Local & Munl. (1895) Department.

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[Despatch Abstract.]

Inspection Notes.

Communicating to the Local Boards concerned for attention ---- of the Depty Sanitary Commissioner on the rural tracts of the Madura district.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Local & Municipal Dept.
CURRENT No. 30932

Local and Municipal Department.

From

W. G. King

Surgeon Lieut.-Col. ~~J. A. LAING~~,

Sanitary Commissioner for Madras,

To

The Chief Secretary
to Government
Local and Municipal

UNDER SECRETARY
PUBLIC DEPT.

No. 1815 / S

Dated 22d
Despatched 23d } October 1895.
Received

Enclosures.

Subject.

Forwarding Inspection Notes of the Deputy Sanitary Commissioner on the rural tracts of the Madura District.

N
P.S.

Order

Communicated to the Local Boards concerned for attention.

To Inspectr., Distt. Bd., Madura.
" Sanitary Commissioner.
Editor Gazette.

[960—8-12-95.]

(With order)

Shingavelu

No. L., th November 1895.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following paper:—

Inspection Notes of the Inspector of Vaccination and Deputy Sanitary Commissioner for Madras.

RURAL TRACTS—MADURA DISTRICT.

Allanagarum.

Inspected 23rd August 1895.

A large village on the main road consisting of 967 houses with a population of 4,926 inhabitants, nearly all agriculturists and labourers. There are no conservancy arrangements. The dead are burned and buried on the river bank. Outside the village there is a large square well without any parapet, abandoned apparently, because the water turned out to be brackish. Its present state is dangerous to children or to passers by in the dark. At the other side of the village in the fields there is a very fine drinking-water well which never dries up. Washing of clothes as at present carried on alongside the mouth of this well, which has no parapet wall, should be prohibited. The low caste inhabitants not being allowed to use this well resort to the stream or to another well at some distance. Vaccination is carried on by first-class vaccinator Venkataram Nayudu. On my arrival, I found about 52 childern collected for examination, all of low castes, and all protected by vaccination or small-pox except three. Including these I examined 171 children, of whom 98 were vaccinated, 56 or 32·9 per cent. were unprotected and 17 were marked with small-pox.

Bodikavandanpatti.

Inspected 23rd August 1895.

A small hamlet of Allanagarum population 304, consists of poorly built mud-walled thatched huts, 47 in all, built without any order, with narrow ill-kept roads intervening. Water-supply from one well outside the village. This dries in April and May when people resort to the river.

Vaccination is carried on by first-class vaccinator Venkataramalu Nayudu. Of 67 children examined, 45 were vaccinated, 18 unprotected and 4 bore marks of small-pox.

Thani.

Inspected 23rd August 1895.

A small roadside hamlet of eight or ten houses selected as a central position for a market place. The latter is a large enclosure, originally fenced with wire (which has entirely disappeared) running through stone uprights. There are six well-built sheds in the market place, each divided into eighteen stalls, nine on either side. Many of these are used as rest-houses by travellers and wandering beggars. There are three large bandy pettahs, two enclosed with brick walls and one with mud. They are kept fairly clean.

Vaccination is carried on by first-class vaccinator Venkataramulu Nayudu. Of fourteen children examined, two were unprotected by vaccination or small-pox.

Uttamapalaiyam.

Inspected 24th August 1895.

A large village of 7,475 inhabitants forming a major union, divided into two parts by the main road from Cumbum. On the side of this road the principal shops are located. The back streets are narrow and irregular, but fairly clean. Large numbers of cattle are kept in the backyards, which are in a very dirty state, generally half filled with stable refuse. There are no public latrines, but a toty is employed with an iron hand-cart to clean the streets, which are resorted to for purposes of nature. This should not be allowed as there are plenty of fields close by which might be utilized with advantage to the owners. There are eleven circular iron dust-bins, the contents of which are removed by two carts and four sweepers under the superintendence of a maistry, and carted outside the village and sold to the cultivators. There are six wells in the town, four being used for drinking purposes. All of these wells are so constructed that persons drawing water stand on the edge inside the parapet walls or on stones across the mouth of the well, thus allowing of the containmation of the water by the dirt of their feet, &c. The parapet walls should be continuous with the lining walls of the wells, and the platforms should be coustructed outside these. The river and irrigation channel flowing by the town are also used. There is a weekly market held on the roadside in Therkatheroo for the sale of grain and vegetables. In the village there are two butchers' shops, miserable shanties of leaves and tatties measuring about 8′×5′. The roofs and walls afford litte or no protection from sun or rain. They should be permitted to build proper shelters. The sheep and goats are slaughtered in the backyards adjoining the butchers' houses.

Vaccination is in charge of acting second-class vaccinator Govindasawmi Nayudu. Of 128 children under six years of age examined in the streets and houses. 58 were vaccinated, 58 or 45·3 per cent. were unprotected and 12 were marked with small-pox. In a result grant Muhammadan school of 18, 13 were vaccinated, 3 unprotected and 2 marked with small-pox. In a Hindu pial school of 22 children, 15 were vaccinated, 2 unprotected and 5 bore marks of small-pox. In this school the children were arranged in such a way that the light fell on their faces instead of on their books, while the black boards and diagram maps, &c., were on the dark side of the room instead of facing the light. This should be rectified. In the Roman Catholic school, of 28 children examined, 20 were vaccinated, 3 were unprotected, and 5 marked with small-pox. It would be well to insist on personal cleanliness in this school, as the pupils were the dirtiest lot I have seen for some time. All operations are direct from the calf. I saw one calf ready for use; the vesicles were well formed and the animal in very good condition.

Kurvanuth.

Inspected 24th August 1895.

A small hamlet at the foot of the ghât containing about thirty houses inhabited by cartmen and cultivators. The people here suffer greatly from fever and consequent anæmia and debility. Nearly every one has an enlarged spleen. The prevalence of fever is probably due to drinking the water of the neighbouring hill streams which drain the forest lands above. Vaccination is in charge of acting second-class vaccinator Govindasawmi Nayudu. Examined 23 children—10 vaccinated, 11 unprotected and 2 marked with small-pox.

Periyar.

Inspected 25th and 26th August 1895.

This village has arisen in consequence of the water project in progress for the past seven or eight years and forms the camp of the officers engaged and the coolies employed under them. The population is about 3,000, of whom the great majority are coolies. For these, three camps have been built of thatched lines of huts on the

left bank of the river below the dam. On the right side the houses of the Engineer officers and their staff of subordinates, the hospital and bazaar are located. The upper portion of the river below the dam is reserved for drinking purposes, as well as five wells sunk on the right bank. The cooly lines are built on the slopes of three small hillocks. Earthen channels have been cut to carry off the surface drainage, which flows naturally towards the river. Each camp is provided with latrines for males and females, a lascar and two toties being provided for each and living close to their work. The latrines are mud-walled enclosures. Excreta is removed in baskets from the smaller ones, and in carts from the larger to pits dug at a convenient distance, where it is buried, each day's deposit being covered with black earth. A sanitary inspector is employed to supervise the arrangements, reports being made daily to the Chief Engineer in charge of the works. The conservancy establishment consists of four lascars and twenty-three sweepers at a monthly cost of Rs. 108. The sanitary condition of the camp is thus carefully attended to. All cases of cholera which have occurred have been traced to importation; the last outbreak, owing to prompt and efficient measures taken to check its progress, was confined to a few sporadic cases. The men employed suffer greatly from fever and consequent anæmia. The most unhealthy months are April, May and June when almost everybody leaves the place and no work can be carried on. June is shown by the hospital statistics to be the worst month in the year for fever. No improvement as regards the prevalence of fever has followed on the clearing of the jungle which formerly surrounded the camps on every side, nor has any connection been established between any particular class of labour (such as earth cutting) and the liability to fever, though it would appear that those working in water are liable to more severe attacks. The water of the lake is largely used for drinking by those employed in its vicinity, which probably accounts for the prevalence of the fever. It is a curious fact that this water emits no smell when disturbed by rowing or the screw of the steam launch, but when it falls from a height through an aperture in the dam, and is tossed and broken into spray over rocks as it falls, a most pungent and disagreeable odour is perceptible, said to be especially so after sunset, so much so that the windows of houses near have to be closed to exclude it. This may perhaps be due to impregnation with vegetable organic matter derived from the vegetable mould of the submerged forest. The water has been analysed by the Chemical Examiner and pronounced to be usable.

Vaccination is in charge of the resident Assistant Surgeon and is not properly carried on. The register shows only five or six cases vaccinated every month and a large number of unprotected children are to be seen. The Deputy Inspector has been ordered to arrange for a calf and to protect all requiring it. I verified six cases, not one of which was correctly entered, the results having evidently been entered on the date of vaccination.

Registration is in charge of the Assistant Surgeon, reports being made by the sanitary inspector and lascars in each line.

