable dwellings. To the westward, in which *somewhat descends, are the parade ground, store rooms, magazine, solitary cells, staff and regimental lines. The magazine is a*

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 productions. 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, Anon. cushion-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

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 sepoy's 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.

Table exhibiting the number of Admissions and Deaths from the Native Troops at Berhampore, from the year 1831 and 1832.

CLASS OF DISEASE	Admissions		Deaths	
	1831	1832	1831	1832
Small Pox	100	120	10	15
Measles	50	60	5	8
Cholera	20	30	2	3
Diarrhoea	150	180	15	20
Typhoid	80	100	8	12
Other Diseases	100	120	10	15
Total	480	560	48	63

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

CLASSES. DISEASES.	Aggregate strength 9505.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Total deaths from each class.	Percentage of sick to strength.	Per centage of deaths to sick treated.							
	1st Half.		2d Half.		1st Half.		2d Half.												
	Ad.	Di.	Ad.	Di.	Ad.	Di.	Ad.	Di.											
Fever.	Febrisphemera	208	0	415	3	1004	15	1500	19	2364	31	24	971	1	438				
	Intermit quot.	735	14	865	12														
	tertiana	22	0	23	0														
	remittens	22	1	30	2														
	com. cont.	17	0	27	2														
Cholera	17	12	47	16	17	12	47	16	64	28	0	673	43	750					
Diseases of the abdominal viscera.	Diarrhoea	29	3	68	4	156	11	287	11	293	27	4	131	5	597				
	Dysentery	44	6	60	5														
	Obstipatio	12	0	19	0														
	Dyspepsia	74	2	85	2														
	Hæmorrhoids	3	0	12	0														
Hepatitis	3	2	7	2	3	2	7	2	10	4	0	100	40	909					
Diseases of the Lungs & Heart.	Catarrhus	12	0	19	0	42	0	36	2	78	9	0	820	11	528				
	Asthma	13	1	9	0														
	Phthisis pulmonalis	4	5	5	2														
	Pneumonia	13	0	3	1														
Diseases of the Brain.	Apoplexia	1	1	2	0	13	5	15	2	28	7	0	294	25	090				
	Epilepsia	2	2	1	0														
	Paralysis	4	1	10	1														
	Amentia	2	0	0	0														
	Mania	4	1	0	0														
Hydrophobia	0	0	1	1	1	0	1	0	1	0	0	0	0	0					
Tetanus	1	0	1	0	1	0	1	0	1	0	0	0	0	0					
Eruptive fevers.	Varicella	4	0	6	3	23	1	27	3	50	4	0	506	8	900				
	Varicella	10	0	4	0														
	Rubeola	8	0	12	0														
	Erysipelas	1	1	2	0														
Dropsies.	Anasarca	5	0	19	2	7	1	24	5	31	6	0	326	19	354				
	Ascites	2	1	5	3														
Rheumatismus.	285	2	322	6	226	2	322	6	548	8	5	784	1	409					
Venereal affections.	Syphilis primitiva	60	2	67	0	122	2	120	1	250	3	2	631	1	199				
	consecutiva	9	0	14	1														
	Gonorrhœa	27	0	30	0														
	Hernia humoralis	5	0	17	0														
	Stricture urethrae	1	0	3	0														
Specific diseases.	Dracunculosis	3	0	3	0	63	6	125	9	188	15	4	977	7	978				
	Atrophia	25	1	56	1														
	Scrophula	4	0	5	1														
	Berberi	31	5	61	7														
Lepra	0	0	1	0	0	0	1	0	0	0	0	0	0	0					
Diseases of the eye.	Morbi oculorum	30	0	35	0	173	0	229	0	173	0	219	0	602	0	4	229	0	000
	Do. Skin	Cutis	173	0	229															0
Other diseases.	586	5	645	4	588	5	643	4	1231	9	12	561	0	721					
Total.	2485	68	3239	81	2465	68	3239	81	5784	149	60	910	2	612					

* Of this number were Phlogosis... 416 and 4 deaths.
Ulcus... 250 - 2
Per centage of deaths to strength... 1.672

RUSSEL-CONDAR.

Description of
the Cantonment
&c.

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 $20^{\circ} 00'$ and east longitude $84^{\circ} 40'$, 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 sepoy 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.

RUSSEL-CONDAR.
Tanks are small, and few, the
one, is five miles from the cantonment, and
two miles in circumference.

The south-west monsoon sets
in the middle of June, and is generally over towards
October, the average annual fall of rain, has
been estimated. The weather is cool and pleasant
the year, but hot during the other three, viz
and May, at which time the nights are very

The prevailing winds are north-east and
from the south during November, and is very
Thunder and lightning frequently occur at
the commencement of the north-east monsoon, accom-
panied by heavy showers; in October 1842, this part of
the cantonment was visited by a typhoon from the north-west
which did injury.

The barracks or place of
the hospital is situated
near the foot of a hill, facing the east, and
was completed in October 1842. The hospital is also
situated on an elevated platform, about a hundred yds
from a parallel line with the barracks; it is well
lighted, there are two wards placed at right
angles, large, airy and comfortable, with verandahs
in front and well ventilated. The dimensions
of the hospital are 80 by 18 feet, and 84 by 18, with walls 20

In addition to the above, there are two
as a bath room and a dispensary; with a
perry; the whole being enclosed by a wall
about 10 feet in front and at the sides, an
enclosure, forming altogether a very complete
hospital and barracks are built of burnt brick
four of the small wats is flagged, that
is surrounded.

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

Climate. The south-west moonsoon sets in about the 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, accompanied 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.

Barracks and hospital. The barracks or place of arms, are situated 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 parallel 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.

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

CLASSES. DISEASES.	Aggregatstrength 1837.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.			
	1st Half.		2d Half.		1st Half.		2d Half.								
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.							
Fever.	Febrisephemera	74	0	115	0	606	7	1250	9	1856	16	42	886	0	857
	.. inf. quot.	420	2	1035	6										
	.. tertian.	6	0	26	1										
	.. remittens.	12	1	3	0										
.. com. cont.	15	4	30	2											
Cholera	56	21	7	6	56	21	7	6	63	27	1	447	42	857	
Diseases of the Abdominal viscera.	Diarrhœa	4	1	31	2	87	4	102	2	185	6	4	343	3	174
	Dysentery	31	2	29	0										
	Obstipatio	0	0	1	0										
	Dyspepsia	23	1	28	0										
	Hæmorrhoids	3	0	10	0										
Hepatitis	1	0	0	0	1	0	0	0	1	0	0	0	0	0	
Diseases of the Lungs.	Catarrhus	9	0	7	0	27	2	15	3	42	5	0	965	11	581
	Asthma	4	0	5	1										
	Phthisis pulmonalis	5	1	2	2										
	Pneumonia	5	1	0	0										
Dyspnoea	4	0	1	0											
Do. of the Brain.	Apoplexia	0	0	1	1	6	0	7	1	13	1	0	298	7	692
	Epilepsia	0	0	1	0										
	Paralysis	2	0	2	0										
	Amentia	3	0	3	0										
	Mania	1	0	0	0										
Eruptive fevers.	Variola	15	1	0	0	105	1	2	0	107	1	2	450	0	924
	Varicella	85	0	1	0										
Erysipelas	2	0	1	0											
Dropies.	Anasarca	4	0	8	0	5	0	8	0	13	0	0	298	0	300
	Ascites	1	0	0	0										
Rheumatismus	163	0	168	1	163	0	168	1	331	1	7	607	0	300	
Venereal affections.	Syphilis prim.	26	0	26	0	58	2	59	1	117	3	2	689	2	564
	.. consecutiva	2	2	6	0										
	Gonorrhœa	3	0	10	0										
	Hernia humor.	9	0	15	1										
Stricture urethrae	1	0	1	0											
Specific diseases.	Dracunculosis	7	0	5	0	16	0	27	4	43	4	0	988	9	308
	Atrophia	3	0	11	0										
	Beriberi	5	0	11	4										
	Scrophula	1	0	0	0										
Diseases of the eye.	Morbi oculorum	25	0	34	0	25	0	34	0	60	0	1	378	0	600
	Do. .. Skin	102	0	55	0										
Other diseases	373	1	349	1	373	1	349	1	722	2	15	503	0	277	
Total.	1631	38	2091	28	1631	38	2093	28	3724	66	85	580	1	772	

* Of this number were Phlogosis 234—Ulcus... 212
Per centage of deaths to strength, 1-5-16.

REMARKS ON THE GENERAL TA

REMARKS ON THE GENERAL TA

In the general table No. 30 are included the sick of H. M. the first Madras European regiment at Russel-coudah, from 1837, (when first garrisoned) to 1841, inclusive. The remarks appended to the report of Major-General Sir G. B. D. have however been given at page 29, sickness and mortality amongst the latter division from those of the troops of the line. The admission into hospital, and the mortality of diseases each half year, for the usual period from 1829 to 1838 inclusive. The annual strength, of deaths to sick treated, strength, are also given; the average of the Abstract table No. 2, being 184-943, 5-500 per cent.

In 1833 and 1834, these averages were from the prevalence of cholera, dysentery & the remarks appended to the report of Major-General Sir G. B. D. have however been given.

During the last four years no European troops were stationed in this division; table No. 2 shows the nature of the diseases which have occurred at Russel-coudah. Of the total deaths 197, the greater number of those dysentery, all under the heads dyspepsia, hepatic, diarrhoea, dizziness and cholera, and nearly 60, have been contracted, in the opinion of Officers in charge, by excessive indulgence in spirituous liquors; many of their reports on this subject.

On referring to the Abstract table No. 2

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

The most prevalent diseases have been *fevers, dysentery, venereal complaints, rheumatism, hepatitis, diarrhæa, 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

Admissions and Deaths, from
to, during the period of

Other complaints.	Strength each year.	Admissions for each year.	Average per centage of sick to strength.	Deaths to strength.
1830	10,000	1,000	10	100
1831	10,000	1,000	10	100
1832	10,000	1,000	10	100
1833	10,000	1,000	10	100
1834	10,000	1,000	10	100
1835	10,000	1,000	10	100
1836	10,000	1,000	10	100
1837	10,000	1,000	10	100
1838	10,000	1,000	10	100
1839	10,000	1,000	10	100
1840	10,000	1,000	10	100
1841	10,000	1,000	10	100
1842	10,000	1,000	10	100
1843	10,000	1,000	10	100
1844	10,000	1,000	10	100
1845	10,000	1,000	10	100
1846	10,000	1,000	10	100
1847	10,000	1,000	10	100
1848	10,000	1,000	10	100
1849	10,000	1,000	10	100
1850	10,000	1,000	10	100
1851	10,000	1,000	10	100
1852	10,000	1,000	10	100
1853	10,000	1,000	10	100
1854	10,000	1,000	10	100
1855	10,000	1,000	10	100
1856	10,000	1,000	10	100
1857	10,000	1,000	10	100
1858	10,000	1,000	10	100
1859	10,000	1,000	10	100
1860	10,000	1,000	10	100
1861	10,000	1,000	10	100
1862	10,000	1,000	10	100
1863	10,000	1,000	10	100
1864	10,000	1,000	10	100
1865	10,000	1,000	10	100
1866	10,000	1,000	10	100
1867	10,000	1,000	10	100
1868	10,000	1,000	10	100
1869	10,000	1,000	10	100
1870	10,000	1,000	10	100
1871	10,000	1,000	10	100
1872	10,000	1,000	10	100
1873	10,000	1,000	10	100
1874	10,000	1,000	10	100
1875	10,000	1,000	10	100
1876	10,000	1,000	10	100
1877	10,000	1,000	10	100
1878	10,000	1,000	10	100
1879	10,000	1,000	10	100
1880	10,000	1,000	10	100
1881	10,000	1,000	10	100
1882	10,000	1,000	10	100
1883	10,000	1,000	10	100
1884	10,000	1,000	10	100
1885	10,000	1,000	10	100
1886	10,000	1,000	10	100
1887	10,000	1,000	10	100
1888	10,000	1,000	10	100
1889	10,000	1,000	10	100
1890	10,000	1,000	10	100
1891	10,000	1,000	10	100
1892	10,000	1,000	10	100
1893	10,000	1,000	10	100
1894	10,000	1,000	10	100
1895	10,000	1,000	10	100
1896	10,000	1,000	10	100
1897	10,000	1,000	10	100
1898	10,000	1,000	10	100
1899	10,000	1,000	10	100
1900	10,000	1,000	10	100

Admissions have amounted to 11870, and from an aggregate strength of 6204 men. The most prevalent diseases have been fever, dysentery, rheumatism, hepatitis, diarrhea, and the greatest mortality has been produced by fever, hepatitis, thoracic diseases and dysentery. The average strength of the regiments is pretty equal during each of the years, but fever and dysentery are most prevalent during the latter half of the year, and the excess of mortality of the year is wholly caused by dysentery.

In an epidemic form in 1830, 1831, 1832, and May 1830, while the left wing of the European regiment was marching from Masulipatan, 30 men were buried out of 40 cases of cholera occurred with 6 deaths; in 1831, in the same wing while marching to Masulipatan, lost 15 men out of 34 of whom has already been detailed in a former report. H. M.'s 62d regiment suffered severely on its march to Masulipatan from

Table 4, exhibit the admissions from the same regiments, and the mortality which have occurred amongst the regiments throughout the whole division for the same period.

The most prevalent diseases, and the greatest mortality, have been the most prevalent diseases, while the greatest mortality has resulted from fever, cholera, dysentery, rheumatism and thoracic diseases. The average strength of 81,806; the average per centage of deaths to strength being 88,945, of deaths to sick

Admissions and Deaths, from the regiments, during the period of

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.
327 287	1010	167-900	3-889	4-851
145 115	690	149-565	5-717	8-500
236 308	831	165-095	5-632	9-315
270 238	904	178-429	5-145	9-181
209 280	924	185-270	6-603	18-831
150 78	707	287-094	5-948	17-114
50 63	321	142-056	3-917	5-097
37 45	304	79-034	8-230	6-578
45 24	306	92-156	7-801	7-189
28 16	277	73-090	6-730	5-004

f admissions and Deaths &c. from 1829 to 1838.

	Insanity.	Leprosy.	Ophthalmoy.	Rheumatism.	Small pox.	Syphilitic &c.	Thoracic diseases.	Etiar phagedenic.	Wounds & injuries.	Other Complaints.
1829	12	0	61	415	0	435	149	0	377	1718
1830	8	1	54	367	0	354	147	0	304	1672
1831	20	1	115	780	0	789	296	0	681	3390
1832	3	0	0	8	0	5	13	0	4	40
1833	1	0	0	8	0	7	16	0	0	62
1834	4	0	0	16	0	12	23	0	6	102
1835	0-315	0-015	1-815	12-345	0	12-656	4-673	0	10-751	53-500
1836	20-0	0	0	2-045	0	2-045	9-797	0	0-881	3-008
1837	0-053	0	0	0-252	0	0-189	0-457	0	0-094	1-610

*and Deaths,
&c. during*

Year	Admitted for insanity	Admitted for ophthalmoy	Admitted for rheumatism	Admitted for small pox	Admitted for syphilitic &c.	Admitted for thoracic diseases	Admitted for etiars phagedenic	Admitted for wounds & injuries	Admitted for other complaints
1829	12	0	61	415	0	435	149	0	377
1830	8	1	54	367	0	354	147	0	304
1831	20	1	115	780	0	789	296	0	681
1832	3	0	0	8	0	5	13	0	4
1833	1	0	0	8	0	7	16	0	0
1834	4	0	0	16	0	12	23	0	6
1835	0-315	0-015	1-815	12-345	0	12-656	4-673	0	10-751
1836	20-0	0	0	2-045	0	2-045	9-797	0	0-881
1837	0-053	0	0	0-252	0	0-189	0-457	0	0-094

ON.

tal number of Admissions and Deaths, &c. from

	Culera Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
8	35	40	59	7	281	3033	57	1027	221	2	1457	6370
0	38	25	21	5	384	2862	20	878	297	1	1168	5974
4	73	75	90	12	665	5895	77	1905	713	10	2625	12344
1	0	8	2	0	1	37	6	9	29	0	15	58
1	0	7	3	0	1	57	6	17	41	0	9	136
5	0	15	10	0	2	89	12	26	60	0	24	234
8	0.089	0.091	0.110	0.014	0.812	7.206	0.094	2.318	0.871	0.012	3.208	15.080
0	0.30000	11.111	0	0.300	1.509	15.581	1.364	11.220	0	0.214	1.480	
8	0	0.018	0.012	0	0.000	0.108	0.014	0.003	0.097	0	0.025	0.288

NORTHERN DIVISION
Table exhibiting the number of Admissions in each class of Disease, for 5 years
EUROPEAN TROOP.

(Faint text and table on the right page, partially obscured)

month 1901, and of deaths to strength for 1896, the sickness and mortality were generally average, occasioned solely by fever, from which troops employed in the Coosoo campaign suffered very severely.

The admissions and deaths are most numerous during the half yearly period, and chiefly from acute dysentery, accompanied by fever, which prevails most of months of the year. It is thought proper to mention on borders, and also a few cases of jaundice or bilious remittent fever of Coosoo.

The disease called *Berikeri*, by the several stations on the coast, throughout the district, from the Kumb river to the Chilka lake, is not very appropriately given in this place: the observations are taken from an unpopulated district, forwarded to the Medical Board in

The word *Berikeri* is derived from the Hindi of a sheep (*Bera*), from a fanciful notion, that the patient, when affected with the disease, walk like a peculiar animal, i. e. with a kind of jerking motion by which it is known, as the Gentoos of the coast, sleep, stupor, rheumatism combine with it.

The disease, though endemic in many stations, appears also as an epidemic, after the setting in of the rainy season, or from July to the close of the year, when the various complaints and cholera also break out, to some extent annually—and they would all seem to arise, viz. not only exhaustion, through several forms of the diseases enumerated.

The colonies of Chizwadi, Samilotta, and other places, which are low, damp and more or less exposed to suffer more than the other towns through some of the stations, whatever may

NORTHERN DIVISION.

No. 9.—Table showing the amount of disease and Deaths, from the principal classes of disease during five years, Admissions from each to the total of sick treated, and of deaths to the

	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
<i>European Troops.</i>												
Total Admissions,	1402	1/10	21	1/10	190	1/10	269	1/10	105	1/10	94	1/10
Deaths,	54	1/10	2	1/10	40	1/10	9	1/10	6	1/10	17	1/10
<i>Native Troops.</i>												
Total Admissions	56,142	3/10	395	1/10	11,239	1/10	2,119	1/10	51	1/10	572	1/10
Deaths,	1,442	1/10	192	1/10	1,541	1/10	75	1/10	9	1/10	48	1/10

No. 10.—Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of amongst European and Native troops.

	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.	
	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.
<i>European Troops.</i>												
STRENGTH, 1915.	1402	78.211	21	1.096	190	9.921	269	14.017	105	5.488	94	4.4
Percentage of sick to strength	54	3.861	2	0.523	40	21.052	9	3.345	6	5.714	17	18-
" of deaths to sick	54	2.819	2	0.101	40	2.088	9	0.470	6	0.313	17	0-
<i>Native Troops.</i>												
STRENGTH, 45,308.	34047	75.143	395	0.871	1129	2.491	2119	4.676	51	0.112	572	1-
Percentage of sick to strength	589	1.729	192	48.607	124	13.640	75	3.539	9	17.647	48	8-
" of deaths to sick	589	1.299	192	0.423	154	0.339	75	0.165	9	0.019	48	0-

treated 2939, and of deaths to strength 2593. 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 *jaugle or bilious remittent fever* of Goomsoor.

Beriberi. 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,hero*.) 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, *Ooboo-taioo*, 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,

Note. In the following table the amount of discharges and deaths from the several forms of acute and chronic diseases, and of accidents to the troops, is given for the year 1836, and for the first and second half years of that year, and for the first and second quarters of the year. The total number of troops, and the number of sick, are also given for each of the several forms of disease, and for the first and second half years of the year, and for the first and second quarters of the year. The number of deaths, and the number of discharges, are also given for each of the several forms of disease, and for the first and second half years of the year, and for the first and second quarters of the year. The number of deaths, and the number of discharges, are also given for each of the several forms of disease, and for the first and second half years of the year, and for the first and second quarters of the year.

Disease.	1836.		1st Half.		2d Half.		1st Quarter.		2d Quarter.		3d Quarter.		4th Quarter.	
	Adm.	Deaths.	Adm.	Deaths.	Adm.	Deaths.	Adm.	Deaths.	Adm.	Deaths.	Adm.	Deaths.	Adm.	Deaths.
Acute Diseases.	1400	100	700	50	700	50	180	15	520	35	120	15	180	15
Chronic Diseases.	91	9	45	4	46	5	12	1	33	3	13	2	20	2
Total Admissions.	1491	109	745	54	746	55	192	16	553	38	133	17	200	17
Total Deaths.	109	109	54	54	55	55	16	16	41	41	17	17	17	17
Total Discharges.	34027	2800	17013	1400	17014	1400	4257	350	12756	1050	4257	350	4257	350

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 erect 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 œdema 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 serum into the pericardium is also a common morbid result.

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

asionally 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 anasarca 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 cachectic 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 on beriberi, 1835 p. 113.

duration, is seen to be suffering from urgent
feeling of anxiety at the precordia, having a
throbbing pulse, and whose face probably ap
pearance, from 12 to 18 ounces of blood
ly be abstracted, and the bowels freely act
calomel; ℞. of compound jalap powder,
jalap. After which, calomel with squills, sh
continued until the system is b
der the influence of the nerve
cases a decided improvement u
is active, it is rarely requi

V. S. if the first bleeding be sufficiently cop
oppressed condition of the circulating syst
should be kept free, by occasional aperient
treatment, and to assist the diuretic action
dial acidulated with the superacetate of pot
ed and this plan of treatment must be perseve
dian action of the heart and arteries is vol
found to succeed on the first appearance of t
being established in the system; should th
at any time show a tendency to increas
ing of.

Tincture digitalis ℞ x

Scilla ℞ xx

Spiritus ætheris nitrici ʒss

Aqua mentha piperitis ʒi m

in the day

Should the patient complain of spasms, or
in the limbs, or should the calomel act m
tion is desirable, doses powder may b
time, or a small quantity of the extract
added to the pills. Frictions to the limbs
emollients, and foot baths in which
mucosa used has been boiled, will be
lief; and during convalescence, or wh
febrile exacerbations occur periodically,
result from the use of the sulphate of

* Symptom Beriberi et malum subtilem beriberi

duration, is seen to be suffering from urgent dyspnœa, with a feeling of anxiety at the precordia, having a full bounding or throbbing pulse, and whose face probably appears bloated, or œdematous, from 12 to 18 ounces of blood should immediately be abstracted, and the bowels freely acted on by an active cathartic; ʒi. of compound jalap powder, or calomel with jalap. After which, calomel with squills, should be given and

Calomel gr. ij. to liij. Pulv. scillæ gr. ʒi. to ʒiij. with aromatic confection to be taken every 4th hour.

continued until the system is brought fully under the influence of the mercury, when in most cases a decided improvement usually takes place.

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 ℞ x

„ Scillæ ℥ xx

Spiritus atheris nitrici ʒ ss

Aquæ menthæ piperitæ ʒ i 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

* Hyperanthus Morings an excellent substitute for the *radix arumoriae*.

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 diet 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 turpentine, 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. ipecac 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 convalescence, the best of which is sulphate of quinine, with sulphuric acid.

The active remedies black oil, and trepan have been employed extensively, in the chronic beriberi, after the acute stage has been removed, and in many cases with success, may here be briefly noticed.

The oleum nigricans, a black empyreumatic oil, obtained by distillation per ascensum, by means of a retort, with a combination of spices, with the seeds of iron and gum benzoin. It is given in doses of from ʒss to ʒj, 3 times during the day, and is prepared by the natives made into a bolus with trepan, or taken on a bevel leaf; the diet observing in its use, is entirely farinaceous, as wheat and maize without salt. The action of the oil is a stimulant, it is also diuretic, and produces internal heat, attended with high coloured urine, and cases of effusion of the conjunctive, but it has no effect either on the bowels or skin.

The trepan-fum, a remedy said to be obtained from the shores of the Red sea, and is obtained in most parts throughout India, is supposed to be often spiritous; it is said to consist of various spices and stimulants, and is prepared with starch, in the proportion of trepan-fum to 7 of starch, made into a bolus, with honey, the dose being the size of a nutmeg every morning; it usually acts as a stimulant, in addition to which some patients experience a feeling of internal heat, in the chest, and after continuing its use for 3 or 4 days, often causes a good deal of irritability, and a burning heat of skin; two patients of the latter kind, who had been long afflicted with this disease, and who had never before been cured, were cured by the use of this remedy, and after continuing its use for 3 or 4 days, the appearance may have been owing to the starch. It is usual with natives to take

The native remedies *black oil*, and *treak-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 treak-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 farago of various spices and stimulants, and is given combined with rhubarb, in the proportion of about 1 part, treak-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

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 remedies, and consisted of milk and farinaceous food, such as wheaten bread without salt, and abstinence from meat.

Goomsoor fever. 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 necessary to enter more into detail respecting the history of the disease.

The sickness and mortality in Goomsoor considerably increased the results above tables of diseases, both of the division and of it has been considered desirable to advert to this place.

"It now remains that account of the fever which is universal, and so severe, to its cause. The symptoms vary in different constitutions; but it is, such as I saw it, at Newgum, a fever of peculiar, mainly affecting the head; and of peculiar nature. Mr. McKenna says, "It is of a peculiar nature, for that want of energy and mental depression, which characterise the febrile state, acting equally on the cerebral system, exhausting in time, the whole stock of sensorial power." "It was characterised by entire and protracted strength, skin preternatural pale and rapid, and frequently was times fatal, always fatal in some instances sepulchral, patient in complete reaction but in few instances (speaking of the Durgurpe) Kiffin says "the head was invariably affected." Mr. Fortescue says "the symptoms by the patient on admission, were, great languor over the whole body, head-ache, thirst of strength, oppression, shortness and difficulty with a full tongue and parched fauces, and the whole body, in many cases amounting patient continued in this state for a longer and then followed the hot and sweating after which he felt much better, but weak such however was not always the asthma

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 Surg. Surgeon Northern Division 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 febrile 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 languor 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

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 January 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 troops.

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*

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 venereal 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.

REGIMENT	YEAR	ADMISSIONS	DEATHS	PER CENTAGE OF DEATHS TO SICK TREATED	PER CENTAGE OF DEATHS TO STRENGTH
1st BATTALION	1850	1200	150	12.5	12.5
2nd BATTALION	1851	1500	200	13.3	13.3
3rd BATTALION	1852	1800	250	13.9	13.9
4th BATTALION	1853	2100	300	14.3	14.3
5th BATTALION	1854	2400	350	14.6	14.6
6th BATTALION	1855	2700	400	14.8	14.8
7th BATTALION	1856	3000	450	15.0	15.0
8th BATTALION	1857	3300	500	15.2	15.2
9th BATTALION	1858	3600	550	15.3	15.3
10th BATTALION	1859	3900	600	15.4	15.4
11th BATTALION	1860	4200	650	15.5	15.5
12th BATTALION	1861	4500	700	15.6	15.6
13th BATTALION	1862	4800	750	15.6	15.6
14th BATTALION	1863	5100	800	15.7	15.7
15th BATTALION	1864	5400	850	15.7	15.7
16th BATTALION	1865	5700	900	15.8	15.8
17th BATTALION	1866	6000	950	15.8	15.8
18th BATTALION	1867	6300	1000	15.9	15.9
19th BATTALION	1868	6600	1050	15.9	15.9
20th BATTALION	1869	6900	1100	16.0	16.0
21st BATTALION	1870	7200	1150	16.0	16.0
22nd BATTALION	1871	7500	1200	16.0	16.0
23rd BATTALION	1872	7800	1250	16.0	16.0
24th BATTALION	1873	8100	1300	16.0	16.0
25th BATTALION	1874	8400	1350	16.1	16.1
26th BATTALION	1875	8700	1400	16.1	16.1
27th BATTALION	1876	9000	1450	16.1	16.1
28th BATTALION	1877	9300	1500	16.1	16.1
29th BATTALION	1878	9600	1550	16.1	16.1
30th BATTALION	1879	9900	1600	16.2	16.2
31st BATTALION	1880	10200	1650	16.2	16.2
32nd BATTALION	1881	10500	1700	16.2	16.2
33rd BATTALION	1882	10800	1750	16.2	16.2
34th BATTALION	1883	11100	1800	16.2	16.2
35th BATTALION	1884	11400	1850	16.2	16.2
36th BATTALION	1885	11700	1900	16.3	16.3
37th BATTALION	1886	12000	1950	16.3	16.3
38th BATTALION	1887	12300	2000	16.3	16.3
39th BATTALION	1888	12600	2050	16.3	16.3
40th BATTALION	1889	12900	2100	16.3	16.3
41st BATTALION	1890	13200	2150	16.3	16.3
42nd BATTALION	1891	13500	2200	16.3	16.3
43rd BATTALION	1892	13800	2250	16.3	16.3
44th BATTALION	1893	14100	2300	16.3	16.3
45th BATTALION	1894	14400	2350	16.3	16.3
46th BATTALION	1895	14700	2400	16.3	16.3
47th BATTALION	1896	15000	2450	16.3	16.3
48th BATTALION	1897	15300	2500	16.3	16.3
49th BATTALION	1898	15600	2550	16.3	16.3
50th BATTALION	1899	15900	2600	16.4	16.4
51st BATTALION	1900	16200	2650	16.4	16.4
52nd BATTALION	1901	16500	2700	16.4	16.4
53rd BATTALION	1902	16800	2750	16.4	16.4
54th BATTALION	1903	17100	2800	16.4	16.4
55th BATTALION	1904	17400	2850	16.4	16.4
56th BATTALION	1905	17700	2900	16.4	16.4
57th BATTALION	1906	18000	2950	16.4	16.4
58th BATTALION	1907	18300	3000	16.4	16.4
59th BATTALION	1908	18600	3050	16.4	16.4
60th BATTALION	1909	18900	3100	16.4	16.4
61st BATTALION	1910	19200	3150	16.4	16.4
62nd BATTALION	1911	19500	3200	16.4	16.4
63rd BATTALION	1912	19800	3250	16.4	16.4
64th BATTALION	1913	20100	3300	16.4	16.4
65th BATTALION	1914	20400	3350	16.4	16.4
66th BATTALION	1915	20700	3400	16.4	16.4
67th BATTALION	1916	21000	3450	16.4	16.4
68th BATTALION	1917	21300	3500	16.4	16.4
69th BATTALION	1918	21600	3550	16.4	16.4
70th BATTALION	1919	21900	3600	16.4	16.4
71st BATTALION	1920	22200	3650	16.4	16.4
72nd BATTALION	1921	22500	3700	16.4	16.4
73rd BATTALION	1922	22800	3750	16.5	16.5
74th BATTALION	1923	23100	3800	16.5	16.5
75th BATTALION	1924	23400	3850	16.5	16.5
76th BATTALION	1925	23700	3900	16.5	16.5
77th BATTALION	1926	24000	3950	16.5	16.5
78th BATTALION	1927	24300	4000	16.5	16.5
79th BATTALION	1928	24600	4050	16.5	16.5
80th BATTALION	1929	24900	4100	16.5	16.5
81st BATTALION	1930	25200	4150	16.5	16.5
82nd BATTALION	1931	25500	4200	16.5	16.5
83rd BATTALION	1932	25800	4250	16.5	16.5
84th BATTALION	1933	26100	4300	16.5	16.5
85th BATTALION	1934	26400	4350	16.5	16.5
86th BATTALION	1935	26700	4400	16.5	16.5
87th BATTALION	1936	27000	4450	16.5	16.5
88th BATTALION	1937	27300	4500	16.5	16.5
89th BATTALION	1938	27600	4550	16.5	16.5
90th BATTALION	1939	27900	4600	16.5	16.5
91st BATTALION	1940	28200	4650	16.5	16.5
92nd BATTALION	1941	28500	4700	16.5	16.5
93rd BATTALION	1942	28800	4750	16.5	16.5
94th BATTALION	1943	29100	4800	16.5	16.5
95th BATTALION	1944	29400	4850	16.5	16.5
96th BATTALION	1945	29700	4900	16.5	16.5
97th BATTALION	1946	30000	4950	16.5	16.5
98th BATTALION	1947	30300	5000	16.5	16.5
99th BATTALION	1948	30600	5050	16.5	16.5
100th BATTALION	1949	30900	5100	16.5	16.5

Statement showing the extent of accommodation, diet, &c. in the several jails.

NORTHERN DIVISION.

STATION.	Number of prisoners in the prison is capable of containing in separate cells.	Number of prisoners actually in the prison.	Dietary or other work.	Allowance of clothing and bedding.	Description of employment and hard labour.	Hours of labour, and of exercise.
MASQUELATA.	None.	380 males and 31 females.	1 Set of rice per day with 4 annas; 1 piece of coarse cloth per head about 3 annas.	2 cloths of 3 yards each, 1 cumby and 1 set of yearly 1 anna for bedding, annual cost per head about 1 rupee and 6 annas.	Road making street cleaning, &c.	In moderate weather from 7 to 11 a. m. and 2 to 6 p. m. but during the rainy season from 5 to 10 a. m. and from 5 to 5 p. m.
HAMHUN-DAY.	None.	430	1 Beer of rice and 4 pieces daily for a male prisoner and for a female prisoner; 1 beer, 1 anna and 1 piece of coarse cloth weekly cost to a male prisoner 8 annas and a female prisoner 6 annas; 6 pieces every half year, bedding the same as the male prisoners.	Male prisoners are allowed two cloths, a cumby, and a cumby; female prisoners are allowed 15 annas 4 pieces of coarse cloth, 1 anna and 1 piece of coarse cloth weekly cost to a male prisoner 8 annas and a female prisoner 6 annas; bedding the same as the male prisoners.	Working on the roads and at the repairs of the court house, cutting down the walls, and the streets of the town, &c.	From the 1st April to 30th June 1841 the prisoners work from 5 to 11 a. m. and from 3 till 5 p. m. after which they wash in the river, both before and after the above duties; from 12 p. m. to 10 1/2 p. m. on Sundays permitted to walk about on the jail compound.
VIZAGAPATA.	One.	270 Conventually.	One Beer of rice and 4 pieces per day the same for men and women. Weekly cost 8 annas and 2 pice.	2 Pieces of cloth of 6 cubits each and 1 cumby for a male prisoner every year, annual cost 1 rupee 12 annas; 2 pieces of cloth 12 in or about the full make prisoner 2 rupees and 6 annas.	Spentest prisoners work on the high roads, and the prisoners in or about the jail.	From 8 a. m. till 4 p. m. daily and Sundays excepted.
CHICAGOOLE.	700.	350 Conventually.	1 Of a beer of rice and 6 pice for each male and 1 female daily.	Two pieces of cloth the same, and 1 anna cumby every year, and bedding.	Convicts labour and work on the roads, and in the manufacture of paper.	From 8 a. m. till 4 p. m. daily, Sundays excepted.

NORTHERN DIVISION

Hepatitis, rheumatic affections several and injuries; the most fatal have been disease of the brain and of the lungs; the sick treated during the five years has thus differing but little in these respects, as in the preceding table for ten years.

table for the native troops, (No. 6) number of admissions actually for every per cent of deaths, to the sick treated; the total admissions being 56343, with aggregate strength of 45938 men. The have been produced by fever, cholera, and rheumatism; the greatest have been from the same classes of diseases and several affections.

ments No. 9 and 10, have been treated in the same way as in the preceding view the proportion and the per cent deaths from the principal classes of

NORTHERN DIVISION.

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

DISTRICT OR STATIONS.	Class and sex of Patients.						Total vaccinated.	
	Christians.		Hindoes.		Mahomedans.			
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Ganjam.....	64	57	9,466	7,611	144	72	9,674	7,770
Vizagapatam.....	211	163	8,613	7,388	106	54	8,939	7,525
Injeram and Madepollum.....	27	29	15,345	11,107	94	49	15,468	11,225
Rajahmundry.....	26	31	15,461	10,653	230	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 Vaccinators in each District.		
	1st Class Vaccinators.	2d Class Vaccinators.
Ganjam.....	1	3
Vizagapatam.....	1	3
Injeram and Madepollum.....	1	3
Rajahmundry.....	1	3
Masulipatam.....	1	3
Total.....	5	15

The number vaccinated in this Division, during these ten years is 1,06,637; the whole expense incurred, amounts to Rupees 44,940 which gives an average of about Rupees 42-3 per hundred, or ten pence per head in English money.

APPENDIX.

NORTHERN DIVISION.

Number of Persons successfully vaccinated from 1829 to 1838 inclusive.

Year	Class and sex of Patients.						Total vaccinated.
	Males		Females		Total		
	Christian	Native	Christian	Native	Christian	Native	
1829	100	100	100	100	200	200	400
1830	120	120	120	120	240	240	480
1831	150	150	150	150	300	300	600
1832	180	180	180	180	360	360	720
1833	200	200	200	200	400	400	800
1834	220	220	220	220	440	440	880
1835	250	250	250	250	500	500	1000
1836	280	280	280	280	560	560	1120
1837	300	300	300	300	600	600	1200
1838	320	320	320	320	640	640	1280

Number of Vaccinations in each District.

District	1st Class Vaccinations	2d Class Vaccinations
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
Total	5	5

and in this Division, during these ten years is 1,280, the amount in Europe at 1838 which gives an average of about 4, or five pence per head in English money.

APPENDIX.

