Public Works (1896) Department.

G.O., No. 2011W

Dated 13 July 1896

[Despatch Abstract.]

Laccadive Islands - Proc
Political Dept regarding report
on the inspection of the —
Communicated to the Supt &
Engineer Cochin

[P. W.-14.
1,000—6-8-96.]

BACK PAPERS.

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

FURTHER PAPERS.

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

No. 373, Political, 11th June 1896.

GOVERNMENT OF MADRAS.

POLITICAL DEPARTMENT.

Read—again the following papers:—

G.O., No. 750, Political, dated 9th November 1893.

Abstract.—Recording Proceedings, Public Works Department, deputing Mr. Baker, Assistant Engineer, to inspect the lagoons in Androth and other islands and report whether it would be feasible to blast a passage into them.

G.O., Nos. 97, 98, Marine, dated 19th March 1894.

Abstract.—Passing orders on the question of purchasing a steamer for the use of Government officers proceeding on inspection duty.

G.O., No. 232, Political, dated 7th April 1894.

Abstract.—Recording Proceedings, Public Works Department, directing that Mr. Baker's deputation to the Laccadives be deferred till the next Government steamer visits the islands and that in the meanwhile the requisite men and materials be collected.

Read also the following papers:—

Proceedings of the Board of Revenue (Land Revenue), No. 166, dated 12th May 1896.

Read—the following papers:—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Munjéri, 24th March 1896, Dis. No. 33-1-1.

I have the honour to submit my report on my recent visit to the Laccadive Islands and Minicoy.

2. The pearl-fishery steamer *Margarita* arrived at Calicut on the 6th December 1895 and left on the 9th for Minicoy with the District Medical and Sanitary officer and myself. As Mr. Baker failed to find the island, we returned to Calicut on the 13th for coal and water. Mr. Swann, Reserve Port officer, was sent to relieve Mr. Baker, and the *Margarita* left again on the 21st for Kalpeni. The islands were visited in the following order: Kalpeni, Kavarathi, Agathi, Kavarathi, Androth and Minicoy. On the second day of our stay at Kavarathi there was a heavy swell and we went on to Agathi, where the steamer can enter the lagoon and returned again to Kavarathi to finish the work there. From Androth the steamer returned to Calicut to bring the District Medical and Sanitary officer and a Public Works Department party to blast the entrance into the reef. After dropping the Public Works Department party at Calicut, the steamer proceeded to Minicoy and finally returned to Calicut on the 7th February 1896.

3. *Kalpeni.*—Five days were spent on this island. The lands granted on cowle by Messrs. Brodie and Underwood in 1880 and 1882 were inspected and the rents payable enhanced from 284 thulams and 43 paloms to 301 thulams and 56 paloms. Five plots of lands were also inspected, on which reduction of rent was claimed and remissions, amounting to 6 thulams and 30 paloms, were granted. One fresh cowle was given. Some lands converted into paddy flats had been assessed by the amin and his assessments were confirmed. The three plots of land, alluded to by Mr. Dumergue in paragraph 14 of his report and by Mr. Batten in paragraph 18 of his report, were inspected and found to have been fully planted up.

4. The amin only kept two registers—criminal and civil. He was ordered to open a third, or miscellaneous register, as the present arrangement leads to some very curious classification. A few cases were pending principally because of the absence of one or other of the parties. A register for applications for copies was ordered to be opened.

5. There were 81 petitions for disposal, some of them duplicates presented on the island, of petitions presented previously on the mainland. All were disposed of except two, which were left to be compromised. A few petty petitions were referred to the amin for disposal. None of them were of special interest or importance.

6. The amin Ibrahim Kutti is an old man who has been a long time in office. He does not wish to resign, and I left him in office for another year, with instructions to be a little more prompt in his work and to have his registers better kept. He is illiterate, and the permanent gumastah has been ill for the greater part of 1895.