Gudalur.

Inspected 27th August 1895.

A large village close to the main road consisting of 1,400 houses with a population of nearly 9,000. The majority of the dwellings are small thatched mud-walled huts; some of those belonging to wealthy inhabitants have masonry walls and tiled roofs. The sanitary condition of the village is looked after by a sanitary association consisting of twelve members. Their chief source of income is a house-tax which should produce Rs. 700 yearly, but only between Rs. 400 and Rs. 500 can be collected as the well-to-do and influential members of the community decline to pay, so I was told by the vice-president and two members of the association, who are anxious to have the place formed into a union. With this income two sweepers and two carts are employed for sweeping the roads and lanes and carting away the rubbish. The latter is collected in pits outside the village and burnt or used as manure. There are no latrines; the people resort to the adjoining fields. The roads are uneven and rough, but are kept fairly clean. The inhabitants are all employed in agriculture,

and consequently a very large number of cattle (said to be 4,000) belong to the village. It is said that only milch cattle and buffaloes are kept in the courtyards, while the others are hoarded together outside the town. This was certainly true as regards the courtyards inspected by me. In every open space heaps of manure are to be seen. Efforts should be made to collect this outside the village. Between the upper and lower portions of the village there is a large open space where rubbish is collected in heaps and burnt, the ashes being blown about the wind and creating a nuisance. This might be put a stop to and the ground kept clean. The practice of filling excavations and depressions of the ground near dwellings with rubbish should also be prohibited. Drinking water is obtained from a large square well about quarter mile from the village, sunk by the sanitary association. It has a very good platform and drain surrounding it, but requires a parapet wall. The present arrangement of cross beams across the mouth, on the same level as the outer-platform is not a good one, as waste water returns into the well fouled by the washings of the limbs and feet of those drawing it. Low caste people obtain their water from a nullah about 1 mile distant. Arrangements should be made to provide them with a well nearer the village. There are about 200 Muhammadans in the town who slaughter animals as required in their own backyards. The dead are buried about 1 mile east of the village.

Vaccination is carried on by acting second-class vaccinator Govindasawmi Nayudu. Of 109 children examined, 46 were vaccinated, 58 or 53·2 per cent. were unprotected and 5 marked with small-pox.

Cumbum and Oottampuram.

Inspected 27th August 1895.

These two villages are only separated by the breadth of one street, and together form a union. The former is inhabited chiefly by Hindus and the latter by Muhammadans and Pariahs. All are engaged in field work. There are said to be 4,000 cattle in the town. Most of them are kept in the backyards, but in several cases a number of owners herd their cattle together in walled enclosures, of which there is a number in the town, especially in Oottampuram. All the manure from these places is collected in unsightly heaps all round the outskirts of the village. The roads are, as a rule, well made and in good order, and kept clean, except in the Pariah quarters, where rubbish is collected in every vacant corner. The conservancy staff consists of four sweepers and five carts for the two villages. There are 34 iron dust-bins to be cleaned out, the contents being carted to the fields or waste ground adjoining the villages. In some places these dust-bins are knocked over by children and cattle. To avoid this they might be fixed with three pegs. There are no latrines; all the people resort to the fields. Drinking water is obtained from a tank Totapungaram close to Oottampuram and from the river Suruli about one mile distant. This latter forms the chief supply, as the tank is dry during April, May and June. There are several wells in the town, but all are brackish. The tank is said to be specially reserved for drinking purposes, but no watchman is appointed and cattle are watered in it. It derives its supply from the west side of the hills close by.

Vaccination is carried on by acting second-class vaccinator Govindasawmi Nayudu. Of 121 children examined in Cumbum village, 45 were vaccinated, 47 or 38·8 per cent. unprotected and 29 marked with small-pox; in Oottampuram of 94 examined, 53 were vaccinated, 28 or 29·8 per cent. unprotected and 3 marked with small-pox. In the salary result school, Cumbum, of 40 present, 16 were vaccinated, 5 unprotected and 19 marked with small-pox; and of 33 children in Pyal schools, 15 were vaccinated 3 unprotected and 15 marked with small-pox. From the large proportion of children thus shown as having been attacked with small-pox and from the number of older children and adults similarly marked in the village, it is evident that vaccination has not been properly carried on. The last outbreak occurred during last year.

Chinnamanur.

Inspected, 28th August 1895.

This village, in conjunction with Karukatangalam, forms a union. The main roads are in fair order but the back lanes and smaller roads are very rough. The conservancy establishment consists of four sweepers and two hand-carts. There are only ten dust-bins for the whole union. As there are 1,043 houses with a population of 7,033, this establishment is quite inadequate and consequently heaps of rubbish are collected all over the village in backyards and on waste ground. In nearly every court-yard there are excavations from which the mud for the wall has been dug and these are invariably filled up with rubbish and house refuse. This should not be allowed. Existing excavations should be filled up with clean earth or sand, and a spot set apart outside the village from which earth can be taken for building purposes. There are a large number of cattle in the town, all kept in the backyards. There are no latrines; fields or waste land adjoining are resorted to for purposes of nature. There is a great want of good drinking-water. All the public wells in the village are brackish, except one in the market place which requires to be deepened as at present, it only holds water during the rainy season. The present supply is obtained from an irrigation channel, about $\frac{3}{4}$ mile distant, or, from the Ursuli river, $1\frac{1}{2}$ miles away. The latter is the only source during the hot season. No means are taken to prevent contamination and fouling of the water, which is used for bathing, washing clothes, cattle, &c., and for drinking purposes indiscriminately. A certain portion should be reserved for drinking, and a watchman appointed to see that bathing and washing clothes, &c., are carried on lower down the stream. There is a market attached to the village, one shed of eighteen stalls and a second of similar dimensions under construction. The wire forming the fence around it and the gates have disappeared, only the stone uprights remaining. The dead are buried about 2 or 3 furlongs east of the village.

Vaccination is carried on by acting 2nd-class vaccinator Govindasawmy Naidu. Out of 84 children examined in the streets and houses, 45 were vaccinated, 33 or 39·3 per cent. were unprotected and 6 marked with small-pox. In the Upper Primary Result Grant school of 38 children, 24 were vaccinated, 5 unprotected and 9 marked with small-pox. This school requires re-roofing; the present roof admits both sun and rain. In a second Result Grant school — of 36 children — 23 were vaccinated, 1 unprotected and 12 marked with small-pox. This school is located in an old mantapam, which is unsuited for the purpose, as both light and ventilation are defective. This might be remedied by making three or four good-sized windows on the blank wall, if the surroundings permit of it.

Devadanapatti.

Inspected, 29th August 1895.

A village of 700 houses and a population of 5,055 on the side of the main road. There are no conservancy arrangements. The roads are rough and not cleanly kept. Extensive excavations have been made for the construction of a new road through the village towards the fields. These are now being filled up with rubbish which gives rise to a foul smell and should be put a stop to. The dirtiest spot in the village is a narrow roadway running past the house of the late karnam Chinnasawmy Pillay. A masonry cistern has been constructed outside the wall to receive liquid refuse from the house, all of which is baled out on the road forming an offensive puddle for about thirty yards from the cistern. The inhabitants resort to the fields for the purposes of nature. Drinking-water is obtained from two fine wells in the village which never dry in the hot season. The dead are buried about one mile to the north of the village. A weekly market is held in two large walled enclosures, the larger of which is furnished with 2 sheds of 18 stalls each on the road side. There are about 200 Mahomedan houses here with two butchers' shops. Two animals are slaughtered daily in the backyards of the owners.

Vaccination is carried on by 1st-class vaccinator Venkataramaloo Naidu and acting 2nd-class vaccinator A. Narainsawmy Naidu. Both required new lancets;

the forceps used for lymph extraction is not cleanly kept. Both vaccinators keep their registers in vernacular. I verified 34 recent cases, 26 done by the 1st-class vaccinator and 8 by the 2nd-class man during the current month. All were correctly entered. Besides these, I examined 108 children by a house to house visitation. Of these, 68 were vaccinated, 19 or 18·4 per cent. unprotected and 16 marked with small-pox.

The register of births and deaths and also the unprotected list were kept up to date by the gumastah.

BUTTALAGUNDU.

Inspected, 29th August 1895.