Metereological Observations, made at Mississippi in 1843.

Date	Thermometer		Barometer		Wind		Direction		Quantity of Rain		Direction		Direction		Direction		Direction	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Jan 1	50	30	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 2	55	35	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 3	60	40	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 4	65	45	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 5	70	50	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 6	75	55	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 7	80	60	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 8	85	65	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 9	90	70	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 10	95	75	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 11	100	80	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 12	105	85	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 13	110	90	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 14	115	95	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 15	120	100	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 16	125	105	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 17	130	110	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 18	135	115	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 19	140	120	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 20	145	125	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 21	150	130	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 22	155	135	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 23	160	140	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 24	165	145	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 25	170	150	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 26	175	155	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 27	180	160	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 28	185	165	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 29	190	170	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 30	195	175	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0
Jan 31	200	180	30	28	SE	SW	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX

Meteorological Observations, made at Masulipatam in 1843.

	Barometer.			Thermometer.			Amount of rain. Inches.	Number of days on which rain has fallen.	Prevailing Winds.			
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.			Mean daily range.	Days.	A. M.	P. M.
											F. M.	
January.....	30.14	29.47	30.05	81	76	78.5	1.02	3	N. E.	S. E.		
February.....	30.46	29.77	30.10	82	77	79.5	0	0	N. E.	S. E.		
March.....	30.05	29.47	29.91	82	77	79.5	0	0	S. E. by E.	S. E.		
April.....	30.02	29.44	29.82	80	75	77.5	0.25	1	S. W.	S. E.		
May.....	29.87	29.16	29.51	82	73	77.5	2.50	8	S. W.	S. E.		
June.....	29.83	29.05	29.74	82	75	78.5	2.50	10	N. W.	S. W.		
July.....	29.81	29.41	29.71	82	78	80	7.31	15	N. W.	W. S. W.		
August.....	29.88	29.08	29.78	83	79	81	7.15	13	N. W.	S. W.		
September.....	29.94	29.43	29.68	83	79	81	1.09	8	N. W.	S. E.		
October.....	30.02	29.42	29.72	83	78	80.5	7.42	17	N. E.	S. E.		
November.....	30.05	29.41	29.73	83	77	80	7.42	17	N. E.	S. E.		
December.....	30.16	29.46	30.06	82	76	79	6.10	5	N. E. & N. W.	E. S. E.		

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May.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	3 P. M.		
1	80	87	0	S. & N. W.	At 4 P. M. a strong north-wester with rain.
2	78	85	0	S.W. by W. & S.	Fair.
3	82	85	0	S.	" " "
4	84	90	88	S.	" " Calm.
5	83	88	0	W. S.	Calm and Cloudy.
6	84	92	88	S.	" " "
7	82	90	88	S.	" " " afternoon clear.
8	85	91	90	S.	Clear.
9	86	90	88	S. S. W.	Cloudy.
10	84	85	84	S.	Clear.
11	86	88	86	S.	" " "
12	85	95	91	S. W.	" " and Calm.
13	89	89	95	W. S. W.	Hot wind in afternoon, heat oppressive.
14	92	99	98	W. N. W.	" " " "
15	94	98	94	W.	" " " "
16	98	96	94	S. W. & S.	" " " "
17	92	94	91	W.	Hot land wind under wet tatties.
18	92	94	0	W.	" " "
19	90	93	96	E. & S. E.	" " "
20	89	94	94	S. E. & S. S.	" " "
21	88	95	90	S. & S. W.	" " "
22	88	90	88	S.	" " "
23	89	90	84	S. by N. W.	Cloudy, a south wester with heavy rain at 3 P. M. during which Ther. fell to 80°.
24	84	88	86	E. S. E.	" " "
25	81	90	88	E. S. E.	" " "
26	83	93	84	E. S. E. by N.W.	3 P. M. a north-wester with rain.
27	86	95	0	S.	Much lightning in afternoon, no rain.
28	86	95	0	S.	" " " "
29	84	95	0	S.	" " " "
30	88	94	0	S.	" " " "
31	88	91	0	S.	" " " "

Thermometer highest between 7 and 3 P. M.

June.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	3 P. M.		
1	80	87	0	S. & N. W.	At 4 P. M. a strong north-wester with rain.
2	78	85	0	S.W. by W. & S.	Fair.
3	82	85	0	S.	" " "
4	84	90	88	S.	" " Calm.
5	83	88	0	W. S.	Calm and Cloudy.
6	84	92	88	S.	" " "
7	82	90	88	S.	" " " afternoon clear.
8	85	91	90	S.	Clear.
9	86	90	88	S. S. W.	Cloudy.
10	84	85	84	S.	Clear.
11	86	88	86	S.	" " "
12	85	95	91	S. W.	" " and Calm.
13	89	89	95	W. S. W.	Hot wind in afternoon, heat oppressive.
14	92	99	98	W. N. W.	" " " "
15	94	98	94	W.	" " " "
16	98	96	94	S. W. & S.	" " " "
17	92	94	91	W.	Hot land wind under wet tatties.
18	92	94	0	W.	" " "
19	90	93	96	E. & S. E.	" " "
20	89	94	94	S. E. & S. S.	" " "
21	88	95	90	S. & S. W.	" " "
22	88	90	88	S.	" " "
23	89	90	84	S. by N. W.	Cloudy, a south wester with heavy rain at 3 P. M. during which Ther. fell to 80°.
24	84	88	86	E. S. E.	" " "
25	81	90	88	E. S. E.	" " "
26	83	93	84	E. S. E. by N.W.	3 P. M. a north-wester with rain.
27	86	95	0	S.	Much lightning in afternoon, no rain.
28	86	95	0	S.	" " " "
29	84	95	0	S.	" " " "
30	88	94	0	S.	" " " "
31	88	91	0	S.	" " " "

Thermometer in its greatest height about 7 or 8 P. M.

July.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	83	88	0	S. W.	Cloudy.
2	82	89	0	S.	Strong wind, with rain in the afternoon.
3	82	85	0		
4	82	86	0	S. W. and N. W.	
5	82	87	0	do. do.	Cloudy, rain.
6	82	88	0	do. do.	" "
7	82	90	0	Calm.	" "
8	82	88	0	S. W.	" "
9	82	88	0	S. W. and N. W.	Rain in afternoon, from N. W.
10	80	87	0		
11	81	90	0	Variable.	Clear.
12	80	91	91	do.	Cloudy.
13	85	88	0	do.	"
14	86	89	0		
15	88	89	87	N. E.	Clear in the forenoon, afternoon cloudy.
16	86	87	85	N. E.	Cloudy.
17	78	78	78	N. E.	Much rain.
18	78	80	78	N. W.	
19	79	81	83	N. W.	Clear and dry.
20	82	84	86		Clear.
21	84	89	86	Calm.	
22	82	86	0	S.	Cloudy.
23	82	85	0	S.	"
24	82	86	0		"
25	81	87	0	Calm.	Rain in afternoon.
26	81	86	0		Rain.
27	82	84	0		Light rain.
28	80	83	0		Cloudy.
29	80	83	0	S. W.	"
30	79	82	0	S. W.	" and light rain.
31	80	82	0		"

August.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	81	86	0		Cloudy
2	82	87	0		light rain
3	83	88	0		no rain
4	84	89	0		Clear.
5	85	90	0		Clear.
6	86	91	0		Clear.
7	87	92	0		Clear.
8	88	93	0		Clear.
9	89	94	0		Clear.
10	90	95	0		Clear.
11	91	96	0		Clear.
12	92	97	0		Clear.
13	93	98	0		Clear.
14	94	99	0		Clear.
15	95	100	0		Clear.
16	96	101	0		Clear.
17	97	102	0		Clear.
18	98	103	0		Clear.
19	99	104	0		Clear.
20	100	105	0		Clear.
21	101	106	0		Clear.
22	102	107	0		Clear.
23	103	108	0		Clear.
24	104	109	0		Clear.
25	105	110	0		Clear.
26	106	111	0		Clear.
27	107	112	0		Clear.
28	108	113	0		Clear.
29	109	114	0		Clear.
30	110	115	0		Clear.
31	111	116	0		Clear.

August.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	79	82	0	S.	Cloudy.
2	81	82	0	"	" light rain.
3	80	82	0	Calm.	" no rain.
4	81	86	0	S.	Clear.
5	82	85	0	S. E.	" occasional light showers.
6	82	84	0	Calm.	Bright.
7	82	83	0	"	Cloudy and rain in the afternoon.
8	78	81	0	"	Constant heavy rain.
9	80	85	0	"	Clear.
10	82	87	0	S.	Showers.
11	82	86	0	S.	Cloudy and some rain.
12	84	87	0	"	Clear.
13	83	89	0	S.	"
14	84	89	0	S. W.	"
15	85	88	85	S. E.	Cloudy.
16	84	84	82	"	" heavy rain to the northward.
17	81	83	82	S.	Some rain.
18	83	87	84	Calm.	Clear.
19	84	86	83	S.	" rain in the afternoon.
20	83	86	0	S.	"
21	81	87	86	S. E.	"
22	83	85	85	S. E.	"
23	82	85	0	S.	" distant thunder.
24	78	80	0	S.	Heavy rain last night and this day.
25	77	78	0	"	"
26	80	82	0	Calm.	"
27	80	82	0	"	Cloudy.
28	83	85	0	S.	Clear—fresh breeze.
29	81	86	0	E. S. E.	"
30	81	86	0	S. E. by E.	"
31	81	88	0	"	"

September.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	85	85	0	E. & S. E.	Clear fresh breeze.
2	84	87	0	S. E.	Forenoon clear—afternoon heavy rain & thunder.
3	82	85	0	N. E.	Heavy rain from North East.
4	82	85	0	N. E.	Do. Do.
5	81	80	81	S. E.	Clear.
6	81	86	0	S. E.	Do. some showers.
7	82	85	0	S. E.	Do. strong fresh breeze.
8	84	85	0	Calm.	At 7 $\frac{1}{2}$ A. M. a slight shock of an earthquake was felt accompanied by a noise like distant thunder towards the S. W.
9	85	86	0	S. W.	
10	83	86	0	W. S. W.	
11	83	85	0	S. W.	Cloudy close.
12	81	84	0	N. E.	Much rain.
13	80	83	0	Do.	Do.
14	78	82	0	Do.	Do.
15	81	82	0	N. E.	Do.
16	80	81	0	N. E.	Do.
17	80	82	0	N. E.	Some rain.
18	79	80	80	N. E.	Do.
19	80	82	0	Calm.	Cloudy.
20	82	84	0	do.	Do.
21	83	88	0	do.	Do.
22	84	88	87	N.	Clear a thunder storm with rain at 6 p. m.
23	82	86	86	N.	Do.
24	80	82	87	Calm.	Do. rain in the afternoon with thunder.
25	82	86	79	N. W.	Do. thunder storm at 2 p. m.
26	80	85	86	Calm.	Do.
27	82	87	0	do.	Do.
28	82	88	87	do.	Do. (the Northward.)
29	84	88	82	S. E.	Thunder storm with heavy rain at 3 p. m. from Clear.
30	82	86	0	N.	

October.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	85	85	0	E. & S. E.	Clear fresh breeze.
2	84	87	0	S. E.	Forenoon clear—afternoon heavy rain & thunder.
3	82	85	0	N. E.	Heavy rain from North East.
4	82	85	0	N. E.	Do. Do.
5	81	80	81	S. E.	Clear.
6	81	86	0	S. E.	Do. some showers.
7	82	85	0	S. E.	Do. strong fresh breeze.
8	84	85	0	Calm.	At 7 $\frac{1}{2}$ A. M. a slight shock of an earthquake was felt accompanied by a noise like distant thunder towards the S. W.
9	85	86	0	S. W.	
10	83	86	0	W. S. W.	
11	83	85	0	S. W.	Cloudy close.
12	81	84	0	N. E.	Much rain.
13	80	83	0	Do.	Do.
14	78	82	0	Do.	Do.
15	81	82	0	N. E.	Do.
16	80	81	0	N. E.	Do.
17	80	82	0	N. E.	Some rain.
18	79	80	80	N. E.	Do.
19	80	82	0	Calm.	Cloudy.
20	82	84	0	do.	Do.
21	83	88	0	do.	Do.
22	84	88	87	N.	Clear a thunder storm with rain at 6 p. m.
23	82	86	86	N.	Do.
24	80	82	87	Calm.	Do. rain in the afternoon with thunder.
25	82	86	79	N. W.	Do. thunder storm at 2 p. m.
26	80	85	86	Calm.	Do.
27	82	87	0	do.	Do.
28	82	88	87	do.	Do. (the Northward.)
29	84	88	82	S. E.	Thunder storm with heavy rain at 3 p. m. from Clear.
30	82	86	0	N.	

October.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 a. m.	Noon.	4 p. m.		
1	82	87	0	N.	Cloudy.
2	84	88	82	N. E.	Forenoon clear—a thunder storm at 3 p. m.
3	82	85	80	N. W. to N. E.	Cloudy—rain in the afternoon.
4	81	86	0	N.	Do.
5	82	85	81	N. W.	Some rain.
6	78	82	80	N.	Cloudy—light showers.
7	78	84	0	N.	Clear. [continued till morning.
8	82	86	0	N. by S. E.	Sea breeze at 2 p. m. Ny. winds at 8 p. m. and
9	80	84	0	N. by S. E.	Do.
10	79	83	0	S.	Clear sea breeze at 3 p. m.
11	81	85	0	Calm.	Sultry.
12	81	84	85	Do.	Do. clear.
13	82	85	0	Do.	
14	80	85	0	Do.	Close and oppressive.
15	81	86	85	Do.	Do. sea breeze in the afternoon.
16	80	85	0	Do.	
17	78	82	83	N. E.	Clear—wind cold at night from the northward.
18	74	82	84	N. & N. E.	
19	76	83	0	N.	Clear.
20	76	83	0	N.	Do.
21	77	82	82		Cloudy.
22	76	82	0		
23	78	82	0	N. W.	Cloudy fresh breeze.
24	76	82	0	Do.	Do.
25	79	81	83	N.	Clear—sea breeze in the afternoon.
26	82	83	0		Do. Do.
27	77	84	84	N.	Do. Do.
28	78	84	0	Ny. & S. E.	Do. Do.
29	78	82	84	do.	Do. Do.
30	79	83	80	do.	Cloudy light rain.
31	77	83	0	N.	Clear—wind dry and warm by day at night cold.

APPENDIX, NORTHERN DIVISION

Wind. Remarks.

1. E. E. Clear fresh breeze

2. E. E. Forenoon clear—a heavy heavy sea & thunder

3. E. E. Heavy sea from North East.

4. E. E. Do. Do.

5. E. E. Clear

6. E. E. Do.

7. E. E. Cloudy

8. E. E. Do. some showers

9. E. E. Do. strong fresh breeze

10. E. E. At 7 a. m. a slight shower of ice particles was

11. E. E. but accompanied by a snow like shower

12. E. E. shower towards the N. W.

13. E. E. Do.

14. E. E. Cloudy close

15. E. E. Much rain

16. E. E. Do.

17. E. E. Do.

18. E. E. Do.

19. E. E. Do.

20. E. E. Do.

21. E. E. Some rain

22. E. E. Do.

23. E. E. Cloudy

24. E. E. Do.

25. E. E. Do.

26. E. E. Clear a thunder storm with rain at 11 a.

27. E. E. Do.

28. E. E. Do. rain in the afternoon with thunder

29. E. E. Do. thunder rain at 11 a.

30. E. E. Do.

31. E. E. Do.

Thunder storm with heavy rain at 11 p. m. 30th.

31. E. E. Do.

November.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	75	82	0	N.	Clear—nights cold thermometer 6 A. M. 69°.
2	73	81	82	N.	Do. Do.
3	73	82	83	N. E.	Do. Do.
4	75	81	81	N.	Do. Do.
5	72	80	81	N.	Cloudy.
6	73	79	80	N.	Do.
7	75	84	82	N.	Clear—sea breeze from 11 A. M. to 4 P. M.
8	78	82	80	N. E.	
9	73	80	80	N. E.	Clear—thermometer at 6 A. M. 69°.
10	72	78	79	N.	Do. dry and parching wind.
11	71	78	0	N.	Do. Do. Do.
12	71	77	79	N.	Do. thermometer at 6 A. M. 69°.
13	70	78	77	Ny.	
14	74	79	77	do.	
15	73	78	75	do.	
16	74	78	78	do.	Clear wind from the Northward at night sea breeze during the afternoon.
17	74	78	79	do.	
18	74	80	81	do.	
19	74	79	78	do.	
20	74	81	78	do.	
21	70	78	77	N. E. by S. E.	Do.
22	73	77	78	N. E.	Thermometer at 6 A. M. 69°.
23	68	75	78	do.	
24	70	76	75	do.	
25	68	77	75	do.	Clear weather—thermometer at 6 A. M. 59½°.
26	70	70	76	do.	Do.
27	71	75	75	do.	Do.
28	73	78	75	do.	Do.
29	73	82	81	do.	Cloudy.
30	74	74	74	fy.	Some rain.

APPENDIX, NORTHERN DIVISION.

December.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	75	82	0	N.	Clear—nights cold thermometer 6 A. M. 69°.
2	73	81	82	N.	Do. Do.
3	73	82	83	N. E.	Do. Do.
4	75	81	81	N.	Do. Do.
5	72	80	81	N.	Cloudy.
6	73	79	80	N.	Do.
7	75	84	82	N.	Clear—sea breeze from 11 A. M. to 4 P. M.
8	78	82	80	N. E.	
9	73	80	80	N. E.	Clear—thermometer at 6 A. M. 69°.
10	72	78	79	N.	Do. dry and parching wind.
11	71	78	0	N.	Do. Do. Do.
12	71	77	79	N.	Do. thermometer at 6 A. M. 69°.
13	70	78	77	Ny.	
14	74	79	77	do.	
15	73	78	75	do.	
16	74	78	78	do.	Clear wind from the Northward at night sea breeze during the afternoon.
17	74	78	79	do.	
18	74	80	81	do.	
19	74	79	78	do.	
20	74	81	78	do.	
21	70	78	77	N. E. by S. E.	Do.
22	73	77	78	N. E.	Thermometer at 6 A. M. 69°.
23	68	75	78	do.	
24	70	76	75	do.	
25	68	77	75	do.	Clear weather—thermometer at 6 A. M. 59½°.
26	70	70	76	do.	Do.
27	71	75	75	do.	Do.
28	73	78	75	do.	Do.
29	73	82	81	do.	Cloudy.
30	74	74	74	fy.	Some rain.

Wind.	Remarks.
N. E.	Clear—night and thermometer 41 & 37°
N. E.	Do. Do.
N. E.	Do. Do.
N. E.	Cloudy.
N. E.	Do.
N. E.	Clear—sea breeze from S. & S. W. 11 & 12
N. E.	Clear—thermometer at 1 & 2 P. M.
N. E.	Do. dry and passing wind.
N. E.	Do. Do. Do.
N. E.	Do. thermometer at 1 & 2 P. M.
N. E.	Clear wind from the Southwest at night and lower during the afternoon.
N. E.	Do.
N. E.	Thermometer at 1 & 2 P. M.
N. E.	Clear weather—thermometer at 1 & 2 P. M.
N. E.	Do.
N. E.	Do.
N. E.	Cloudy.
N. E.	Sea calm.

December.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	71	74	0	E.	Clear—sea breeze rain last night thermometer 7 A. M. 78°. Thermometer 62° at sun rise.
2	65	68	67	do.	
3	64	69	68	N. E.	Clear weather, wind northerly at night and easterly during day.
4	66	69	0	do.	
5	64	73	0	N. W.	
6	68	77	77	do.	
7	72	78	76	N. E.	
8	72	74	74	do.	
9	65	75	74	do.	
10	68	74	74	do.	
11	67	74	72	N. E.	
12	68	72	74	N. by E.	
13	67	72	0	do.	Clear weather, wind northerly at night and easterly during day.
14	68	76	0	do.	
15	69	76	0	do.	
16	69	74	0	do.	
17	69	75	74	do.	
18	69	76	0	do.	
19	67	76	25	do.	
20	68	78	77	do.	
21	69	76	75	do.	
22	79	80	80	do.	
23	73	79	78	do.	Change from mild weather to cold N. E. wind blowing fresh.
24	72	78	0	do.	
25	72	78	0	do.	
26	68	76	75	do.	
27	65	73	0	N. E.	
28	66	71	72	do.	
29	68	72	71	N. W.	
30	68	72	72	do.	
31	68	75	0	do.	

January 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	68	77	0	S. E. & Ny.	
2	70	76	0	do.	
3	70	76	0	do.	Cloudy, wind northerly by night easterly by day.
4	72	77	55	do.	
5	74	77	0	S. E. & E. S. E.	
6	75	80	0	Do.	Strong sea breeze from E. S. E.
7	76	81	0	Do.	
8	74	80	76	S. E.	Cloudy.
9	75	79	77	S. E.	do.
10	74	80	76		
11	75	80	75		Wind Ny. at night from S. E. by day.
12	70	74	0		
13	67	73	72	N.	
14	65	71	71	N.	
15	70	76	75		Ther. 6 A. M. 62°.
16	72	77	76		
17	70	79	78	N. E.	Clear.
18	73	80	78	Ny. & S. E.	Cloudy.
19	70	77	75	do.	Do. sea breeze in the afternoon.
20	70	73	72	do.	do. do.
21	70	73	72	do.	do. do.
22	69	69	68		Cloudy, light rain.
23					
24	70	75	75		Dry warm winds.
25	72	81	81	S.	do.
26	73	88	83	S.	do.
27	75	88	82	N. E. by S.	do.
28	73	82	80	S. E.	
29	68	76	71	do.	
30	66	73	71	do.	Clear.
31	68	79	75	do.	

February 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	68	77	0	S. E. & Ny.	
2	70	76	0	do.	
3	70	76	0	do.	
4	72	77	55	do.	For weather, vide S. E.
5	74	77	0	S. E. & E. S. E.	night.
6	75	80	0	Do.	
7	76	81	0	Do.	
8	74	80	76	S. E.	Cloudy, light rain.
9	75	79	77	S. E.	do. do.
10	74	80	76		
11	75	80	75		Wind Ny. at night from S. E. by day.
12	70	74	0		
13	67	73	72	N.	
14	65	71	71	N.	
15	70	76	75		Ther. 6 A. M. 62°.
16	72	77	76		
17	70	79	78	N. E.	Clear.
18	73	80	78	Ny. & S. E.	Cloudy.
19	70	77	75	do.	Do. sea breeze in the afternoon.
20	70	73	72	do.	do. do.
21	70	73	72	do.	do. do.
22	69	69	68		Cloudy, light rain.
23					
24	70	75	75		Dry warm winds.
25	72	81	81	S.	do.
26	73	88	83	S.	do.
27	75	88	82	N. E. by S.	do.
28	73	82	80	S. E.	
29	68	76	71	do.	
30	66	73	71	do.	Clear.
31	68	79	75	do.	

February 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	70	51	35	S. E. & Ny.	
2	68	77	75	do.	
3	67	75	75	do.	Fair weather, winds S. E. during the day Ny. at night.
4	79	80	81	S. E.	
5	78	82	81	do.	
6	73	81	81	do.	
7	71	80	0	do.	Cloudy, light rain.
8	55	71	72	E.	Do. Do.
9	55	74	8	do.	Clear. Do.
10	73	73	77	do.	Do.
11	71	75	75		
12	56	80	78	E. S. E.	Cloudy.
13	55	80	79		Heavy fall of rain.
14	51	72	0		Cloudy, light rain.
15	72	78	77	do.	Do.
16	71	78	76		Do.
17	73	71	0	E. S. E.	Do.
18	71	77	78	Sy.	Cloudy, light rain.
19	74	78	8		Light rain.
20	74	80	81	S. E.	
21	74	82	82		
22	76	82	0	S. E.	
23	75	80	0		Heavy rain at 9 p. m.
24	75	82	0		
25	75	84	82	S. W.	Rain from N. W.
26	77	84	83	S. E.	Heavy rain last night.
27	75	80	0		Rain.
28	76	82	75		Occasional heavy showers.
29	75	80	0	N. E. & S. E.	Clear.

Heavy Gains.

Wind.	Remarks.
S. & Ny.	
do.	Cloudy wind westerly by night westerly by day
do.	
S. E. & S. E.	
do.	Strong sea breeze from S. E.
do.	
S. E.	Cloudy.
do.	
S. E.	Wind Sy. at night from S. E. by day.
S.	
S.	Thin f. s. a. 12.
S. E.	Clear.
S. E.	Cloudy.
do.	Do. sea breeze in the afternoon
do.	do. do.
do.	Cloudy, light rain.
do.	
	Dry warm wind.
do.	
S.	
S. E.	
do.	
do.	
do.	Clear.

March 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	75	87	79	Ny. and S. E.	Fair weather, wind Ny. at night Sy. by day.
2	72	79	79	N.	
3	70	83	80	do.	Close oppressive, wind warm.
4	71	80	81	Ny.	
5	75	81	81	do.	Wind Ny. dry and warm till at 1 P. M. when it changes to S. E. thermometer at 7 A. M. about 70°
6	76	81	80	do.	
7	74	82	80	N.	Winds Ny. warm and dry.
8	74	82	83	N.	
9	75	85	87	N.	do.
10	74	85	86	N. and S.	
11	75	89	84	S. and Sy.	do.
12	71	88	88	S. and Sy.	
13	89	98	90		do.
14	89	86	86		
15	78	86	86	Ny. and by E.	do.
16	75	88	86		
17	74	85	86	E.	do.
18	89	85	86		
19	89	88	86	S. E.	do.
20	81	88	86	E.	
21	82	88	87	S. E.	do.
22	82	89	86	S. E.	
23	82	91	87	S. E.	do.
24	85	87	88	S. E. by S.	
25	82	87	84	do.	Clear.
26	82	85	84	E.	
27	77	88	84	E.	do.
28	78	87	84	E.	
29	83	87	86	H.	Cloudy.
30	82	86	84	E. and by S.	
31	89	89	81	Calm.	Light rain.

April 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	70	75	75		Severe thunder storm at 1 P. M.
2	70	75	75		Fair, light rain.
3	70	75	75		Fair, light rain.
4	70	75	75		Fair, light rain.
5	70	75	75		Fair, light rain.
6	70	75	75		Fair, light rain.
7	70	75	75		Fair, light rain.
8	70	75	75		Fair, light rain.
9	70	75	75		Fair, light rain.
10	70	75	75		Fair, light rain.
11	70	75	75		Fair, light rain.
12	70	75	75		Fair, light rain.
13	70	75	75		Fair, light rain.
14	70	75	75		Fair, light rain.
15	70	75	75		Fair, light rain.
16	70	75	75		Fair, light rain.
17	70	75	75		Fair, light rain.
18	70	75	75		Fair, light rain.
19	70	75	75		Fair, light rain.
20	70	75	75		Fair, light rain.
21	70	75	75		Fair, light rain.
22	70	75	75		Fair, light rain.
23	70	75	75		Fair, light rain.
24	70	75	75		Fair, light rain.
25	70	75	75		Fair, light rain.
26	70	75	75		Fair, light rain.
27	70	75	75		Fair, light rain.
28	70	75	75		Fair, light rain.
29	70	75	75		Fair, light rain.
30	70	75	75		Fair, light rain.
31	70	75	75		Fair, light rain.

April 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	78	81	79	Sy.	Severe thunder-storm at 1 P. M. during which the Cloudy, light rain. [ther. fell to 72°.
2	80	84	84	Calm.	Forenoon cloudy, afternoon clear calm & sultry.
3	80	85	88	E. & by S.	Clear, wind warm from S. E.
4	80	84	85	do.	Cloudy.
5	79	85	86	S. E. by S.	} Clear, fresh breeze.
6	80	86	84	S. by S. E.	
7	80	83	88	S. E. by S.	} Clear, hot wind at noon.
8	82	80	85	S.	
9	82	80	87	S. by W.	} Clear, fresh breeze.
10	82	80	88	S. E.	
11	82	83	93	S.	Sultry.
12	85	91	89	S. E.	Cloudy, a gale of wind from 5 P. M. till mid night.
13	86	91	87	S. E.	do. [with thunder & lightning]
14	85	88	86	do.	Land winds in the forenoon, yesterday from 1 P. M.
15	85	90	86	W.	} Fair.
16	84	88	87	E.	
17	83	88	85	S. E.	} do. Light rain.
18	84	89	86	do.	
19	85	91	88	E. by S. E.	} Land wind from 5 P. M. yesterday.
20	87	91	89	S. E.	
21	87	90	91	N. by W.	Clear fresh breeze.
22	86	92	90	E. by S.	do. do. light rain.
23	87	93	90	E. S. E.	do. do. a north western in the afternoon.
24	86	94	89	do.	Cloudy, a north western at 4 P. M. with a low drop
25	84	92	86	S.	do. do. at 4 1/2 P. M. with rain. [of rain.
26	86	91	85	S. E. by E.	} Clear, wind high.
27	86	92	89	S. E.	
28	86	91	89	do.	}
29	85	93	89	S.	
30	89	94	94	do.	

May 1828.

Date.	Thermometer degrees.			Wind.	Remarks.
	9 A. M.	Noon.	4 P. M.		
1	85	92	90	S. E.	Clear, calm. (afternoon.)
2	85	96	91	W.	Winds westerly in the forenoon, easterly in the afternoon.
3	87	92	89	S. E.	Clear, fresh breeze.
4	88	92	92	S. E. by S.	
5	88	93	88	S.	Clear weather strong breeze.
6	89	92	87	S. E.	
7	88	91	90	S. E. by E.	Clear weather strong breeze.
8	88	90	90	S.	
9	88	91	88	S.	Clear weather strong breeze.
10	89	93	90	S.	
11	89	92	89	S.	Clear weather strong breeze.
12	90	91	88	S.	
13	86	88	88	S. E.	Clear weather strong breeze.
14	87	90	88	S.	
15	88	90	91	S.	Clear weather strong breeze.
16	89	89	87	S. E.	
17	86	93	90	W. & S.	Thunder storm or squall from the N. W. with forenoon wind westerly, afternoon southerly and clear.
18	87	92	80	S. by W.	A fine gale with heavy rain at 4 P. M. from the west, which continued to blow till 6 A. M.
19	85	89	86	S. E. by E.	
20	86	89	85	do.	Clear, wind moderate afternoon cloudy.
21	87	89	88	E.	
22	86	90	87	E. S. E.	Clear.
23	87	91	90	E.	
24	88	91	89	E. S. E.	Cloudy.
25	89	93	89	E.	
26	88	92	90	S. E.	Clear fresh breeze.
27	91	93	89	S.	
28	89	93	90	S.	do. do. do. } country has a parched appearance.
29	89	93	90	S.	
30	89	92	89	S. E.	do. do. do. }
31	89	91	87	S. E.	

HYDERABAD.

The country of Hyderabad and provinces of Hyderabad and part of Ahrampah, Canish, and Bevar, limits, extends between the 15th, and 21st north latitude, and the 75th, and 81st 30' of It is somewhat of a quadrangular shape, but very irregular, as to *its* description.

It is bounded on the east, by the Rajah of Nagpore, the Warrer rivers separating the two countries;—on the west, by the Bombay territories; and on the north, by the British territories, the Ceded districts, Kurnool, Guntur, and part of the Madras provinces, the Eastern rivers throughout a great part limit, forming the natural boundary.

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

The general surface of the country is being elevated from 1,800 to 2,000 feet above sea; but there are no mountains of any great height, the rocky hills so common through this province, consist chiefly of dark coloured granite, in most places in large detached blocks, and is covered by dykes of green stone, which are frequent.

The soil in general, between the granite hills, and when capable of being irrigated, where alluvial deposits are collected, produces

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 valleys 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 Mulcapore 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

HYDERABAD.
not higher above the level of the sea, are of a different structure. Their sides are very steep, and the traveller to see his hands and knees, and the jagged stones and tors, of the same granite, are not visible.

"The outcrop of Bolaram five miles distant, is one of the highest inhabited parts of the country, and from thence to the north-west crosses in height as far as Munsickpet, the more suddenly at Mallapure to the eastward, rises to the north-west.

"The city of Hyderabad, close to the wall over Money runs, is by barometrical measurement above the level of the sea, and the calculation, 1837, which agrees with Colonel's geometrical measurement, within 19 feet.

"The outline of the basaltic trap hills, is their lacinated, with a few conical elevations; they consist of an accumulation of round hills, rising and separating them. They are covered with long grass to their summits. Their conical shape is not regular, but it frequently is perceived. The hills are not far, the sides of the hills are steep, and the granite they cover, reaching to their bases; their direction is south-east, or nearly so, and it is probable, that over a considerable portion of the south-east coast.

"The lakes are all artificial, and are for the granite and sandstone country; they are situated on the upper half of a valley from the low country of granite, or mounds of earth, and different streams rising from the hills during

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

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 "

Vegetable fibre.....
Silicious sand.....

The surface of Hyderabad is an elevatedly but not mountainous, with a climate of temperature than its latitude would indicate.

The country is general may be said to be and there are no jungles of any great forest trees to be found, except in the north but little known, north-eastern direction; e date and palmyra trees, are however to be fo

There are innumerable tanks throughout the country, formed as above in basements thrown up between ranges of granite,* but with the exception of the T 100 miles north-east of Hyderabad—these reservoirs of water to be met with, and but Partial, a body of water of great extent depth, gives rise to a stream called the Kus which as well as several other large streams, both in the eastern and western direction, river, which enters the sea south of M water is general, both of tanks and wells country, is of good quality.

The principal rivers are a boundary, as the Purna which flows through Deccan, and unites with the Taptee at Ch war; the Waris, which runs along the w dividing Hyderabad from the country of Na unites with the Godavery near a place call The Pyna-gangul, takes its rise in the north the country, and flowing eastward joins

* The main granitic base on the Hindostan range and consists of a great variety of gneiss, which is several of Hyderabad. The base of which is formed by its horizontal and the other is, which is open. This body of water is the only one in the country. It is found by a canal from the Muzer on the water. It was constructed at an expense of 10 lacs of

Vegetable fibre.	2	„
Silicious sand.	154	„
	<hr/>	
	421	

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 Meikwar; 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 these are the Hussain Sangor tank lying between the cantonment of Secunderabad and Hyderabad, which is several miles in circumference, and irrigates 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 horizontal arches—15 of which are 150, and the other 7, 100 feet in span. This body of water is 17 miles in circumference when the tank is full. It is filled by a canal from the Moosy river, and supplies the city with water. It was constructed at an expense of 8 lacs of Rupees.

HYDERABAD.

of water, of from three to ten miles
This mode of retaining water artificially, as the small supply derived from wells, and to the cultivation of rice, which is the only produce in the granitic soil. After they sustain from irrigation, evaporation, and infiltration, nevertheless, many become dry a season returns. Those tanks which no longer supply rice-fields, are speedily covered with leaves and flowers of the *Nelumbo-orientalis*, and other aquatic plants: their waters are small and unwholesome taste. The number and state of repair, afford a fair criterion of the country.

frequent in the sandstone country, and the stream is accordingly more abundant.

trap they are rarely seen, and the irrigation, is performed solely by wells.

The soil which composes the elevated part of this province, depends greatly on the rock of which they are formed, because the soil is silicious, but varies in such a valley of Mulhapore forms an exception, that usually, the spontaneous fertility is in height above the level of the sea.

is an analysis of a garden soil at the cantonment of Secunderabad, which has not received much

of soil 1.70. Four hundred and eighty
via: 10 gr.
of quartz and felspar. 250

Warra. The Godavery, the most considerable river in 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 Ghurk-purna, and Wurda, it flows south-eastward, into the Bay of Bengal, below Rajshundry. 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 ghaut 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.

HYDERABAD.
The road via Nandair, being open, and
jungle, may be travelled with safety at all sea-
sons, is consequently preferred. A good
road leads north and by west to Jinnah.

A road running southward, divides at a
distance into two branches, one leading
to Bangalore, the other to Karnool and Cudda-
lore, have not been erected on these lines. In a
various roads, others intersect the country
running between the different stations of the
and the principal towns.

The travelling distance from Secunderabad
to Bangalore, is 200 miles; to Masulipatam via Be-
japore, via Nirmul 324; and by Nandair
by Ghauri 255; to Bellary, via Adoni 229;
to Karnool 256.

Wild animals. The wild animals do not
usually met with in Southern India, tigers,
leopards are however very numerous; and in the
country to the north-east, wild buffaloes are
The wild elephant is not known in this part.

The British connexion with
commenced in the latter half of the last cen-
tury, and about the year 1798, a treaty was
made with the Nizam, under which a certain number
of military detachments were agreed to be kept up; and
a treaty was made in 1800, when the subsidiary
force of 5000 infantry, and 1000 cavalry; a certain
sum being voted for their maintenance.

The Hyderabad subsidiary force now con-
sists of 5000 infantry, and 1000 cavalry.—His Highness the Nizam
keeps the regular troops of the line, European troops
belonging to the Madras presidency.

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 Jud-dacherlah 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, via Ongole, is 399 miles; to Masulipatam via Beizwarra 221; to Nagpore, via Nirmul 323½; and by Nandair 420; to Jaulnah by Oodghir 263; to Bellary, via Adoni 229½; and to Cuddapah, via Kurnool 256½.

Wild animals. 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 Hingolee.

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.