7. The school had been open from the 1st January 1893 in accordance with Mr. Batten's order (paragraph 21 of his report), but was again closed about the beginning of April 1895, on account of the gumastah's illness, and the allowance of Rs. 3 a month will be withheld from the 1st April. No one on the island is competent for the post, and I am making inquiries on the mainland to see if I can get any one to go to the island at a reasonable rate of pay.

8. The anchorage at the island is exposed, but if two rocks were blasted, a passage into the reef would be available with a minimum depth of 11 feet of water.

9. The birth and death registers were not well kept: in 1895 the work had been neglected owing to the illness of the gumastah. The necessary orders were issued.

10. Government sanctioned a sum of Rs. 200 for building a new cutcherry on the island and Mr. Bradley promised to send the amin a plan. Nothing had been done up to time of my visit. I have now ordered the amin to pull down the cage in the present building in order to make it more suitable for a court room and to build another room for the accommodation of visiting officers. The cost will not exceed Rs. 75.

11. *Agathi.*—Six days were spent on this island. Five survey plots of pandarom land left in charge of the amin were inspected: progress has been made in planting them up, and the amin was ordered to use the nett receipts from the lands in further planting. Another piece of cowle land was resigned from 1st January 1896, and the amin ordered to take charge of it. Remissions, amounting to 1 thulam and 20 palams, were granted on two pieces of cowle land in consequence of trees having gone out of bearing.

12. The four islets of Bungaram, Tinnakara, Parli and Kalpitti are now in the hands of one man; he petitioned, in February 1891, for remission on the ground of damage done by the storm of 1891, and the matter had been left for disposal on the island. Pending disposal the rent due on the 1st April 1894 and 1895 had not been paid. Mr. Batten remarked that the damage done in Agathi was not as great as in Kavarathi, but that the dependent islets had suffered more than the main island. I remitted Rs. 250 a year for seven years from the 1st April 1894, as it was reported that 550 trees had been blown down and others rendered unproductive. Assuming 250 trees to have been rendered unproductive, the total is 800, which, at 5 annas a tree—the rate paid for pandarom trees on cowle land—gives Rs. 250. The balance due for two years was paid at once.

13. The amin keeps criminal and civil registers and a register of copy applications. In 1894 there were 11 and in 1895 2 criminal cases. All had been disposed of, but fines imposed in 1894, amounting to Rs. 36, had not been paid. I levied Rs. 31 and wrote off the balance, as the party fined had since died. One civil case of 1892 and four of 1893 had been reserved for my disposal and were disposed of. All the 13 cases of 1894 had been disposed of, but 4 of the 32 cases filed in 1895 were pending. Two connected cases were referred to me and the other two the amin promised to dispose of without delay. All the applications for copies had been disposed of, except one in which the copy was ready, but the applicant had not taken delivery.

14. There were 83 petitions for disposal: there were two complaints against the amin, but nothing was proved. There is a little ill-feeling against him on account of the attachment of property in a big civil suit, but the amin only acted under the Collector's orders and cannot be blamed. This suit is known as the "Pakernoopano-davil case," and, unfortunately, I found myself unable to dispose of it, as the parties had not got copies of some important papers, and I therefore adjourned the further hearing to Calicut. A few of the petitions were referred to the amin for disposal, and one I had to leave pending, as the defendant was absent from the island.

15. The school has been closed since September 1894; many of the boys go over to the mainland to earn their living and there does not seem any desire for education.

16. In 1894, 19 births and 25 deaths were registered, and in 1895, 39 births and 29 deaths, the population of the island being 1,354. The registration does not seem well done, and the gumastah was warned.

17. Mr. Batten gave the amin ½ lb. of casuarina seed. Nine young trees planted near the cutcherry are alive; all the other plants are stated to have been destroyed by rats.

18. The amin had built a sub-jail at a cost of Rs. 55, which was passed and included in his accounts. The amin had not been to the mainland in the spring of 1895 and his accounts were settled for two years to save him the trouble of coming to Calicut this year.