A union village containing 1,490 houses and 11,503 inhabitants. Nearly all are engaged in agriculture. The roads and lanes are rough, but fairly clean. No side-drains exist, except on the main road and in Bazaar street, and a few streets close by. In all of these the drains are blocked with silt and covered with large stones opposite the shops and dwellings. These stones should only be permitted opposite the entrance of each house—the ramainder should be removed and the drains cleaned out. Waste water from the Vellala theru well is carried by a rough stone drain into an adjoining street which it converts into a noxious drain. There are no dust-bins. Six sweepers with three carts are provided to collect and remove the house refuse and rubbish of the village. This is collected on vacant ground, about half a furlong from the town and sold annually by auction. There are no latrines; the fields adjoining are used instead. Large numbers of cattle and buffaloes are kept in the backyards of houses, which are consequently in a dirty state. Manure and heaps of rubbish are collected on vacant ground in the back lanes. Fish are sold in a narrow lane in the Mahomedan quarter contrary to the orders of the Chairman. There is a large open space on the west of the town much more suitable for the purpose. Drinking water is obtained from the Mariyalar river and from wells in the town. Of these there are eleven, but many of them contain only brackish water and others are dry except during the rainy season. The Vellala theru well before mentioned never dries up and yields good water, but is not properly conserved. There is no parapet wall, and an iron frame work across the mouth, on which those drawing water stand permits contamination. All the wells are of the same pattern and have foul pools of waste water close by. One near the Primary Result Grant school on the western side of the town has two logs of wood across the mouth; the top of the side wall is out of repair and below the level of the ground; it should be raised as a parapet wall. In the market place there is a fine square well with cross beam and pulleys, and cattle trough attached. It requires deepening and cleaning. The market is a walled enclosure in the middle of the town containing two sheds—tiled roofs on stone pillars—one of which was in use as a rest-house for travellers and cattle at the time of my visit. There is no gate to the market place. If this were provided, travellers and animals could be excluded. Sheep and goats are slaughtered on the open ground in the market on market days. The spot where this is done is easily detected being discoloured and soaked with blood. It would not entail much expense to wall off a corner of the market for this purpose and provide a cemented floor with cross beams and hooks for skinning animals and cistern. In the town itself it is said that eight or ten animals are killed daily in the court-yards of the butchers, so that a simple form of slaughtering, such as now described, would be daily required and might be made a source of income to the union. There are two burial-grounds—one for Mahomedans—a large piece of ground enclosed with a good wall on the western side of the town and the second towards the south-east.

Vaccination is carried on by acting 1st-class vaccinator G. Muniswami Naidu. In the village I examined in the streets and houses 195 children. Of these, 120 were vaccinated, 72 or 34·8 per cent. were unprotected and 15 marked with small-pox. I also visited two schools. The Primary Result Grant school contained neither teacher nor pupils, having been closed "on account of a wedding." The school-room was in use as a dwelling. In the second, a Result Grant Brahmin school, 30 boys were present, but the teacher had gone "to a village." Of these boys, 13 were vaccinated, 10 unprotected and 7 marked with small-pox.

The register of births and deaths is kept by the village munsif who was absent attending court on a summons.

NELAKOTTAI.

Inspected, 30th August 1895.

A union village containing 921 houses with a population of 3,987. The main roads are cleanly kept and generally provided with drains, some with masonry sides and others square earthen channels. Care should be taken to keep these drains free of silt and to prohibit house-holders from sweeping street and house refuse into them. There are no dust-bins. Two hand carts and one bullock cart with a staff of four sweepers and one maistry are employed to collect rubbish and remove it outside the village. There are no latrines, waste ground and fields adjoining being resorted to for purposes of nature. Drinking-water is obtained from wells; all have parapet walls outside the platform with the mouth of the well crossed by wooden beams or iron frame work, or else, are provided with steps. One private well has an excellent system of troughs attached for the use of dhobies with a drain leading off waste water into a garden. Those wells which do not dry up in the hot season, and they are few in number, should be carefully conserved. Attached to the chattram is a large well with steps leading to it, which never dries up. In the village there is a place set apart for slaughtering sheep and goats. A narrow passage guarded by a curtain of gunny bags leads to a small square enclosure behind the houses on the street. At one side are two stalls for selling meat—miserable thatched sheds with earthen floors—and on the ground adjoining, the animals are killed and cleaned, three bamboos forming a triangle on which the carcasses are hung for skinning, &c. It would, perhaps, be better and more useful if an enclosure with cemented floor was attached to the market outside the village for this purpose. There is a very fine market on the opposite side of the main road with a separate yard for sheep. The whole place is enclosed with mud walls with chunam copings. It is provided with one tiled shed containing eighteen stalls for the sale of grain and vegetables and three open tiled sheds without partition walls. Two sweepers are employed to keep it clean. There is also a large square well with cattle trough attached, but it does not appear to be used.

Vaccination is in charge of acting 1st-class vaccinator G. Moonoosawmy Naidu and acting Probationer Sundaram Pillay. Both keep their records in English neatly and up to date. I verified 11 recent cases done by the former, all correctly entered. In the village I examined 94 children, of whom 68 were vaccinated, 23 or 24·5 per cent. were unprotected and 3 marked with small-pox.

The birth and death registers and the unprotected list are kept by the karnam in vernacular and up to date.

MUTULAGAPUTTI AND MENAKSHI NAYAKANPUTTI.

Inspected, 2nd September 1895.

Visited the above two hamlets in the neighbourhood of Dindigul to inspect the work of 1st-class vaccinator M. Sudalamuthu Pillai and verified 25 recent cases, all entered in his register as vaccinated on the 10th August in the former, and 16 in the latter. All were successful and correctly returned. Out of the total vaccinated by him on this date in these villages only two were absent.

PALKANUT.

Inspected, 3rd September 1895.

A small village on the main road, 15 miles from Dindigul. Inhabitants all engaged in field work. No roads, simply circuitous paths between thatched mud-walled huts built without any order or system. Water-supply from large step-well sunk by the Local Fund authorities which does not dry in the hot season. Low caste people use a well in the compound of the District officer's bungalow and Police station. When this is dry, wells in the adjoining fields are resorted to. There are no conservancy arrangements. Village fairly clean but surrounded with prickly-pear.

Vaccination is in charge of 2nd class vaccinator P. Shunmugam Pillai, service 13 years; pay Rs. 10 monthly; minimum number 150 successful cases. Register neatly kept in Tamil up to date. All operations direct from the calf or from scabs. No work done here since April last. The new form of headings for nominal register has not yet been supplied; the latter are simply manuscript forms. No nominal lists to be found later than February 1894. Of 88 children examined from house to house, 63 were vaccinated, 16 or 18·2 per cent. were unprotected, and 9 marked with small-pox.

The birth and death register is kept in vernacular up to date by the village munsif. Also a list showing the number of unprotected children in the village.

SUTERAPUTTI.

Inspected, 5th September 1895.

A large village lately (8th August) formed into a union. Up to the present no conservancy establishment has been entertained except one sweeper woman to keep the roads clean. The main road to Palni divides the village into two parts. On either side of this road are the traders' shops for grain, vegetable, &c. In front of these the drains are coverd with heavy slabs of stones and choked with rubbish. Only such stones as are necessary to give entrance to the dwellings should be permitted; the remainder should be removed and the drains kept free and clean. The houses are of the usual type built without any attempt at orderly arrangements, the materials for the construction of the walls having been dug out on the spot. All through the village there are large excavations, in every instance being filled in with refuse and rubbish. Arrangements should be made to put a stop to this practice. One of these excavations is alongside a Mahomedan grave-yard on the south side surrounded by habitations. It should be filled in with earth and the grave-yard closed. On the north side there are several narrow alleys. In this quater four or five houses have recently been burnt down. By removing some of these the roads might be opened out better. Drinking-water is obtained from a fine well of the step pattern on the south side. A watchman should be appointed to prevent the pollution of the water by washing of clothes, &c., as at present carried on. At the back of the zemindar's house is a well used for domestic purposes but not for drinking. He has erected a pump over it and cistern with tap for drawing off the water. He would earn the gratitute of the present and future generations of inhabitants if he could be induced to provide a good pump and covered cistern with several taps in connection with the drinking-water well, as at present the process of procuring water by the existing rough steps is a laborious and insanitary one. There is another large well in the northern portion of the village used for domestic purposes. House refuse and rubbish from the houses around it are thrown around its mouth. This rubbish should be removed and the practice prohibited.

Vaccination is carried on by 2nd-class vaccinator K. Ramanjam, formerly by Probationary vaccinator Govindaswami Nayudu. The former was ordered by letter on 31st August to meet me here but did not appear. His nominal list of July last shows eleven cases vaccinated. Of these, I verified five. The probationary vaccinator's list of March shows 81 cases vaccinated. I could only verify six of these, although I went round the village from house to house with the munsif. Of one-hundred and twenty-eight children examined in this way, 91 were vaccinated, 32 or 25·0 per cent. were unprotected and 5 were marked with small-pox. In the village of Vallur, about one mile from Suteraputti, I verified eight out of fourteen cases said to be vaccinated in July last by 2nd-class vaccinator K. Ramanjam. One had since died. Of 98 children examined here from house to house, 81 were vaccinated, 16 or 16·3 per cent. unprotected, and 1 marked with small-pox.