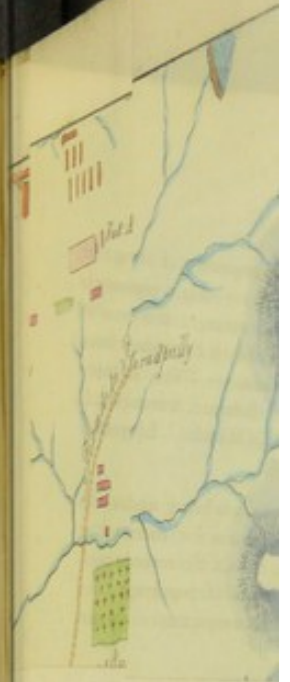
SECUNDERABAD.

Cantonment of Secunderabad, and vicinity.

This cantonment, the head quarters of the Hyderabad subsidiary force, is situated in north latitude $17^{\circ} 26''$, and east longitude $78^{\circ} 32''$. 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



HYDRABAD.

my consists of two regiments of regular
cavalry, a company of native artillery—eight regiments
of which are officers by Europeans from
of the three presidencies.—The names
of the troops, are Bolaram, Arcuzabad,
Bijapur, Masulihah, Muzul, Lingore

Officers of this service not being under the
control, no reports or returns are received at
this office from them, nor do the records con-
tain relative to the medical topography of
the country mentioned, which, consequently do not
form a part of this report.

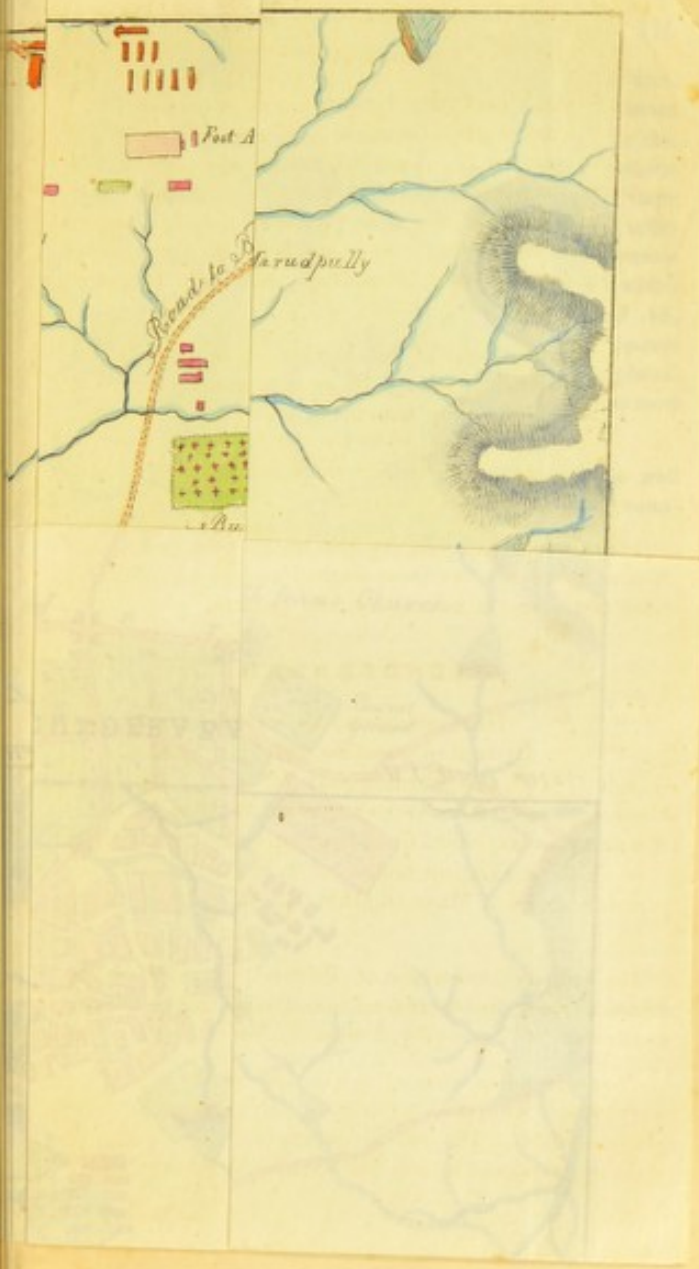
occupied by the troops belonging to the
Muzul, are Secunderabad and the adjoining ca-
mpanies of Bownepilly, and Julah.

SECUNDERABAD.

This cantonment, the head quarters of the
Muzul subsidiary force, is situated in north
latitude 18° 22'. The city of
Secunderabad, separated from the
cantonment by the river Mussey,
is situated to the southward, separated from the
cantonment by the river Mussey,
an excellent bridge has been erected under the
direction of Major Oliphant, late of the Madras Engi-

The cantonment of Bolaram, occupied by the
Muzul, is about 5 miles north-east, and the country
is generally, 2 miles north-west.

The country is wild and picturesque, being
intersected by small hillocks of granite, over the entire
The soil is principally alluvial on the
and many of the scintillating stones are to be



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 fakcers. 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.

Tanks. The^s 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 (*Phoenix 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 $74\frac{1}{2}$, February $76\frac{1}{2}$, March 84, April $91\frac{1}{2}$, May 93, June 88, July 81, August $80\frac{1}{2}$, September 79, October 80, November $76\frac{1}{2}$, December 74, giving as the annual mean $81\frac{1}{2}$. 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, sepoy 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

HYDERABAD.
enclosed by a wall; the road from Madras ar-
riving between the barracks and burial ground
to the west of the barracks is the hospital, a
massive quadrangular building, enclosed by
and further west, are the lines of the office
ment. Southward, and at a right angle with
European regiment, and those of a native corp
force in 1844; they are of a temporary struc-
on which they stand is high, intersected by
number very many.

Left of the European lines, follow those
the five native regiments, and the officers' lines
to the western end of the cantonment; on the
stands the church, a large and handsome building
on the highest spot of ground in the cantonment
the north-west of it, is the massie lodge.

In front of the lines of the native corps, is
hospitals, places of arms, and quarters for the
corps; and at about the centre of the whole
general, the front, of all of these buildings, be-
line about thirty feet in advance of the office
with a row of trees before them. About fifty
advance is a good road running from east to west
church to the lines of the horse brigade of artillery
the parade ground, which is about half a mile in
parade forms an inclined plane, descending
in the east, and is bounded to the north by
two small bridges across it, over which run the
to the foot artillery lines, and to the cantonment
On the north side of the rivulet, does not
is the cantonment burial ground, in a low
situation, surrounded by a fence of milk
northern side are first the public rooms,
the first court, about a quarter of a mile
the powder magazines, and half a mile

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 east 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-east, 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 Saugor
Tank.

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-
valry lines.

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

Bowenpilly, situated in an open country, at
somewhat elevated ground; and the region
there has generally been very healthy, and
demic diseases, more particularly cholera.

Population of
Bowenpilly. There are about 5000 houses
to each, which at the average of 30,000
under the estimate recently made out, give
aggregate population of 34,357. The houses
are of one story, built of mud and
straw, consisting of two stories, and
is uneven and rocky, causing much difficulty
in the extension of the several streets of
the cantonment, and deficient in breadth
and extent throughout the several streets of
the cantonment, pools have formed in
places where the water is not removed
into which the sewers empty themselves
masses of filth, which at certain seasons
prove very offensive, and are productive of
disease. It is however paid to the cleanliness of
the streets, the inhabitants being held
responsible for the repair of the drains,
which they reside. Houses of the better
class have gardens attached to them, but
of that essential, amongst the poorer classes
of the cantonment, especially offensive. The
certain localities exceedingly offensive. The
the houses, and the convenience of its inhabi-
tants greatly promoted by the recent erection of
open and airy situation, where the butcher
shops are located; it has also had the
effect of building in the neighbourhood, and
a portion of the population from the cantonment.

Area of the
Cantonment
Total

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.

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 pukka 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

* Adult males . . .	13,006
Females . . .	13,745
Children	8186
Total	34,837

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.

Police. 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

to hard labour, are employed under the order of the superintendent of police, in draining and levelling in repairing bridges and other public works. Debtors, are supported by the parties at whose expense they are confined, and criminal offenders are supported by the government, at the rate of four pice each per diem. The expenses of the maintenance of the prisoners are regularly accounted for, and generally are the expenses of the maintenance of the prisoners.

The barracks for the European troops are situated at the eastern extremity of the hill, on the side of a hill sloping eastward, with high land on three sides, and plain on the fourth, the latter being interspersed with rice fields, and a date plantation to within 500 yards of the barrack wall; communicating beverage is so abundantly produced as a place of deposit for all the fish, and various kinds of produce. On the north-west or opposite side, is the burying ground, densely crowded with tomb stones, and about half a mile further beyond, is a ridge of granite rocks. The soil on which the barracks are situated, consists of a reddish coloured clay, mixed with good granite, and except the low cultivate mentioned, the surface in the immediate vicinity is barren.

The dimensions of the several apartments are as follows.

Room No.	Length Feet.	Breadth Feet.	Height Feet.
1. Centre room	210	18	12
2. do.	210	18	12
3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.	210	18	12

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 & Hospital accommodation, for the European Infantry. 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.

	Rooms.	No.	Length Feet.	Breadth Feet.	Height Feet.	No. of Cots.	Total.	
Square. Wing.	1	Centre room.	210	18	18	76	76	
	1	do.	229	18	18	84	84	
	2	Verandah rooms each	196	12	18	34	68	
	2	do.	215	12	12	58	208	
	4	Centre rooms	142	18	18	58	208	
	4	do.	164	18	18	60	240	
	4	Verandah rooms each	135	12	12	24	96	
	4	do.	150	12	12	26	104	
		32	Serjeants' rooms			2	24	
							Total Cots	1016

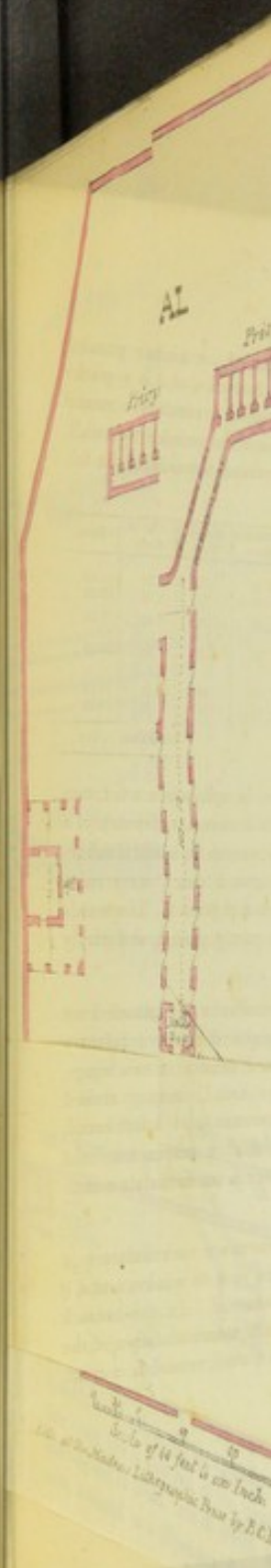
Hospital. The hospital is situated on higher ground, about 400 yards to the west of the barracks, and is a pukka building with a tiled roof, having enclosed verandahs round it; it is in the form of an oblong square, surrounded by a wall, and is divided into 4 centre, and 6 verandah wards, of the following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

	Length Feet.	Breadth Feet.	Height Feet.	No. of Cots.	Total.	
For Males.	2 Long centre wards each	110	18	18	20	40
	2 Short do. do.	75	18	18	14	28
	2 Long Verandahs do.	248 and 180 to	12	12	0	36
	4 Short do. do.		107 and 75 to	12	12	0	28
For Females.	1 Ward do.	65	18	18	0	14
	4 Verandahs.		12	12	0	18
				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 foot artillery barracks are situated on 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 serjeants, each 16 feet by 10, with a small verandah in front.



HYDERABAD

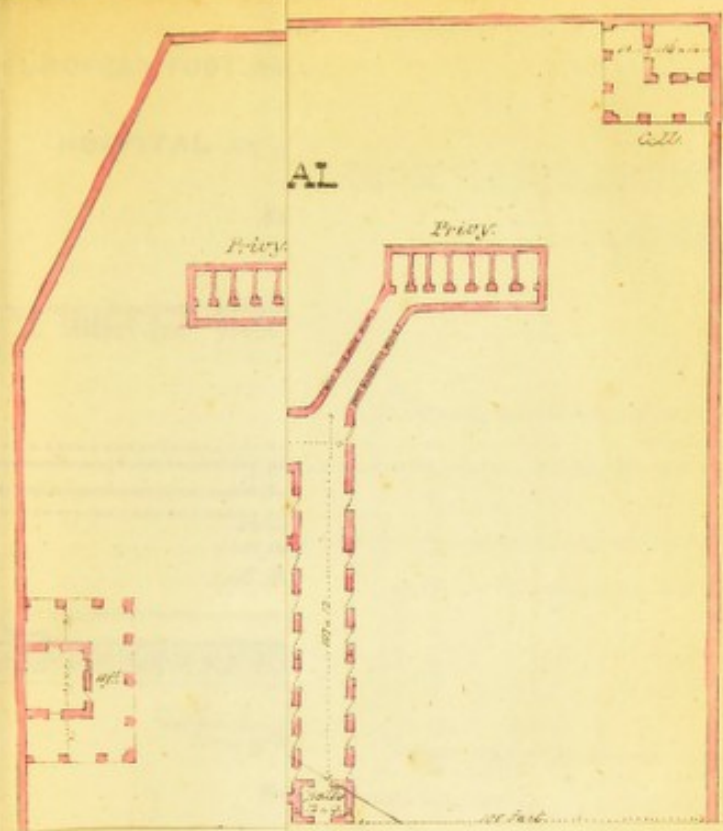
The hospital is situated on higher ground to the west of the barracks, and is a picturesque building, having enclosed verandahs round on an oblong square, surrounded by a wall 40 feet high, and 6 verandah wards, of the following dimensions:

Ward	Length Feet	Breadth Feet	No. of Cots	Total
1st	120	12	12	144
2nd	120	12	12	144
3rd	120	12	12	144
4th	120	12	12	144
5th	120	12	12	144
6th	120	12	12	144
Total				864

In addition to the above, an ophthalmic ward, two patients, two bath rooms, a dispensary, a room for medical officers on duty, a room for medical sub-officers, nurses, a guard room, store room with cooking houses and privies. The verandah is painted, and the doors partly glazed, and partly

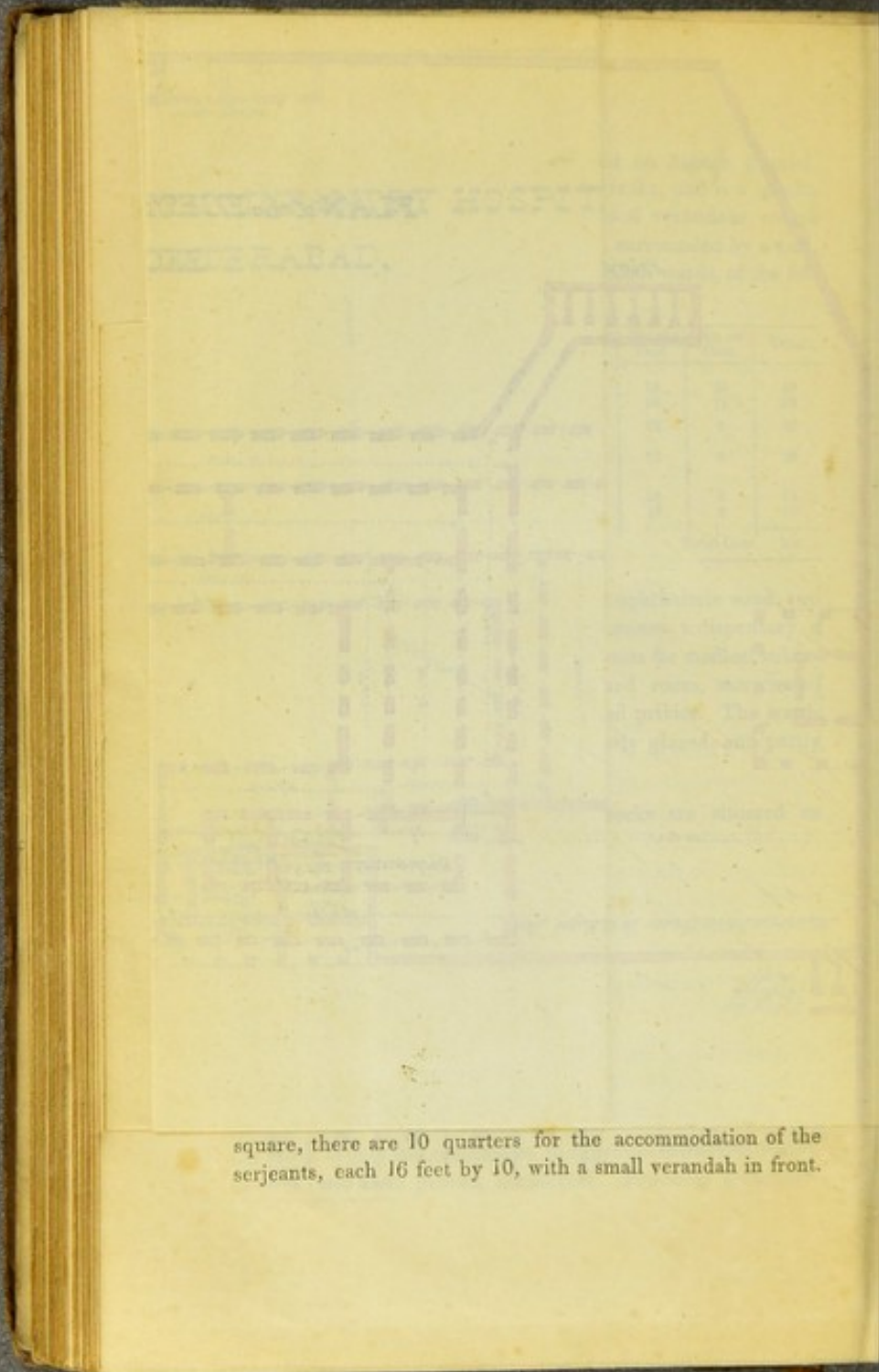
The foot artillery barracks are situated on a raised ridge, opposite the native infantry barracks, built in 1826, and consist of two wings, 120 feet long and 22 feet broad, having verandah with a verandah on each side 11 feet broad, long building, with an entrance in the middle of each wing, one accommodates a com-

pany of 100 men, though there are no ventilators in the building, being provided with 66 windows, and 60 quarters for the accommodation of the company, 10 feet by 10, with a small verandah in front.



Scale of 40 feet to an Inch

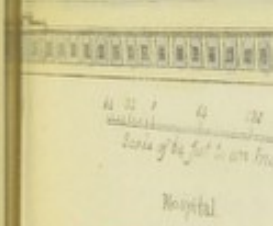
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REGENCY HOSPITAL
BOMBAY

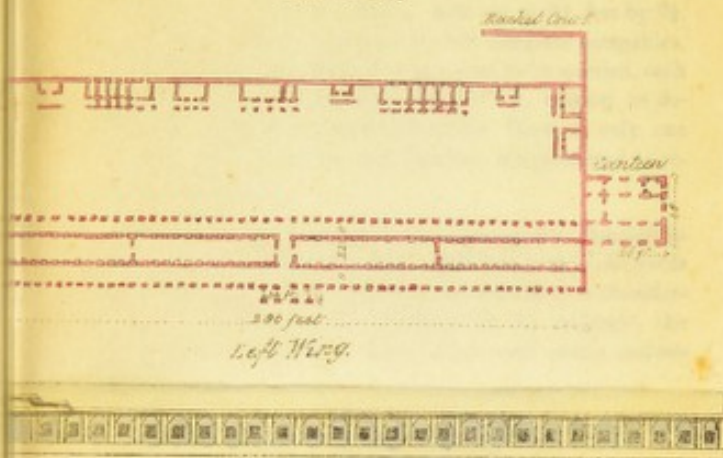
square, there are 10 quarters for the accommodation of the serjeants, each 16 feet by 10, with a small verandah in front.

PLAN
of the
EUROPEAN FOOT ARTILLERY BARRACKS
and
HOSPITAL at SECONDE
Barracks



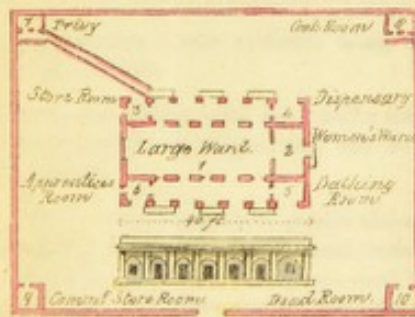
PLAN
of the
EUROPEAN FOOT ARTILLERY BARRACK,
and
HOSPITAL at SECUNDERABAD.

Barracks.



Scale of 60 feet to an Inch

Hospital.

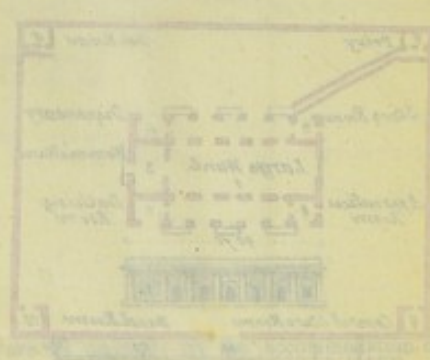
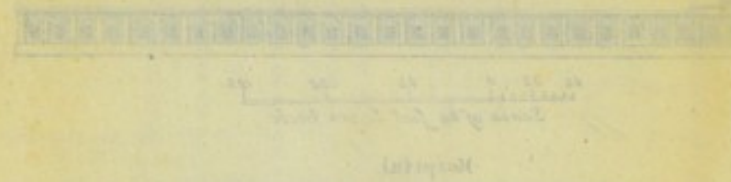
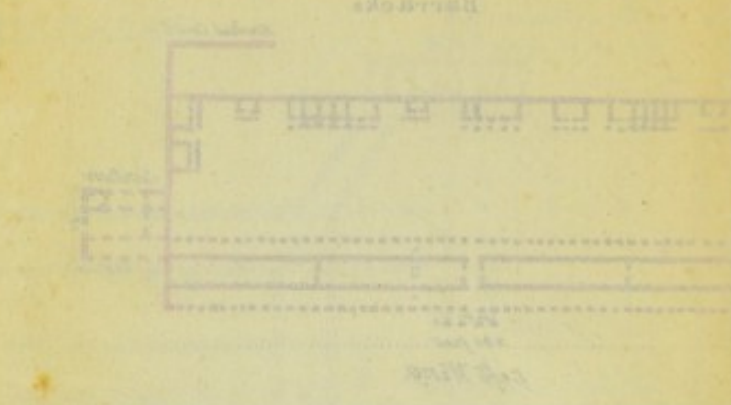


Scale of 40 feet to an Inch

Printed at the Madras Lithographic Press by B. C. Regal.

are 10 quarters for the accommodation of the
16 feet by 10, with a small veranda in front.

HOSPITAL AT BARRACKS
AND
BARRACKS



BARRACKS

The men are provided with iron cots on the floor planks of which it consists, during the winter in a smaller set of trestles, to form a cot, consisting of two, serving as a table; each cot should be occupied by two men, and as intended, and supposing never per cent to individual would have 600 cubic feet of air deduction for children, at present however, the company, and several men with families, are side in the parkery.

The yard is square, which has an open centre, is so confined, the back wall being from the remainder of the barracks, and this is only enclosed on by the buildings for the guard, prison rooms, store, congee house, cool rooms.

There is a good well, outside the square with a mast attached, worked by bullocks.

The prisons are detached buildings, at corners of the square, and have one sewer into a shallow covered tank, about 80 yards long, it emits a constant stench during the hot season.

The prison room is very confined, being 10, with one window.

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

The European hospital is also a proof building, 90 feet long, by 60 broad, in front verandah. It consists of one large ward 14 broad, with a smaller one 15 feet long broad, at one end, usually set apart for four rooms, two at each end of the verandah 10 feet long and 11 broad, one of which is one room, a second as a dispensary, the third is

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 $6\frac{1}{2}$ feet by $2\frac{1}{2}$. 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 necessaries.

There is a good well, outside the square at its western end, with a moat 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 Hospital. The European hospital is also a pukka, bomb-proof 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 cook-rooms—dead-room, commissariat store room, and the privy. This hospital was erected in 1828. 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.

Bolarum, description of. The cantonment of Bolarum is situated about 12 miles north of the city of Hyderabad, and about 5 north of Secunderabad, 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 pine 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

months it sometimes rises much higher. August and September, the winds are westerly; but, November, December, January and February from the east; and in March, April, and the western seasons are frequent.

The station has military lines for two battalions, a regiment of irregular horse, and 250 artillery.

The hospital is in an airy situation, and having every convenience for the accommodation of sick, but there are seldom more than a number under treatment.

The annual fall of rain may be taken at inches, which occurs principally in the south or between June and October. In the north 4 or 5 inches have been known to fall during December, but this is unusual and only happens.

With respect to salubrity, Bolarum is amongst the most healthy stations in the Deccan, and consequently resort to it for change of air from Secunderabad, and often with the most. No rank regulation is permitted to spring up of the cantonment, the hedge rows are cut to a certain height, and the place is consequently a great measure free from the sources of noxious which besides being a nuisance, are the frequent sickness in large military stations.

CANTONMENT OF JAVANAR

General description of health and salubrity. Javanar, is a considerable station, in the province of Aurangabad, capital of a district of the same name. It is situated in north latitude 18° 50', and east longitude 75° 30', travelling distance, north-west is 250 miles, from Bombay, and about the same from Secunderabad, and about the same from Bombay, and

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 north-westerly 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 unusual 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 cantonment, 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 exhalations, which besides being a nuisance, are the frequent causes of sickness at large military stations.

CANTONMENT OF JAULNAH.

General description of Jaulnah and its vicinity.

Jaulnah, is a considerable town and military station, in the province of Aurungabad, and is the capital of a district of the same name. The cantonment is situated in north latitude $19^{\circ} 50''$, 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.

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 eastern 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 ochre used by native painters, is also very common.

The principal grains and plants, cultivated in the neighbourhood, are rice, bajecry, 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;

Jaulnah.

the ground is, first ploughed in one direction, and freed from weeds, when the seed is sown, and being passed once over, the operation

Irrigation from wells is chiefly resorted to for the purpose of watering a few rice fields in the vicinity of the water; wheat, and grain of various kinds, are raised from nullahs.

Best of Cows in Cows.

In the neighbouring villages the best of cows were formerly bred, and some well adapted for the cavalry, but of late years become deteriorated; draft bullocks and buffaloes, the neighbouring downs afford a superior description; and milk and butter are of an excellent quality; good working bullocks for carts, or oxen, are purchased for twenty rupees per pair; and cows at from seven to ten rupees; but milk about twenty rupees each. Great numbers of oxen of a superior breed, are sent for sale to Shalapur, Burwar, Hoobly and many other parts of the country. Sheep and goats, are in almost every part of a superior description and flavour, and will generally bear a comparison with those of southern India, and is moreover cheap. The country is sold at high prices.

Climate and Diseases.

The climate is considered the most pleasant and salubrious in southern India. In the greater part of the year a fresh invigorating breeze is experienced in the mornings,—yet convulsions and serious attacks of disease, and more especially of air, is almost invariably slow and imperfect, especially to the sea coast, is generally experienced for the restoration of health. The hot season commences in April, May and June, and is decidedly the hottest period of the year,—the heat in the middle of the season, the thermometer ranging between 100 and 110, but it becomes comparatively cool towards the end of the season, and the prevailing winds in these months are westerly.

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 pasture; 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 Seasons. The climate is considered to be one of the most pleasant 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 mah-rattas. 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 Koon-dulka, 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

INDIAN.

the latter are a prominent class, who labour their vocation, as sowers and sheffs. There is a numerous race of pusses at this place, but a degeneration of late, and their numbers have fallen to about 40.

A large and flourishing trade was carried on in Jaulnah, about 25 or 30 years ago, in silk and other articles of manufacture, and sent to various countries; cotton cloths and muslins, of different kinds, were also extensively made, and met with a ready sale in various parts, such as the great influx and export of British manufactures, the taxation of the Nizam and the exaction and rapacity of the public servants, have greatly declined, and the numbers of the artisans, who were formerly employed in making sarrees, pagrees, coarse muslins, and the coarser kinds of cotton, are now diminished to 8 or 100, which are chiefly employed in making sarrees, pagrees, coarse muslins, and the coarser kinds of cotton, which are raised in the neighbourhood is chiefly consumed, and is of a superior quality.

A beautiful description of scarlet dye is given in the history of the Nizam, where it is much prized for the color.

Wood is scarce and dear, teak-wood being the most valuable; it is brought from the jungles of the Nizam, and is used in building, and making furniture.

The streets in the town of Jaulnah are very narrow; the houses are tiled, and those of the nobles, are often ornamented with fine painting, and are the subjects of hindoo mythology. Some of the houses are four stories, with a corresponding number of balconies. The ground floor is sometimes of brick, and the upper stories are generally of a costly appearance.

The paggy, angreah, and other articles of clothing in use with the natives

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, pugries, 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 Mas-suck, 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 mahratia 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 opium.

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 Medicine.

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.

There are some aged inhabitants among the in particular, a mussulman, whose years amount to 100, and who although infirm, is still hale, and of good health. Females are likewise long-lived, as well as hindoo women, octogenarians.

Water. Bore water is always preferred when procurable for culinary purposes. Jaulsh is abundantly supplied from wells, and is so good, the water is seldom good, being big with minute particles. In the custom of drinking water from three wells, the water of which is drinkable in the drier seasons, there is no scarcity.

Sugar-cane. Sugar-cane is raised in the neighbourhood, but the coarsest description only, and that known under the name of 'muckhara', the finer sort, being brought from the Berar country. Wheat is raised in great quantities; the former when used to all other descriptions of grain, and the second, fifty seers of the best quality can be purchased, and several wheaten loaves of the best also to be had for a rupee. Chenna is raised in much estimation, and is but little cultivated procurable during the harvest at less than 60 rupees.

Climate. The climate of Jaulsh is adapted for the purposes of horticulture—vegetables are raised in great perfection; figs and strawberries, are all excellent in the soil in the way not with in England, but deficient in flavour; there is also a great quantity of excellent European vegetables, such

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.

Water. River water is always preferred by the natives 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.

Vegetable productions. Sugar-cane is raised in the neighbourhood in abundance, 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 rupee. 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 seers per rupee.

European vegetable and fruits. The climate of Jaulnah is admirably adapted 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,

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-east, 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 south-westerly 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.

River Koondulka.

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 plan annexed.

† Two of the lines for native corps are at present unoccupied, and in a ruinous condition.



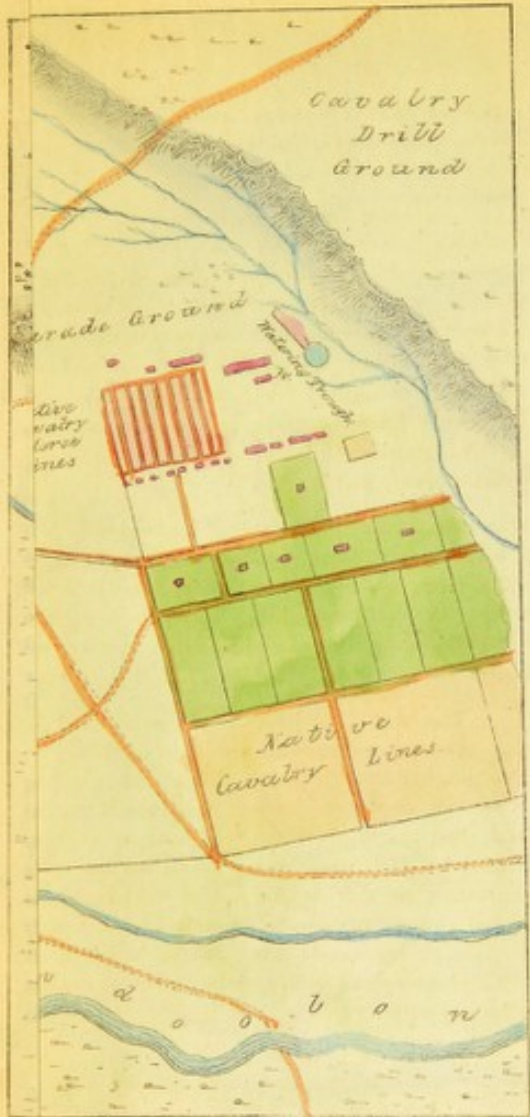
the, cannon, passage, bridge, obelisk, statue, fountains, as well as the more common country very description.

The cantonment* is situated on a gently sloping declivity, a small range of hills in front, and a range of hills in the rear, are on the south-east, those of the hills and the north-west, and the infantry in the centre. Hyderabad lies within half a mile of the cantonment, in a south-east direction, in two miles of the cantonment, is a small river Koonjulka, separates Hyderabad and Jaulnah, and forms the boundary.

is capable of affording accommodations to European horse artillery, one regiment of and three regiments of native infantry, hospitals, store rooms, &c. for each; they are, under the superintendance of an experienced

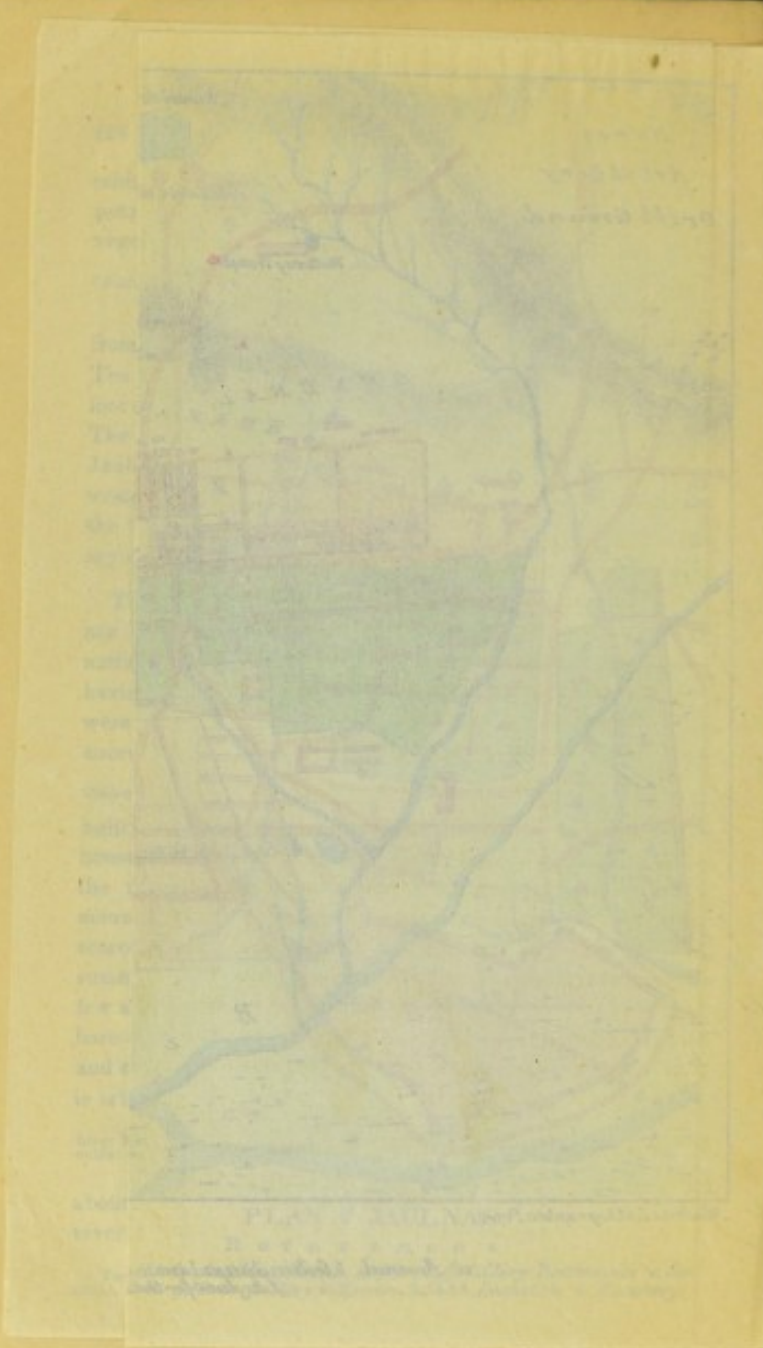
the houses in the officers' lines, are well situated compounds with good gardens, and are attached to them. The range of hills in front, does not deserve the appellation of hills, as their height above the neighbouring country, is not more than 100 feet; they are flat, or tabular on their surface, and peculiar to this part of the Deccan; a range of hills, having merely a few stunted bushes here and there, and a precipitous ridge in the rear.

The river Koonjulka has its rise near "Tellicherry" and "Rajee," two small villages situated in the northward. In its course, it receives many streams, and empties itself finally into the Bay of Bengal.



D. C. Keyes, del.

Commissioner Hyderabad.



JACINAR.

the Benda, a branch of the Godavery, flows south-east. During the monsoon it comes down here, and at this period, is in many places broad, but on the cessation of the rains, it is in the dry season diminishes to scarce one in depth, and ten or twelve in breadth, and is fordable at all seasons. The river water is used by the natives for domestic purposes. Excelsior is annually procured from deep pools left in the subsidence of the monsoon.

Cavalry lines. The Cavalry lines are situated east-end of the cantonment, on a gentle declivity or plain for artillery and arms, eight in number north; the store rooms, gran godown, and are on the opposite side, and lying parallel to the lines; in the centre is the hospital at the barracks; within about a hundred yards for sick horses, facing north and south. They are in rear of the barracks, and the sepoy lines the outward of these.