19. The usual complaints were made that their coir was only classed as second class and that 5 per cent. was deducted for drying. They also complained of a recent order that all coir should be weighed before the amin. I have arranged to have samples of each description of coir sent to the Islands for reference, as this seems not to have been done hitherto.

20. *Kiltan.*—Twelve days were spent on this island, where petitions were, as usual, numerous. The poli-poli and swamp-lilies pandanus buds, given on cowle by Mr. Dumergue in 1891, were inspected to see if the condition tied they should be, had been observed. Out of the 101 plots given something had been done on all but 15. The cowle-dars in these 15 cases were warned that their plots would have to be resumed unless great improvement was shown before the next visit. Remissions were granted on four plots of land amounting to 6 thulams and 20 palams, and the amin, who is the lessee of all the bread-fruit trees standing on Hiakkal lands, was granted a remission, the number of trees having much diminished. Two fresh cowles were given.

21. The island of Suheli could not be visited, as the steamer did not carry sufficient coal and the wind was not favourable for an *odam* to go and return. The renter applied for a decrease in his rent, which I saw no reason to grant, as he took the lease at public auction. In any case nothing can be done until the island is inspected.

22. There were 102 petitions for disposal; several petty suits were referred to the amin for disposal, as the parties could give no reason for not having gone to his court. The other petitions were all disposed of. Disputes between landlords and tenants are common in this island, and suits for inheritance numerous. There were practically no complaints against the amin, though the late amin and the Suheli renter are not on good terms with him.

23. Twenty-four criminal cases were filed in 1895; all but two had been disposed of. One was a suspected forgery case in which the amin had not examined the person whose mark was supposed to have been forged. On this man being questioned, he admitted that he had affixed his mark and that the document was genuine. The case therefore fell through. The other case related to the burning of the amin's cutcherry; this occurred at the end of September 1895, and the amin at once reported that he suspected some of his enemies. There was no real evidence against any one, and it is quite possible the fire was accidental. If any one wanted to injure the amin they would set fire to his house and not to the Government cutcherry. The only evidence against the accidental nature of the fire is the finding of an anonymous petition attached to one of the pillars of the railings in front of the cutcherry, which ended by praying the

prophet to destroy by fire. If an officer could have been sent over to inquire as soon as news of the fire reached the mainland, something might have been made of the case. As things were, I could come to no certain conclusion: none of the neighbours, who must have been roused by the fire, would give any information; they all said they did not leave their house until the conch was blown. The amin was ordered to re-roof the cutcherry before the monsoon bursts.

24. The amin had fined a man Rs. 6 for adultery, which is not an offence on the islands, and he had also convicted five men of escaping from lawful custody, which is not one of the offences he is empowered to try. Of the fines imposed Rs. 30 had not been paid, but the money was brought to me and handed over to the amin.

25. In the civil register cases were pending from 1891. Nine cases of 1891 were pending; three English petitions had been referred to the amin by Mr. Dunnergue; the amin sent them to the mainland for translation into Malayalam, but they had not been returned to him. One was compromised before me, and others were pending for production of records or because parties were absent. Two cases of 1892 and thirteen of 1894 were pending, but none of 1893. I issued orders to the amin to give adjournments for fixed periods and to take up cases again at the expiry of the time given. At present if an adjournment is given to get copies from the mainland or some similar reason, nothing is done unless and until the parties voluntarily appear. Of 13 cases filed in 1895, 13 are still pending.

26. The amin keeps a register of Muktiarnamas, of which he registered 28 in 1894 and 37 in 1895. In almost all cases before me one or both of the parties appeared by agent.

27. One register is kept for miscellaneous petitions and copy applications. Two miscellaneous petitions relating to the registration of a marriage were pending. Of 83 copy applications, 72 had been complied and 11 were pending, 4 because paper had not been produced, and 7 because the applicants had not taken delivery of the copies. The amin asked permission to levy copying fees in advance, but this did not seem necessary, as only one copy made in 1894 is still undelivered and most of those of 1895 still undelivered were applied for at the end of the year.