In Gopalapuram, a small hamlet of fifteen or twenty houses on the main road, I verified four cases, being all reported as vaccinated by this same man. Of eleven other children examined, only one was unprotected.

In another hamlet, Anapaputti, I verified six out of eight cases done by him. Of 27 other children examined, 5 were unprotected.

Nominal lists are kept and were used by me for verification.

The register of births and deaths is kept by the karnam who was absent at the time of my visit.

AYAKUDI.

Inspected 8th September 1895.

The two villages of old and new Ayakudi together with the hamlet of Oralapuram form a union. Old Ayakudi contains 1,234 houses and is chiefly inhabited by Pullars and Pariahs. Their houses are crowded together without any order with narrow tortuous lanes intervening; the whole place is in a dirty state—heaps of rubbish everywhere. This is hardly to be wondered at, as there are only two galvanized iron dust-bins and two handcarts with three sweepers provided for the whole village. In the main street, the drains are choked with silt and rubbish, and entirely covered in front of the shops. In fact at one spot an upper drain has been formed over the lower one. In the roads there are several cesspools connected with dwellings. Drinking water is obtained from two large wells both of the step pattern—square in shape with retaining walls of large blocks of loosely set stones. When the adjoining tank is full, it is largely resorted to. An open space of ground without any sheds or fence on the side of the main road is used as a weekly market.

New Ayakudi on the opposite side of the main road contains several well-built tiled houses. Very large numbers of cattle are kept in the courtyards. Stable and house refuse is generally collected in any available open space or in the excavations made for building purposes. On the road leading to the tank it is thrown on each side. The establishment for removing it is quite inadequate. On the eastern side prickly-pear is abundant and affords shelter for purposes of nature, as there are no public latrines. Drinking water is obtained from a well on the edge of the tank. It is simply an excavation in the ground with a few steps of stone leading to the water which is fouled by the dirt of feet, &c. It would be advisable to build up this well with platform, parapet wall, &c., as it is largely used, and the only other sources of supply are the tank itself, the bed of which is fouled by human and bestial excreta, and a well in its bed which is covered over when the tank is full. There are a number of Muhammadans in this village, about 350 houses being inhabited by them. For their use two or three sheep are killed daily by butchers in their own backyards. They have their mosque and burial-ground in the centre of the village. On the side of the street leading from the main road, there is a Roman Catholic burial-ground.

Vaccination is in charge of First-class Vaccinator Woodhanda Pillai,—service eighteen years; pay Rs. 18; monthly minimum, 200 successful cases. Register neatly kept in English, entirely manuscript with old form of heading. Lancet clean, forceps not so. In these villages I examined 220 children. Of these, 119 were vaccinated, 88 or 40 per cent. were unprotected, and 13 marked with small-pox. I also verified twenty of his recent cases—all failures. In two result grant schools of 43 children, 29 were vaccinated, 10 or 23·2 per cent. unprotected and 4 marked with small-pox. The chairman and karnam were absent, and birth and death registers not forthcoming.

VIRUPAKSHI AND SAMAYAGUDUR.

Inspected 9th September 1895.

These two villages contain 446 houses and 2,000 inhabitants. The population is said to be decreasing yearly, owing to the difficulty of gaining a livelihood. The majority are labourers working in the fields, or crossing the hills and cutting and carrying bamboos—a day's journey for this purpose being 20 miles. The roads and lanes are fairly clean; only one sweeper is employed for this purpose. A cart is also provided, but as it is too heavy for one man, it is not used. A second sweeper is necessary and might be appointed. The rubbish is, as a rule, collected in excavations from which earth has been dug to build the houses or adjoining walls. Stable refuse is collected in heaps on the outskirts of the villages. This should be kept at least 200 yards away from habitations, and some attempt should be made to prevent the obnoxious practice of digging earth for walls, &c., inside the village. The schoolhouse in Samayagudur is very badly lighted. Two or three windows are required

in the blank wall at the back. All the wells in the neighbourhood are brackish, and the sole source of drinking water is the river Nunganji running close to both the villages. Its bed is now dry, but plenty of water is obtained from shallow pits dug in it. Between the spot at which water is taken by the inhabitants of Virupakshi and that used by those of Samayagudur, the dead of both villages are burnt and buried *in the bed of the river*. I saw several graves belonging to each. This most pernicious and dangerous practice should at once be put a stop to. Moreover, its bed is resorted to for purposes of nature. There is a large weekly market attached to Virupakshi. The ground contains nine tiled sheds with chunam floors, and is fenced with wire running through stone posts. The roofs of the sheds, and the fencing both require repairs at present trifling, but if neglected, they will prove extensive and expensive. A contractor undertakes the cleaning of the ground and the removal of manure and rubbish. He should be directed to remove this after each market day and not allowed to collect it on the spot as at present. It is said that this is the largest market in the division; no well is provided. This should be taken in hand. As the market is on the river bank, water in plenty will probably be obtained at slight cost. If the well were sunk near the market gate on the river bank, it would be of great advantage to the people of the village who at present use pits dug close by; and during the rainy season when the water in the river is muddy and fouled with accumulated excreta and dead bodies, that in the well would be comparatively clear and clean. A watchman is employed to prevent nuisance in the river bed, but his duties would appear to be performed in a very perfunctory manner.

Vaccination is in charge of Second-class Vaccinator R. Gurusawmi Nayudu. I verified in these villages 28 recent cases out of 34 done by him on 30th August—all successful (direct from calf); one wrongly entered. Besides these, I examined 82 children, of whom 67 were vaccinated, 13 or 15·8 per cent. unprotected and 2 marked with small-pox. In the American Mission result grant school at Samayagudur, of 20 pupils examined, 18 were vaccinated, one unprotected and one marked with small-pox. A list of unprotected is kept by the munsif which shows 21 remaining up to date. Nominal lists of those vaccinated are also furnished in vernacular to the village authorities.

The birth and death register is kept by the karnam in vernacular and is up to date.

General Remarks.—The annexed statement shows in tabular form the results of the inspection of children as regards vaccination, which agrees fairly well with the percentage of protected in the whole district as shown by last year's returns, viz., 67·5 or 32·5 unprotected:—

Names of Villages.	Number of children examined.	Number vaccinated.	Number unprotected.	Small-pox.	Percentage of unprotected cases.
Bodikavandanpatti	67	45	18	4	27·0
Allinagaram	171	98	56	17	32·9
Thani	14	12	2	..	14·3
Uttamapalayam	128	58	58	12	45·3
Koravanuth	23	10	11	2	47·8
Gudalur	109	46	58	5	53·2
Cumbum	121	45	47	29	38·8
Oothampuram	94	53	28	13	29·8
Chinnamanur	84	45	33	6	39·3
Devathanapatti	103	68	19	16	18·4
Buttalagundu	207	120	72	15	34·8
Nelakottai	94	68	23	3	24·5
Palakanuth	88	63	16	9	18·2
Sathurapatti	128	91	32	5	25·0
Vallur	98	81	16	1	16·3
Gopalapuram	11	10	1	..	9·1
Anapapatti	27	22	5	..	18·5
Ayakudi	220	119	88	13	40·0
Virupakshi and Samayagudur	82	67	13	2	15·8
Total ..	1,869	1,121	596	152	31·9

Names of Villages.	Number of children examined.	Number vaccinated.	Number unprotected.	Small-pox.	Percentage of unpaotected cases.
Results of Schools examined.					
Uttamapolayam	18	13	3	2	16·7
	22	15	2	5	9·1
	28	20	3	5	10·7
Cumbum	40	16	5	19	12·5
Oothampuram	33	15	3	15	9·1
Chinnamanur	38	24	5	9	13·2
	36	23	1	12	2·8
Buttalagundu	30	13	10	7	33·3
Ayakudi	43	29	10	4	23·2
Samayagudur	20	18	1	1	5·0
Total ..	308	186	43	79	13·9

The large number of failures with glycerine paste during the first half of this year may, I think, be attributed to two causes : first, the faulty method of storing employed, namely, in reeds about 6 inches long by which sufficient protection from contamination is not provided ; secondly, carelessness of vaccinators in retaining the paste too long before use. The same paste in the hands of the vaccinators in Madura town gave excellent results. All the vaccinators seen by me had manuscript registers ; none were furnished with revised form and none had ink-bottles for making immediate entries as required by Circular No. 15, dated 19th October 1894. It is very desirable that all registers should be printed and bound in book form. A revised form was circulated by this office to the President, District Board, and was approved for use by him. Unfortunately the permanent Deputy Inspector of the district died recently, and his successor has not yet taken up his appointment. The acting incumbent is a first-class vaccinator and of course cannot be held responsible.

FORT ST. GEORGE,
18*th October* 1895.