The hospital is capable of containing patients, it is flagged with rather a rough stone in the centre, opposite each other, and at the corners are large windows fitted with shutters about 12 feet high, and the roof double tiled with channan, and the common roof of the verandah, is of channan, all thick, laid on fat tiles, they are also flagged across, and on either end of them are two stone store rooms, and surgery.

The barracks and other public buildings are constructed of brick and plastered with mud materials in the hospital.

The hospital is well raised having a slight declivity on either side, and the barracks are also elevated from the foundation. The houses of the regi-

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.

Cavalry lines. The Cavalry lines are situated on the south-east 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 sepoy's 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 chunnam, 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 rased 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 Hospital and lines. The hospital is airy, commodious, and capable of containing fifty bedsteads.

The sepoy's 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 Artillery barracks. 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 Koon-dulka, 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 cantonment 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 disease. The general table No. 1, for European troops 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 shows the number of admissions into hospital, and the amount of mortality from the

REMARKS ON THE GENERAL TABLES.

most important diseases each half year, for the ten years, from 1829 to 1838. The annual sick strength, of deaths to sick treated, strength, are also given, as in the preceding average of these, as exhibited in the abstract being 217,290, 2,805, and 6,239 respectively.

The admissions were considerably above 1833, 1834 and 1835, especially in 1834, the year being almost wholly occasioned by febrile mortality was nearly doubled in 1834 a latter year, the result exclusively of dysentery, fever, partly occasioned by hepatitis also.

During the ten years the total admissions to hospital and the total deaths in hospital 664 from an amount of 10,571 men. The most prevalent diseases dysentery, hepatitis, venereal affections, the and febrile diseases; the mortality has chiefly been occasioned by dysentery, hepatitis, and fever, but partly one half of the whole number of deaths, caused by that disease.

Malignant dysentery of a low typhoid character prevailed to a great extent in the several years which have from time to time occupied the station, since they were erected in 1830 from this disease, 385 deaths, shown in No. 2, and which as already mentioned, in and deaths amongst the Artillery at Jaulnah will be seen from the following occurred almost exclusively amongst H. M. troops. The per centage of deaths to sick very small, amongst the Royal troops is per centage of deaths, from all diseases amounting to only 1/100.

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 22,933, 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, diarrhoea 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.

ON THE GENERAL TABLES.

The general table No. 1, for European troops, shows the sick of H. M.'s regiments, and the Artillery at Secunderabad, and also a Company of Artillery at Jaulnah; it shows the number of admissions, and the amount of mortality from the

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.

CLASSES. DISEASES.	Aggregate strength 1819.				Admissions and Deaths from each class of Disease.				Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
	1st Half.		2d Half.		1st Half.		2d Half.					
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fever.	Febrisephemera	31	0	31	0							
	intermit quot.	162	0	235	1							
	tertiana	78	0	185	0	411	2	639	3	1050	5	86.126
	remittens	97	2	63	0							
	com. cont.	23	1	24	0							
	Cholera	5	5	12	2	5	5	10	7	17	7	1.492
Diseases of the abdominal viscera.	Diarrhoea	59	0	99	0							
	Dysenteriacuta	56	2	101	7							
	chronica	2	0	5	0							
	Obstipatio	48	0	46	0	201	2	312	8	512	70	42.063
	Dyspepsia	14	0	35	0							
	Hæmorrhoids	27	0	37	0							
	Gastritis	0	0	3	1							
	Hepatitis acuta	131	5	119	5							
	chronica	7	0	10	0	138	5	129	5	267	10	21.963
Diseases of the Lungs	Catarrhus	29	0	16	0							
	Asthma	5	0	6	0	45	0	34	0	79	0	6.480
	Pneumonia	11	0	12	0							
Diseases of the Brain.	Apoplexia	3	3	3	1							
	Epilepsia	5	0	1	0							
	Paralysis	1	0	3	0							
	Ebrietas	4	0	9	0	13	3	22	3	35	6	2.871
	Delirium Tremens	0	0	6	2							
Eruptive fevers.	Varicella	1	1	0	0	3	1	0	0	3	1	0.246
	Ascites	0	0	3	0	0	0	3	0	3	0	0.246
Rheumatism.	Rheumatismus acutus	91	0	76	0	109	0	98	0	207	0	16.961
	chronicus	18	0	22	0							
Venereal affections.	Syphillis primitiva	116	0	74	0							
	consecutiva	1	0	4	0							
	Gonorrhœa	31	0	32	0	182	0	140	0	322	0	26.415
	Hernia humoralis	34	0	28	0							
	Stricture urethrae	0	0	2	0							
Scrophula	0	0	1	0	0	0	1	0	1	0	0.081	
Morbi oculorum	20	0	40	0	20	0	40	0	60	0	4.922	
Cutis	12	0	11	0	12	0	11	0	23	0	1.886	
Other diseases.		429	0	434	0	429	0	434	0	863	0	70.735
Total.		1568	18	1875	21	1568	18	1875	21	3443	29	282.444

* Of this number were Phlogosis... 140. Ulcus 41.
NOTE.—Per centage of deaths to strength... 3.200

TABLES OF THE GENERAL T...
H. M. S. Engineers and the H. C. Artillery
contrasted.

H. M. S. Engineers
Aggregate Strength 794
From 20th to 29th inclusive of 1830.

Table No. 2 and 3.	Admission.	Death.	Per centage of sick to strength.	Per centage of deaths to sick.
Cholera	12	5	41.66	41.66
Diarrhoea	10	1	10.00	10.00
Dysenteria	10	1	10.00	10.00
Obstipatio	10	1	10.00	10.00
Dyspepsia	10	1	10.00	10.00
Hæmorrhoids	10	1	10.00	10.00
Gastritis	10	1	10.00	10.00
Hepatitis acuta	10	1	10.00	10.00
Hepatitis chronica	10	1	10.00	10.00
Catarrhus	10	1	10.00	10.00
Asthma	10	1	10.00	10.00
Pneumonia	10	1	10.00	10.00
Apoplexia	10	1	10.00	10.00
Epilepsia	10	1	10.00	10.00
Paralysis	10	1	10.00	10.00
Ebrietas	10	1	10.00	10.00
Delirium Tremens	10	1	10.00	10.00
Varicella	10	1	10.00	10.00
Ascites	10	1	10.00	10.00
Rheumatismus acutus	10	1	10.00	10.00
Rheumatismus chronicus	10	1	10.00	10.00
Syphillis primitiva	10	1	10.00	10.00
Syphillis consecutiva	10	1	10.00	10.00
Gonorrhœa	10	1	10.00	10.00
Hernia humoralis	10	1	10.00	10.00
Stricture urethrae	10	1	10.00	10.00
Scrophula	10	1	10.00	10.00
Morbi oculorum	10	1	10.00	10.00
Cutis	10	1	10.00	10.00
Other diseases	10	1	10.00	10.00
Total.	794	100	12.59	8.06

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 improvement, 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

Incidence and Deaths, from
during the period of

Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to strength.	Annual per centage of deaths to strength.
1838-39	1.95	1.48	
1839-40	2.81	4.97	
1840-41	1.71	1.98	
1841-42	2.95	3.42	
1842-43	1.98	4.26	
1843-44	1.66	9.18	
1844-45	2.27	6.71	
1845-46	3.41	5.43	
1846-47	4.18	11.77	
1847-48	1.18	4.18	

HYDRASID.

ably increases in severity and in extent, occupying the Infantry barracks, non-ment of the monsoon, and Commissions military officers have been appointed, as dis- quise into the probable exciting causes of as yet without arriving at any satisfactory

Medical authorities have attributed the mial malarious condition of the barracks a season when the vicissitudes of climate ages of temperature are very great; while sed it to be occasioned more, by the ill d faulty construction of the barracks, than

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round on the south west, the range of rocky east, intercepting the free current of air, and the more crowded condition of the have all probably contributed to produce

Commissions and Deaths, from during the period of

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.
1220	218-806	1-560	3-434
1210	193-966	2-513	4-876
1181	184-674	1-971	3-640
1090	175-321	3-087	5-412
991	219-344	2-509	6-256
756	323-905	3-042	10-158
884	260-972	2-507	6-674
1102	212-159	2-651	5-626
1124	196-797	6-238	12-877
994	202-615	3-128	6-328

the beneficial results, and appear to justify the altogether abandoned.

With respect to the comparative immunities experienced by the militia, there seems to be that the more open and elevated position of rocks stand, and the superior construction of stations, are perhaps not adequate fully to the difference exhibited in the tables.

The total admissions during each half year nearly equal, but the numbers under the dysentery, are most numerous during the second period, while at the same time it will be observed to increase in the number of deaths, during this period, which are taken place from the various European regiments in this Division; it occurred in 1830, 1832 and 1833. In July 1832, the 1st European regiment lost 6 men at a single attack; the 1st wing of the same regiment in 1832, while marching from Mysore met with 31 attacks; and in May 1833, the 1st European regiment lost 25 men.

Tables No 3 and 4, show the amount of deaths, from the same diseases, which have occurred in the same troops at Secunderabad and Jubbulpore. The total number of deaths, during the period of ten years, was 46,678, and 1,297 deaths have occurred in the strength of 81,592 men; the average per cent of deaths to strength 1.480.

Fevers, rheumatism and bowel complaints are the most numerous admissions, and the most principally from these diseases and cholera were considerably above the average in 1833; and the mortality it will be observed

SECUNDERABAD SUBSIDIARY FORCE.

No. 9.—Table shewing the amount of Admissions and Deaths from the principal classes of disease for the period of five years, from the proportion of Admissions from each to the total of sick troops, and of deaths to the total of deaths.

European Troops.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Total Admissions.....	11347		64	1/100	1591	14	937	8	932	8	290	2	502	4
Deaths.....	399		8	2	230	5	11	2	62	1	10	2	13	3
Notice Troops.														
Total Admissions.....	27,166		390	1/70	421	1	1260	4	32	1	273	1	171	1
Deaths.....	655		171	2	61	9	50	7	1	1	40	5	16	2

No. 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.

European Troops.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.	
	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.	Ad. & deaths.	Per centage.
STRENGTH, 4862.	3768	77.498	64	1.316	1591	32.723	937	19.271	932	19.169	290	5.964	502	10.3
Percentage of sick to strength	40	1.061	8	0.164	235	4.833	11	0.226	62	1.275	10	0.205	13	2.5
of deaths to strength.....	40	0.822	8	0.164	235	4.833	11	0.226	62	1.275	10	0.205	13	2.5
Native Troops.														
STRENGTH, 36,744.	16717	42.774	390	1.061	421	1.145	1260	3.439	32	0.087	273	0.742	171	0.4
Percentage of sick to strength	208	0.566	171	0.465	61	0.166	50	0.136	1	0.002	40	0.108	16	0.04
of deaths to strength.....	208	0.566	171	0.465	61	0.166	50	0.136	1	0.002	40	0.108	16	0.04

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

Note. 10.—Tables exhibiting the amount of admissions and deaths from the principal diseases, from the period of 1828 to 1838, in the division of the Madras Army, and the average per centage of sick to strength, of deaths to sick, and of deaths to strength, of the same diseases, which have occurred amongst the native troops at Secunderabad and Jaulnah, during a period of ten years.

Disease	1828		1829		1830		1831		1832		1833		1834		1835		1836		1837		1838	
	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths	Ad.	Deaths
Total Admissions	11047	3076	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100
Total Deaths	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021
Cholera	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
Dysentery	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204	3204
Hepatitis	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431	431
Intermittent Fevers	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597
Small Pox	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Measles	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
Scarlet Fever	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
Typhoid	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502	502
Other Diseases	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Total	11047	3076	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100	10210	3100

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 division, 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 divisions; 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, venereal 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,

of deaths to sick treated 8616, and of d
4-06, being in these respects considerably a
shown in the preceding table for ten years.

In table No. 4, for Native troops, the numb
have been greatest from *fevers, bowel
rheumatism*; and the greatest mortality b
*fever, cholera, bowel complaints, diseases of
sore and rheumatism*. The total admissions i
been 27,106, the deaths 655, from an aggre
36,744 men; the per centage of sick to streng
of deaths to sick treated 2411, and of d
1-72; agreeing in these respects pretty c
results given in table No. 4, for ten years.

The tabular statements No. 9 and 10, ha
from these two returns, as usual; and the
view, the proportion and percentage of admi
from the principal classes of disease, both a
European and native troops.

The three following tables exhibit the sickness
which have occurred amongst the officers, the
children of H. M.'s regiment, at Secunde
period of ten years.

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 European 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.

Year	Officers	Women	Children
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
Total

HYDERABAD.

1874 and 1888, in consequence of the prevalence of fever and cholera.

and half yearly period, as except the European number of admissions especially from those in the first half yearly period, preponderates in a corresponding degree, prevalence and severity of fever, lowest cholera; the latter disease having appeared epidemic form in 1870, 81, 82, 83, 87 and why of remark that except in 1881, when in the 5th regiment N. I. but 28 men, on the march from the northern division, all cholera, occurred amongst the troops while at Secunderabad and Jaidah. Thus in June 1887, with 25 deaths, occurred in the 5th and 1, at Secunderabad, and in July 1888, buried 48 men out of 146 attacked, at the

statements Nos. 7 and 8, the comparative principal diseases amongst both European and mortality are contrasted, as in the preceding divisions; they afford at one view information on several points.

Nos. 5 and 6, exhibit the admission and disease, in the various classes, as in the preceding five years from 1874 to 1888 including sick from each class is also shown, with the per centage of admissions to strength, sick treated. Amongst the European troops, the number of admissions have been from fever, including dysentery and hepatitis, several cases of the brain and rheumatism; and the most bowel complaints, fever, and diseases. The total admissions amount to 11,347, and from an aggregate strength of 4,882 men, giving a per centage of sick to strength 231 881.

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.		Admissions.	Deaths.	Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.		
CLASSES.	DISEASES.								
Fever.	Febris int. quot.	49	0	182	4	66	425	2	197
	.. remittens.	65	0						
	.. com. cont.	67	0						
	Cholera.....	1	1	1	1	0	361	100	100
Diseases of the Abdominal viscera.	Diarrhoea.....	48	0	92	5	33	576	5	434
	Dysentery.....	23	5						
	Obstipation.....	8	0						
	Hæmorrhoids.....	4	0						
	Dyspepsia.....	9	0						
	Hepatitis.....	41	2	41	2	14	961	4	878
Diseases of the Lungs.	Catarrhus.....	70	0	86	0	29	197	0	000
	Phthisis pulmonalis.....	2	0						
	Asthma.....	0	0						
	Pneumonia.....	2	0						
Do. of the Brain.	Apoplexia.....	3	1	6	1	2	189	16	666
	Epilepsia.....	1	0						
	Paralysis.....	1	0						
	Delirium Tremens.....	1	0						
	Anasarca.....	1	0	1	0	0	361	0	000
	Variola.....	1	1	1	1	0	361	100	000
	Rheumatismus.	33	0	33	0	12	043	0	000
Venereal affections.	Syphilis prim.....	13	0	42	0	15	328	0	000
	.. Consecutiva.....	1	0						
	Gonorrhœa.....	25	0						
	Hernia humor.....	1	0						
	Stricture urethrae.....	1	0						
	Morbi oculorum.....	3	0	3	0	1	094	0	000
	.. cutis.....	6	0	6	0	2	189	0	000
	Other diseases.	151	0	151	0	55	109	0	000
Total..		629	14	639	14	233	211	2	190

NOTE.—Per centage of deaths to strength, 5109.

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, exclusive of 1833.

CLASSES.	DISEASES.	Admissions.	Deaths.	Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.	Aggregate strength
								271.
Fever.	Febris int. quot.	12	0	12	0	4	33	12
	.. remittens.	10	0					
	.. com. cont.	10	0					
	Cholera.....	1	1	1	1	0	361	100
Diseases of the Abdominal viscera.	Diarrhoea.....	48	0	92	5	33	576	5
	Dysentery.....	23	5					
	Obstipation.....	8	0					
	Hæmorrhoids.....	4	0					
	Dyspepsia.....	9	0					
	Hepatitis.....	41	2	41	2	14	961	4
Diseases of the Lungs.	Catarrhus.....	70	0	86	0	29	197	0
	Phthisis pulmonalis.....	2	0					
	Asthma.....	0	0					
	Pneumonia.....	2	0					
Do. of the Brain.	Apoplexia.....	3	1	6	1	2	189	16
	Epilepsia.....	1	0					
	Paralysis.....	1	0					
	Delirium Tremens.....	1	0					
	Anasarca.....	1	0	1	0	0	361	0
	Variola.....	1	1	1	1	0	361	100
	Rheumatismus.	33	0	33	0	12	043	0
Venereal affections.	Syphilis prim.....	13	0	42	0	15	328	0
	.. Consecutiva.....	1	0					
	Gonorrhœa.....	25	0					
	Hernia humor.....	1	0					
	Stricture urethrae.....	1	0					
	Morbi oculorum.....	3	0	3	0	1	094	0
	.. cutis.....	6	0	6	0	2	189	0
	Other diseases.	151	0	151	0	55	109	0
Total..		629	14	639	14	233	211	2

NOTE.—Per centage of deaths to strength, 5109.

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, exclusive of 1833.

CLASSES. DISEASES.	Aggregate strength. 1833.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fever.	Febris intermit- tens..... tertiana..... remittens..... continua.....	154	1	493	9	37	142
		19	1				
		133	5				
		97	4				
Cholera.....	14	7	14	7	1	290	
Diseases of the abdominal viscera.	Diarrhoea..... Dysentery..... Peritonitis..... Colica..... Dyspepsia..... Obstipation..... Hæmorrhoids..... Sydenhism..... Enteritis..... Hepatitis.....	81	5	372	36	34	285
		181	26				
		13	4				
		45	1				
		15	0				
		12	0				
		10	0				
		9	0				
3	0						
86	2	86	2	7	936		
Diseases of the Lungs.	Catarrhus..... Dyspnoea..... Asthma..... Phthisis pulm..... Hæmoptysis.....	20	1	42	7	3	879
		4	0				
		11	0				
		6	6				
		1	0				
Diseases of the Brain.	Epilepsia..... Paralysis..... Hysteria..... Tetanus trem..... Eclampsia.....	1	0	21	0	2	119
		1	0				
		13	0				
		1	1				
		4	0				
Eruptive fevers.	Variola..... Varicella..... Rubella..... Erysipelas.....	9	1	15	1	1	382
		2	0				
		1	0				
		2	0				
Anasarca.....	3	1	3	1	0	276	
Rheumatism.....	27	0	27	0	2	488	
Peculiar diseases.	Amenorrhœgia..... Menorrhœgia..... Parturiti..... Abortio..... Scirrhus.....	1	0	44	1	4	050
		12	0				
		25	0				
		4	0				
		1	1				
Morbi oculorum.....	35	0	35	0	3	225	
cutis.....	2	0	2	0	0	184	
Other diseases.....	127	2	127	2	11	740	
Total.....	1193	69	1193	69	109	95	5

NOTE.—Per centage of deaths to strength, 4/359.

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, exclusive of 1833.

Aggregate strength. 1843.		Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
CLASSES. DISEASES.							
Fever.	Febris intermit quodid.....	256	2	784	28	58	576
	.. remittens.....	177	12				
	.. continua.....	257	14				
	Cholera.....	7	3	7	3	0	521
Diseases of the Abdo- minal vis- cera.....	Diarrhoea.....	223	31	399	70	29	709
	Dysenteria.....	169	29				
	Obstipatio.....	7	0				
	Marasmus.....	15	9				
	Colica.....	4	0				
	Icterus.....	1	0				
	Hepatitis.....	7	1	7	1	0	521
Diseases of the lungs.	Cyananche.....	12	3	85	9	6	329
	Catarrhus.....	58	3				
	Pneumonia.....	3	2				
	Pertussis.....	12	1				
Diseases of the brain.	Convulsio.....	50	88	57	41	4	244
	Epilepsia.....	1	0				
	Hydrocephalus.....	5	5				
	Phrenitis.....	1	1				
Eruptive fe- vers.....	Varicella.....	24	3	91	7	6	775
	Varicella.....	33	0				
	Rubeola.....	30	3				
	Erysipelas.....	4	1				
	Vermes.....	2	0	2	0	0	148
	Morbi oculorum	77	0	77	0	5	733
	.. Cutis.....	29	1	29	1	2	159
	Other diseases..	93	2	93	2	6	224
	Total.....	1631	174	1631	174	121	444

NOTE.—Per centage of deaths to strength, 12-906.

NAGPURI.

The extensive country south of Nagpore, a powerful Maratta prince, of central India called Berar—and includes Gondwana—of which the city of Nagpore is the chief. It is somewhat triangular in shape, the base being towards the province of Bengal, and the sides towards the Hyderabad and the country of Orissa.

It lies between the parallels of north latitudes 17° 20', and between 78° and 88°, of east longitude. It is bounded on the north by Allahabad; on the west by Hyderabad, from which it is separated by the Wardha and Godavary rivers, and on the east, by Dehar and Orissa, the Maha-ruddy being its natural boundary throughout a large portion of the eastern confines. The general surface is irregularly mountainous and hilly; but extensive highly cultivated plains, and also the forest, covered with long coarse grass, which attains a height of 14 feet.

The principal rivers are the Wardha—The Maha-ruddy takes its rise in the western part of the Chhota-ghar district, and runs east and then in an easterly direction, after an easterly course, and receiving many tributary streams, it flows into the Bay of Bengal, about 50 miles below Cuttack. The Wardha rises in the north-eastern part of Berar, and its line of boundary between the Nagpore and Orissa, unites with the Godavary at Secunderabad.

Though a great part of the country is waste land, and thinly peopled, the tract is fertile, and the soil is generally good.

NAGPORE.

General description. The extensive country subject to the Rajah 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 south-west by Hyderabad, from which it is separated by the Wurda and Godavery rivers, and on the east and south-east, 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 Productions. Though a great part of the country consists of waste land, and thinly peopled, jungly tracts, other portions

* The 25 Fats, or Ghurries.
† Called Elephant grass.

HYDERABAD
SECUNDERABAD
during the sickness and mortality amongst
N. of H. M.'s Regiments at Secunderabad,
of ten years, from 1822 to 1830, etc.

Year	Admissions	Deaths	Discharged	Returned to duty	Presently absent	Presently on sick leave	Presently on furlough	Presently on leave	Presently on other duty
1822	100	10	50	20	10	10	10	10	10
1823	100	10	50	20	10	10	10	10	10
1824	100	10	50	20	10	10	10	10	10
1825	100	10	50	20	10	10	10	10	10
1826	100	10	50	20	10	10	10	10	10
1827	100	10	50	20	10	10	10	10	10
1828	100	10	50	20	10	10	10	10	10
1829	100	10	50	20	10	10	10	10	10
1830	100	10	50	20	10	10	10	10	10
Total	1000	100	500	200	100	100	100	100	100

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

Articles of Export, &c. The staple productions may be said to be cotton 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, cocoanuts, and cocoanut-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 occurrences, connected with the English. 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.

Subsidiary force. The subsidiary force consists of one regiment 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,



and extremely fertile, producing rice, wheat, rice, chalum, raggy, cotton, and several kinds of plants from which oil is obtained.

The staple productions may be said to be cotton and rice, which are exported in considerable quantities, the former being chiefly on bullocks, the only mode of transport, and these bring back salt, coconuts, and other articles. Timber, both for building and for fuel, is also sometimes dragged up the stream, but water carriage does not appear to be of any other purpose.

A considerable body of troops, called the Nag-Subsidiary Force, has occupied this country since 17, when in consequence of the treaty with Appah Sahib, in attacking a small force of British resident at his court, he was detained in confinement, but ultimately escaped and fled the country.

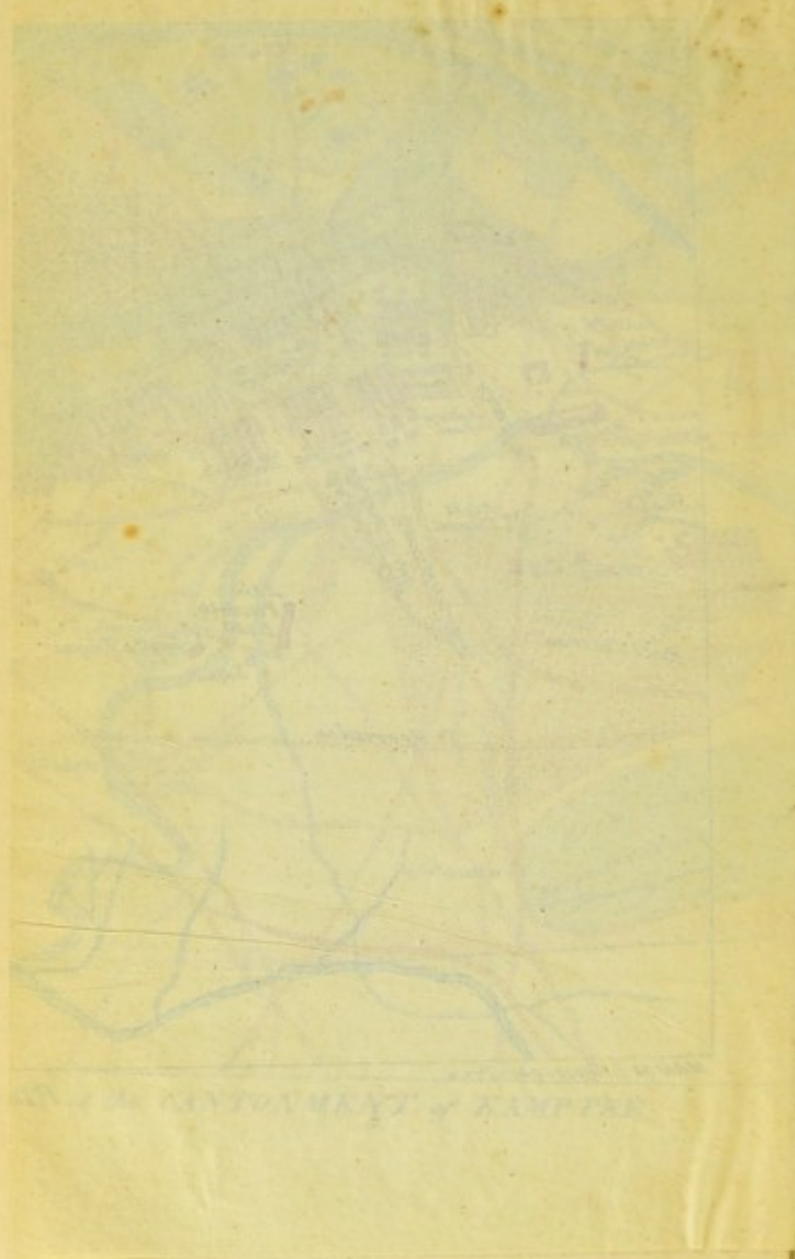
The prince, named Rajoo the Third, being avaricious, an additional contingent force, consisting of Malacca here and two regiments of British troops, was agreed by treaty, for the preservation of the general peace. In 18, an arrangement was entered into between the British and the raja's contingent, on the payment of a certain annual tribute.

The subsidiary force consists of one regiment of British troops, one troop of European horse artillery, a battery of native infantry, and a company of British infantry, who are stationed at the city of Nagpore.

Station of Nagpore being now the only station occupied by the British army, throughout the Nagpore country.



Lithographed by B.C. Kiser



KANITTE

no information has been procurable by the
relative to the general statistics of the provin
which relates to Kanitite itself, and its imm
land.

Kanitite is distant from Madras 722 mile
tance, from Secunderabad 384, from Hoost
Calcutta 588, and from Bombay 577 miles.

There are four principal rou
coming from, or returning to the Company
by Chandah, along the Godavery, leading
Bijapur towards Behanpore; and two to
the most direct route by Nirmal, the othe
The road by Chandah is in good order almos
but supplies are scarce, and there bei
healthy jungle to pass through, it is seldom
very rarely during the rainy, or cold sea
of the rank and extensive jungle, from t
within four stages of Ellore. The Nirmal
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it, from the 1st of June, till the 1st of Jan
middle of August all the beginning of I
most dangerous period, but the journey is
posting, even in these months, without much
the time so occupied, being less than five day
The road by Hingpalee is rather open, and r
ed for the horse, which pass through Se
wards the end of the year, are usually sent b
Bijapur is used by the regiments coming fr
they usually leave the Northern division in Ja
at Kanitite about the middle of March. The
goes along the same line, to within about 3
thalpore, but travellers proceeding to Calcutta
vil Mirzapore, and from thence down the G
two great northern roads towards the North
ing to Hoosingabad, the other to Jabbalpo
leave from August till December, on accou

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 Sumbulpore, but travellers proceeding to Calcutta, prefer the road via Mirzapore, and from thence down the Ganges. There are two great northern roads towards the Nerbuddah, one leading to Hoosingabad, the other to Jubbulpore, but both are unsafe from August till December, on account of the jungle

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 Kamptee. On the termination of the last Mahratta war, a cantonment for the subsidiary force was formed close to the British residency at Nagpore, at the foot of the celebrated Sctabuldee 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 $21^{\circ} 10''$, and east longitude $79^{\circ} 50''$, 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 calcareous 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 north-west, and empties itself into the Wye Gungah, 54 miles below Kamptee, near Bundaria.

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 The above are all classified, and require some regular annual
 to give a general view of the state of the year

The roads to Ellichpore and Jambh, are unhealthy at any time, but the black soil renders them extremely difficult to travel.

At the termination of the last Malacca road for the subsidiary force was formed a residency at Nagpore, at the foot of the Malabar hill. The situation however proving abandoned after a few years, and a new one, ten miles eastward of the city, selected on the Kurnool river.

The town of Kamptee is situated in north latitude 18° 30', longitude 75° 30', and occupies an extent of a half, along the right or south bank of the river. It has been pursued a tortuous course from

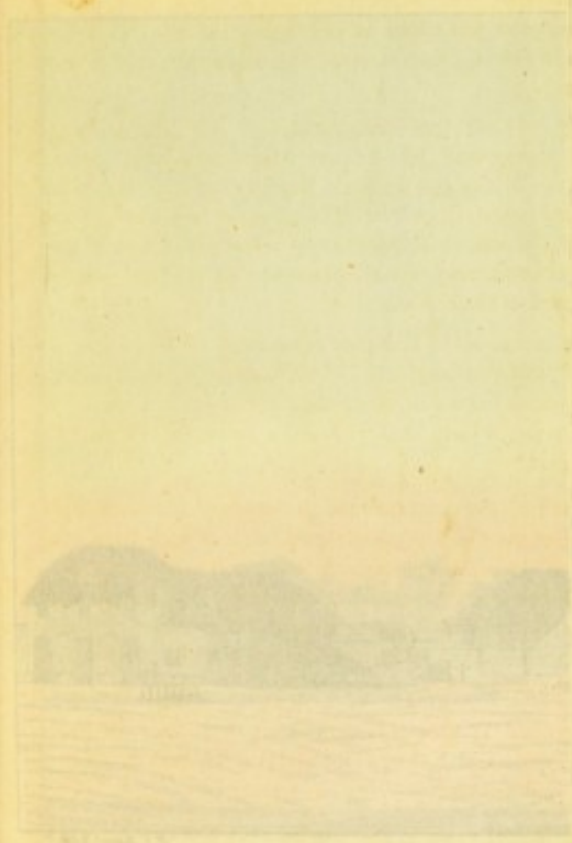
The soil in the cantonment is the common black earth, of which is interspersed with a very large proportion of nodules, commonly called kambe, in most places considerable. The surrounding country miles in extent, is flat, destitute of wood, and is only under cultivation in the rainy seasons.

The cantonment is elevated, undulating and in some parts close to the river, much broken up into hills.

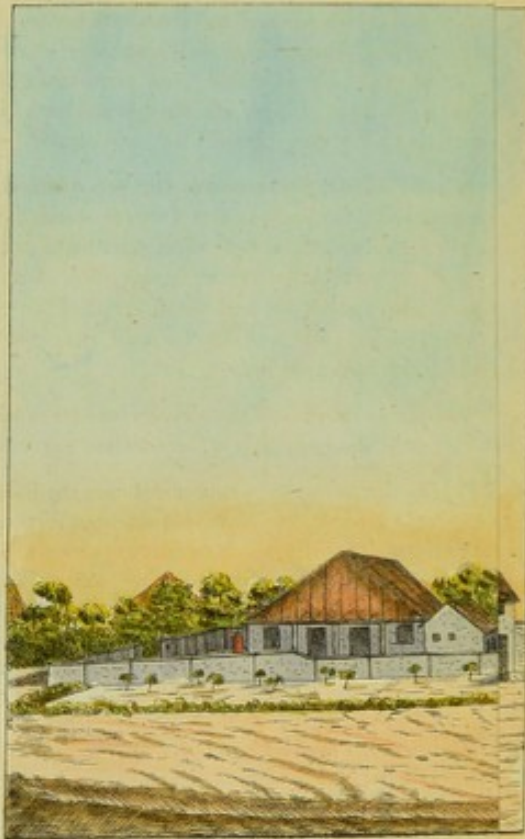
Roads in the cantonment, are kept in good order, leading to the surrounding villages, afford the best means of communication.

The houses, are for the most part situated close to the river, having spacious compounds, with

A large number of houses on the bank of the river, is reserved for the general staff, the hospital, and a range of shops. The river is navigable for the whole of the year.



Descending towards the river, are the three European houses. 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.



Madras Lith. Press.

VIEW of the RIGHT

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 north-west, and empties itself into the Wyna Gungah, 54 miles below Kamptee, near Bundatia.

KAMPTEE.

of one of the native corps, near the centre of being also on the bank of the river) the houses are large and commodious, with extensive extent. In front of these are the captains' lines separating them from those of the subalterns.

A road intervenes between the sepoy barracks, and the officers' houses; the hospitals of native regiments, and the places of arms being in front of their respective regiments; the one before mentioned, and the hospital of the Europeans.

The places of arms of the cavalry are on the right, and the hospital is at the extreme end.

In the centre of the cantonment are the parade ground, the main piquet, and the main mess, to which a bridge thrown across leads. The mess is of considerable extent and shape of all descriptions and sizes, and the messes contain every thing that can be desired by natives or Europeans.

At the west of the lines, are the barracks, which are commodious, lofty and a ground, surrounded with excellent enclosed calculated to accommodate 1000 men. The horse artillery adjoining them, are by number, and enclosed at one end with a gate square in the front, they likewise are lofty and some line further west, are the foot artillery consisting of two long ranges of buildings. A detached hospital, and places of arms, consist of native horse artillery follow next; and at the end, are several buildings for the use of the Europeans.

* The houses are all thatched, and require some repairs annually. The ground is a marshy plain, and is not so high as the hills.

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 sepoy's 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 Barracks. At the west of the lines, are the European barracks, which are commodious, lofty and situated on high ground, surrounded with excellent enclosed verandahs,† 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-

* 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

officers, and for the general staff, the hospital
is a range of little white, the walls being in the
the West English, Madras, and the British.

Climate. This climate is remarkable among the Madras 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

* Hoar frost is occasionally seen with thin pellicles of ice on small pools, but this may be accounted for, by the effect of evaporation lowering the temperature to the freezing point.

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.

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
and gardens.

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,

SINDWARRA.

cucumbers, pumpkins, turnips, celery, parsley, peas, artichokes, lettuces, beet, potatoes and in also, all the common *banar* vegetables are

SINDWARRA.

The station of Sindwarra, which was occupied by the British auxiliary troops, until that of 1830, claims particular notice here, as being renowned to by its salubrity, and other visits during the hot months, or from March till J

It lies about 70 miles distant, situated on land having an open space of ground free for summit, of about 4½ miles in circumference, part occupied by the village; and it is said to be 30 degrees cooler than Kemptee.

The climate has been much praised, by those who have taken refuge there from the great heat experienced at Kemptee; and during the hottest season are able to keep their doors open, and vent there is only one good bungalow at the place, two others which might be put into repair; they are now the property of the Government, and always at the service of any person recommending himself.

Supplies are said to be abundant, and erecting temporary buildings, are close at hand.

The elevation of Sindwarra has been ascertained to be higher than Nagpore, which is 900 feet above the sea; and about 50 miles further to the west, and still more lofty range, the mountain of which is said to be upwards of 2000 feet high, as the Mahadeo or Pindimare hills;—the climate is said to be more salubrious than Nagpore, and the climate is said by some, to be to be found in almost any part of India.

carrots, parsnips, 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 $4\frac{1}{2}$ 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.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

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, diarrhoea, 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

Admissions and Deaths, from
sic, during the period of

Year	Number of Troops	Number of Admissions	Annual per centage of admissions to strength	Number of Deaths	Annual per centage of deaths to strength
1829	10,000	1,000	10.00	100	1.000
1830	10,000	1,200	12.00	120	1.200
1831	10,000	1,500	15.00	150	1.500
1832	10,000	1,300	13.00	130	1.300
1833	10,000	1,400	14.00	140	1.400
1834	10,000	1,800	18.00	180	1.800
1835	10,000	1,700	17.00	170	1.700
1836	10,000	1,600	16.00	160	1.600
1837	10,000	1,900	19.00	190	1.900
1838	10,000	1,700	17.00	170	1.700
Total	100,000	13,000	13.00	1,300	1.300

ON THE GENERAL TABLES.

already mentioned, the troops composing the tables of disease appended, will show the extent of sickness and mortality, which have befallen the bodies of men, during the period of ten years, 1838, inclusive.

European troops, the total of sick have amounted to 337, from an aggregate of 10,000 men, giving 3.37, as the average number of sick per 100 men, and 1.632, as the average of deaths to sick treated, while the per centage of strength, has been 84.67. The admissions were the average in 1834, and 1835; and the mortality considerably increased in 1831, 1833, and 1835, after prevalence and severity, of fever and cholera.

From the general abstract table No. 2, the extent of sickness, but more especially of cholera, took place during the second half yearly period, the wet and cold seasons; the latter is the most prejudicial to health, and fever and cholera are not only more numerous, but also more severely fatal, during this season of the year.

The most common types, but especially the intermitting, malarial, dysentery, hepatitis, rheumatism and diarrhoea, claimed the greatest number of admissions, and were chiefly revealed from the same diseases, and their various complications. The per centage of these diseases to the strength and of deaths are given in the table No. 2.

Extracts from the medical reports by Surgeon Adams, long resident at Bangalore, will

E.

Admissions and Deaths, from Cholera, during the period of

Wounds & Injuries.	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.																	
43 50 0 0	151 145 8 1	785	224	.713	1	.700	3	.821														
60 68 0 0	166 170 2 1								948	292	.199	1	.096	2	.215							
76 80 0 0	219 236 1 2															918	355	.773	1	.831	4	.684
110 103 1 0	200 206 2 7																						850	250	.506	1	.674	3	.830
103 98 0 0	222 230 2 4	999	271	.271	2	.281	6	.205														
110 104 0 0	233 179 2 4								1000	324	.504	1	.230	3	.992							
110 114 0 0	214 245 4 3															969	304	.324	0	.216	2	.786
127 98 1 1	271 192 3 4																						1001	227	.772	1	.523	3	.496
101 87 1 0	223 224 2 4	1024	196	.757	2	.481	4	.882														
77 63 1 0	215 130 1 0								1023	168	.230	1	.271	3	.223							

FORCE.

il number of Admissions and Deaths, &c. from

	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.
	26	19	20	0	165	1154	36	413	112	0	1102	3997
	3	18	1	0	226	1257	8	330	101	0	1042	2609
	27	37	38	0	394	2411	44	743	223	0	2144	5737
	0	1	0	0	0	22	6	5	17	0	4	48
	0	2	0	0	0	31	0	4	157	0	1	23
	0	3	0	0	0	53	11	5	44	0	11	107
	0-004	0-075	0-077	0	0-708	4-889	0-089	1-506	0-432	0	4-347	11-274
	0	8-198	0	0	0	2-198	25-0	1-211	19-730	0	0-513	1-858
	0	0-006	0	0	0	0-107	0-022	0-018	0-089	0	0-022	0-216

MADPORE SUBSIDIARY
No. 2—Table exhibiting the number of Admissions and Deaths, &c. from each class of Disease, for 5 years

Table with multiple columns and rows, partially obscured and difficult to read. It appears to be a continuation of the data from the main table, showing admissions and deaths for various diseases over a period of 5 years.

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

Note. The table showing the amount of Admissions and Deaths from the principal causes of disease for the period of the year 1835, is given in the margin of the preceding page.

Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths
13,270	3912	13,270	3912	13,270	3912	13,270	3912	13,270	3912
188	40	188	40	188	40	188	40	188	40
10,254	10,005	10,254	10,005	10,254	10,005	10,254	10,005	10,254	10,005
1871	1801	1871	1801	1871	1801	1871	1801	1871	1801

Note. The table showing the amount of Admissions from the various causes of disease in the principal hospitals for the period of the year 1835, is given in the margin of the preceding page.

Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths
404	32	404	32	404	32	404	32
32	1	32	1	32	1	32	1
128	17	128	17	128	17	128	17
91	7	91	7	91	7	91	7
404	32	404	32	404	32	404	32
32	1	32	1	32	1	32	1
128	17	128	17	128	17	128	17
91	7	91	7	91	7	91	7
404	32	404	32	404	32	404	32
32	1	32	1	32	1	32	1
128	17	128	17	128	17	128	17
91	7	91	7	91	7	91	7

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: ℥vi, magnes: sulph: ℥i, given in doses of ℥iss, with a little water, every two or three hours, till sufficient effect was obtained; or a mixture composed of pulv: rhei ℥ss, or ℥ii, magnes: sulph: ℥ss, aq: ℥vi, tinct: cardam: ℥iii, which was given in doses of ℥iss or ℥ii and repeated according to circumstances. Sometimes a dose of rhubarb and magnesia, made into a draught, with the addition of spt. æther: nitrici ℥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."

REMARKS ON THE GENERAL

"In protracted convalescence from debilitated and irritated state of bowels, and night sweats with some light bitter infusion answered well."

"The lamentable mortality among the men of the force, has had no parallel since this country was occupied by Malra troops, from Decemr 1800, and the deaths 5, and four have proceeded, either to England or the coast."

"In the treatment of fevers, whether natives, there is one precaution which I would wish to mention, viz. when pain or irritability of the bowels, especially tartarated antimony, should be avoided, leeches being in such cases necessary."—Dated 9th

Superintending surgeon Stevenson remarks

"The officers of the force, have escaped mortality from disease this season. The men are put on two distinct forms, the one characterised by acute action, intense heat of surface, acute pain, irritability of stomach; the other by a more asthenic nature, marked by stupor, small, feeble pulse, heat not much above the natural standard, this form ran its course very gradually, terminating in typhus. The men of the 8th Troop horse being the principal subjects of the first class, being robust and were rendered more liable to be attacked by the disease on the long march they had to their advanced post of the season; and on arriving at the hot weather, which was of great power, were also attacked with influenza, but all recovered with febrile symptoms for some days. In these cases, bleeding, both general and local, was imperatively required, with large doses of purgation."

"The men of the 8th Battalion artillery, and the 1st year regiment, mostly exhibited the low

"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

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

manner, both for the European and native admissions amongst the European troops, 4 and 188 deaths have taken place, from an aggregate strength of 30770 men; the per centage of admissions to strength, 444·102; of deaths to sick treated, 1·519; coinciding in these respects with the results given in the table for ten years.

The corresponding table No. 6, for the native troops, shews the annual number of admissions to strength, 20448, and 1858 deaths per cent on the sick treated, the per centage of deaths to strength, during the same period, has been 1·280; the total admissions being 301, from an aggregate strength of 23,000.

The tabular statements Nos. 7, 8, 9 and 10 shew, the proportion and per centage of deaths, from the most important diseases, at different times of the year, both amongst the European and native troops.

The three following tables have been drawn up to shew the relative healthiness of the horse and foot of the Madras European regiment, which comprises the greater part of the Subsidiary force.

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 strength, 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.

No. 11.—Table exhibiting the number of admissions and deaths, in the 1st Madras European regiment at Kamptee, from 1829 to 1839, exclusive of 1831.

Aggregate strength 6352.	Admissions.	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers.....	4,703	55	73-080	1-169
Cholera.....	123	27	1-926	21-951
Diarrhoea.....	426	14	6-673	3-286
Dysentery acuta.....	737	44	11-659	5-812
" chronica.....	123	4	1-226	3-259
Hepatitis acuta.....	417	15	6-532	3-597
" chronica.....	251	3	3-222	1-193
Catarrhus.....	156	5	2-443	3-205
Hæmoptysis.....	2	1	0-031	50-000
Asthma.....	8	1	0-125	12-500
Phthisis pulmonalis.....	5	2	0-078	60-000
Pneumonia.....	124	3	1-947	2-419
Apoplexia.....	17	10	0-266	70-588
Epilepsia.....	65	0	1-033	0-000
Paralysis.....	40	2	0-625	5-000
Amentia.....	4	1	0-062	25-000
Mania.....	22	1	0-314	4-545
Ebrietas.....	411	1	6-438	0-213
Delirium Tremens.....	83	1	1-309	1-204
Anasarca.....	20	2	0-313	10-000
Ascites.....	19	6	0-297	31-578
Rheumatismus acutus.....	656	4	10-277	0-609
" chronicus.....	409	7	6-297	1-741
Syphilis &c.....	1906	9	30-613	0-450
Morbi oculorum.....	131	0	2-052	0-000
" cutis.....	40	0	0-625	0-000
Other diseases.....	3,619	32	56-556	0-886
Total.....	14,572	252	218-293	1-729

NOTE.—Per centage of deaths to strength, 2-947.

No. 12.—Table exhibiting the number of deaths, in the European foot artillery, from 1829 to 1839 inclusive.

Aggregate strength 273	Admissions	Deaths.	Per centage of sick to strength.
Fever.....	156	31	6-197
Cholera.....	15	3	1-545
Diarrhoea.....	50	4	4-857
Dysentery acuta.....	80	11	13-650
" chronica.....	1	0	0-405
Hepatitis acuta.....	10	3	31-000
" chronica.....	3	1	0-412
Catarrh.....	80	2	2-500
Hæmoptysis.....	2	0	0-157
Asthma.....	7	0	0-260
Phthisis pulmonalis.....	0	0	0-000
Pneumonia.....	40	0	1-000
Apoplexia.....	2	0	0-200
Epilepsia.....	8	0	0-267
Paralysis.....	2	0	0-229
Mania.....	2	0	0-401
Ebrietas.....	2	0	0-400
Delirium Tremens.....	10	2	21-900
Anasarca.....	110	2	2-500
Ascites.....	15	0	0-714
Rheumatismus acutus.....	0	0	0-000
" chronicus.....	25	4	13-500
Syphilis &c.....	4	1	2-500
Morbi oculorum.....	50	2	2-000
" cutis.....	40	0	0-000
Other Diseases.....	0	0	0-000
Total.....	112	7	7-500
Total.....	472	75	15-891

NOTE.—Per centage of deaths to strength, 2

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.	Per centage of sick to strength.	Per centage of deaths to sick.
Fever.....	1050	14	48.187	1.333
Cholera.....	18	10	0.826	55.555
Diarrhoea.....	193	4	8.857	2.073
Dysentery acute.....	280	11	12.819	3.928
" chronica.....	1	0	0.045	0.000
Hepatitis acute.....	266	8	12.207	3.007
" chronica.....	9	1	0.412	11.111
Catarrhus.....	84	0	3.854	0.000
Hæmoptysis.....	3	0	0.137	0.000
Asthma.....	7	0	0.321	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.....	2	0	0.091	0.000
Mania.....	2	0	0.091	0.000
Ebrietas.....	499	3	22.900	0.601
Delirium Tremens.....	110	2	5.048	1.818
Anasarca.....	15	0	0.734	0.000
Ascites.....	0	0	0	0
Rheumatismus acutus.....	296	4	13.564	1.351
" chronicus.....	61	1	2.799	1.639
Syphilis &c.....	563	2	27.214	0.337
Morbi oculorum.....	45	0	2.065	0.000
" cutis.....	6	0	0.275	0.000
Other diseases.....	1115	7	51.170	0.627
Total.....	4,715	71	216.383	1.508

NOTE.—Per centage of deaths to strength, 3.258.

TABLE
 exhibiting the number of admissions and deaths, in the Madras European regiment at Kamptee, from 1829, exclusive of 1831.

Aggregate strength.	Admissions.	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick.
4,719	35	2,086	1.000	1.000
121	37	7,000	2.000	2.000
600	33	5,072	3.000	3.000
115	44	2,100	1.000	1.000
128	4	1,000	1.000	1.000
477	31	8,022	2.000	2.000
351	8	2,100	1.000	1.000
350	5	2,100	1.000	1.000
3	7	1,011	20.000	20.000
8	1	1,025	12.500	12.500
5	2	1,025	20.000	20.000
10	2	1,011	20.000	20.000
17	21	1,000	20.000	20.000
10	0	1,000	0.000	0.000
8	2	1,000	20.000	20.000
4	1	1,025	25.000	25.000
20	1	1,000	5.000	5.000
11	1	1,420	9.090	9.090
52	2	1,000	3.846	3.846
30	0	1,000	0.000	0.000
27	0	1,000	0.000	0.000
420	4	1,077	2.380	2.380
89	7	1,077	7.852	7.852
100	8	1,000	8.000	8.000
120	8	1,000	6.666	6.666
40	4	1,000	10.000	10.000
1,119	35	21,500	3.089	3.089
Total.....	14,715	216,383	1.508	1.508

NOTE.—Per centage of deaths to strength, 3.258.

Meteorological Observations, made at Secunderabad in 1843.

	Barometer.			Thermometer.			Amount of rain. Inches.	Number of days on which rain has fallen.	Days.	Prevailing Winds.
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.				
January.....	28.41	28.05	28.10	76.9	57.5	66.6	19	0.35	3	N. E. S. S. E. K. N. E. W.
February.....	28.47	28.27	28.35	86.2	59.3	69.7	21	0.05	1	N. E. S. S. E.
March.....	28.38	28.35	28.37	81.3	65.4	73.5	15.9	5.46	10	S. E. N. E.
April.....	28.37	28.32	28.35	85.5	69.9	79.2	18.6	0.36	5	S. E. E.
May.....	28.35	28.25	28.25	91.5	71.9	82.0	18.3	11.25	8	S. E.
June.....	28.13	28.12	28.13	90.9	70.4	80.5	20.5	0	0	W.
July.....	28.15	28.11	28.12	78.7	68.5	73.5	10.4	6.66	12	W.
August.....	28.19	28.16	28.17	80.1	67.2	73.6	12.9	7.39	13	S.
September.....	28.26	28.25	28.25	87.9	80.3	84.1	7.6	4.89	6	N. W.
October.....	28.34	28.29	28.31	78.9	65.1	72	13.6	5.2	6	E. S. N. E.
November.....	28.41	28.36	28.39	75.1	54.2	65.1	21.9	0	0	E. N. E.
December.....	28.44	28.39	28.41	71.1	49	60	25.1	0.20	3	E. N. E.

exhibiting the number of admissions and the European horse artillery at Lucknow, 1857, inclusive.

Year	Admissions.	Deaths.	Five centages of sick to strength.	Five centages of deaths to strength.
1857	100	100	100	100
1858	100	100	100	100
1859	100	100	100	100
1860	100	100	100	100
1861	100	100	100	100
1862	100	100	100	100
1863	100	100	100	100
1864	100	100	100	100
1865	100	100	100	100
1866	100	100	100	100
1867	100	100	100	100
1868	100	100	100	100
1869	100	100	100	100
1870	100	100	100	100
1871	100	100	100	100
1872	100	100	100	100
1873	100	100	100	100
1874	100	100	100	100
1875	100	100	100	100
1876	100	100	100	100
1877	100	100	100	100
1878	100	100	100	100
1879	100	100	100	100
1880	100	100	100	100
1881	100	100	100	100
1882	100	100	100	100
1883	100	100	100	100
1884	100	100	100	100
1885	100	100	100	100
1886	100	100	100	100
1887	100	100	100	100
1888	100	100	100	100
1889	100	100	100	100
1890	100	100	100	100
1891	100	100	100	100
1892	100	100	100	100
1893	100	100	100	100
1894	100	100	100	100
1895	100	100	100	100
1896	100	100	100	100
1897	100	100	100	100
1898	100	100	100	100
1899	100	100	100	100
1900	100	100	100	100

Meteorological Observations, made at Kamptee in 1843.

	Thermometer.				Amount of rain. Inches.	Number of days on which rain has fallen.	Prevailing Winds.	
	Mean Maxim.	Mean Minim.	General Mean.	Mean daily range.			A. M.	P. M.
							Days.	
January.....	89.0	65.6	71.4	16.4	4.25	2	N.	N. E.
February.....	87.7	61.6	76.1	23.9	0	0	N. E.	E.
March.....	86.1	70.2	78.1	15.8	2.30	7	E.	N. W.
April.....	100.6	75	88	25.2	0	0	W.	W.
May.....	103.0	83.4	93.2	19.5	0.30	2	W.	S. W.
June.....	106.5	68.4	84.4	22	0.75	6	W.	W.
July.....	82.9	75.6	79.2	7.3	18.80	24	S. W.	S. W.
August.....	86.5	77.6	82.1	8.7	4.55	19	W.	W.
September.....	89.6	75	82.3	14.6	7.35	5	W.	W.
October.....	89.8	72	80.5	17.8	3.40	4	N. E.	N. E.
November.....	85.7	60.9	73.3	24.8	0	0	N. W.	W.
December.....	81.1	48.5	64.8	22.6	0	0	W.	N. E.

TENASSERIM PROVINCES.

General description.—The Tenasserim provinces, with the districts of Amherst, Tavoy and Mergui, were ceded to the East India Company by the treaty of Yandala, the termination of the Burmese war, in 1826.

These districts comprise a tract of coast 250 miles in length, lying along the eastern side of Bengal, and south of the kingdom of Pegu; however a considerable, and imperfectly defined, distance of the Burmese war, in 1826.

Location.—They are bounded on the north by the Irawaddy river, from which they are separated by the Mergui range of mountains, running from west to east, and on the east by the Malay Peninsula, which is nearly parallel with the coast, at a distance of 100 miles inland, though approaching nearer to the coast towards the south. On the south they adjoin the Malay Peninsula, and the entire face is washed by the bay of Bengal, a chain of islands, the Mergui archipelago, lying along the coast 15 to 20 miles.

General aspect of the country.—The entire face of the country is covered with dense jungle to the top of the mountains;—and it is but thinly inhabited. The mountains being kept up by water, and villages met with on the banks of the principal rivers, such as the Salween, Gye, Attaran, and the Tavoy rivers, of less importance.

The geological features of the country have not been perfectly explored, some remarks however

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, &c. 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 south, nearly 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 of the country. The entire face of the country is mountainous, and 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.	House.	Males.	Females.	Burmese and Tubans.	Siamese.	Chinese.	Malays.	Kayans and Tengchobos.	Natives of India.	Miscellaneous.
Moulmein Town.....	2565	8780	8453	14397	0	540	72	0	2912	0
Do. District } (including Amherst)	6609	21318	20511	31217	0	105	5	10353	114	0
Tavoy Town.....	1953	5206	5084	9523	0	284	33	0	328	0
Do. District.....	4756	12590	12792	23173	26	54	50	1616	3	0
Mergui Town.....	1358	3764	3641	6771	25	180	15	3	55	258
Do. District.....	1723	5389	5098	6751	1376	34	337	1531	0	428
Total..	18,954	56,958	55,459	92,247	1425	1197	1531	17,203	2517	686

Animals, wild
and domestic.

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.

Exports. The chief exports of the provinces consist of 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.

TENASSERIM PROVINCES.

Teak-wood. Extensive forests of teak-wood, are to be found along the entire coast, a valuable trade in timber, is carried on by large establishments, at which numbers of coolies are employed, being kept up in the interior for the purpose of felling and preparing the timber, which is floated down by the rivers.

Ship-building. Several ship building establishments, are on the banks of the Salween river, of which are at a place called Namoo, and at Tavoy-oo, three miles below Moulmein, of beautiful structure, and of 4 or 500 tons burr, are in progress at these places. Considerable quantities of teak-wood have also, of late, been sent direct to the coast.

Principal stations. The principal stations in Tenasserim, are Moulmein, the head quarters, nearly opposite to the burmese town of Amherst, on the Salween river—Amherst a station for a company, at the mouth of the river, 28 miles from Moulmein, and Tavoy 130 miles south of Amherst, on the Andaman coast, and Mergui about 200 miles south of the latter.

The approach to the Tenasserim coast is by a series of highly picturesque, forming an outline of regular hills, to the northward and eastward, the low land on the Rangoon shore, is a series of hills, as seen to stretch from the coast, in the back ground,—and presenting a very interesting appearance.

The small town of Amherst lies at the mouth of the Salween river, on a point of land running west, after passing which, the view along the coast becomes desolate, the banks presenting but little appearance of cultivation, having a few villages and huts to be seen, having a very low and narrow appearance, except a few houses, to be seen here and there, the coast, or stretching along the shore, there

Teak-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 building. Several ship building establishments, 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.

Military stations. The principal stations in the provinces are Moulmein, or Maulmein the head quarters of the force, nearly opposite to the burmese town of Martaban, on the Salween river—Amherst a station for a company of native troops, at the mouth of the river, 28 miles below Moulmein;—Tavoy 150 miles south of Amherst, 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 south-east, 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 north-west, 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 canoes, to be seen here and there, either crossing the stream, or stealing along the shore, there is no appearance

TENASSERIM PROVINCES.

The particular description of each of the provinces on this subject has been investigated. The original inhabitants are a tribe of Burmese, from time to time, been under different rulers, and were gradually taken into the possession of the provinces came into the possession of the Burmese, numbers of Chinese, as well as natives, have settled at Moulmein, where a mixed population of various castes of people from India, and increasing race of Burmese-Indians, and a few now to be found. The population in 1825—

Province	Population	Area	Capital
Moulmein	100,000	1,000	Moulmein
Amherst	50,000	500	Amherst
Tavoy	150,000	1,500	Tavoy
Mergui	100,000	1,000	Mergui
Total	400,000	4,000	

The domestic animals to be met with on this island are the buffalo, pig and the peacock;—black cattle, and horses being bred in various kinds, is however abundant. The principal are the royal tiger, elephant, and several different species of deer. The peacock, a species of pheasant, jungle fowl, and abundance at certain seasons of the year. Animals and birds however, common to India, even, hares, jackalls, foxes, porcupines, &c. are to be seen; and both sheep and deer seem to be even with the greatest ease and attention. The chief exports of the provinces consist of hides, horns, elephant's teeth, tin, bird's nest, and wax.

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 farther 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.

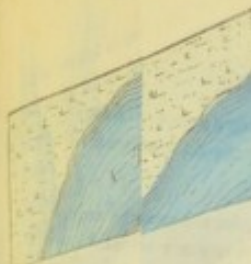
Ships anchor immediately off the town, but owing to a high embankment intercepting the view, the military cantonment, cannot be seen from the river.

Station of Moul-
mein. Moulmein, lying in north latitude $16^{\circ} 3'$, and east longitude $97^{\circ} 38'$, 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 south-east 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.

Military canton-
ment. 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 river, opposite the town, is about a
navigable for vessels drawing 12 feet water,
18 feet at the springs. The water is fresh in

SHANSHAN PROVINCE

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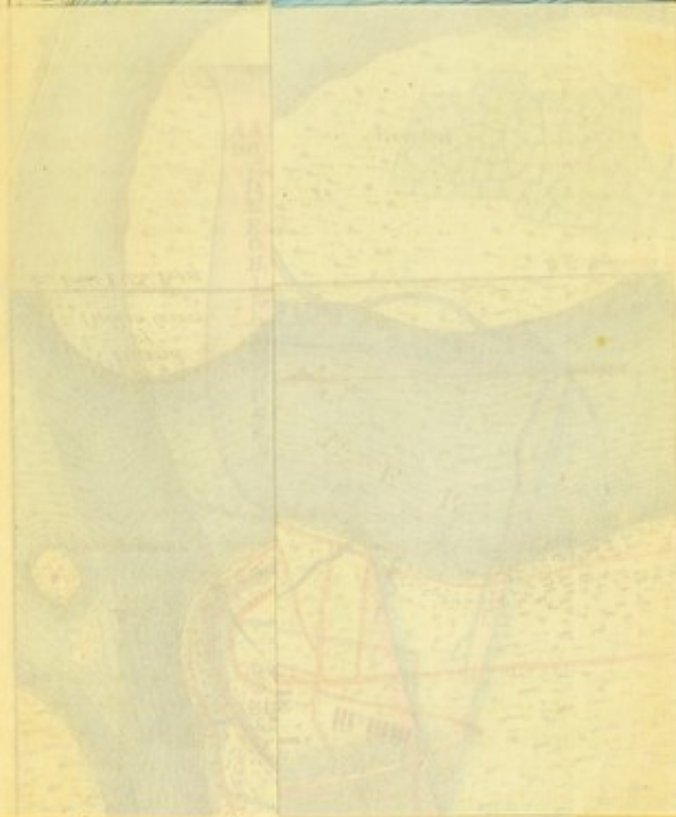
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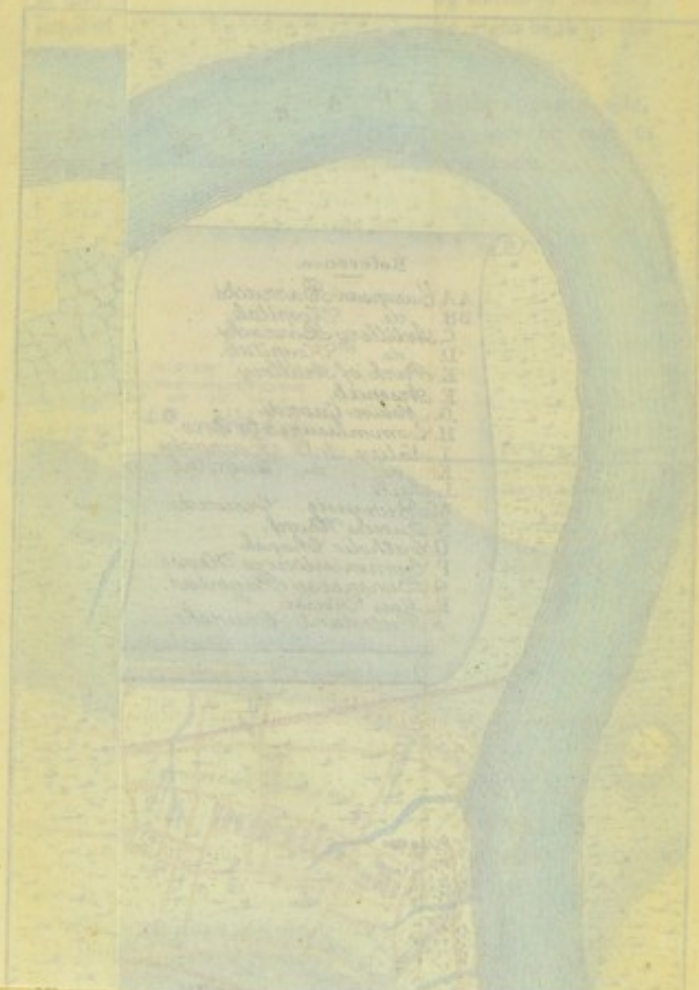
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a road leads along the summit, on every
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top, and at the base of this ridge, and in
the barracks, and the parade ground

distance, from the foot of the hill, to the
a mile, and down right to both of the cas-
forms a series of granite steps.



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



front of them are the barracks, and the parade ground.

Military cantonment. 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.

TENASSERIM PROVINCES.

The remains of an old fort, a work of
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 years ago.

101. Outside of the fort, the gro
 a little to the west is the jail, a large enclo
 ble of containing from 12 to 1400 prisoner
 of a small rising ground, are the lines of t
 local battalion, officered by Europeans.

The houses are all constructed of wood,
 and thatched with the leaves of the Neep-

The ground on which the barracks
 situated, is of a sandy nature, and slopes
 so that the rain quickly runs off, or become

For eight months in the year, the surface
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A dense jungle covered the cantonment,
 occupied by the British, in 1806, but where
 large trees were left standing, which contri
 butory of the scenery.

The river, opposite the town, is about a
 navigable for vessels drawing 12 feet water.
 18 feet at the springs. The water is fresh in

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.

Old 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.

Jail. 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 Neepea-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

the barracks, and the parade ground
distance, from the foot of the hill, is the
a mile, and then right to left of the ca-
forms a series of granite crags.

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.

Hot 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 calcareous crust, containing carbonate of iron.

Isle of monsters. 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.

Buffaloes, of a large and fine breed, are the principal agricultural labour, and are sufficiently numerous to supply the wants of the people;—these animals require to be housed, and have always abundance of pasture on the dry grounds;—the natives of the country are very fond of milk, a universal prejudice existing against the use of food.

On the north bank of the river, is an open plain, wide but shallow, and only navigable for small boats, which blows through it in the hot months.

To the north of this channel, is the country of Martaban, belonging to the Burmese; the mountains are covered with jungle, and is a healthy country. The summits of the hills, are crowned with pyramidal temples, which, when viewed from a distance, form a scene of great beauty. By any thing to be seen in India, unless perhaps the pyramids of Babel.

It is stated by persons who have been on the river, that the Attaran, which winds through the hills into dense teak forests, and a total of about 60 miles from Mook, is narrow, with banks from 20 to 40 feet high, and with the thick foliage, almost shut out the river. The Gyne leads through a mere open plain, and along its banks are a number of villages. The river, is navigable for several miles into the interior, and along its banks, a number of points, are to be found the finest teak forest.

With the exception of the few villages on the banks of the river, the whole interior is a wilderness, destitute of inhabitants;—the only labourers employed in the field, are about two hundred men employed in the field, and preparing it for rice, to be sown in the spring. The process adopted, is to kill the trees

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

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.

Geology. 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 Moulraein. 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 Cogoan.

The soil in the cantonment, is light, sandy and answers pretty well for gardening, but requires abundance of manure: and

European vegetables are successfully cultivated in the cold months.

Climate. The year is divided, according to the seasons; the cold from November to March to July, and the rainy season from November; but the rains generally begin in April, and moderate a part of the hot season.

After the vernal equinox, southerly winds loaded with watery vapour, prevail, and the air varying from south to south-west, till the autumnal equinox. During this season the air is clear and the sun's rays are so very powerful, that to exposure in the Caucasus, cannot bear it, but even, generally use umbrellas.

The vapours accumulating, soon however, and intercept the sun's rays, and after the very seldom shines out, till the end of the

During this time, the air is so loaded with moisture becomes mouldy, the glass, as also books give vapour attracts rust with rapidity their vegetating properties, unless kept in a dry place. The barometer at this season seldom rises above 29 inches, and usually ranges within two or three points; and the rain falls in torrents, accompanied particularly at the commencement and end of the rainy season.

European vegetables are successfully cultivated, during the cold months.

Climate. The year is divided, according to the natives, 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 south-west monsoon.

come much less powerful, and fogs are frequent in the mornings, clearing up at 9 or 10 o'clock.

Bazaar supplies. The bazaar supplies are abundant, and generally 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 matha, 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.*

Rice. 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.

* Napee is made either of shrimps, which is the best sort, or of small fish in a half putrid state.

TENASSERIM PROVINCE.

Month	Barometer	Thermometer	Winds	Remarks
Jan	30.0	80	SE	
Feb	30.0	80	SE	
Mar	30.0	80	SE	
Apr	30.0	80	SE	
May	30.0	80	SE	
Jun	30.0	80	SE	
Jul	30.0	80	SE	
Aug	30.0	80	SE	
Sep	30.0	80	SE	
Oct	30.0	80	SE	
Nov	30.0	80	SE	
Dec	30.0	80	SE	

Record of the Thermometer at Moulmein.

annual equinox, variable winds and rain for four or five weeks, until the north-east which it generally does after the first week when the atmosphere becomes dry, and pervasion of water, in an eastern part of the air; the thermometer stands above 30 from that to 36.2. The wind may be

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 Kareens 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.

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.

The poorest of the burmese have curtains from the attacks of mosquitoes, from which suffer as much as strangers, these insects being troublesome throughout the rainy season.

Use of Tobacco. The practice of smoking tobacco is not in great quantity, except by the natives, and is not considered a respectable habit; and the name and chief, are synonymous in the language of the natives.

Climate of the Province. The climate is the most common, but it is not of great severity.

Cholera. In the highlands both of Siam and Burmah is frequent, but the enlarged gland of the eye is not so common, nor is it accompanied by eruptions on the face, nor is the quality of the water by so much as the use of earth salt.

Small pox. Small pox, has been a disease in this country, and inoculation is practised to a great extent, to lessen its severity. In the treatment the patient is kept cool, and water is sprinkled occasionally; in Siam the patient is bathed daily in cold water, from the time the eruptive appearance begins.

Vaccination. All attempts at permanent vaccination have failed, in consequence of the heat of the climate, destroying the specific virus, to transport and preserve which, even the most ingenious that could be thought of, has been tried in vain.

Cholera. Cholera has occasioned great violence in some districts; in 1804 and 1805 great violence in the burmese army above 100,000 men were killed.

Periods considered most favourable to the natives. The periods considered most favourable to the natives, are the commencement and termination of the rainy season.

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 and opium 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 natives. Rheumatism is the most common of the diseases seen, but it is not of great severity.

Bronchocele. In the highlands both of Siam and Ava, bronchocele 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 seasons of the year The periods considered most unhealthy by the natives, are the commencement and termination of the

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.

Framboesia. Framboesia, 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 nascentium. 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. Leprosy 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 Hydrophobia. 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 Cattle. The warm season of 1839, was considered unusually hot, and the cattle which came from the Shan country in March, brought with them a disease which spread

MOULMEIN.
sensitive at Moulmein, and proved excessive.

It usually commenced its attack in a manner, and to the inexperienced eye was at first the animal appeared dull, the clefts were seen to swell, and the hoofs to become sore; breath was observed to be offensive, and the discharge issuing from the nostrils, at this stage, the feet were so much swollen, that the animal was unable to walk, and it gradually becomes emaciated, from feeding, by the state of the mouth.—The disease usually proved fatal, in about three first commencement.—From 7 to 800 head during the year.

Several "got women" examinations were kept in a few instances, in which there was softening, of the mucous membrane of the uterine cervical appearance, was inflammation of

Disease of Elephants. In this year also, an extensive disease carried among the government elephants, which in June, after the other epidemic had ceased, elephants throughout the provinces were dying, a short time previous thereto. "Post mortem" examinations showed, that this disease was also an inflammation of the lungs, which were seen in various stages of

In one case suppuration was present, in another deposits existed, and generally, one side of the lung was affected, the other being healthy; in some at its first outbreak, the lungs were healthy, their whole substance, and resembled the spleen, and when cut into, a frothy purulent matter was always healthy, but the spleen was not, and engorged with blood.

extensively at Moulmein, and proved exceedingly destructive.

It usually commenced its attack in a most insidious 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 Elephants. 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 inflammation.

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.

Military 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 battalion called the Taliens corps, the whole being under the command of a Brigadier.

European barracks. 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 100 feet in length, by 25½ 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 feet high.—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

fourteen unglazed windows, with wooden shutters, which are opened in a similar manner as the barracks, in a double manner as the barracks, the space of 45 feet between the barracks, allowing five feet for the passage of patients;—every other range of buildings is adopted in the same manner of ventilation are adopted.

The prison belonging to the barracks, are constructed of teak wood, they consist of a deep trench, those of the hospital are connected by leading from the verandahs;—every other cell is closed, and quick lime is constantly thrown

Artillery lines and barracks. The artillery lines and barracks are more eligibly placed, than those of any other station, they face an open grassy esplanade, of which, bounded by the low mound, the remainder of the line of houses, which runs along the bank, sweeps round the north west angle of the

Hospital. The hospital is at a short distance from the lines, and possesses all the advantages of an airy, commodious, edifice, constructed of teak wood; it can accommodate 30 European patients, exclusive of a ward for women and

Native lines and barracks. The lines of one of the native regiments, near Tavoyan, half a mile from the village, and two and a half miles east of the fort, are covered with low jungle, ranging immediately to the ground, being chiefly bamboo, but in the lower situation, the ground is chiefly level; abundance of good water is obtained from wells, and from natural springs by the hill streams.—Previous to 1838, it was a low swampy ground, but has since been cleared, and good stone buildings, have been made; stone bridges, and another at the village, in the vicinity.

Prison. The lines for the sepoys are in length 19 feet by 12, and intended to accommodate

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.

Artillery lines and barracks. 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,

Hospital. The hospital is at a short and convenient distance 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 lines at Tavoyzoo. 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.

Sepoys 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 sepoy, 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 cantonment. 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 troops. 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; thesepoy, 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 rations, and a great improvement in their health has in consequence taken place.

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The most severe cases have occurred at F
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The men employed in cutting oak tin
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Pulmonary dis- Pulmonary complaints were a
to be very prevalent; and that a residence
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of clearing jungle is not experienced, till some years have elapsed.

The most severe cases have occurred at Balooeoun 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. Dysentery and liver diseases are the most fatal complaints amongst Europeans; and prisoners confined ^{Scorvy.} 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 diseases. 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,

the absence of hot winds, and the slight variation, in the daily range of temperature.

Ulcers. Ulcers are difficult of cure during wet weather.

Hepatic diseases. 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, particularly at their commencement; and pulmonary complaints during the cold season.

Health of the Hindoo and Mussulman residents. The resident mussulman and hindoo inhabitants, appear to enjoy good health, and amongst the natives, there are few diseased persons to be seen, and no mendicants.

Health of Convicts. 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 year.....	540	11	1 in 49
	2d do.	670	16	1 in 41
1836	1st do.	750	14	1 in 67
	2d do.	850	12	1 in 70
1837	1st do.	890	17	1 in 52
	2d do.	930	24	1 in 40
1838	1st do.	1006	22	1 in 47
	2d do.	1050	28	1 in 37
1839	1st do.	1130	20	1 in 37
Total.....		7216	174	or 1 in 41,04

The above statement, includes men of whom are confined for life; they are under are well fed, and not overworked. Each man has a basket of six, containing 34 lbs, and one rupee monthly, besides firewood, and the prisoners are divided into 30. Each individual contributes 12 annas per week, the remaining 4 annas being expended for breakfast consist of vegetable curry with rice of 2 ball curry, with fish occasionally.

General Description and Location. The small station of Ambert is situated on a narrow neck of land, at the mouth of the Indian river, and is the extreme north-western point of Tenasserim provinces.

A bold range of wooded hills, rises within a few miles on the inland side of the town, leaving a level level ground, but partially cleared of jungle, and the sea on one side, and the river on the other.

Ambert is about 25 miles from Moulmein but the distance by land, is considerably less. There is no road either for carriages, or cattle of any kind, a path way running through swamps, and being the only land communication, and the use of on particular occasions, for foot conveyance intelligence to head quarters in the arrival of ships off the river.