(Signed) C. MALLINS, M.D., Surgn.-Major,
Ag. Inspr. of Vaccination and Dy. Sany. Commr.

No. 1845—S.

Forwarded to Government.

FORT ST. GEORGE,
22*nd October* 1895.

(Signed) W. G. KING, Surgeon-Lieut.-Col.,
Sanitary Commissioner for Madras.

ORDER—No. 2225 L., November 1895.

Communicated to the Local Boards concerned for attention.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the President, District Board, Madura.
„ Sanitary Commissioner.
Editors' Table.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following paper:—

Inspection Notes of the Inspector of Vaccination and Deputy Sanitary Commissioner for Madras.

RURAL TRACTS—MADURA DISTRICT.

Allinagaram.

Inspected 23rd August 1895.

A large village on the main road consisting of 967 houses with a population of 4,926 inhabitants, nearly all agriculturists and labourers. There are no conservancy arrangements. The dead are burned and buried on the river bank. Outside the village there is a large square well without any parapet, abandoned apparently, because the water turned out to be brackish. Its present state is dangerous to children or to passers by in the dark. At the other side of the village in the fields there is a very fine drinking-water well which never dries up. Washing of clothes as at present carried on alongside the mouth of this well, which has no parapet wall, should be prohibited. The low caste inhabitants not being allowed to use this well resort to the stream or to another well at some distance. Vaccination is carried on by first-class vaccinator Venkataram Nayudu. On my arrival, I found about 52 childern collected for examination, all of low castes, and all protected by vaccination or small-pox except three. Including these I examined 171 children, of whom 98 were vaccinated, 56 or 32·9 per cent. were unprotected and 17 were marked with small-pox.

Bodikavandanpatti.

Inspected 23rd August 1895.

A small hamlet of Allanagaram population 304, consists of poorly built mud-walled thatched huts, 47 in all, built without any order, with narrow ill-kept roads intervening. Water-supply from one well outside the village. This dries in April and May when people resort to the river.

Vaccination is carried on by first-class vaccinator Venkataram Nayudu. Of 67 children examined, 45 were vaccinated, 18 unprotected and 4 bore marks of small-pox.

Tani.

Inspected 23rd August 1895.

A small roadside hamlet of eight or ten houses selected as a central position for a market place. The latter is a large enclosure, originally fenced with wire (which has entirely disappeared) running through stone uprights. There are six well-built sheds in the market place, each divided into eighteen stalls, nine on either side. Many of these are used as rest-houses by travellers and wandering beggars. There are three large bandy pettahs, two enclosed with brick walls and one with mud. They are kept fairly clean.

Vaccination is carried on by first-class vaccinator Venkataram Nayudu. Of fourteen children examined, two were unprotected by vaccination or small-pox.

Uttamapalaiyam.

Inspected 24th August 1895.

A large village of 7,475 inhabitants forming a major union, divided into two parts by the main road from Cumbum. On the side of this road the principal shops are located. The back streets are narrow and irregular, but fairly clean. Large numbers of cattle are kept in the backyards, which are in a very dirty state, generally half filled with stable refuse. There are no public latrines, but a toty is employed with an iron hand-cart to clean the streets, which are resorted to for purposes of nature. This should not be allowed as there are plenty of fields close by which might be utilized with advantage to the owners. There are eleven circular iron dust-bins, the contents of which are removed by two carts and four sweepers under the superintendence of a maistry, and carted outside the village and sold to the cultivators. There are six wells in the town, four being used for drinking purposes. All of these wells are so constructed that persons drawing water stand on the edge inside the parapet walls or on stones across the mouth of the well, thus allowing of the contamination of the water by the dirt of their feet, &c. The parapet walls should be continuous with the lining walls of the wells, and the platforms should be constructed outside these. The river and irrigation channel flowing by the town are also used. There is a weekly market held on the roadside in Terkateroo for the sale of grain and vegetables. In the village there are two butchers' shops, miserable shanties of leaves and tatties measuring about 8′×5′. The roofs and walls afford little or no protection from sun or rain. They should be permitted to build proper shelters. The sheep and goats are slaughtered in the backyards adjoining the butchers' houses.

Vaccination is in charge of acting second-class vaccinator Govindaswami Nayudu. Of 128 children under six years of age examined in the streets and houses. 58 were vaccinated, 58 or 45·3 per cent. were unprotected and 12 were marked with small-pox. In a result grant Muhammadan school of 18, 13 were vaccinated, 3 unprotected and 2 marked with small-pox. In a Hindu pial school of 22 children, 15 were vaccinated, 2 unprotected and 5 bore marks of small-pox. In this school the children were arranged in such a way that the light fell on their faces instead of on their books, while the black boards and diagram maps, &c., were on the dark side of the room instead of facing the light. This should be rectified. In the Roman Catholic school, of 28 children examined, 20 were vaccinated, 3 were unprotected, and 5 marked with small-pox. It would be well to insist on personal cleanliness in this school, as the pupils were the dirtiest lot I have seen for some time. All operations are direct from the calf. I saw one calf ready for use; the vesicles were well formed and the animal in very good condition.

Kurvanut.

Inspected 24th August 1895.

A small hamlet at the foot of the ghât containing about thirty houses inhabited by cartmen and cultivators. The people here suffer greatly from fever and consequent anæmia and debility. Nearly every one has an enlarged spleen. The prevalence of fever is probably due to drinking the water of the neighbouring hill streams which drain the forest lands above. Vaccination is in charge of acting second-class vaccinator Govindaswami Nayudu. Examined 23 children—10 vaccinated, 11 unprotected and 2 marked with small-pox.

Periyar.

Inspected 25th and 26th August 1895.

This village has arisen in consequence of the water project in progress for the past seven or eight years and forms the camp of the officers engaged and the coolies employed under them. The population is about 3,000, of whom the great majority are coolies. For these, three camps have been built of thatched lines of huts on the left bank of the river below the dam. On the right side the houses of the Engineer officers and their staff of subordinates, the hospital and bazaar are located. The upper portion of the river below the dam is reserved for drinking purposes, as well as five wells sunk on the right bank. The cooly lines are built on the slopes of three small hillocks. Earthen channels have been cut to carry off the surface drainage, which flows naturally towards the river. Each camp is provided with latrines for males and females, a lascar and two toties being provided for each and living close to their work. The latrines are mud-walled enclosures. Excreta is removed in baskets from the smaller ones, and in carts from the larger to pits dug at a convenient distance, where it is buried, each day's deposit being covered with black earth. A sanitary inspector is employed to supervise the arrangements, reports being made daily to the Chief Engineer in charge of the works. The conservancy establishment consists of four lascars and twenty-three sweepers at a monthly cost of Rs. 108. The sanitary condition of the camp is thus carefully attended to. All cases of cholera which have occurred have been traced to importation; the last outbreak, owing to prompt and efficient measures taken to check its progress, was confined to a few sporadic cases. The men employed suffer greatly from fever and consequent anæmia. The most unhealthy months are April, May and June when almost everybody leaves the place and no work can be carried on. June is shown by the hospital statistics to be the worst month in the year for fever. No improvement as regards the prevalence of fever has followed on the clearing of the jungle which formerly surrounded the camps on every side, nor has any connection been established between any particular class of labour (such as earth cutting) and the liability to fever, though it would appear that those working in water are liable to more severe attacks. The water of the lake is largely used for drinking by those employed in its vicinity, which probably accounts for the prevalence of the fever. It is a curious fact that this water emits no smell when disturbed by rowing or the screw of the steam launch, but when it falls from a height through an aperture in the dam, and is tossed and broken into spray over rocks as it falls, a most pungent and disagreeable odour is perceptible, said to be especially so after sunset, so much so that the windows of houses near have to be closed to exclude it. This may perhaps be due to impregnation with vegetable organic matter derived from the vegetable mould of the submerged forest. The water has been analyzed by the Chemical Examiner and pronounced to be usable.

Vaccination is in charge of the resident Assistant Surgeon and is not properly carried on. The register shows only five or six cases vaccinated every month and a large number of unprotected children are to be seen. The Deputy Inspector has been ordered to arrange for a calf and to protect all requiring it. I verified six cases, not one of which was correctly entered, the results having evidently been entered on the date of vaccination.

Registration is in charge of the Assistant Surgeon, reports being made by the sanitary inspector and lascars in each line.

Gudalur.

Inspected 27th August 1895.