Troops. A detachment consisting of a company of the native corps at Moulmein, under a British officer, occupies the little town, the chief importance of which is being a convenient pilot station for the boats, being able to proceed up the river to the mouth of the stream, and the distance of the capital of the stream, and the distance of the capital of the stream, and the distance of the capital of the stream, without an expense.

When the Tenasserim provinces were ceded to the East India Company, in 1825, it was

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.

General Description and situation.

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

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	Men	Strength.	Died.	Proportion of deaths to strength.
1826	640	11		1 in 61
1827	670	16		1 in 42
1828	750	14		1 in 54
1829	860	18		1 in 48
1830	880	17		1 in 52
1831	910	24		1 in 38
1832	1000	28		1 in 36
1833	1050	38		1 in 28
1834	1130	50		1 in 23
Total	7216	174		1 in 41.44

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 intention, 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 cane Planters.

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 description.

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

TAVOY.
the country of Siam, and none of them exceed 600 feet.

There is only one river of any importance called the Tenasserim river, it rises in the north latitude 14° 8', and after a southerly course of 18 miles, nearly parallel to the sea coast, and from it, enters the sea in north latitude 13° 30', shallow, broad, but a rocky bed, and is full of sand banks, and is not navigable for vessels more than three or twenty miles from its mouth, and other craft of little burden, some miles, but not without difficulty; though the river extends as high as 50 miles. Besides the main river, which forms a portion of the eastern boundary of the district, there are also a few small and insignificant rivers, which are used for the purposes of irrigation.

The Tavoy valley, through which the river flows to the south, bounded on the west by a range of hills along the sea coast, the highest of which are of an elevation of about 1800 feet; and on the east by a range, the most easterly of which are the hills of the valley, the principal situation in which rice is cultivated at its broadest part, a few miles above the mouth, about 10 miles across, but becomes gradually narrower northward, and shut in by hills.

Geology. The principal geological formation in the district, is granite. The hills along the sea coast, are almost entirely of granite; on the east side, there is an abundance of micaceous iron ore, and clay iron stone, the latter being magnetic; and the hills of the interior, along both banks of the river, are chiefly stiff clay; the banks of the river are also clayey, but occasionally a red sandstone is seen. The first hilly mountains are composed of basalt, clay and sandstone;

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 $14^{\circ} 8''$, 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 $13^{\circ} 30'$. 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

DISTRICT OF TAVOY.

Tavoy lies between the districts of Monimie and Mergui, being in length from north to south, and in breadth about 40 miles. It is very fertile, and its whole extent, the hills, and also the valleys, with few exceptions, being covered with rice. The hills run in ridges, generally in the north and south, separating the district, from

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, caoutchouc 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 $\frac{5}{10}$ 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

TAYOY.

inches in 1838;—the fall of rain during the year in 1851, was as follows.

	Total
May.....	21
June.....	36
July.....	51
August.....	39
September.....	28
October.....	24

As regards internal communications, there being no such thing as a road in the Tayoy river, affords the only means of inter-

The products of the country are principally rice, cassia, and the fruit called the doria.

The population is said to amount to the greatest portion of whom, are distributed in villages along the banks of the river, and in

Tayoy, the chief town of the district, contains inhabitants, and is situated on the left bank 30 miles from the sea, in north latitude 18°. Its site is low, but slopes to the river, by which all accumulations of water are prevented. It includes an area of 300 acres; on the west it is flanked by all other sides by paddy-fields, which are a great source of wealth, but in the monsoon, they are but little above water. The highest point of the ground, stands, is 14 feet above high water mark.

The town is studded with fruit and other trees, under the shade of which the houses are for the most part constructed of wood, and are all constructed above the ground, and are all constructed

inches in 1838;—the fall of rain during the south-west monsoon in 1831, was as follows.

	Total of each month.	
	Inches.	Tenths.
May.....	21	3
June.....	36	4
July.....	51	4
August.....	39	2
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 $14^{\circ} 50'$, 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 talians, 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 *poes*, 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

TAVOT.

charitable: they live in a state of celibacy, as
world, in byways or monasteries, and are
the young; almost every woman can therefore

Polygamy is not permitted, but divorce is
Women, though obliged to work, whilst
eat, or nurse themselves, are nevertheless
have intelligence, though not handsome or
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they are gentle, and fond of their children,
for three, four or even five years.

The town, and surrounding
muchly healthy, the prevailing diseases be
fever of a mild form, and catarrhs, chiefly
settling in the south-west monsoon. About
small pox carried off a great many of the in

Cholera, also made its appearance about
was confined to the burmese.—They are
Europeans for medical assistance, the case
understood, every encouragement has been
but hitherto they have not often availed
and some of those who have applied for as
safety in the advanced stages of disease,
relief could not be gained, by effecting ex

The detachment of troops
40 European infantry and artillery, and 200

The fort, within which the barracks for
various public buildings are situated, is in
town, extending one thousand yards from
eight hundred feet from north to south.—It
is built, having an entrance at each face, and
surrounded by a deep trench. The extent
the perimeter of about one-third, to the re

The European infantry barracks, occupy
ground, on a second formed by the ruins

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.

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.

Diseases. The town, and surrounding country are remarkably 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.

Military 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 barracks. 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 and lines. 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 from, and within sight of the barracks.

MERGUL

Wells are numerous, and the water is good. The bazaar is almost adjoining the right of the town. The small detachments stationed here in general been remarkably healthy, and nothing, so regards their state of health, to be remarked.

MERGUL

General description. Mergul, the most southern of the provinces, formerly belonged to the Siamese, but invaded by the Burmese in 1783, was given by a treaty of peace concluded between the two powers and the Burmese retained possession of it, till 1817, when it was restored to the British.

It is bounded on the north, by the province of Pegu; on the east, by the Siamese territory; on the south, by the Andaman Sea; and on the west, by the bay of Bengal.

General description. The Mergul archipelago, consisting of several small islands on the coast, belongs to this province.

Appearance of the country. The surface of the country is uneven, and much intersected by streams; two principal hills, varying generally, from four to fifteen miles in length, traverse the center of the province, from north to south, running parallel with each other, at a distance of about 10 miles, which winds through the river Tenasserim, which winds thro' between them, and it arrives at the old town of Mergul, where it is joined by a stream from the east. The river Tenasserim, is then pursued a westerly course, through a gap in the range of hills, and discharges itself into the bay of Bengal, dividing into several small streams, which flow into the bay of Bengal.

The line of coast is very irregular, and the land is but little raised above the level of the sea, for the most part, but particularly to the south, where there are several small islands, here and

Wells are numerous, and the water is good.

The bazaar is almost adjoining the right of the barracks.

Health of troops The small detachments stationed at Tavoy, have in general been remarkably healthy, and there has been nothing, as regards their state of health, to call for particular remark.

MERGUI.

General description. Mergui, the most southern of the Tenasserim provinces, 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 east, by the Siamese territory; on the south, by the Pachan river; and on the west, by the bay of Bengal.

Mergui Archipelago. The Mergui archipelago, consisting of numerous small islands on the coast, belongs to this province.

Appearance of the country. 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-east 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,

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 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.

Climate.

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

MEROU

the year 1840, from observations taken three
extreme variation of temperature, was found
the highest range of the thermometer, in a
feet above the level of the sea, having been 9
April, and the lowest 68° in November an
various; though the Mercury occasionally falls
January 1842, when it was down to 63° at su
ly winds, rising from east to west, prevail fro
March, during the remainder of the year, al
north-west; in the rainy season, violent stor
rain, from the N. W. occur, and continue for
thor. Thunder storms, accompanied by torren
frequent occurrence in the months of April an
at the change of the monsoon, in October
The transition in the state of the weather, are
to be very regular, in their recurrence;—the
usually commences raining at a certain hour
times perhaps for several hours, and is suc
terval of fine weather, this occurring sever
times; when a sudden and complete change
storms of rain, which previously came on dail
now happen at noon, or, some other stated pe
hours. It also often happens, that storms recur
successive days, but on each occasion, an hour
than the previous one.

The most striking peculiarity of the cli
humidity of the atmosphere, dew is det
quantity, during the north-east monsoon, and
clouds, obscuring the sun's rays, which are
five or 10 o'clock, may be also seen hangin
the country, especially in the interior. I
these were 27 days upon which rain fell
posed without rain, in which respect, Merg
round the other parts of this coast; and the c
respected more agreeable, and healthy. Ab
can fall extremely.

With regard to the diseases
they are, with few exceptions, very mild. T

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 p. 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 atmosphere, 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 country.

With regard to the diseases of the province, they are, with few exceptions, very mild. The most common

TENASSERIM PROVINCE.

of fertile land adapted for the growth of rice are occasional hills of moderate elevation, upon the gardens of the area palm, and glassia.

of the country, when viewed for miles, are mostly clothed with luxuriant vegetation, and in the more elevated situations open tracts arrive at the largest size. After passing the limits, towards the interior, a gradual elevation is perceptible, and the country becomes more and more elevated. After passing the banks of the river, it becomes suddenly changed, and through an alluvial valley, varying in width from 20 miles, having a horizontal or slightly undulating surface; the banks are here generally very perpendicular, in some parts however, the river is through low lands, and there are many islands, giving to the scenery a picturesque character. In some situations, it is so narrow, as to be navigable for large boats up to the mountains, but beyond that, even those of small size, are without much difficulty. The distance from the coast for about 10 miles above Tenasserim.

The climate of Mergui is agreeable, and moderate, the heat during the months of April and May, being moderated by the land and sea breeze, which usually commences to blow, between 10 and 12, in the day, and continues till evening, soon after which the land breeze ceases, and is replaced by the sea breeze, which is accompanied with delightful coolness. In the month of October, the weather is very agreeable, and the air is in consequence so cool, as to be very refreshing. The months of November, December, and January, are the most agreeable, and the air is in consequence so cool, as to be very refreshing. The months of February, March, and April, are the most disagreeable, and the air is in consequence so hot, as to be very oppressive. The months of May, June, and July, are the most oppressive, and the air is in consequence so hot, as to be very oppressive. The months of August, September, and October, are the most agreeable, and the air is in consequence so cool, as to be very refreshing.

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 troops. 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 diarrhœa, rheumatism, remittent and intermitent fevers, beriberi, atrophica 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 country. 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,

of minor importance, in which he is assisted by native magistrates.

The province is divided into several districts under a thegwan, or head constable, who receives, and conducts the business of the villages.

The villages are thinly scattered, and consist from 20 to 30 houses; the spot being selected for advantage, and three or four houses are always gathered for mutual protection.

Residence of the natives. Among the burmese, one family inhabits each house, but some of the burmese are social creatures, consisting perhaps of 50 or 100 individuals, living under one roof.—The house consists of a long room with a central passage, running from end to end, which are apartments, separated by bamboo partitions, opening towards the public passage; the village is almost invariably built upon the banks, or the shores of some navigable stream, with which it is intersected in all directions.

Population. The population of the province, and from the returns of the village authorities, exceeds the deaths, in the proportion of more than double.

It is scarcely possible to enter the country by land, or by water, from the interior of the jungle, and it has consequently, been chiefly explored.

Geological formation. The more westerly islands and archipelago, are composed entirely of the same formation, chiefly varieties of granite and gneiss, and consist of sandstone, gray wacke, and in the composition of the latter, iron is a prominent constituent. The geological features, of the

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.

Habitations of the natives.

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.

Coal.

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 eastern 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.

MERGUI.

The springs are situated up the Palouk river, on the western side of a high range, running along the western, or right bank of Tenasserim; six miles, which is about 50 miles it is about 100 feet wide, but narrows higher up the village of Palouk, and soon after passing the village in places very shallow, and a succession of rapids met. Having ascended as far as I could in a sampan dragged over rapids, I performed the journey by land, in consequence of the river being shallow, and the rapids or falls getting strong however, I descended the stream, the whole distance on foot. The hills, which form Palouk, on the sides of the river, are by no means high, but thick with jungle and high trees; there are two springs close to the river, one immediately at the river, (here about 100 feet wide) the other about two miles inland; around the river, and the others about two miles inland, are several of circular stones, of various sizes, together with hardened clay, having the appearance, and in some places, small circles, which have been formed, by springs now dry. All the springs, are close to the water edge, or they issue from under the rocks, through the crevices, and are very small, and not at all deep, and a thermometer being dipped into one, it stood at 100° F. Their height above the surface of the water, is about 30 feet. The springs a little higher up the river, and deeper, they are situated in a small opening, and are about 20 or 40 feet high, along the river, and the largest being at the north end, and half a mile deep, and two feet in diameter, and about half that size, in both the thermometer stood at 104° F. the ground at the bottom, is of a dark brown, and there resembling the colour of brimstone.

"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 basins 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 196° 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 194°, 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 $13^{\circ} 20'$ north latitude, and $90^{\circ} 19'$ east longitude. Though vapours rise from them, no disagreeable 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 Tennasserim 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.

Botanical productions.

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 "*coccoloba*", is perhaps the most useful; from it toddy and sugar are obtained, and its leaves are used for roofing houses, for

which purpose they are well adapted, forming a defence against heavy rains, and from being silicious coating, it does not readily decay even. The "*acropora* sapon." the wood of a tree, given in great abundance in the island, the principal are the mangrove, mango, papaya, cocconut, areca, cochen, lime, orange and plumose;—the many indigenous fruit trees in the forests, it is believed, might be much improved by a country also, produces rice of several kinds, sweet-potatoes, shallots, sesaman, black peppermint, tobacco, pine-apples, melons, gourds and

Animals. The animals met with, are tiger, rhinoceros both double and single horned, the buffalo, bear, hog, elk, deer of several sorts, monkeys and squirrels of several varieties, amiable and cloth. Dr. Helfer says, "I have had an opportunity of observing the existence of the "*tupias* malayensis" in latitude $11^{\circ} 37'$, in Mergui, though I have not been so fortunate as to see a specimen of it, it is well known to the natives as "*great pig*." Wolves have been reported to exist in the interior, nevertheless their existence is doubtful, as Dr. Helfer observes, "I have no representative in the country, so far as I am aware." It has been reported that tigers on this coast never attack man, one instance, however occurred lately, and it is to be the case, but such occurrences are rare and the facility with which they obtain deer and other animals, may account for the rhinoceros in common, and much deer

Reptiles.

Serious reptiles are various, including, iguanas, a large brown lizard,

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 "cesalpine 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

Fruits. 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-potatoes, chillies, sesamum, black pepper in small quantities, tobacco, pine-apples, melons, gourds and cucumbers.

Animals.

The animals met with, are the elephant, 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 $11^{\circ} 37'$, 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-Burham-pooter, 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 sand-banks 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 propagation; mosquitoes, sandflies, eye-flies, 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.

WINDS.

The coleopterous insects, are especially numerous and heavy.

Small brown scorpions and centipedes, are among the arachnida is found the tarantula beautiful large spotted spider.

Town. Mergui or "Byite", stands the same name, at the principal mouth of the river, which opens into the sea about two miles and about one to the south of the town; it is $10^{\circ} 36'$, and east longitude $98^{\circ} 30'$. The vessels of 18 feet draught of water, which run at the town are laid gravel, but towards the sea, some distance, a sand bank of some considerable depth is low water. The town consists of six houses, besides the barracks for the troops, and buildings.

Barracks and buildings. The barracks stand on the hill, around which is the town, and the houses are situated upon open ground, on its north side, all the buildings are raised upon posts.

Native houses. The native houses, generally rooms and a small verandah, the flooring, is bamboo and elevated about eight or ten feet. The sides and partitions of the houses, are of the same palm, or of a large description being soaked in water to prevent insects attacking them, and were into water.

Officers houses. The officers houses are built the materials above mentioned, or with a of plank; the European and native barracks are planked. The small hill upon which all 100 feet high, of an oblong form, having on one side a pretty steep ascent, but on the other a gentle slope; and from its summit is a fine view of islands forming the opposite shore about a mile

The coleopterous insects, are especially remarkable for their number and beauty.

Small brown scorpions and centipedes, are very common.

Among the arachnidæ is found the tarantula, and also a beautiful large spotted spider.

Town. Mergui or "Byite", stands on an island of 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 $10^{\circ} 36''$, and east longitude $98^{\circ} 30''$. 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.

Barracks and hospitals. The barracks stand on the summit of a small 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.

Native houses. The native houses, generally consist of two 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.

Country in the vicinity 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.

Inhabitants of the town. 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.

MERGUI.

Markets. Excellent bread, butter and lard, at a little above the Madras prices, the market is supplied with vegetables; beef, though of a superior quality, and good pork can be had occasionally not procurable; geese, ducks and fowls, are both fresh and salted; is in great variety and the produce in particular is excellent. coral prawns, are also to be procured, in the season.

Exports. The chief exports are, soap, palm leaves, or stumps for roofing, rattans, dried fish, ivory, tortoise shell, sea slugs, edible nests.

Ivory is chiefly brought to Mergui, from Siamese hunters.

Islands. The Seelongs, a miserable fishermen who inhabit the neighbourhood, have no fixed habitations, and live chiefly in which they move from island to island in their canoes, they gain a precarious livelihood by collecting sea shells, some of the latter being of good value, they also gather sea slugs, honey and sea articles. Thuringian race of people are also found here.

Edible nests. are exported to Singapore, for the chinese market;—the nests are small and composed of a glutinous substance, when cooked, has very much the taste of bird's nest, and is found in several of the islands adjoining to the rock. Government derive the sale of them, of about 4,000 ruypees per annum, good quality selling for very high prices.

Mergui offers great advantages. The soil being exceedingly fertile, and grants are made on liberal terms; plantations of coconuts would probably yield the most certain profit, favourable to their growth; coffee, cloves, and nutmeg, it is believed, succeed well.

Markets. 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, gnappce, 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

Seclong, or natives of the Islands.

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 rupees per annum; nests of good quality selling for very high prices.

Concluding 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, diarrhœa, hepatitis, thoracic diseases, rheumatism and syphilis*; and the most fatal have been *dysentery, fever, hepatitis and thoracic 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

IN STRENGTH 1838. The most numerous have been *fevers, rheumatism, head complaints* and the mortality has resulted principally from *fevers, rheumatism, and thoracic diseases* in ten years, only seven cases of cholera are recorded.

The tables No. 5 and 6, for European and native troops, are drawn up similarly to those for the preceding divisions; they exhibit the admissions and deaths from specific diseases, in each of the various classes of five years, from 1834 to 1838 inclusive; in each class, is also shewn with the mortality, a table of admissions to strength, and of deaths to strength.

Amongst the European troops, table No. 5 shews admissions have been from the classes of *fevers, dysentery, diarrhœa, hepatitis, rheumatism, and diseases of the brain*; and the most fatal have been *fevers, head complaints, especially dysentery, and diseases of the lungs*. During these five years the average per centage of sick to strength, has been 143·326, of deaths to strength 4·439.

In the table No. 6, for the native troops, the number of admissions it will be seen, has been from the classes of *fevers, rheumatism, head complaints, general effusions, and diseases of the lungs*; and the most fatal mortality has been occasioned by *fevers, rheumatism and diseases of the lungs*.

The tabular statements No. 7, 8, 9 and 10, shew the per centage of the admissions and deaths from the most important diseases, and the per centage of admissions and deaths from the most important diseases, both amongst the European and native troops, give at one view, much interesting information.

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.

H. M.'s Regiment, and the H. C.'s Artillery at Moulmein, contrasted.

Table No. 11 and 12.	H. M.'s Regiment. Aggregate strength 5037. From 1879 to 1889, exclusive of 1834.				H. C.'s Artillery. Aggregate strength 895. From 1879 to 1889, exclusive of 1831, 32 and 1835.			
	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.
Fever.	3708	56	41-009	1-511	170	5	19-187	2-941
Cholera.	4	1	0-044	25-000	0	0	0	0
Diarrhoea.	979	10	10-833	1-021	165	3	18-620	1-518
Dysentery acute.	902	71	9-981	7-871	74	4	8-352	5-403
.. chronic.	341	36	3-904	7-802	41	1	2-277	4-761
Hepatitis acute.	335	15	3-332	4-920	25	1	2-931	3-846
.. chronic.	606	12	4-492	2-955	23	1	4-288	2-631
Catarhus.	628	4	6-942	0-626	30	1	3-721	3-000
Hæmoptysis.	3	0	0-033	0-000	0	0	0	0
Asthma.	10	2	0-110	20-000	6	2	0-577	33-333
Phtisis pulmonalis.	21	9	0-232	42-857	7	2	0-333	66-666
Pneumonia.	65	7	0-719	10-769	1	0	0-112	0-000
Apoplexia.	4	4	0-044	100-000	1	1	0-112	100-000
Epilepsia.	10	0	0-110	0-000	4	0	0-451	0-000
Paralysis.	23	2	0-251	8-056	1	0	0-112	0-000
Amentia.	5	0	0-055	0-000	4	0	0-451	0-000
Mania.	9	0	0-099	0-000	0	0	0	0
Eclampsia.	17	0	0-185	0-000	7	0	0-799	0-000
Delirium Tremens.	42	5	0-461	11-201	18	0	2-031	0-000
Anasarca.	22	5	0-243	22-727	0	0	0	0
Ascites.	6	3	0-066	50-000	0	0	0	0
Rheumatismus acutus.	330	0	3-651	0-000	37	0	4-175	0-000
.. chronicus.	231	3	2-556	1-299	54	0	6-094	0-000
Syphilis &c.	1109	3	14-700	0-285	149	1	16-817	0-671
Morbi oculorum.	157	0	1-737	0-000	16	0	1-805	0-000
.. cutis.	100	0	1-106	0-000	5	0	0-562	0-000
Other diseases.	3749	15	41-686	0-400	409	5	45-162	1-222
Total.	13,472	251	148-522	1-884	1245	27	140-519	2-168

Per centage of deaths to strength, 2-799.
H. H.'s Troops.

Per centage of deaths to strength, 2-047. H. C.'s Troops.

*Losses and Deaths from
by the period of*

Period	Admitted	Died	Per centage of sick to strength	Per centage of deaths to sick
1879-80	1,200	1,400		
1880-81	1,100	1,300		
1881-82	1,000	1,200		
1882-83	900	1,100		
1883-84	800	1,000		
1884-85	700	900		
1885-86	600	800		
1886-87	500	700		
1887-88	400	600		
1888-89	300	500		
1889-90	200	400		
1890-91	100	300		
1891-92	0	200		
1892-93	0	100		
1893-94	0	0		
1894-95	0	0		
1895-96	0	0		
1896-97	0	0		
1897-98	0	0		
1898-99	0	0		
1899-00	0	0		

YUKON PROVINCE

and the H. C.'s Artillery at Moosonee, contrasted.

1899-1900
1900-1901
1901-1902
1902-1903
1903-1904
1904-1905
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1907-1908
1908-1909
1909-1910
1910-1911
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2018-2019
2019-2020
2020-2021
2021-2022
2022-2023
2023-2024
2024-2025

Sickness and Deaths, from
during the period of

Year	H. C.'s Artillery Average strength 100 Total 12,000 sick, 1,000 deaths		H. C.'s Artillery Average strength 100 Total 12,000 sick, 1,000 deaths	
	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of sick to strength.	Annual per centage of deaths to strength.
1904	154.795	2.805	4.343	
1909	153.296	1.715	2.628	
1915	145.116	1.682	2.441	
1920	137.445	2.419	3.353	
1926	95.104	2.818	2.080	
1930	184.032	6.293	12.741	
1937	57.330	0.762	0.437	
1918	134.856	2.093	2.722	
1921	151.964	2.141	3.254	
1925	170.293	2.313	3.261	

Percentage of sick to strength, H.C.'s Troop.

AST.

Number of admissions and Deaths &c. from 1829 to 1838.

	Guinea Worms.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
0	0	285	4	0	96	243	2	473	274	4	718	1367
0	0	256	7	0	102	207	1	433	336	15	660	1459
0	0	541	11	0	198	550	3	904	610	19	1378	2876
4	0	11	0	0	0	5	0	2	8	0	4	19
9	0	18	0	0	0	3	0	4	16	2	2	21
3	0	29	0	0	0	6	0	4	21	3	6	40
8	0	5-960	0-100	0	2-177	6-049	0-022	9-264	6-709	0-208	15-156	31-082
7	0	5-260	0	0	0	1-090	0	0-641	3-931	10-505	0-425	1-415
12	0	0-318	0	0	0	0-065	0	0-043	0-263	0-022	0-065	0-425

Number of Admissions and Deaths, etc. or Epidemic, during

Year	Guinea Worms	Hepatic diseases	Insanity	Leprosy	Ophthalmia	Rheumatism	Small pox	Syphilis &c.	Thoracic diseases	Ulcer phagedenic	Wounds & injuries	Other Complaints	Total
1829	0	285	4	0	96	243	2	473	274	4	718	1367	3703
1830	0	256	7	0	102	207	1	433	336	15	660	1459	3703
1831	0	541	11	0	198	550	3	904	610	19	1378	2876	6782
1832	4	11	0	0	0	5	0	2	8	0	4	19	42
1833	9	18	0	0	0	3	0	4	16	2	2	21	65
1834	3	29	0	0	0	6	0	4	21	3	6	40	105
1835	8	5-960	0-100	0	2-177	6-049	0-022	9-264	6-709	0-208	15-156	31-082	70-525
1836	7	5-260	0	0	0	1-090	0	0-641	3-931	10-505	0-425	1-415	23-172
1837	12	0-318	0	0	0	0-065	0	0-043	0-263	0-022	0-065	0-425	1-130
1838	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	17	1000	12	0	306	1014	3	1417	1527	42	1802	3703	10000

number of Admissions and Deaths, &c. from

	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggr											
1829 to 1838.											
Adm	2	11	9	2	42	611	10	361	74	1	423
	3	10	5	0	56	497	10	253	71	0	334
	5	21	14	2	72	1108	20	614	145	1	757
Dec	0	1	1	0	0	12	0	5	0	0	35
	0	1	0	0	0	9	1	5	0	0	27
	0	2	1	0	0	21	1	7	0	0	62
Average of sic	0.142	0.026	0.013	0.180	7.259	0.125	4.172	0.985	0.006	5.144	17.674
Do. sick tri	0.023	7.142	0	0	1.825	5.000	1.140	10.344	0	0.396	2.383
Do. death	0.013	0.005	0	0	0.142	0.006	0.047	0.101	0	0.020	0.421

TENNESSEE COAST

Table exhibiting the number of Admissions and Deaths, for 5 years each class of Diseases, for 5 years

EUROPEAN TROOPS

From 1829 to 1833. Admissions

The number of Admissions and Deaths, for 5 years each class of Diseases, for 5 years

Year	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
1829	2	11	9	2	42	611	10	361	74	1	423
1830	3	10	5	0	56	497	10	253	71	0	334
1831	5	21	14	2	72	1108	20	614	145	1	757
1832	0	1	1	0	0	12	0	5	0	0	35
1833	0	1	0	0	0	9	1	5	0	0	27
1834	0	2	1	0	0	21	1	7	0	0	62

TENASSERIM COAST.

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

NATIVE TROOPS.

CLASSES. DISEASES.	From 1834 to 1838.				Admissions and deaths from each class of disease.				Total admissions from each class.	Total deaths from each class.	Average of admissions per centage of strength.	Average of deaths per centage of strength.
	Aggregate strength. 6955				1st Half.		2d. Half.					
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fever.....	Febrisphomera	309	2	197	5							
	„ intermit. quot.	125	3	124	5							
	„ tertiana.....	28	0	72	0	533	5	434	11	965	16	13 874
	„ remittens.....	63	0	24	1							
	„ continua.....	8	0	15	0							
	Cholera.....	0	0	0	0	0	0	0	0	0	0	0
Diseases of the Abdominal viscera.....	Dysenteriacuta	69	1	44	4							
	„ chronica.....	9	4	15	2	69	5	59	7	128	12	1 540
	Diarrhœa.....	100	5	96	10							
	Colica.....	32	0	7	0							
	Obstipatio.....	8	0	15	0							
	Hœmorrhœis.....	12	1	13	0							
	Hœteritis.....	0	0	0	0	178	10	185	12	363	22	5 219
	Peritonitis.....	0	0	0	0							
	Gastritis.....	0	0	0	0							
	Dyspepsia.....	28	4	53	2							
Hepatitis acuta.....		0	0	2	0							
	„ chronica.....	1	0	1	1	1	0	3	1	4	1	0 007
Catarrhus.....	30	1	26	2								
Asthma.....	16	0	11	1								
Diseases of the Lungs and Heart	Phthisis pulmonalis.....	2	2	4	2							
	Hœmoptysis.....	1	1	1	0							
	Pleuritis.....	0	0	0	0	55	5	46	5	101	10	1 452
	Pneumonia.....	0	0	1	0							
	Carditis.....	0	0	0	0							
	Palpitatio.....	1	0	0	0							
Dyspœna.....	5	1	3	0								
Diseases of the Brain	Apoplexia.....	0	0	0	0							
	Epilepsia.....	1	0	0	0							
	Paralysis.....	2	0	1	0							
	Cephalalgia.....	13	2	7	0							
	Phrenitis.....	0	0	0	0							
	Ictus solis.....	0	0	0	0							
	Asenitia.....	1	1	2	0	22	3	12	0	34	2	0 588
	Mania.....	1	0	2	0							
	Hydrophobia.....	0	0	0	0							
	Delirium Tremens.....	3	0	0	0							
Ebrietas.....	0	0	0	0								
Diseases of the Eye	Morbi oculorum	12	0	4	0	12	0	4	0	16	0	0 230
	„ cutis.....											
Do. Skin	„ cutis.....	187	0	85	0	187	0	85	0	272	0	3 910
Eruptive fevers.....	Variola.....	2	0	9	1							
	Varicella.....	7	0	1	0							
	Rubeola.....	0	0	3	0	11	0	12	1	24	1	0 345
	Scarlatina.....	0	0	0	0							

Deaths.....	340
Total Admissions.....	9424
Deaths.....	504
Total Admissions.....	504

From 1834 to 1838 inclusive, with the proportion of Venereal complaints.

Diseases.	Venereal complaints.		Venereal complaints.	
	Ad.	Dd.	Ad.	Dd.
Cholera.....	0	0	0	0
Dysenteriacuta.....	0	0	0	0
Diarrhœa.....	0	0	0	0
Obstipatio.....	0	0	0	0
Hœmorrhœis.....	0	0	0	0
Hœteritis.....	0	0	0	0
Peritonitis.....	0	0	0	0
Gastritis.....	0	0	0	0
Dyspepsia.....	0	0	0	0
Hepatitis acuta.....	0	0	0	0
Hepatitis chronica.....	0	0	0	0
Catarrhus.....	0	0	0	0
Asthma.....	0	0	0	0
Phthisis pulmonalis.....	0	0	0	0
Hœmoptysis.....	0	0	0	0
Pleuritis.....	0	0	0	0
Pneumonia.....	0	0	0	0
Carditis.....	0	0	0	0
Palpitatio.....	0	0	0	0
Dyspœna.....	0	0	0	0
Apoplexia.....	0	0	0	0
Epilepsia.....	0	0	0	0
Paralysis.....	0	0	0	0
Cephalalgia.....	0	0	0	0
Phrenitis.....	0	0	0	0
Ictus solis.....	0	0	0	0
Asenitia.....	0	0	0	0
Mania.....	0	0	0	0
Hydrophobia.....	0	0	0	0
Delirium Tremens.....	0	0	0	0
Ebrietas.....	0	0	0	0
Morbi oculorum.....	0	0	0	0
„ cutis.....	0	0	0	0
Variola.....	0	0	0	0
Varicella.....	0	0	0	0
Rubeola.....	0	0	0	0
Scarlatina.....	0	0	0	0

WASSERIN COAST.

of the number of Admissions and Deaths from various kinds of Disease, for 3 years.

TABLE I.—

Year.	Admissions.		Deaths.	
	No.	Per cent.	No.	Per cent.
1884	1,043	100.0	12	1.2
1885	3,823	100.0	7	0.18
1886	3,488	100.0	13	0.37
Total	8,354	100.0	32	0.38

in 1884 to 1888 inclusive, with the proportion of each.

Year.	Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per cent.	Ad. & deaths.	Per cent.	Ad. & deaths.	Per cent.
1884	1	0.10	12	1.2	3	0.3
1885	13	0.34	474	12.4	161	4.2
1886	2	0.06	38	1.1	59	1.7
Total	16	0.38	532	12.7	253	6.2

No. 7.—Table exhibiting the admissions on the ten years, from

Disease.	Admissions.		Deaths.	
	No.	Per cent.	No.	Per cent.
Cholera.				
Ad. & deaths.	35	0.42	17	0.20
Prop.	1/25	1/25	1/25	1/25
Enteric.				
Total Admissions	13,046	100.0	340	2.6
Deaths	340	2.6	204	1.6
Total Admissions	9,921	100.0	7	0.07
Deaths	204	2.1	1	0.01

No. 8.—Table showing the per centage

Disease.	Admissions.		Deaths.	
	No.	Per cent.	No.	Per cent.
Cholera.				
Ad. & deaths.	35	0.42	17	0.20
Prop.	1/25	1/25	1/25	1/25
Enteric.				
Total Admissions	13,046	100.0	340	2.6
Deaths	340	2.6	204	1.6
Total Admissions	9,921	100.0	7	0.07
Deaths	204	2.1	1	0.01

of the number of Admissions and Deaths from various kinds of Disease, for 3 years.

TABLE I.—

Year.	Admissions.		Deaths.	
	No.	Per cent.	No.	Per cent.
1884	1,043	100.0	12	1.2
1885	3,823	100.0	7	0.18
1886	3,488	100.0	13	0.37
Total	8,354	100.0	32	0.38

MULLEN.

No. 15.—Table exhibiting the sickness and deaths of the OFFICERS of H. M.'s regiments in 1829 to 1840, exclusive of 1833 and 1834

CLASS OF DISEASE	Admissions	Deaths	Total deaths	
			From each class	From all classes
Aggravated				
Cholera				
Diarrhoea				
Dysentery				
Abdominal complaints				
Diseases of the Liver				
Diseases of the Lungs				
Diseases of the Brain				
Other diseases				
Total				

TENASSERIM PROVINCES.

No. 9.—Table showing the amount of Admissions and Deaths from the principal classes of disease during five years, from 1829 to 1833, from each to the total of sick treated, and of deaths to the total number of deaths.

European Troops.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	
Total Admissions	6,539		1414		34		594		1059		258		283		168
Deaths	194		29		16		84		11		9		12		4
Total Admissions	3,526		975		0		128		353		4		101		34
Deaths	100		16		0		12		22		1		10		3

No. 10.—Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of deaths to the strength, amongst European and Native troops.

European Troops.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.	
	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.	Ad. & deaths.	Per-cent- age.
STRENGTH, 4379.	1414	32.290	34	0.776	594	13.564	1059	24.183	258	6.120	283	6.462	168	3.836
Percentage of sick to strength	29	2.050	16	47.058	84	14.141	11	1.038	9	3.358	12	4.240	4	0.914
" of deaths to sick	29	0.662	16	0.365	84	1.918	11	0.251	9	0.205	12	0.284	4	0.914
Native Troops.														
STRENGTH, 6935.	965	13.874	0		128	1.840	363	5.219	4	0.057	101	1.462	34	0.490
Percentage of sick to strength	16	1.658	0		12	9.375	22	6.060	1	25.000	10	9.901	3	4.311
" of deaths to sick	16	0.230	0		12	0.172	22	0.316	1	0.014	10	0.143	3	0.431
" of deaths to strength	16	0.230	0		12	0.172	22	0.316	1	0.014	10	0.143	3	0.431

MOULMEIN.

No. 13.—Table exhibiting the sickness and mortality amongst the OFFICERS of H. M.'s regiments at Moulmein, from 1829 to 1840, exclusive of 1833 and 1834.

CLAUSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to strength.
Fever.	Febris intermit. quotidian.	11	0	92	4	28.507	4.547
	.. remittens.	19	1				
	.. com. cont.	60	2				
	Cholera.	0	0	0	0	0	0
Diseases of the abdominal viscera.	Diarrhoea.	23	0	91	1	28.000	1.028
	Dysenteria.	19	0				
	Obstipatio.	15	0				
	Dyspepsia.	24	0				
	Hepatitis.	20	2	26	2	8.000	7.000
Diseases of the lungs.	Catarrhus.	31	0	34	6	10.401	0.000
	Asthma.	2	0				
	Pneumonia.	1	0				
Diseases of the brain.	Paralysis.	1	0	2	1	0.415	50.000
	Mania.	1	0				
	Anasarca.	1	1	1	1	0.307	100.000
	Rheumatismus.	24	0	24	0	7.285	0.000
Venereal affections.	Syphilis prim.	2	0	31	0	0.328	0.000
	Gonorrhoea.	18	0				
	Hemorrhoida.	8	0				
	Stricture urethrae.	2	0				
	Morbi oculorum.	8	0	8	0	2.461	0.000
	.. cutis.	2	0	2	0	0.451	0.000
	Other diseases.	140	0	140	0	43.076	0.000
Total.		434	9	451	9	138.709	1.000

Nota.—Per centage of deaths to strength, 2.775.

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.

CLASSES. DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Aggregate strength 788.						
Fever.....	Febris intermit. quotidian.....	17	0	205	1	.26 .015
	" remittens.....	20	0			
	" com. cont.....	168	1			
	Cholera.....	1	0	1	0	0 .120
Diseases of the abdominal viscera.....	Diarrhoea.....	63	4	231	10	.25 .889
	Dysentery.....	45	0			
	Colica.....	14	0			
	Dyspepsia.....	18	0			
	Oedipatio.....	59	0			
	Splenitis.....	1	0			
	Gastritis.....	2	0			
Diseases of the Lungs.....	Catarrhus.....	24	2	29	2	.8 .617
	Asthma.....	4	0			
	Pneumonia.....	1	0			
Diseases of the Brain.....	Apoplexia.....	1	1	4	3	0 .577
	Epilepsia.....	1	0			
	Hysteria.....	1	1			
	Tetanus.....	1	1			
	Erysipelas.....	3	0	1	0	0 .125
	Rheumatismus.....	8	0	8	0	1 .015
Peculiar diseases.....	Amenorrhoea.....	1	0	65	1	.8 .218
	Menorrhagia.....	2	0			
	Abortio.....	2	1			
	Prolapsus uteri.....	1	0			
	Parturitio.....	58	0			
	Morbi oculorum.....	10	0	10	0	1 .269
	" cutis.....	2	0	2	0	0 .255
	Other diseases.....	54	1	54	1	11 .928
	Total.....	643	18	643	18	81 .508

NOTE.—Per centage of deaths to strength, 7-81.

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.

CLASSES. DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	
Fever.....	Febris intermit. quotidian.....	8	0	157	
	" remittens.....	89	1		
	" com. cont.....	60	0		
	Cholera.....	0	0	0	
Diseases of the abdominal viscera.....	Diarrhoea.....	156	0	236	
	Dysentery.....	10	0		
	Colica.....	1	0		
	Dyspepsia.....	1	0		
	Oedipatio.....	1	0		
	Splenitis.....	1	0		
	Gastritis.....	1	0		
Diseases of the Lungs.....	Catarrhus.....	2	0	29	
	Asthma.....	0	0		
	Pneumonia.....	0	0		
Diseases of the Brain.....	Apoplexia.....	1	1	4	
	Epilepsia.....	1	0		
	Hysteria.....	1	1		
	Tetanus.....	1	1		
	Erysipelas.....	3	0	1	0
	Rheumatismus.....	8	0	8	0
Peculiar diseases.....	Amenorrhoea.....	1	0	65	
	Menorrhagia.....	2	0		
	Abortio.....	2	1		
	Prolapsus uteri.....	1	0		
	Parturitio.....	58	0		
	Morbi oculorum.....	10	0	10	0
	" cutis.....	2	0	2	0
	Other diseases.....	54	1	54	1
	Total.....	244	3	244	3

NOTE.—Per centage of deaths to strength, 1-24.

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.

Aggregate strength 918.		Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
CLASSES.	DISEASES.						
Fever.	Febria intermit- tens.....	8	0	147	10	16.159	6.539
	.. remittens. .. com. con..	40	10				
		99	0				
	Cholera.....	0	0	0	0	0	0
Diseases of the abdom- inal vis- cera.....	Diarrhœa.....	128	9	178	20	19.603	11.253
	Dysenteria.....	34	8				
	Obstipatio.....	4	0				
	Marasmus.....	4	0				
	Colica.....	1	0				
	Esteritis.....	1	0				
	Hepatitis.....	1	0	1	0	0.110	0.000
Diseases of the lungs.	Cynanche.....	3	0	50	2	6.657	3.631
	Catarrhus.....	48	0				
	Pneumonia.....	4	2				
	Convulsio.....	18	17	18	17	1.982	24.444
	Varicella.....	1	0	1	0	0.110	0.000
	Dentitio.....	5	1	36	3	3.961	8.323
	Vermes.....	31	2				
	Morbi oculorum	19	0	19	0	2.082	0.000
	.. Cutis.....	12	0	12	0	1.321	0.000
	Other diseases.	51	2	51	2	5.616	3.921
	Total....	518	54	518	54	57.064	10.424

NOTE.—Per centage of deaths to strength, 5.947.

TEJANMERH PROVINCE

MOULMEIN.

Exhibiting the sickness and mortality amongst the CHILDREN of H. M.'s regiments at Moulmein, from 1829 to 1840, exclusive of 1833 and 1834.

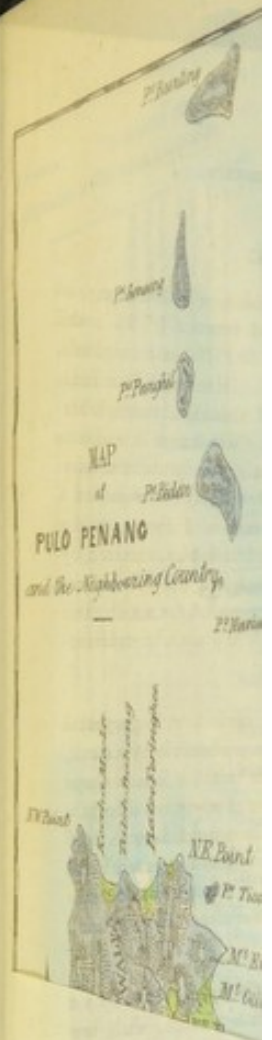
Aggregate strength	Admissions.	Deaths.	Total admissions	Total deaths	Per centage of sick to strength.	Per centage of deaths to sick.
918	518	54	518	54	57.064	10.424

PENANG.

General Description. Prince of Wales island, or Pulo-Penang, as it is called by the Malays, is situated between $5^{\circ} 15'$, and $5^{\circ} 29'$, of north latitude, and in $100^{\circ} 19'$ east 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.

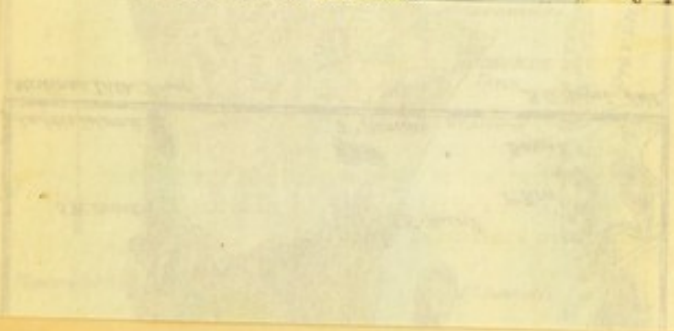
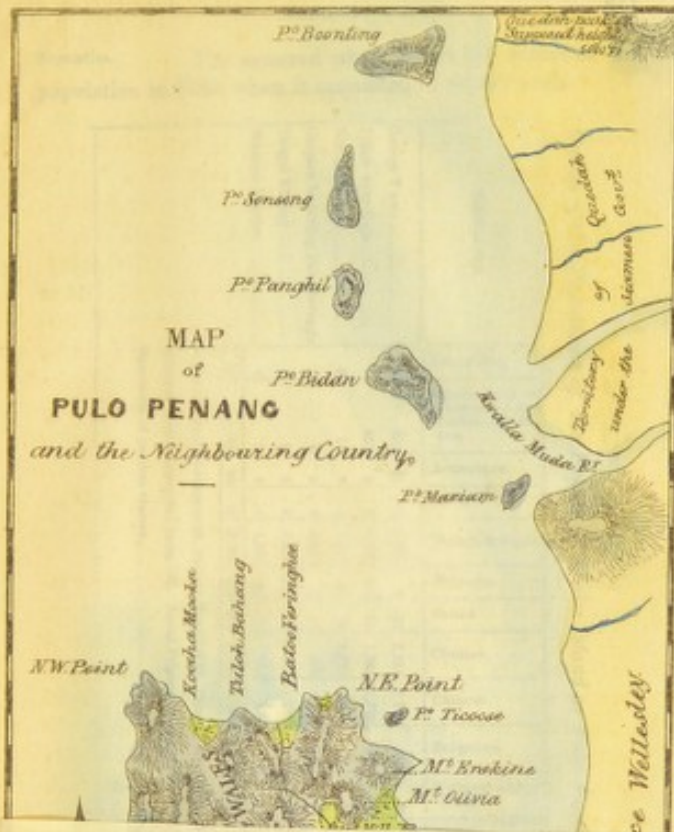


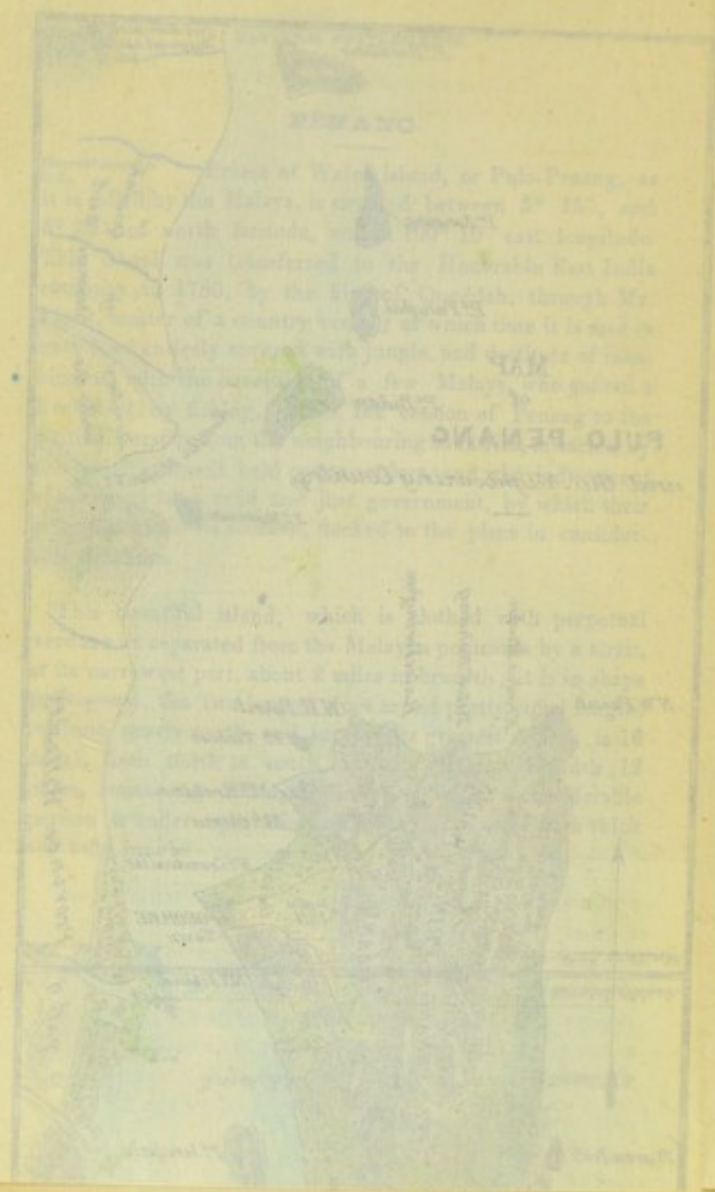
PENANG

... of Wales Island, or Pulo-Penang, is situated between $5^{\circ} 15'$, and $5^{\circ} 30'$ latitude, and in $100^{\circ} 15'$ east longitude. It was transferred to the Honourable East India Company, by the King of Quedah, through Mr. ... a country vessel; at which time it is said to have been covered with jungle, and destitute of inhabitants, except a few Malays, who great a ... After the cession of Penang to the British, the neighbouring countries, situated by the sea, were held out to settlers, and the instrument of peace and just government, by which their ... secured, looked to the place in consider-

... island, which is clothed with perpetual verdure, and separated from the Malayan peninsula by a strait, about 2 miles in breadth; it is in shape like a triangle, its longest sides are of pretty equal length, the north and south,—its greatest length is 14 miles, and its greatest breadth 12 miles, containing 160 square miles, of which a considerable part is cultivated, and the rest covered with thick

... divided into two nearly equal portions, by a range of hills, running from north to south, with low hills on the north side, the chain being most elevated on the western side of the hills, in the most thickly wooded part of the eastern part of it stands. For the mountains of which have at different times been





PELANG

The annexed table, shows the population in 1850, when it amounted to 400

Occupation	Population	Total
Chinese	1,200	
Malacca	1,000	
Arab	500	
English	100	
Portuguese	50	
Others	150	
Total	3,400	3,400

For the Chinese from January 27, 1850; for the English from the 1st of January 1850; for the others from the 1st of January 1850.

Population. The annexed table, shows the extent of the population in 1859, when it amounted to 40,242 souls.

Census of the Population of the Prince of Wales Island or Palo-Penang, in 1859.

DISTRICTS	Europeans.	Descendants of Europeans and Native christians.	Armenians.	Jews.	Malays & Bugis.	Achinese.	Battis.	Chullas.	Chinees.	Bengalies.	Bornese and Siamese.	Arabs.	Parsees.	Coffrees.	Total
George Town.....	71	692	29	16	2,501	0	20	2,231	3,219	200	98	26	9	68	11,117
Teluk Ayer Rajah.....	0	465	0	0	4,575	123	61	1,230	1,279	612	202	22	0	27	9,039
Selangor.....	0	11	0	0	2,826	12	12	1,175	1,597	121	46	49	6	5	5,990
Changre including Teluk Aranga	0	4	0	0	1,573	0	12	492	405	19	22	19	0	22	2,016
Tempel Kinang.....	0	0	0	0	4,812	105	101	117	973	2	12	0	0	9	6,311
Western District.....	0	0	0	0	1,869	11	161	21	618	0	19	0	0	0	2,634
	71	1,161	29	16	18,791	225	203	6,196	8,991	1,161	711	131	9	101	35,204

In the Chinese poor house 29, Pauper Hospital 25, Lunatic Asylum 22..... 86
 Convicts from Continental India 76, Local Prisoners, and Debtors 75..... 854
 Remnants of various classes..... 1,000
 Grand Total..... 40,242

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 lines. About $2\frac{1}{4}$ 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 hospital. 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 floor 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

length, and is wide but steep; and invalids, if sent to the hill for the benefit of change to a climate, can be carried up in a chair by coolies and a half; but on horseback much less time the summit of the hill, nearly 2500 feet above the sea, and the highest inhabited spot of the island, the larger being the residence of the Straits, on his occasional visits to this station available to be rented by invalids. Run have been built on some of the lesser hills, but of late have been abandoned, in consequence of the fever, which occurred in families formerly in others are still occasionally occupied, and generally healthy.

Soil. The hills appear to be of a fine sand, consisting almost entirely of a fine debris of which, combined with decomposed granite, composes the soil of the low lands, which, at some swampy patches of mangrove, are situated; the parts inundated during the rainy season, the rest chiefly for rearing rice, both climate and soil have been found to be

Water. Good water is procurable almost, a few feet from the surface, except in some parts, from excellent springs at the foot of the hills.

Botany. The botany of the island has not been fully investigated, though it would well repay the student in examination, particularly the medicinal plants, which are extremely abundant. A list of trees met with, may see much price account of the various uses to which they are put. Fruit can be obtained in great abundance year, among the best kinds of which may be mentioned, mangoes, rambrotes, oranges, jack fruit, breadfruit, and many others. — Pine

to the number of 50 or 60 are quartered in
accommodated in good barracks, built upon the
it also, is an arsenal, with a powder magazine.

west along the shore extends George town,
a further south, is a small collection of native
the name of James' town has been given. To
the fort, extending for about a mile and a
half, there is a succession of good houses, in-
cluding a gentry resident on the island. At
from the fort, is the hospital for the Euro-
peans, calculated to contain 14 beds, the sick occupy
the lower part of the building being used as
a ward on the ground floor, is also divided
into wards.

forming, are the barracks of the gendarmes,
chambers, with tiled roofs, and furnished
with iron beds.

about 2½ miles to the N. W., are the sepoy
accommodating a complete native regiment,
open space, which in fair weather, is dry
comes somewhat swampy during the rains.
arranged in parallel rows, with a sufficient
vent; they are built of the atap leaf and
erected at the expense of government.

at the rear of the lines is the regimental ho-
spital building; the upper story, which
is a native room, with two smaller ones on each
side the sick; the length of the building is
about 80 feet, and the wards can contain about 50
patients. The dispensary, and bathing
house is good, being a slightly raised and
well cleared and open.

extending about two miles to the north-west,
by which the great hill, or "Governor's
Hill," is ascended, it is about three miles in

length, and is wide but steep; and invalids, who frequently re-
sort 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 govern-
ment, 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 land. The hills appear to be of primitive forma-
tion, 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 cul-
tivation; 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.

Water. 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.

**Botanical pro-
ductions.** The botany of the island has not yet been
fully investigated, though it would well repay the labour and
risk attending its examination, particularly in ferns and para-
sitical plants, which are extremely abundant; of the great varie-
ty 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,

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 elk, 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 effects upon health.

The peculiar position of Penang, its insular 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-

PENANG.

ductive of fevers, while the cultivated and improved are exempt from them, but no cases of fever, of the character to that described by Dr. Ward, for some years past.

The quantity of rain varies much in different seasons, usually ranging from 60, to 90 inches, January being the driest month. From the great relaxing effects of the climate, some peculiar cases of the kind are observed; the acute fevers, in these latitudes, not being here seen, and the affections, are characterised by a want of action in the constitution; and even in acute cases, is in general sufficient to arrest their course.

The atmosphere is felt to be particularly oppressive before and after rain, when the dumpy heat is insupportable; and this condition of the air, with strong squalls, by which the perspiration causing many of the diseases met with.

The climate is therefore a trying one to constitution, from there being no cold season, the system often the oppressive heat; and in a severe attack of severe disease, either a change of residence on the hill, becomes necessary for

As the air is always mild, even in the winter, the climate is in many cases, well suited for persons under a diseased or irritable state of the lungs, though instances are seen, in which coughs and pulmonary expectoration, arising from a relaxed mucous membrane. Excessive discharges of European females, from the genito-urinary system, are likewise met with, arising from the same cause.

The evenings and nights are cool through and when the day is clear, a copious deposit of dew, rendering the air chilly. Page 20 p. 2

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 oppressive 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

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.

The most prevalent diseases, among the native troops, men frequently sicken, become emaciated and die, which is a probable symptom of local disease. In these cases, when they return to their native country, it is the most of the complaint.

The cases of fever, are usually malarial or quotidian, and fevers of a severe nature have been seen.

Worms in the intestines, are very common.

Cases of hepatitis are rarely cured.

Albucation is the most remarkable disease of the island; and natives more from it, than Europeans; in many cases, however, it has been derived from any mode of treatment, the climate becomes requisite.

Varicella has occasionally prevailed, and from the character of the climate has been experienced in keeping up vacuoles, some even has not been satisfactorily cured.

Acute dysentery is very common, but when they do occur, they are exceedingly cured as the least neglect of diet or regimen is found a most valuable medicine in the leading, counter irritation by blisters, and mineral and vegetable acids, during convalescence.

Dyspepsia and hypochondriacal debilitating effects of the disease, and usually require a change of diet.

The number of natives injured from hydrocele, is very remarkable; whether they employ any remedies for its

Prevaling diseases.

The most prevalent diseases, are fevers, rheumatism, 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.

Fevers.

The cases of fever, are usually either ephemeral or quotidian, and fevers of a severe form, have not of late been seen.

Worms.

Worms in the intestines, chiefly lumbrici, are very common.

Hepatitis.

Cases of hepatitis are rarely met with, and easily subdued.

Rheumatism.

Rheumatism is the most important, and intractable 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.

Variola has occasionally prevailed in a severe 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.

Dysentery.

Acute dysentery is very rare, neither is the chronic form of the disease, nor diarrhoea 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.

Dyspepsia and hypochondriasis, are, from the debilitating effects of the climate, of frequent occurrence, and usually require a change of residence.

Hydrocele.

The number of natives in the island suffering from hydrocele, is very remarkable; and it is not known whether they employ any remedies for its cure.

No. 16.—Table exhibiting the sickness and mortality amongst the native troops at Penang from 1831 to 1841, exclusive of 1833.

CLASSES.	DISEASES.	Aggregate strength. 6222.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fever.	Febris ephemera	640	2	0	879	17	14.127	1.934
	" intermit quot.	161	0					
	" tertiana	8	0					
	" remittens	45	7					
	" com. cont.	7	0					
	Cholera	2	0	2	0	0.032	0.003	
Diseases of the abdomi- nal vis- cera	Diarrhoea	160	6	0	455	14	7.312	3.976
	Dysenteria	19	0					
	Colicæ	14	1					
	Obstipatio	29	0					
	Hæmorrhoides	5	0					
	Dyspepsia	198	4					
Diseases of the lungs.	Catarrhus	229	0	262	4	4.210	1.594	
	Asthma	24	0					
	Phthisis pulmo.	4	1					
	Pneumonia	5	1					
Diseases of the brain.	Apoplexia	1	0	23	4	0.369	17.391	
	Epilepsia	2	1					
	Furor vis.	9	0					
	Ameclia	6	0					
	Mania	1	0					
	Tetanus	2	1					
	Ebrietas	2	0					
Eruptive fe- vers	Varicella	9	0	11	0	0.176	0.000	
	Erysipelas	2	0					
Dropsies	Anasarca	34	8	38	12	0.610	31.573	
	Ascites	4	4					
	Rheumatismus	439	7	449	7	6.904	1.031	
Venereal af- fections	Syphilis prim.	83	0	158	0	2.700	0.000	
	" consec.	8	0					
	Gonorrhœa	20	0					
	Hernia humor.	54	0					
	Stricture ureth.	3	0					
Specific dis- eases	Lepra	5	0	25	4	0.562	11.428	
	Atraphia	23	4					
	Burning of the feet	3	0					
	Scrophula	5	0					
Diseases of the eye	Morbi oculorum	46	0	46	0	0.739	0.000	
	" oculis	463	0	46	0	7.441	0.000	
Do. skin	Other diseases	1,514	3	1,541	3	24.815	0.194	
Total		4,355	65	4,355	65	69.993	1.422	

* Of this number 409 were Phlogosis and 2 deaths; ulcers 727 and 1 death.
NOTE.—Per centage of deaths to strength 1.944.

EASTERN SETTLEMENTS.

Lepus is prevalent among the Chinese, and a patients suffering from the disease, are con- sidering about the island.—The surgeon in opinion, that it is also contagious.

There are always prevalent, more especially in the first year of their residence at the not now seen in so severe a form, as when occupied, but are often troublesome and are very liable to recur from slight cases, and want of care in the gently commences in itch, about the ankles, feet with rounded, and hardened edges, either entirely wanting, or the bottom roughly. Ulcers occurring spontaneously, are in some derangement of the subcutaneous when the person's attention is first attracted pain, itching and slight swelling of the skin, and in the centre of the inflamed part a red, which being detached, a small slough is formed; and the pain which is often severe, a open sore is formed.

and most beneficial, has been poulticing with applications or hot dressings, till the then slightly stimulant lotions, such as animal sulphur are used; and occasionally removed from the black wash; should the irritable size, touching its edges with strong and useful, and in cases where the ulcers with round hardened edges, scabrous, are cured by strapping.

It must also be carefully attended to, and in cases, stimulants, a liberal allowance of beer and nutritious diet are the means to

Meteorological table for Penang, for the year 1836.

Month	Median Temperature.		Thermometer.		Number of days on which rain fell.	Quantity of rain.	Number of days was thunder.	Number of days on which there was lightning.	Most prevalent winds.	Number of fair days.	Number of cloudy days.	REMARKS.
	° F.	° C.	Maximum at.	Minimum at.								
January	74½	83½	76 86	82 74	7	4.8	2	5	N. & W.	24	7	Generally cool and pleasant.
February	75	85½	73 87	81 74	1	2.8	1	1	N. & W.	26	1	Warm with a want of rain.
March	74½	83	75 87	82 74	11	9.7	14	22	N. E. & W.	20	11	First half of the month fair, the latter equally from the N. E.
April	75½	87	77 88½	86 75	12	6.7	12	12	N. & E.	18	12	Weather very changeable and uncertain.
May	74½	87½	77 89	86 75	6	5.2	4	7	N. & W.	20	6	A. drier month than it usually is.
June	75½	83½	76 89	82 75	7	6.6	5	11	N. & W.	24	6	
July	74½	84	76 87	84 75½	11	12.2	1	2	N. & W.	19	12	
August	74½	84	76 87	82 74	10	9.6	2	2	N. & W.	20	11	Very changeable weather.
Sept.	75	83½	76 87	82 74	8	8.1	0	0	S. & W.	24	6	
October	74½	83½	77 86	81 73	15	11.4	4	6	N. & W.	10	15	Cool and agreeable.
November	74½	83½	75 86	80 73	18	14.5	3	4	N. & W.	12	18	
December	75½	85	76 87	83 74	5	3.4	0	0	N. & W.	26	5	A. warm and dry month.
Average of the year.	74½	84½	77 89	86 73	122 94.4	48	72	256 110				

N. B. These observations were made on the northern beach, at a few feet above the level of the sea.

Fall of rain for four years, on the northern road, Penang.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1836	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1837	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1838	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1839	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Observed, and only observed.
 2. Where trials & record of rain.
 3. From half of the month till, the latter regularly from the 20th.
 4. The latter every fortnight and uncertain.
 5. A third month only is usually so.
 6. Very abundant weather.
 7. Good and agreeable.
 8. A season and dry months.

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1833	0.6	1.8	1.8	1.5	1.8	1.2	3.9	6.3	6.9	10.4	5.1	5.1	62.2
1834	0.6	2.4	1.9	1.9	7.5	4.5	0.7	10.5	12.9	13.4	9.1	2.7	82.9
1835	0.6	2.4	1.9	1.9	7.5	4.5	0.7	10.5	12.9	13.4	9.1	2.7	82.9
1836	1.7	1.0	3.3	10.0	2.1	8.6	12.4	9.2	8.1	11.1	11.9	16.5	94.4
1837	1.7	1.0	3.3	10.0	2.1	8.6	12.4	9.2	8.1	11.1	11.9	16.5	94.4
Average	3.3	2.5	5.5	7.1	4.4	7.4	6.8	10.2	9.5	12.3	8.8	4.2	87.0

PENANG.

Fall of rain for four years, on the northern road, Penang.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1833	0.6	1.8	1.8	1.5	1.8	1.2	3.9	6.3	6.9	10.4	5.1	5.1	62.2
1834	0.6	2.4	1.9	1.9	7.5	4.5	0.7	10.5	12.9	13.4	9.1	2.7	82.9
1835	0.6	2.4	1.9	1.9	7.5	4.5	0.7	10.5	12.9	13.4	9.1	2.7	82.9
1836	1.7	1.0	3.3	10.0	2.1	8.6	12.4	9.2	8.1	11.1	11.9	16.5	94.4
1837	1.7	1.0	3.3	10.0	2.1	8.6	12.4	9.2	8.1	11.1	11.9	16.5	94.4
Average	3.3	2.5	5.5	7.1	4.4	7.4	6.8	10.2	9.5	12.3	8.8	4.2	87.0

Return of sick in the native pauper hospital at Penang, for 1857 and 1858.

DISEASE	1857.			1858.		
	1st Qr.	2d Qr.	3d Qr.	1st Qr.	2d Qr.	3d Qr.
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Remained.	0	0	0	0	0	0
Admitted.	0	0	0	0	0	0
Discharged.	0	0	0	0	0	0
Died.	0	0	0	0	0	0
Total.	123	121	111	123	121	111
Average number of deaths to sick per cent.	20	11	8	20	11	8

The great mortality observed in the present table, may be accounted for by the size of the native pauper hospital allowing only the admission of patients labouring under disease in its most severe form.

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 $2\frac{1}{2}$ 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 $79\frac{1}{2}^{\circ}$.

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.

Year.	Malays.	Chinese.	Chullabs.	Siamese.	Pengaloes.	Poeloaing.	Total.
1838.....	41,350	2218	410	451	554	800	48,873
1839—Estimated present population.....							50,000
Estimated area of the Province—square miles.....							150
Estimated number of square Acres in Cultivation with rice and other intertropical products, such as sugar, spices, indigo, &c. &c.							24,000

SINGAPORE.

General description. Singapore, an island in the south-east extremity of the Malay Peninsula, which it is separated by a narrow strait north latitude $1^{\circ} 15'$, and east longitude settlement was formed here in the year 1819 by the permission of the late Sir Stamford Raffles.

The island is about sixty miles in circumference, containing an area of 1,433,000 acres of land, including a succession of hills and dales, covered with forest; but the only hill of any considerable height is the hill near the north-west corner, known as the tin hill, near the north-west corner, barren and about 1200 feet in height.

The interior of the island is but little known, but there is a small independent Chinese settlement, about five miles distant from the town, from whence some trade is carried to the interior.

The soil near the town is generally good, but in the interior, it is well adapted for the most valuable articles of agricultural produce, chiefly sago, or a redfish clay, intermingled with grey sand. The rocks are sandstone and granite, appearing exposed on some parts of the coast, much broken and dislocated, by the action of the sea.

Singapore being a general settlement, the natives are employed in making roads into the interior, which will lead to much improvement in the commerce near the town, and in the gardens of the most industrious race, who grow abundance of various tropical fruit; and have also many extensive plantations of tin, from which the jungle is cleared upon the hills, from which the jungle

SINGAPORE.

General description.

Singapore, an island in the straits of Malacca, at the south-east extremity of the Malayan peninsula, from which it is separated by a narrow strait, is situated in north latitude $1^{\circ} 15'$, 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 geological features.

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 *Nutmeg Plantations*. fruit; and have also many nutmeg plantations, situated upon the hills, from which the jungle has been cleared

RAFFLES SETTLEMENTS

single, and very thinly inhabited, but has an upwards of 50,000 souls; and there are about 500 acres of land under cultivation, with rice, opium, indigo &c.

Although the strait separating the province from the rest of the island, the climate differs in respects, from that of the island; the land and sea breeze more regular; it is not so much subject to calms, and damp heated atmosphere; and in the morning the air feels fresher, and more invigorating; the temperature is said to be 2° lower, and the maximum heat being 85° , the minimum being 65° .

The rain falls on the coast, than on the inland; the houses do not differ materially from those of the interior; the river is more frequent and seven, and the native troops, which have occasionally been employed, have suffered from intermittent fevers, as extent.

Population of Province Wellesley for the year 1838.

	At all ages.	Under 15 years.	Between 15 and 25 years.	Between 25 and 40 years.	Between 40 and 60 years.	Over 60 years.
Total population	10,000	4,000	3,000	2,000	1,000	700
At the Province—opium sales	100	50	50	50	50	50
At the Province—free trade	9,900	3,950	2,950	1,950	950	650

away; towards the interior, some spots have likewise been cleared by them, on which they cultivate gambier.

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.

Monsoons. 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.

A meteorological table for the year 18

Months	Maximum temperature for the whole month.	Minimum.	Mean.	Number of days on which rain fell.
January.....	78 41 84	74	75	25
February.....	79 46 86	76	76	16
March.....	80 45 88	75	77	17
April.....	81 43 88	75	75	13
May.....	81 42 86	74	75	17
June.....	81 41 86	75	75	13
July.....	80 41 88	75	75	13
August.....	80 40 86	75	75	23
September.....	79 42 85	74	75	15
October.....	78 40 86	75	75	12
November.....	76 40 85	75	75	21
December.....	78 41 84	75	75	23

Mean temperature for the year $79\frac{1}{2}^{\circ}$.

The average maximum and minimum from July till the end of December 18

acrossed table.

Months	Mean temperature
July.....	75
August.....	75
September.....	75
October.....	75
November.....	75
December.....	75

Prevaling diseases

The prevailing diseases these complaints are most frequent and are generally traced to exposure of the negro's liveries becomes a less generous diet, than they were previous and had not being procurable.

A meteorological table for the year 1830, is here given.

Months.	Medium temperature for the whole month.			Number of days on which rain fell.	Prevailing winds.
	Maximum.	Minimum.	Mean.		
January.....	78°	31°	84°	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	13 S. W.
May.....	81	29	86	77	13 W. & S. W.
June.....	81	58	87	75	17 W. & S. W.
July.....	80	51	88	75	13 S. & S. E.
August.....	80	20	86	75	23 S. E. & S.
September.....	79	22	85	74	15 S. & S. W.
October.....	78	30	86	75	12 W. & N. E.
November.....	76	43	85	75	21 S. & S. W.
December.....	78	34	84	75	23 N. & N. E.

Mean temperature for the year 79½°.

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.	
	Day.	Night.	Day.	Night.
July.....	85°	80°	80°	77°
August.....	86	80	78	77
September.....	86	76	78	77
October.....	82	78	78	77
November.....	83	77	78	77
December.....	82	77	78	77

Prevailing diseases of the troops.

The prevailing diseases are rheumatism, 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 Singapore.

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 eastern 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

SINGAPORE

classes of native children. There are also in the town, a church, court house, and a police

Vegetable productions. The chief productions of the island are rice, sugar, and coconuts. The market is well supplied with fruit, imported chiefly from Malacca, since the discovery of the pepper tree, the latter a very common tree amongst the Malays; in appearance it closely resembles the pepper tree, but smells strongly of assafœtida. It is of an extraordinary size, resembling in form a large tree, some of which are found on the salt swamps, some of which are said to contain half a barrel of water, and from these are commonly called "Neptune's cups."

Market. Singapore is well supplied with rock oysters, poultry and ducks; and beef is had in the market. Sheep are brought from the interior, and consequently very expensive, 10 being the average price of a sheep.

Dutch buffaloes are procured from Malacca and Java.

Wild animals. The chief wild animals are tigers which are numerous and ferocious, being frequently carried off by them; and numerous, and of large size.

White ant. The white ant is of large size and destructive.

Harbour. The harbour of Singapore is well protected, and well sheltered, being an excellent anchorage for the ships of the East India Company and the eastern Islands, and the rest of the world. The direct trade is also carried on with many parts of the world.

The Malays and Chinese get their supplies of British manufactured goods, which are for the produce of the different islands, from England, India and other parts of the world.

classes of native children. There are also two jails close to the town, a church, court house, and a police office.

Vegetable productions. The chief productions of the island are pepper, areca and coconuts. 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 assafetida. 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."

Markets. Singapore is well supplied with fish, turtle, 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.

Wild Animals. The chief wild animals are hogs, deer, and tigers which are numerous and ferocious, the inhabitants being frequently carried off by them; and aligators are also numerous, and of large size.

White Ants. The white ant is of large size, and particularly destructive.

Harbour. The harbour of Singapore is safe, easily approached, 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.

Trade. The Malays and Chinese purchase large quantities 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.

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.

Local Government. The local government is administered by a Resident councillor, 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

SEVAPAKT.
in every other direction the ground is "cleared"
considerable distance.

Artillery lines. The artillery are stationed at
point or extreme of the inlet, near the town
situating battery.

Naval lines. The naval force usually con-
sist.

**Remarks on the
4th Regiment B.
S. I. in 1841.** The 4th regiment had
having suffered considerable
dampness, and other diseases arising
out state of the constitution, the following
extracted from the medical report of the com-
manding officer of the nature of these com-
plaints.

**Remarks on
the 4th Regiment B.
S. I. in 1841.** "Fever of the ephemeral
type, rheumatic affections, and phagedenic
diseases most prevalent; under the head of
fever, are included several cases of burning
fever, accompanied with a dry and glazed condition
of the tongue, and some of the cases of fever have presented
a bilious, some passed rather tedious, but yielded
quicker, and other tenets."

**Remarks on
the 4th Regiment B.
S. I. in 1841.** "Many cases of rheumatism in
very troublesome description, especially with
the symptoms above noticed; viz. burning
soles of the feet, and dry and glazed skin, the
either with or without true rheumatic pains
cases can be assigned, to account for it
presenting himself for admission into hospital
with an expression of countenance, which is of
yellowish tinge of the conjunctive, the bow-
els and the appetite bad; the skin is invariably
glazed, and eventually desquamates; and no
any permanent benefit from medical treat-
ment have therefore, always been sent to Madras

in every other direction the ground is clear and open for a considerable distance.

Artillery lines. The artillery are stationed close to the western point or entrance of the inlet, near the town, where there is a saluting battery.

Naval force. The naval force usually consists of a sloop of war.

Sickness on the 4th Regiment M. N. I. in 1843. The 4th regiment madras native infantry 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 diseases. " 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."

Rheumatism. " Many cases of rheumatism have occurred, of a 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."

Ulcers.

"Phagedenic ulcers which have committed great ravages, commenced about the beginning 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 œdematous. 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 ammoniac 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

into an indolent condition, and the usual effect, in such cases the application of creosote with much advantage, producing healthy sloughing process, or preventing its extension, was useful as an application to indolent ulcers, being applied on the surface of a poultice, or in ointment, with bergamot pitch, and used as a dressing.

"Several cases advanced to a fatal termination either arising from the effects of exhaustion, or being reduced to a state of excessive emaciation, or carried off by colliquative diarrhoea, after the operation. In two cases amputation was performed. In one patient did well, and has since proceeded on his duty. The second died on the fourth day after the operation. The success of this, made such an unfavourable impression on the minds of the men, that they would not resort upon, afterwards."

"A few slight cases of furunculæ and dyshæmæ, but they presented nothing worthy of notice. The men in the regiment are free from itch, which is attributed to want of cleanliness, as well as to the use of too much fish."

Dysentery.

"Previous to the departure from Madras, in April 1843, a few cases of dysentery occurred, when stationed at Veppery, and continued in the various detachments on board ship, as they proceeded to Singapore, up to the month of August. In this period makes its way into the human system, and is no doubt of its having existed in some of the men in several of these cases, for a period of at least a few days, previous to making its appearance externally, being various amongst the inhabitants of Singapore."

Cause of dysentery.

"That the great increase of dysentery amongst the natives of India, does not arise from the use of fish, is a fact which is well known."

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 diarrhœa, 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 diarrhœa 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."

Dracunculus.

"Previous to the departure of the regiment 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 sickness in the regiment.