A large village close to the main road consisting of 1,400 houses with a population of nearly 9,000. The majority of the dwellings are small thatched mud-walled huts; some of those belonging to wealthy inhabitants have masonry walls and tiled roofs. The sanitary condition of the village is looked after by a sanitary association consisting of twelve members. Their chief source of income is a house-tax which should produce Rs. 700 yearly, but only between Rs. 400 and Rs. 500 can be collected as the well-to-do and influential members of the community decline to pay, so I was told by the vice-president and two members of the association, who are anxious to have the place formed into a union. With this income two sweepers and two carts are employed for sweeping the roads and lanes and carting away the rubbish. The latter is collected in pits outside the village and burnt or used as manure. There are no latrines; the people resort to the adjoining fields. The roads are uneven and rough, but are kept fairly clean. The inhabitants are all employed in agriculture,

and consequently a very large number of cattle (said to be 4,000) belong to the village. It is said that only milch cattle and buffaloes are kept in the courtyards, while the others are hoarded together outside the town. This was certainly true as regards the courtyards inspected by me. In every open space heaps of manure are to be seen. Efforts should be made to collect this outside the village. Between the upper and lower portions of the village there is a large open space where rubbish is collected in heaps and burnt, the ashes being blown about the wind and creating a nuisance. This might be put a stop to and the ground kept clean. The practice of filling excavations and depressions of the ground near dwellings with rubbish should also be prohibited. Drinking-water is obtained from a large square well about quarter mile from the village, sunk by the sanitary association. It has a very good platform and drain surrounding it, but requires a parapet wall. The present arrangement of cross beams across the mouth, on the same level as the outer-platform is not a good one, as waste water returns into the well fouled by the washings of the limbs and feet of those drawing it. Low caste people obtain their water from a nullah about 1 mile distant. Arrangements should be made to provide them with a well nearer the village. There are about 200 Muhammadans in the town who slaughter animals as required in their own backyards. The dead are buried about 1 mile east of the village.

Vaccination is carried on by acting second-class vaccinator Govindaswami Nayudu. Of 109 children examined, 46 were vaccinated, 58 or 53·2 per cent. were unprotected and 5 marked with small-pox.

Cumbum and Uttampuram.

Inspected 27*th August* 1895.

These two villages are only separated by the breadth of one street, and together form a union. The former is inhabited chiefly by Hindus and the latter by Muhammadans and Pariahs. All are engaged in field work. There are said to be 4,000 cattle in the town. Most of them are kept in the backyards, but in several cases a number of owners herd their cattle together in walled enclosures, of which there is a number in the town, especially in Uttampuram. All the manure from these places is collected in unsightly heaps all round the outskirts of the village. The roads are, as a rule, well made and in good order, and kept clean, except in the Pariah quarters, where rubbish is collected in every vacant corner. The conservancy staff consists of four sweepers and five carts for the two villages. There are 34 iron dust-bins to be cleaned out, the contents being carted to the fields or waste ground adjoining the villages. In some places these dust-bins are knocked over by children and cattle. To avoid this they might be fixed with three pegs. There are no latrines; all the people resort to the fields. Drinking-water is obtained from a tank Totapungaram close to Uttampuram and from the river Suruli about one mile distant. This latter forms the chief supply, as the tank is dry during April, May and June. There are several wells in the town, but all are brackish. The tank is said to be specially reserved for drinking purposes, but no watchman is appointed and cattle are watered in it. It derives its supply from the west side of the hills close by.

Vaccination is carried on by acting second-class vaccinator Govindaswami Nayudu. Of 121 children examined in Cumbum village, 45 were vaccinated, 47 or 38·8 per cent. unprotected and 29 marked with small-pox; in Uttampuram of 94 examined, 53 were vaccinated, 28 or 29·8 per cent. unprotected and 3 marked with small-pox. In the salary result school, Cumbum, of 40 present, 16 were vaccinated, 5 unprotected and 19 marked with small-pox; and of 33 children in pial schools, 15 were vaccinated 3 unprotected and 15 marked with small-pox. From the large proportion of children thus shown as having been attacked with small-pox and from the number of older children and adults similarly marked in the village, it is evident that vaccination has not been properly carried on. The last outbreak occurred during last year.

Chinnamanur.

Inspected 28*th August* 1895.

This village, in conjunction with Karukatangalam, forms a union. The main roads are in fair order but the back lanes and smaller roads are very rough. The conservancy establishment consists of four sweepers and two hand-carts. There are only ten dust-bins for the whole union. As there are 1,043 houses with a population of 7,033, this establishment is quite inadequate and consequently heaps of rubbish are collected all over the village in backyards and on waste ground. In nearly every courtyard there are excavations from which the mud for the wall has been dug and these are invariably filled up with rubbish and house refuse. This should not be allowed. Existing excavations should be filled up with clean earth or sand, and a spot set apart outside the village from which earth can be taken for building purposes. There are a large number of cattle in the town, all kept in the backyards. There are no latrines; fields or waste land adjoining are resorted to for purposes of nature. There is a great want of good drinking-water. All the public wells in the village are brackish, except one in the market place which requires to be deepened as at present, it only holds water during the rainy season. The present supply is obtained from an irrigation channel, about $\frac{3}{4}$ mile distant, or, from the Ursuli river, $1\frac{1}{2}$ miles away. The latter is the only source during the hot season. No means are taken to prevent contamination and fouling of the water, which is used for bathing, washing clothes, cattle, &c., and for drinking purposes indiscriminately. A certain portion should be reserved for drinking, and a watchman appointed to see that bathing and washing clothes, &c., are carried on lower down the stream. There is a market attached to the village, one shed of eighteen stalls and a second of similar dimensions under construction. The wire forming the fence around it and the gates have disappeared, only the stone uprights remaining. The dead are buried about 2 or 3 furlongs east of the village.

Vaccination is carried on by acting 2nd-class vaccinator Govindaswami Nayudu. Out of 84 children examined in the streets and houses, 45 were vaccinated, 33 or 39.3 per cent. were unprotected and 6 marked with small-pox. In the Upper Primary Result Grant school of 38 children, 24 were vaccinated, 5 unprotected and 9 marked with small-pox. This school requires re-roofing; the present roof admits both sun and rain. In a second Result Grant school — of 36 children — 23 were vaccinated, 1 unprotected and 12 marked with small-pox. This school is located in an old mantapam, which is unsuited for the purpose, as both light and ventilation are defective. This might be remedied by making three or four good-sized windows on the blank wall, if the surroundings permit of it.

Devadanapatti.

Inspected 29*th August* 1895.

A village of 700 houses and a population of 5,055 on the side of the main road. There are no conservancy arrangements. The roads are rough and not cleanly kept. Extensive excavations have been made for the construction of a new road through the village towards the fields. These are now being filled up with rubbish which gives rise to a foul smell and should be put a stop to. The dirtiest spot in the village is a narrow roadway running past the house of the late karnam Chinnaswami Pillai. A masonry cistern has been constructed outside the wall to receive liquid refuse from the house, all of which is baled out on the road forming an offensive puddle for about thirty yards from the cistern. The inhabitants resort to the fields for the purposes of nature. Drinking-water is obtained from two fine wells in the village which never dry in the hot season. The dead are buried about one mile to the north of the village. A weekly market is held in two large walled enclosures, the larger of which is furnished with 2 sheds of 18 stalls each on the road side. There are about 200 Muhammadan houses here with two butchers' shops. Two animals are slaughtered daily in the backyards of the owners.

Vaccination is carried on by 1st-class vaccinator Venkataram Nayudu and acting 2nd-class vaccinator A. Narainswami Nayudu. Both required new lancets;

the forceps used for lymph extraction is not cleanly kept. Both vaccinators keep their registers in vernacular. I verified 34 recent cases, 26 done by the 1st-class vaccinator and 8 by the 2nd-class man during the current month. All were correctly entered. Besides these, I examined 108 children by a house to house visitation. Of these, 68 were vaccinated, 19 or 18·4 per cent. unprotected and 16 marked with small-pox.

The register of births and deaths and also the unprotected list were kept up to date by the gumastah.

Butlagundu.

Inspected 29th August 1895.