"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 sepoy 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 trifling 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 sepoy 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 counter-balance 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

when home, may do not even spend the time they receive."

"Out of 180 cases of ulcers, since the arrival at Singapore, 153 occurred in young men to five years service, their average age years; and with respect to other diseases, they have as might be expected, suffered more speed."

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 sepoy, 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."

EASTERN SETTLEMENTS.

Climate, the essential characteristics of which are, and steadiness of temperature, is evident in diseases prevailing at the settlement."

"The sepoy consists of vegetables and fish, and of this meagre and deficient diet, the emaciated appearance of the greater part of the sepoy is many with pains in the limbs, and other consequences, betraying a want of one of a serious condition of the blood."

"It has frequently been found, that trifling injuries, such as colds, and exposure to cold or wet, fever, although many continue to perform their duty without complaint, any unusual exertion or certainly cause them to become inmates of the hospital."

"Although fish and good vegetables are procured, and food is not by the sepoy, and such diet, if the climate be defective, is used for a course of hours in a relaxing one like this."

"The Chinese are a strong and healthy race, and eat food of various kinds, such as the natives do."

"As has been stated, it will therefore be obvious, that animal food is requisite for the men, in order to put them in an effective condition, and as the supply of this is unattainable, it should be supplied within their reach; and as the expense would not be great, the state, would in many ways counter-

"The expense of the men from their families, extra pay, and social influence on their health. They have a strong influence for their support, and become more efficient, and with a view of saving for their

No. 17.—Table exhibiting the sickness and mortality amongst the native troops at Singapore, from 1835 to 1841, inclusive.

Aggregate strength, 2284.		Admissions.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
CLASSES.	DISEASES.						
Fever.	{ Febrisephmera	278	1	1900	16	51	694
	{ .. intermit quot.	247	12				
	{ .. tertiana.....	111	1				
	{ .. remittens.....	2	2				
	{ .. com: cont.....	170	2				
	Cholera.....	0	0	0	0	0	0
Diseases of the abdominal viscera.	{ Diarrhoea.....	196	9	322	9	12	400
	{ Dysenteria.....	18	0				
	{ Colica.....	70	0				
	{ Obstipatio.....	9	0				
	{ Hæmorrhoids.....	2	0				
	{ Dyspepsia.....	18	0				
	{ Hepatitis.....	5	1	5	1	0	198
Diseases of the lungs.	{ Catarrhus.....	17	2	33	5	1	306
	{ Asthma.....	12	1				
	{ Phthisis pulmonalis.....	2	1				
	{ Pneumonia.....	2	1				
Diseases of the brain.	{ Apoplexia.....	1	1	29	3	1	148
	{ Epilepsia.....	1	0				
	{ Paralysis.....	17	2				
	{ Amentia.....	6	0				
	{ Ebrietas.....	3	0				
	{ Delirium Tremens.....	1	0				
Eruptive fevers.	{ Variola.....	1	0	2	4	0	079
	{ Varicella.....	1	0				
Dropsies.	{ Anasarca.....	16	4	18	6	0	713
	{ Ascites.....	2	2				
	Rheumatismus.	343	19	343	10	13	589
Venereal affections.	{ Syphilis prim.....	21	0	31	0	1	267
	{ Gonorrhœa.....	6	0				
	{ Hernia humoralis.....	4	0				
Specific diseases.	{ Lepra.....	2	0	42	3	1	464
	{ Dracunculosis.....	1	0				
	{ Atrophia.....	27	3				
	{ Scrophala.....	4	0				
Diseases of the eye.	Morbi oculorum	34	0	34	0	1	347
Do. skin.	.. cutis.....	270	1	270	1	10	697
	Other diseases..	593	3	593*	3	23	497
	Total.....	3017	57	3017	57	119	539

* Of this number 138 were Phlogosis, 305 ulcus.
 Note.—Per centage of deaths to strength, 2288.

MALACCA.

MALACCA.

A comprehensive topographical account most ancient and best known settlement Malacca Medical Establishment, in the not considered requisite to enter into a view of a place, the history of which is given in the report alluded to; and which and extensively circulated, throughout India government of Penang.

Malacca is situated in N. and E. Longitude 101° 12', being distant from Penang, and 150 from Singapore; the originally in the hands of the Portuguese, wrested by the Dutch, and in the year 1795 possession of the English, by whom it has retained. The country, in the interior, is a forest, through which there are not even foot and the boundaries of the district have not little in fact being known of the interior, or than the coast, and the borders of the Malacca.

The town of Malacca runs in a the sea coast, the houses of the better class are situated either quite close to, or upon the northern part is occupied by Malays, Kl The town itself is built on a flat sandy soil second end on the sea side, yield little beyond.

In the interior, a few small hills are to be which is lacustrine; when fresh dug, it is soft to the air becomes quite hard, and the buildings to be seen, testify its great durability. The town is bounded on the south by the E. and N. by the Malacca river; the old fort

EASTERN SETTLEMENTS
 Exhibiting the sickness and mortality amongst
 troops of Singapore, from 1850 to 1851,
 inclusive.

Month	Admission	Deaths	Recovered	Discharged	Remains
Jan	10	1	5	4	0
Feb	15	2	8	5	0
Mar	20	3	10	7	0
Apr	25	4	12	9	0
May	30	5	15	10	0
Jun	35	6	18	11	0
Jul	40	7	20	13	0
Aug	45	8	22	14	0
Sep	50	9	24	15	0
Oct	55	10	26	16	0
Nov	60	11	28	17	0
Dec	65	12	30	18	0
Total	300	30	120	80	0

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.

Situation. 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.

Town. 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 coconuts.

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

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 condition.

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.

Climate. 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.

MALACCA.

Land winds blow at night throughout the thermometer generally ranges from 70°

Abstract of the weather at Malacca, for the year 1850.

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Barometer	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Thermometer	70	70	70	70	70	70	70	70	70	70	70	70
Winds	N. E.	N. E.	N. E.	S. W.	S. W.	S. W.	S. W.	S. W.	S. W.	S. W.	N. E.	N. E.
Rain	0	0	0	0	0	0	0	0	0	0	0	0

Of the endemic diseases no fever may be reckoned the principal; among of chills, scrophulous ulcers are very com of late years have been healthy, and have any periodic sickness, slight fevers be disease.

The most unhealthy time of the year is during the monsoon, when the atmosphere is very moist.

Land winds blow at night throughout the entire year, and the thermometer generally ranges from 76°, to 84°.

Abstract of the weather at Malacca, for the year 1838.

Months.	Medium tem- perature of the month.			Maximum temperature of the whole month.	Minimum.	Monthly range.	Number of days on which rain fell.	Total quantity of rain during the month. in. p. in. p.	Greatest daily quantity. in. p. in. p.	Prevailing winds.
	At 6 A. M.	At 3 P. M.	At 9 P. M.							
January,	75°	82°	78°	89°	73°	16°	27	10		N. E. & S. W.
February,	77	85	79	89	74	15	12	7	1	N. E. & S. W.
March,	77	84	79	86	74	12	10	9	2	N. E. & S.
April,	79	84	82	82	70	12	11	4	1	W. S.
May,	79	85	82	82	76	16	13	6	1	S. E.
June,	76	83	81	81	74	7	7	4	1	S. E. & W.
July,	77	84	81	80	74	7	12	8	1	W. & S. W.
August,	78	82	80	80	74	6	17	8	1	S. E.
September,	76	82	78	79	75	9	15	12	2	S. S. W.
October,	78	80	81	81	75	11	14	9	2	N. W.
November,	77	82	79	79	74	11	21	7	1	N. W.
December,	75	84	78	79	85	10	20	9	1	N.

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 for the troops. 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 sepoy 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

MALACCA.
make the head quarters station in the Straits
cases of native military.

For several years past the troops have
the chief complaints being intermittent
character, and rheumatic affections. Cases
never described by Dr. Ward, which pre-
sently in the 8th regiment Madras native
and 28, are not now seen, though as at
this coast, when are frequent and trouble
of the skin, being apt to run into ulceration
previously mentioned; viz. a cathartic stat-
uted by poor living, the peculiar moist nat-
appearing also to be conducive to this disease

The springs. Several hot springs are found
situated about 18 miles, one of which is at
Linnam, and another in the Nuning dist-
at both these places, are situated in swamps
is of a bluish or greenish tinge, and from
wells air bubbles rise, emitting a strong sul-
hydrogen gas; they have not yet been ana-
lyzing a thermometer into one of them,
in the space of one minute, to 130°.

These springs are very much resorted to
native, for the cure of sprains, rheumatism
local diseases, and baths have been built by
Ayer Pannas near Selang, also a bungalow
and a small barrack for the use of the sepoy
be so direct but many chronic cases of disease
beneficial by a change from the coast, to
walk, and the use of the hot baths.

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.

Hot springs. Several hot springs are found in the interior, 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 sepoy; 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.

No. 18.—Table exhibiting the sickness and mortality amongst the native troops stationed at Malacca, from 1830 to 1841, inclusive.

Aggregate strength 4612.	Admitted.	Disch.	Total admissions from each class	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
CLASSES. DISEASES.						
Fevers.....	Febris ephemera 217 " Intermit quot. 854 " tertiana..... 28 " remittens..... 102 " com. cont..... 95	28 20 0 7	1316	35	28.581	2.659
	Cholera.....	0	0	0	0	0
Diseases of the abdominal viscera.....	Diarrhoea..... 100 Dysentery..... 29 Colica..... 15 Obstipatio..... 24 Hæmorrhoids..... 2 Dyspepsia..... 18 Hepatitis..... 0	11 4 0 0 0 3 0	198	18	4.293	9.000
Diseases of the Lungs.....	Catarrhus..... 41 Hæmoptysis..... 1 Asthma..... 2 Phthisis pulmonalis..... 2 Pneumonia..... 6 Dyspnoea..... 1	3 1 0 0 1 0	53	7	1.149	15.694
Diseases of the Brain.....	Apoplexia..... 2 Epilepsia..... 2 Paralysis..... 13 Amenia..... 4 Mania..... 15 Tetanus..... 1 Delirium trem. 3	1 0 2 0 0 1 0	40	4	0.867	10.000
Eruptive fevers.....	Varicella..... 1 Varicella..... 5 Erysipelas..... 4	0 0 0	10	0	0.216	0.000
Dropsies.....	Ascites..... 65 Ascites..... 9	21 4	74	20	1.604	25.135
	Rheumatismus..... 250	4	250	4	6.287	1.370
Veneral affections.....	Syphillis prim..... 26 " consecutiva..... 14 Gonorrhœa..... 5 Hæmorrhoids..... 13 Stricture urethre..... 2	1 1 0 0 0	63	2	1.306	3.174
Specific diseases.....	Lepros..... 2 Herberi..... 7 Burning of the feet..... 11 Dracunculosis..... 2 Atrophis..... 57 Scorbutus..... 5 Scrophula..... 8	0 1 0 0 17 0 0	90	18	1.904	19.360
Disease of the eye.....	Merbi oculorum..... 50	0	50	0	1.279	0.000
De. skin.....	" cutis..... 398	1	398	1	8.029	0.250
	Other diseases..... 367	2	367*	2	18.798	0.220
Total.....	3489	117	3400	117	75.021	3.381

* Of this number 154 were Pologota, Ulcos 182 with 2 deaths.
Note.—Per centage of deaths to strength, 2.566.

CONCLUDING REMARKS.

The following series of tables, Nos. 19, comprehend the whole sickness amongst both European and Native armies, and during the period of ten years embraced reports; and they also show in a clear manner which have been most prevalent and most destructive to both bodies of men.

In the table No. 3 and 4, the number of soldiers discharged are also given; and the number under the diseases specified in these tables notes appended to each table.

The loss to the service annually by deaths and disability, amongst the Europeans, are 4.922 per cent, amongst the Europeans, and amongst the natives is increased to 6.882.

Amongst the native troops No. 4, the percentage to strength averages annually 1.604, but if moved from the effective service by pension per centage is augmented to 3.638.

In this table it will be observed, that the most common diseases are the head lumps, and other phages, and other phages; it appears that in the former head would have been more properly treated, and the major part of the head lumps cured.

In conclusion the following statements as to the relative lameness of each of the regiments of the army, as regards the ratio of sickness to strength, and of deaths to strength.

Concluding remarks. 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.

TABLES
EXHIBITING THE SICKNESS AND MORTALITY AMONGST THE TROOPS STATIONED AT MALDEN, FROM 1830 TO 1839.

DISEASES.	Admitted.		Deaths.	Per centage of deaths to strength.	Per centage of deaths to sick treated.
	Number.	Days.			
Smallpox	21	10	1	4.76	10.00
Measles	12	10	1	8.33	10.00
Scarlet fever	10	10	1	10.00	10.00
Whooping cough	10	10	1	10.00	10.00
Dysentery	10	10	1	10.00	10.00
Diarrhoea	10	10	1	10.00	10.00
Cholera	10	10	1	10.00	10.00
Typhoid fever	10	10	1	10.00	10.00
Typhus	10	10	1	10.00	10.00
Febrile affections	10	10	1	10.00	10.00
General debility	10	10	1	10.00	10.00
Syphilis consecutiva	10	10	1	10.00	10.00
Leprosy	10	10	1	10.00	10.00
Ulcer phagedenic	10	10	1	10.00	10.00
Other diseases	10	10	1	10.00	10.00
Total	100	100	10	10.00	10.00

European Troops.

No.	Divisions.	Per centage of sick to strength.	Divisions.	Per centage of deaths to sick.	Divisions.	Per centage of deaths to strength.
1	Moulmein.....	143-488	Ceded districts....	1-584	Mysore.....	2-823
2	Malabar.....	153-122	Nagpore.....	1-632	Ceded districts....	3-159
3	Centre.....	155-773	Mysore.....	1-718	Moulmein.....	3-729
4	Mysore.....	163-685	Presidency.....	2-362	Malabar.....	3-789
5	Southern.....	169-737	Southern.....	2-317	Southern.....	3-224
6	Northern.....	184-243	Malabar.....	2-461	Nagpore.....	3-947
7	Presidency.....	184-374	Moulmein.....	2-596	Presidency.....	4-291
8	Ceded districts....	199-467	Hyderabad.....	2-835	Centre.....	5-670
9	Hyderabad.....	217-230	Centre.....	3-768	Hyderabad.....	6-239
10	Nagpore.....	241-194	Northern.....	5-509	Northern.....	10-154

Native Troops.

No.	Divisions.	Per centage of sick to strength.	Divisions.	Per centage of deaths to sick.	Divisions.	Per centage of deaths to strength.
1	Presidency.....	43-137	Nagpore.....	2-012	Presidency.....	1-099
2	Centre.....	49-353	Moulmein.....	2-056	Nagpore.....	1-255
3	Ceded districts....	49-456	Mysore.....	2-169	Malabar.....	1-275
4	Malabar.....	57-506	Malabar.....	2-236	Moulmein.....	1-286
5	Hyderabad.....	57-351	Presidency.....	2-547	Mysore.....	1-415
6	Southern.....	63-099	Hyderabad.....	2-396	Hyderabad.....	1-489
7	Nagpore.....	62-387	Southern.....	2-890	Centre.....	1-529
8	Mysore.....	67-693	Northern.....	2-920	Ceded districts....	1-213
9	Moulmein.....	67-416	Centre.....	3-110	Southern.....	1-737
10	Northern.....	88-245	Ceded districts....	3-253	Northern.....	2-593

THE END.

No. 1.—The entire Army of Madras during this year, with the per centage of sick to strength.

Year.	Others Comprehended.	Aggregate strength of Army.	Annual per centage of sick to strength.	Annual per centage of deaths to sick.	Annual per centage of deaths to strength.
1857	Admitted.....	11,640,000	75.2	116.3	80
	Discharged.....	10,000,000			
1858	Admitted.....	11,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1859	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1860	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1861	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1862	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1863	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1864	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1865	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1866	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1867	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			
1868	Admitted.....	10,000,000	90.2	90.0	101
	Discharged.....	10,000,000			

No. 1.—*Tot the entire Army of Madras, during thlso given, with the per centage of s*

Years.	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.				
1829	Admitted..	3092	11,640	169	759	2	115	3	591
	Died.....	2780							
1830	Admitted..	2503	11,623	156	001	2	062	3	217
	Died.....	2797							
1831	Admitted..	2682	10,853	166	408	2	649	4	409
	Died.....	2676							
1832	Admitted..	2457	10,580	164	272	3	371	5	538
	Died.....	2458							
1833	Admitted..	2659	9,853	207	114	3	395	7	033
	Died.....	2729							
1834	Admitted..	1683	9,321	237	002	2	648	6	276
	Died.....	1880							
1835	Admitted..	1708	9,484	193	483	1	722	3	331
	Died.....	2041							
1836	Admitted..	2071	10,201	174	355	1	956	3	411
	Died.....	1876							
1837	Admitted..	1730	10,068	174	116	3	114	5	423
	Died.....	1916							
1838	Admitted..	1983	9,798	177	097	2	189	3	878
	Died.....	1676							

COMPLETION TABLE

European Troops.

Regiment	Strength	Deaths	Percentage
1st Cavalry	1,000	100	10%
2nd Cavalry	1,000	100	10%
3rd Cavalry	1,000	100	10%
4th Cavalry	1,000	100	10%
5th Cavalry	1,000	100	10%
6th Cavalry	1,000	100	10%
7th Cavalry	1,000	100	10%
8th Cavalry	1,000	100	10%
9th Cavalry	1,000	100	10%
10th Cavalry	1,000	100	10%

Native Troops.

Regiment	Strength	Deaths	Percentage
1st Native	1,000	100	10%
2nd Native	1,000	100	10%
3rd Native	1,000	100	10%
4th Native	1,000	100	10%
5th Native	1,000	100	10%
6th Native	1,000	100	10%
7th Native	1,000	100	10%
8th Native	1,000	100	10%
9th Native	1,000	100	10%
10th Native	1,000	100	10%

throughout the entire Army of India, &c. year is also given, with the per cent.

Remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	
Ag	2,032	30	5,798	143	0	2,949	5,285	8	10,449	3,403	5	7,502	22,458
Ad	2,304	19	5,443	131	1	4,109	5,401	4	11,001	3,293	20	7,128	22,828
De	4,336	55	11,251	274	1	7,049	10,687	12	21,450	6,690	25	14,630	45,286
Dis	58	0	233	10	0	3	42	1	19	153	0	26	289
Pe	95	0	292	8	0	4	51	1	44	163	2	27	310
Ill	153	0	545	18	0	6	93	2	63	310	2	53	599
Tot	0	0	309	47	0	73	408	0	76	201	17	192	882
Av	0	0	854	65	0	79	501	2	139	517	19	245	1,481
Co	4.192	0.053	10.877	0.254	0	6.815	10.332	0.011	20.738	6.473	0.024	14,144	43.784
st	3.028	0	4.844	0.589	0	0.085	0.870	0.066	0.293	4.719	8.060	0.302	1.322
di	0.147	0.000	0.523	0.017	0.000	0.005	0.889	0.001	0.060	0.205	0.001	0.051	0.579
Pe	0.000	0.000	0.825	0.002	0.000	0.076	0.484	0.001	0.134	0.499	0.018	0.236	1.431

ES.

missions and Deaths, also the number incalided, &c. amongst the 1829 to 1838 inclusive.

Remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmia.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.	
Ag	2,032	30	5,798	143	0	2,949	5,285	8	10,449	3,403	5	7,502	22,458
Ad	2,304	19	5,443	131	1	4,109	5,401	4	11,001	3,293	20	7,128	22,828
De	4,336	55	11,251	274	1	7,049	10,687	12	21,450	6,690	25	14,630	45,286
Dis	58	0	233	10	0	3	42	1	19	153	0	26	289
Pe	95	0	292	8	0	4	51	1	44	163	2	27	310
Ill	153	0	545	18	0	6	93	2	63	310	2	53	599
Tot	0	0	309	47	0	73	408	0	76	201	17	192	882
Av	0	0	854	65	0	79	501	2	139	517	19	245	1,481
Co	4.192	0.053	10.877	0.254	0	6.815	10.332	0.011	20.738	6.473	0.024	14,144	43.784
st	3.028	0	4.844	0.589	0	0.085	0.870	0.066	0.293	4.719	8.060	0.302	1.322
di	0.147	0.000	0.523	0.017	0.000	0.005	0.889	0.001	0.060	0.205	0.001	0.051	0.579
Pe	0.000	0.000	0.825	0.002	0.000	0.076	0.484	0.001	0.134	0.499	0.018	0.236	1.431

Of the Total number invalided, were H. M.'s Troops..... 1248
H. C. Troops, 1146
Total..2394

The number from H. M. Troops are given under the general head "Invalided"; and of those of the H. C. Troops, viz, 1146.
Were invalided..... 431
" pensioned..... 290
" discharged..... 425
Total.. 1146

Table No. 4.—Abstracts, also the number invalided, &c. amongst usive.

	Admissions and Deaths &c.	Ophthalmy.	Rheumatism.	Small pox.	Syphills &c.	Thoracic diseases.	Ulcer, phagedenic.	Wounds & injuries.	Other complaints.
Aggregate Strength	5,68,403								
Admitted.	1st half. 172882	9 2,823	14,613	322	6,141	2,196	24	13,437	47,645
	2d half. 174445	8 4,398	14,001	93	5,516	2,802	28	12,408	44,002
Total..	347327	17 7,221	29,214	415	11,657	4,998	52	25,845	92,251
Died.....	1st half. 4,803	0 0	224	27	38	301	2	76	751
	2d half. 4,318	1 9	219	15	63	292	5	62	508
Total	9,121	1 15	443	42	91	593	7	138	1,559
Invalided.....	11558	17 347	1125	1	242	357	214	527	8044
Total died & invalided.	20679	18 362	1568	43	333	950	221	665	9603
Average annual per centage of sick to strength.	61.105	2 1.270	5.139	0.073	2.050	0.879	0.009	4.546	16.229
Do. do. of deaths to sick.	2.625	2 0.207	1.516	10.120	0.780	11.864	13.401	0.533	1.389
Do. do. of deaths to strength.	1.604	0 0.002	0.077	0.007	0.016	0.104	0.001	0.024	0.274
Per centage of deaths and invalided to strength.	3.638	2 0.063	0.275	0.007	0.058	0.167	0.038	0.116	1.689

Of the total number under the head "Invalided" viz. 11558.
 Were pensioned..... 6491
 Do. invalided..... 2559
 Do. discharged..... 2508
 Total.. 11558

Of the number and not included in the Table, were..... 421
 Atrophis..... 62
 Anasarca..... 7
 Apostema la..... 13
 Ascites.....
 Aphonia..... 1,5044
 Burning of.....

No. 5.—Table exhibiting the period of five the year

CLASSES	DISEASES.
Fever	Intermittent
	typhoid
	remittent
	continued
Cholera	Asiatic
	cholera
Disease of the abdominal organs	Diarrhoea
	Cholera
	Colic
	Obstipation
	Hæmorrhoid
	Yellows
	Peritonitis
	Catarrh
	Dyspepsia
	Hepatitis with cirrhosis
Disease of the lungs and heart	Catarrh
	Asthma
	Pleuris pleuro-pneumonia
	Emphysema
Disease of the Brain	Paralysis
	Convulsions
	Apoplexy
	Idiocy
	Mania
Disease of the Eye	Acute inflammation
	Chronic inflammation
	St. Vit.
	Blindness
Disease of the Ear	Acute inflammation
	Chronic inflammation
	St. Vit.
	Blindness
	Deafness
Disease of the Throat	Acute inflammation
	Chronic inflammation
	St. Vit.
	Blindness
	Deafness

No. 5.—Table
the period

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 c

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 267786.				Admissions & de- each class of d					
		1st Half.		2d Half.		1st Half.		2			
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	A			
Fever.....	Petrisphemera	8,834	45	19,311	46	47,594	629	47			
	Intermittent	31,648	537	39,604	887						
	tertiana.....	2,851	19	3,104	27						
	remittens.....	3,139	129	1,899	28						
	continua.....	1,795	89	1,326	81						
	Cholera.....	907	417	1,051	484	907	417	1			
Diseases of the abdo- minal vis- cera.....	Dysenteria acuta	1,492	167	1,379	135	1,764	213	1			
	chronica.....	272	56	307	47						
	Diarrhoea.....	2,794	131	2,364	129	5,618	212	5			
	Colica.....	695	7	619	8						
	Obstipatio.....	499	6	641	16						
	Hæmorrhoids.....	223	6	275	2						
	Enteritis.....	19	9	14	5						
	Peritonitis.....	17	3	23	4						
	Gastritis.....	11	5	17	1						
	Dyspepsia.....	1,369	65	1,510	42						
Hepatitis acuta	91	12	87	9	120				18		
chronica.....	26	6	35	4							
Diseases of the Lungs and heart	Catarrhus.....	760	45	837	48	1,441	188	13			
	Asthma.....	269	32	429	24						
	Phthisis pulmo- nalis.....	89	49	98	50						
	Hæmoptysis.....	33	4	27	5						
	Pleuritis.....	6	0	0	0						
	Pneumonia.....	183	35	161	25						
	Carditis.....	2	1	7	1						
Diseases of the Brain.	Palsatio.....	7	2	7	1	945	75				
	Dyspnoea.....	116	19	116	10						
	Apoplexia.....	35	24	29	20						
	Epilepsia.....	56	4	60	15						
	Paralysis.....	144	21	149	14						
Diseases of the Eye..	Cephalalgia.....	439	8	363	4	1,678	4	2			
	Phrenitis.....	11	0	1	1						
	Letus solis.....	0	0	0	0						
	Amentia.....	81	6	60	8						
	Mania.....	116	7	122	2						
Do. Skin.	Hydrophobia.....	2	3	5	5	6,647	3	6			
	Delirium Tre- mens.....	61	3	54	7						
	Ebrietas.....	0	0	0	0	1,649	14				
Diseases of the Eye..	Morbi oculorum	1,478	4	2,451	6						
	Do. Skin.	6,647	3	6,459	5						
Eruptive fe- vers.....	Varicella.....	193	11	64	6				1,649	14	
	Scarlatina.....	1,329	0	267	0						
	Rubella.....	180	1	111	1						
	Erysipelas.....	46	2	45	0						
Dropsies...	Anasarca.....	314	68	341	70	361	88				
	Ascites.....	41	11	35	15						
	Hydrothorax.....	6	6	9	4						
Rheumatic affections.	Rheumat acutus	4,524	63	4,258	51	8,042	110	7			
	chronicus.....	3,600	47	3,506	51						
	Neuralgia.....	0	0	2	0						
	Odonalgia.....	112	0	85	0						

Also the number in each class, at the end of the year, &c.

Of the total number under the head of "Fever".....	47,594
Of the total number under the head of "Diseases of the abdominal viscera".....	5,618
Of the total number under the head of "Diseases of the Lungs and heart".....	1,441
Of the total number under the head of "Diseases of the Brain".....	945
Of the total number under the head of "Diseases of the Eye".....	1,678
Of the total number under the head of "Diseases of the Skin".....	6,647
Of the total number under the head of "Eruptive fevers".....	1,649
Of the total number under the head of "Dropsies".....	361
Of the total number under the head of "Rheumatic affections".....	8,042
Total.....	80,665

GENERAL TABLES.

NATIVE TROOPS.

and Deaths from each class of Disease, throughout the whole Army, during the year 1844; also the number Invalided, Pensioned or Discharged during the year of sick to strength, of deaths to sick treated, of deaths to strength, of deaths and invalids &c. to strength.

Days from disease.	Admitted.	Total admissions from each class.	Total deaths from each class.	Invalided &c. from each class of disease.	Total died and Invalided &c. from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.	Per centage of deaths to strength.	Per centage of deaths, invalids &c. to strength.	
334	629	94,828	1,458	176	1,634	35.411	1.537	0.544	0.618	
603	454	1,960	901	2	903	0.731	45.969	0.336	0.337	
636	382	3,450	405	18	423	1.288	11.730	0.151	0.157	
451	209	11,069	421	60	481	4.133	3.802	0.157	0.179	Of the number invalided under the head "Other diseases" are included the following: Apostema lumborum..... 2 Aphonia..... 2 Burning of the feet..... 13 Caries..... 13 Debilitas..... 255 Diabetes..... 2 Dysuria..... 2 Dysœœma..... 58 Fistula in ano..... 15 Hernia..... 62 Hydarthrus..... 2 Morbus coxarius..... 2 Polypus nasi..... 4 Nephritis..... 2 Ulcus..... 2 Varix..... 31 Maligner..... 21 Under-site..... 5 Bad character..... 99 At his own request..... 163 Unable to sound the bugle..... 1 Not given..... 4 Total.. 3161
127	13	242	31	8	39	0.690	12.879	0.011	0.014	
874	161	3,115	352	239	591	1.368	11.300	0.131	0.210	
812	71	3,788	140	251	400	0.667	8.123	0.655	0.149	Of the admissions and deaths under the head "other diseases." Were Phlogosis..... 1387 44 " Ulcus..... 8617 33 " Bubo simplex..... 2941 8 Total.. 24515 85
451	6	3,929	10	203	218	1.467	0.254	0.003	0.031	The deaths under the head "other diseases," include besides those accounted for in the preceding note viz. 85 Phlogosis &c. 8 Aneurisma. 1 Apostema lumborum. 2 Arthritis. 1 Cancrois. 10 Cynanche. 1 Cystitis. 5 Diabetes. 3 Dysuria. 2 Fistula in ano. 4 Fistula in perineo. 2 Epitaxis. 5 Hematemesis. 4 Hernia.
459	5	13,106	8	4	12	4.891	0.061	0.007	0.004	
488	7	2,127	21	0	21	0.795	0.982	0.007	0.007	
284	89	747	177	16	193	0.278	23.694	0.066	0.072	
901	102	15,943	212	739	951	5.955	1.379	0.073	0.255	

Total Admissions... 34
Total Deaths... 34
No. 3.—The following

Phlogosis	1387
Ulcus	8617
Bubo simplex	2941

Deaths to sick treated, and of deaths to strength, both of

Phlogosis	1387	44
Ulcus	8617	33
Bubo simplex	2941	8
Total	12945	85

of Disease, throughout the whole Army, during
 period of ten years, from 1834 to 1843 inclusive, with the
 deaths to the total mortality.

Year	Admissions	Deaths	Strength
1834	10,433	303	10,130
1835	10,132	61	9,871
1836	15,943	747	14,196
1837	14,905	177	14,728
1838	13,432	41	13,391
1839	5,748	45	5,703
1840	2,146	45	2,101
1841	1,329	45	1,284
1842	782	45	737
1843	83	45	39
Total	61,920	2,146	60,774

European Troop
 STRICKLAND, 103,4
 Percentage of sick to
 " of deaths to sick to
 " of deaths to strength
 Native Troop
 STRENGTH, 68,84
 Percentage of sick to
 " of deaths to sick to
 " of deaths to strength

No. 8.—The following
 Total Admissions, 34
 " Deaths, 18
 " Admissions, 18
 " Deaths, 34

No. 7.—Table exhibiting
 period of ten years, 1834

period of ten years, from 1834 to 1843 inclusive, with the
 deaths to the total mortality.

Diseases of the Brain.	Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
41 5099	10 433	303	6192	61	13432	41
88 160	3 137	61	54	54	41	41
51 160	0 327	61	15943	747	5748	45
63 1788	0 667	747	212	177	45	45
90 149	8 338	177				
31 149	0 055	177				

Diseases of the Brain.	Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
41 5099	10 433	303	6192	61	13432	41
88 160	3 137	61	54	54	41	41
51 160	0 327	61	15943	747	5748	45
63 1788	0 667	747	212	177	45	45
90 149	8 338	177				
31 149	0 055	177				

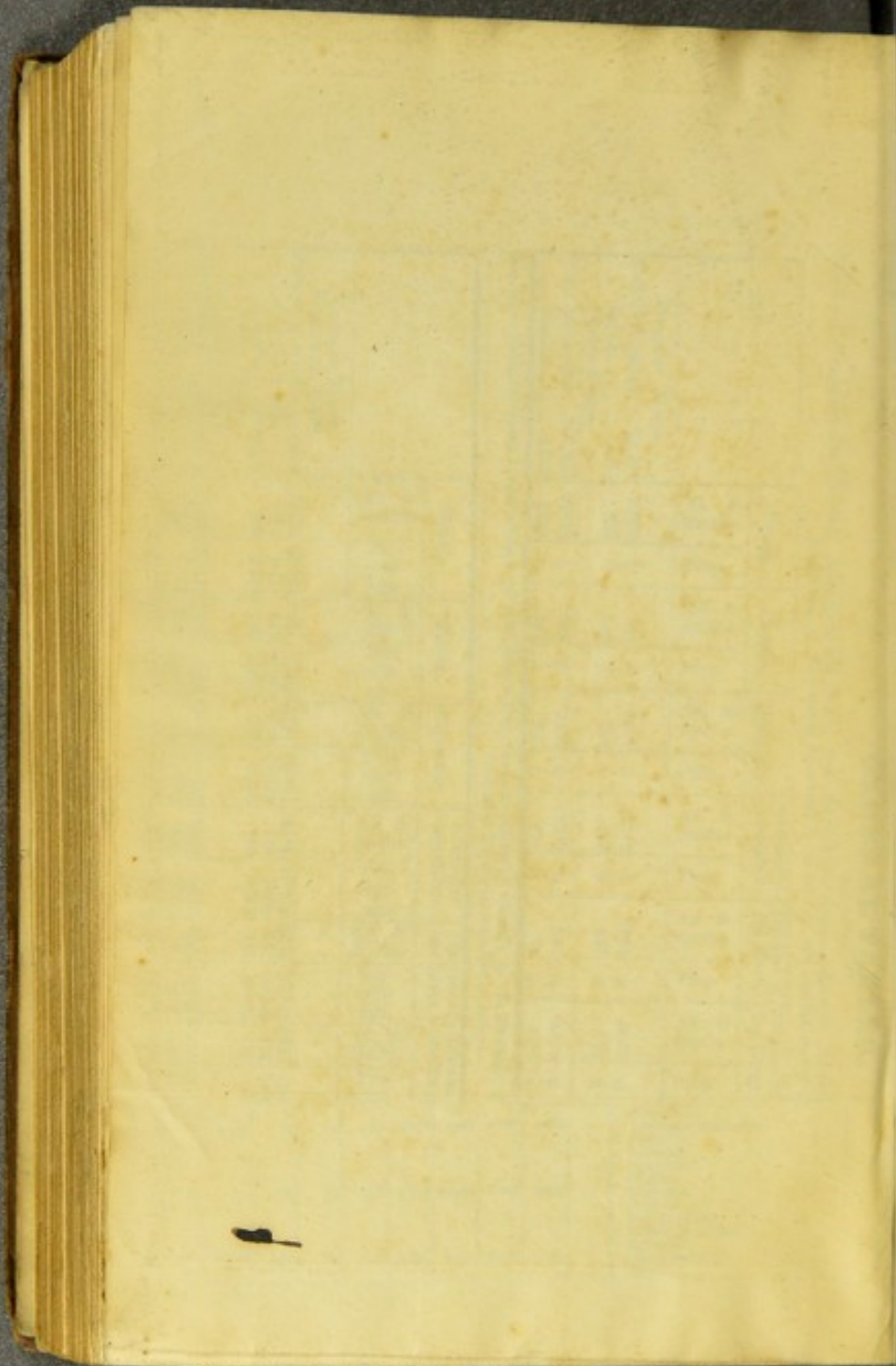
GENERAL TABLES.

No. 9.—Table showing the amount of Admissions and Deaths from the principal causes of disease, for the proportion of Admissions from each to the total of sick treated, and of deaths.

European Troops.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Aneurisma. Apostema lumborum. Arthritis. Cacexia. 10 Cynanche. 1 Crystis. Diabetes. Dysuria. Fistula in ano. Fistula in perineo. Epistaxis. 5 Hematemesis. 4 Hernia.
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	
Total Admissions 93,109	19836	21.4%	521	0.5%	7981	8.6%	8712	9.3%	5292	5.7%	3892	4.2%	8
" Deaths 2,173	296	13.6%	142	6.5%	748	34.4%	129	5.9%	241	11.0%	172	7.9%	1
Native Troops.													
Total Admissions 201,886	94828	47.0%	1950	0.9%	3420	1.7%	11069	5.5%	242	0.1%	3115	1.5%	10
" Deaths 4,800	1468	30.6%	901	18.8%	405	8.4%	421	8.8%	51	1.1%	352	7.3%	1

No. 10.—Table exhibiting the percentage of Admissions from the same classes of diseases to the strength, of amongst European and Native troops.

European Troops. STRENGTH, 46870.	Fever.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		0
	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	Ad. & deaths.	Per-centage.	
Percentage of sick to strength	19836	40.589	521	1.066	7981	16.831	8712	17.826	5292	10.767	3892	7.8	0
" of deaths to sick	296	1.441	142	27.255	748	9.373	129	1.480	241	4.580	172	4.4	1
" of deaths to strength	286	0.555	142	0.290	748	1.530	129	0.253	241	0.493	172	0.3	1
Native Troops. STRENGTH, 267786.													
Percentage of sick to strength	94828	35.411	1950	0.731	3420	1.288	11069	4.133	242	0.090	3115	1.1	1
" of deaths to sick	1468	1.557	901	45.969	405	11.739	421	3.803	51	12.809	352	11.3	1
" of deaths to strength	1468	0.544	901	0.336	405	0.151	421	0.157	51	0.011	352	0.1	1



ERRATIC P

TIGHT C

ERRATIC PAGINATION

TIGHT GUTTERS