A union village containing 1,490 houses and 11,503 inhabitants. Nearly all are engaged in agriculture. The roads and lanes are rough, but fairly clean. No side-drains exist, except on the main road and in Bazaar street, and a few streets close by. In all of these the drains are blocked with silt and covered with large stones opposite the shops and dwellings. These stones should only be permitted opposite the entrance of each house—the ramainder should be removed and the drains cleaned out. Waste water from the Vellalatheru well is carried by a rough stone drain into an adjoining street which it converts into a noxious drain. There are no dust-bins. Six sweepers with three carts are provided to collect and remove the house refuse and rubbish of the village. This is collected on vacant ground, about half a furlong from the town and sold annually by auction. There are no latrines; the fields adjoining are used instead. Large numbers of cattle and buffaloes are kept in the backyards of houses, which are consequently in a dirty state. Manure and heaps of rubbish are collected on vacant ground in the back lanes. Fish are sold in a narrow lane in the Muhammadan quarter contrary to the orders of the Chairman. There is a large open space on the west of the town much more suitable for the purpose. Drinking-water is obtained from the Mariyalar river and from wells in the town. Of these there are eleven, but many of them contain only brackish water and others are dry except during the rainy season. The Vellalatheru well before mentioned never dries up and yields good water, but is not properly conserved. There is no parapet wall, and an iron frame work across the mouth, on which those drawing water stand permits contamination. All the wells are of the same pattern and have foul pools of waste water close by. One near the Primary Result Grant school on the western side of the town has two logs of wood across the mouth; the top of the side wall is out of repair and below the level of the ground; it should be raised as a parapet wall. In the market place there is a fine square well with cross beam and pulleys, and cattle trough attached. It requires deepening and cleaning. The market is a walled enclosure in the middle of the town containing two sheds—tiled roofs on stone pillars—one of which was in use as a rest-house for travellers and cattle at the time of my visit. There is no gate to the market place. If this were provided, travellers and animals could be excluded. Sheep and goats are slaughtered on the open ground in the market on market days. The spot where this is done is easily detected being discoloured and soaked with blood. It would not entail much expense to wall off a corner of the market for this purpose and provide a cemented floor with cross beams and hooks for skinning animals and cistern. In the town itself it is said that eight or ten animals are killed daily in the court-yards of the butchers, so that a simple form of slaughtering, such as now described, would be daily required and might be made a source of income to the union. There are two burial-grounds—one for Muhammadans—a large piece of ground enclosed with a good wall on the western side of the town and the second towards the south-east.

Vaccination is carried on by acting 1st-class vaccinator G. Muniswami Nayudu. In the village I examined in the streets and houses 195 children. Of these, 120 were vaccinated, 72 or 34·8 per cent. were unprotected and 15 marked with small-pox. I also visited two schools. The Primary Result Grant school contained neither teacher nor pupils, having been closed "on account of a wedding." The school-room was in use as a dwelling. In the second, a Result Grant Brahmin school, 30 boys were present, but the teacher had gone "to a village." Of these boys, 13 were vaccinated, 10 unprotected and 7 marked with small-pox.

The register of births and deaths is kept by the village munsif who was absent attending court on a summons.

Nelakottai.

Inspected 30th August 1895.

A union village containing 921 houses with a population of 3,987. The main roads are cleanly kept and generally provided with drains, some with masonry sides and others square earthen channels. Care should be taken to keep these drains free of silt and to prohibit house-holders from sweeping street and house refuse into them. There are no dust-bins. Two hand carts and one bullock cart with a staff of four sweepers and one maistry are employed to collect rubbish and remove it outside the village. There are no latrines, waste ground and fields adjoining being resorted to for purposes of nature. Drinking-water is obtained from wells; all have parapet walls outside the platform with the mouth of the well crossed by wooden beams or iron frame work, or else, are provided with steps. One private well has an excellent system of troughs attached for the use of dhobies with a drain leading off waste water into a garden. Those wells which do not dry up in the hot season, and they are few in number, should be carefully conserved. Attached to the chattram is a large well with steps leading to it, which never dries up. In the village there is a place set apart for slaughtering sheep and goats. A narrow passage guarded by a curtain of gunny bags leads to a small square enclosure behind the houses on the street. At one side are two stalls for selling meat—miserable thatched sheds with earthen floors—and on the ground adjoining, the animals are killed and cleaned, three bamboos forming a triangle on which the carcasses are hung for skinning, &c. It would, perhaps, be better and more useful if an enclosure with cemented floor was attached to the market outside the village for this purpose. There is a very fine market on the opposite side of the main road with a separate yard for sheep. The whole place is enclosed with mud walls with chunam copings. It is provided with one tiled shed containing eighteen stalls for the sale of grain and vegetables and three open tiled sheds without partition walls. Two sweepers are employed to keep it clean. There is also a large square well with cattle trough attached, but it does not appear to be used.

Vaccination is in charge of acting 1st-class vaccinator G. Muniswami Nayudu and acting Probationer Sundaram Pillai. Both keep their records in English neatly and up to date. I verified 11 recent cases done by the former, all correctly entered. In the village I examined 94 children, of whom 68 were vaccinated, 23 or 24·5 per cent. were unprotected and 3 marked with small-pox.

The birth and death registers and the unprotected list are kept by the karnam in vernacular and up to date.

Mutulagaputti and Menakshi Nayakanputti.

Inspected 2nd September 1895.

Visited the above two hamlets in the neighbourhood of Dindigul to inspect the work of 1st-class vaccinator M. Sudalamutu Pillai and verified 25 recent cases, all entered in his register as vaccinated on the 10th August in the former, and 16 in the latter. All were successful and correctly returned. Out of the total vaccinated by him on this date in these villages only two were absent.

Palkanut.

Inspected 3rd September 1895.

A small village on the main road, 15 miles from Dindigul. Inhabitants all engaged in field work. No roads, simply circuitous paths between thatched mud-walled huts built without any order or system. Water-supply from large step-well sunk by the Local Fund authorities which does not dry in the hot season. Low caste people use a well in the compound of the District officer's bungalow and Police station. When this is dry, wells in the adjoining fields are resorted to. There are no conservancy arrangements. Village fairly clean but surrounded with prickly-pear.

Vaccination is in charge of 2nd class vaccinator P. Shunmugam Pillai, service 13 years; pay Rs. 10 monthly; minimum number 150 successful cases. Register neatly kept in Tamil up to date. All operations direct from the calf or from scabs. No work done here since April last. The new form of headings for nominal register has not yet been supplied; the latter are simply manuscript forms. No nominal lists to be found later than February 1894. Of 88 children examined from house to house, 63 were vaccinated, 16 or 18·2 per cent. were unprotected, and 9 marked with small-pox.

The birth and death register is kept in vernacular up to date by the village munsif. Also a list showing the number of unprotected children in the village.

Suterapatti.

Inspected 5th September 1895.

A large village lately (8th August) formed into a union. Up to the present no conservancy establishment has been entertained except one sweeper woman to keep the roads clean. The main road to Palni divides the village into two parts. On either side of this road are the traders' shops for grain, vegetable, &c. In front of these the drains are coverd with heavy slabs of stones and choked with rubbish. Only such stones as are necessary to give entrance to the dwellings should be permitted; the remainder should be removed and the drains kept free and clean. The houses are of the usual type built without any attempt at orderly arrangements, the materials for the construction of the walls having been dug out on the spot. All through the village there are large excavations, in every instance being filled in with refuse and rubbish. Arrangements should be made to put a stop to this practice. One of these excavations is alongside a Muhammadan grave-yard on the south side surrounded by habitations. It should be filled in with earth and the grave-yard closed. On the north side there are several narrow alleys. In this quarter four or five houses have recently been burnt down. By removing some of these the roads might be opened out better. Drinking-water is obtained from a fine well of the step pattern on the south side. A watchman should be appointed to prevent the pollution of the water by washing of clothes, &c., as at present carried on. At the back of the zemindar's house is a well used for domestic purposes but not for drinking. He has erected a pump over it and cistern with tap for drawing off the water. He would earn the gratitude of the present and future generations of inhabitants if he could be induced to provide a good pump and covered cistern with several taps in connection with the drinking-water well, as at present the process of procuring water by the existing rough steps is a laborious and insanitary one. There is another large well in the northern portion of the village used for domestic purposes. House refuse and rubbish from the houses around it are thrown around its mouth. This rubbish should be removed and the practice prohibited.

Vaccination is carried on by 2nd-class vaccinator K. Ramanjam, formerly by probationary vaccinator Govindaswami Nayudu. The former was ordered by letter on 31st August to meet me here but did not appear. His nominal list of July last shows eleven cases vaccinated. Of these, I verified five. The probationary vaccinator's list of March shows 81 cases vaccinated. I could only verify six of these, although I went round the village from house to house with the munsif. Of one-hundred and twenty-eight children examined in this way, 91 were vaccinated, 30 or 25·0 per cent. were unprotected and 5 were marked with small-pox. In the village of Vallur, about one mile from Suterapatti, I verified eight out of fourteen cases said to be vaccinated in July last by 2nd-class vaccinator K. Ramanjam. One had since died. Of 98 children examined here from house to house, 81 were vaccinated, 16 or 16·3 per cent. unprotected, and 1 marked with small-pox.

In Gopalapuram, a small hamlet of fifteen or twenty houses on the main road, I verified four cases, being all reported as vaccinated by this same man. Of eleven other children examined, only one was unprotected.

In another hamlet, Anapapatti, I verified six out of eight cases done by him. Of 27 other children examined, 5 were unprotected.

Nominal lists are kept and were used by me for verification.

The register of births and deaths is kept by the karnam who was absent at the time of my visit.

Ayakudi.

Inspected 8th September 1895.

The two villages of old and new Ayakudi together with the hamlet of Oralapuram form a union. Old Ayakudi contains 1,234 houses and is chiefly inhabited by Pullars and Pariahs. Their houses are crowded together without any order with narrow tortuous lanes intervening; the whole place is in a dirty state—heaps of rubbish everywhere. This is hardly to be wondered at, as there are only two galvanized iron dust-bins and two handcarts with three sweepers provided for the whole village. In the main street, the drains are choked with silt and rubbish, and entirely covered in front of the shops. In fact at one spot an upper drain has been formed over the lower one. In the roads there are several cesspools connected with dwellings. Drinking-water is obtained from two large wells both of the step pattern—square in shape with retaining walls of large blocks of loosely set stones. When the adjoining tank is full, it is largely resorted to. An open space of ground without any sheds or fence on the side of the main road is used as a weekly market.

New Ayakudi on the opposite side of the main road contains several well-built tiled houses. Very large numbers of cattle are kept in the courtyards. Stable and house refuse is generally collected in any available open space or in the excavations made for building purposes. On the road leading to the tank it is thrown on each side. The establishment for removing it is quite inadequate. On the eastern side prickly-pear is abundant and affords shelter for purposes of nature, as there are no public latrines. Drinking-water is obtained from a well on the edge of the tank. It is simply an excavation in the ground with a few steps of stone leading to the water which is fouled by the dirt of feet, &c. It would be advisable to build up this well with platform, parapet wall, &c., as it is largely used, and the only other sources of supply are the tank itself, the bed of which is fouled by human and bestial excreta, and a well in its bed which is covered over when the tank is full. There are a number of Muhammadans in this village, about 350 houses being inhabited by them. For their use two or three sheep are killed daily by butchers in their own backyards. They have their mosque and burial-ground in the centre of the village. On the side of the street leading from the main road, there is a Roman Catholic burial-ground.

Vaccination is in charge of 1st-class vaccinator Woodhanda Pillai,—service eighteen years; pay Rs. 18; monthly minimum, 200 successful cases. Register neatly kept in English, entirely manuscript with old form of heading. Lancet clean, forceps not so. In these villages I examined 220 children. Of these, 119 were vaccinated, 88 or 40 per cent. were unprotected, and 13 marked with small-pox. I also verified twenty of his recent cases—all failures. In two result grant schools of 43 children, 29 were vaccinated, 10 or 23·2 per cent. unprotected and 4 marked with small-pox. The chairman and karnam were absent, and birth and death registers not forthcoming.

Virupakshi and Samayagudur.

Inspected 9th September 1895.

These two villages contain 446 houses and 2,000 inhabitants. The population is said to be decreasing yearly, owing to the difficulty of gaining a livelihood. The majority are labourers working in the fields, or crossing the hills and cutting and carrying bamboos—a day's journey for this purpose being 20 miles. The roads and lanes are fairly clean; only one sweeper is employed for this purpose. A cart is also provided, but as it is too heavy for one man, it is not used. A second sweeper is necessary and might be appointed. The rubbish is, as a rule, collected in excavations from which earth has been dug to build the houses or adjoining walls. Stable refuse is collected in heaps on the outskirts of the villages. This should be kept at least 200 yards away from habitations, and some attempt should be made to prevent the obnoxious practice of digging earth for walls, &c., inside the village. The school-house in Samayagudur is very badly lighted. Two or three windows are required

in the blank wall at the back. All the wells in the neighbourhood are brackish, and the sole source of drinking-water is the river Nunganji running close to both the villages. Its bed is now dry, but plenty of water is obtained from shallow pits dug in it. Between the spot at which water is taken by the inhabitants of Virupakshi and that used by those of Samayagudur, the dead of both villages are burnt and buried *in the bed of the river*. I saw several graves belonging to each. This most pernicious and dangerous practice should at once be put a stop to. Moreover, its bed is resorted to for purposes of nature. There is a large weekly market attached to Virupakshi. The ground contains nine tiled sheds with chunam floors, and is fenced with wire running through stone posts. The roofs of the sheds, and the fencing both require repairs at present trifling, but if neglected, they will prove extensive and expensive. A contractor undertakes the cleaning of the ground and the removal of manure and rubbish. He should be directed to remove this after each market day and not allowed to collect it on the spot as at present. It is said that this is the largest market in the division; no well is provided. This should be taken in hand. As the market is on the river bank, water in plenty will probably be obtained at slight cost. If the well were sunk near the market gate on the river bank, it would be of great advantage to the people of the village who at present use pits dug close by; and during the rainy season when the water in the river is muddy and fouled with accumulated excreta and dead bodies, that in the well would be comparatively clear and clean. A watchman is employed to prevent nuisance in the river bed, but his duties would appear to be performed in a very perfunctory manner.

Vaccination is in charge of 2nd-class vaccinator R. Guruswami Nayudu. I verified in these villages 28 recent cases out of 34 done by him on 30th August—all successful (direct from calf); one wrongly entered. Besides these, I examined 82 children, of whom 67 were vaccinated, 13 or 15·8 per cent. unprotected and 2 marked with small-pox. In the American Mission result grant school at Samayagudur, of 20 pupils examined, 18 were vaccinated, one unprotected and one marked with small-pox. A list of unprotected is kept by the munsif which shows 21 remaining up to date. Nominal lists of those vaccinated are also furnished in vernacular to the village authorities.

The birth and death register is kept by the karnam in vernacular and is up to date.

General Remarks.—The annexed statement shows in tabular form the results of the inspection of children as regards vaccination, which agrees fairly well with the percentage of protected in the whole district as shown by last year's returns, viz., 67·5 or 32·5 unprotected :—

Names of Villages.	Number of children examined.	Number vaccinated.	Number unprotected.	Small-pox.	Percentage of unprotected cases.
Bodikavandanpatti	67	45	18	4	27·0
Allinagaram	171	98	56	17	32·9
Tani	14	12	2	..	14·3
Uttamapalaiyam	128	58	58	12	45·3
Kurvanut	23	10	11	2	47·8
Gudalur	109	46	58	5	53·2
Cumbum	121	45	47	29	38·8
Utampuram	94	53	28	13	29·8
Chinnamanur	84	45	33	6	39·3
Devadanapatti	103	68	19	16	18·4
Butlagundu	207	120	72	15	34·8
Nelakottai	94	68	23	3	24·5
Palkanut	88	63	16	9	18·2
Suterapatti	128	91	32	5	25·0
Vallur	98	81	16	1	16·3
Gopalapuram	11	10	1	..	9·1
Anapapatti	27	22	5	..	18·5
Ayakudi	220	119	88	13	40·0
Virupakshi and Samayagudur	82	67	13	2	15·8
Total	1,869	1,121	596	152	31·9

Names of Villages.	Number of children examined.	Number vaccinated.	Number unprotected.	Small-pox.	Percentage of unprotected cases.
Results of Schools examined.					
Uttamapalaiyam	18	13	3	2	16·7
	22	15	2	5	9·1
	28	20	3	5	10·7
	40	16	5	19	12·5
Cumbum	33	15	3	15	9·1
Utampuram	38	24	5	9	13·2
Chinnamanur	36	23	1	12	2·8
	30	13	10	7	33·3
Butlagundu	43	29	10	4	23·2
Ayakudi	20	18	1	1	5·0
Samayagudur					
Total	308	186	43	79	13·9

The large number of failures with glycerine paste during the first half of this year may, I think, be attributed to two causes: first, the faulty method of storing employed, namely, in reeds about 6 inches long by which sufficient protection from contamination is not provided; secondly, carelessness of vaccinators in retaining the paste too long before use. The same paste in the hands of the vaccinators in Madura town gave excellent results. All the vaccinators seen by me had manuscript registers; none were furnished with revised form and none had ink-bottles for making immediate entries as required by Circular No. 15, dated 19th October 1894. It is very desirable that all registers should be printed and bound in book form. A revised form was circulated by this office to the President, District Board, and was approved for use by him. Unfortunately the permanent Deputy Inspector of the district died recently, and his successor has not yet taken up his appointment. The acting incumbent is a first-class vaccinator and of course cannot be held responsible.

Fort St. George,
18*th October* 1895.

(Signed) C. MALLINS, M.D., Surgn.-Major,
Ag. Inspr. of Vaccination and Dy. Sany. Commr.

No. 1845-S.

Forwarded to Government.

Fort St. George,
22*nd October* 1895.

(Signed) W. G. KING, Surgeon-Lieut.-Col.,
Sanitary Commissioner for Madras.

Order—No. 2225 L., dated 21st November 1895.

Communicated to the Local Boards concerned for attention.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the President, District Board, Madura.
" Sanitary Commissioner.
Editors' Table.

Exd. T. K. Narayana Iyengar.

Govt. of {1895} Madras.

LOCAL AND MUNICIPAL.

Issued

Recd. *Encl.*

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NOVEMBER.

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