28. In 1893, 97 births and 51 deaths were registered. In 1894, 57 births and 47 deaths were registered and in 1895, 60 births and 58 deaths were registered. As the population of the island is 2,126, the registration of births appears to be defective and the gumastah was warned.

29. The gumastah gets Rs. 3 as schoolmaster, but owing to his illness the school had to be closed since June 1895. The allowance will be stopped from July 1st until the school is re-opened, which was ordered to be done as soon as the inspecting party left the island. Some of the islanders asked to be taught Hindustani, but the majority agreed that there was no chance of a second language being learnt when they had not sufficient energy to learn to read and write their own. The men excused themselves for not sending their boys to school by the plea that they were poor and that the boys had to earn their own living from a very early age.

30. The boat entrance to the lagoon is at the north-east; the amin said that if a few rocks were blasted away, a steamer of the *Margarita* draught could enter and anchor in 9 feet of water. Soundings might be taken on the next visit to verify this statement.

31. Half a pound of casuarina seed was given to the amin by Mr. Batten, but the seed and the young plants were eaten by ants and rats. Another attempt should be made.

32. Though there were no complaints against the amin, a petition signed by 64 persons including most of the karanadars complained that the amins we appointed had no education or belonged to some big tarwad, and hence gave unjust decisions; that the Inspecting officer coming once in two years and able to stay only a week was in a great hurry and sometimes failed to understand their petitions and that, in any case, there was great delay in disposing of their appeals. They compared their condition with that of the Canara islanders who were said to have educated officers and plenty of supervision. They also brought up the usual grievance in connection with the monopoly, but agreed that they preferred it to the alternative of free trade and a tree tax. They also complained that their coir was spoilt in the Calicut Custom office, as the wind blew sand in, through the walls of the godown which are only of bamboo, and that they had to pay Rs. 3 a maund for salt. I pointed out that in 1880 they were informed they could buy salt duty free but they said they could not afford to buy elsewhere than at Calicut. All these general questions will be dealt with in my report on the future administration of the island.

33. *Andrott.*—Eleven days were spent on this island. The sixteen plots of cowle land referred to in paragraph 7 of Mr. Batten's report were inspected and the rent raised on four plots by three thulams. On one plot a further reduction of 6 thulams, 20 palams had to be granted. There were 64 petitions for remission, and remission amounting to 116 thulams and 2 pdoms were granted. Remission was refused where no planting had been done. One fresh cowle was granted.

34. In 1895 there were 34 criminal cases, of which the amin had disposed of 24. Fourteen cases were also shown as pending from the year 1891. In one of these the accused was dead and others had been reserved for the officer visiting the islands; some were shown as pending, because no evidence was forthcoming. I gave orders which enabled most of these cases to be struck off the file. There were 87 civil cases in 1895, of which 51 were pending. Sixty cases of previous years were also pending, but this was a large reduction on the number pending at the beginning of 1895. The large number of pending cases was ascribed to the gumastah's absence from the island for fifteen months in 1894 and 1895 and to the outbreak of cholera at the beginning of 1894. The amin was given orders which I hope will ensure quicker disposal of work in future. He is still young and a little afraid of trying important cases.

35. I had to try two cross-pending cases which arose out of a civil dispute. Mr. Dunnergue passed orders on 1st January 1891, but the orders were suspended by Mr. Bradley in 1893, pending the visit of another officer to the islands. The suspension order was not understood and led to the parties taking the law into their own hands. I acquitted one party on the ground that they acted in self-defence and imposed fines in the other case amounting to Rs. 50.

36. There were 93 petitions for disposal, many of them were claims for remission. Some of the petitions had to be left pending, owing to the absence of one or other of the parties and some petty cases were referred to the amin for disposal. In one case the following list of the customary services due by a tenant to his landlord was agreed to by both parties:—

(1) to sail in the landlord's big odam,
(2) to sail in the small odam for fishing,
(3) to serve in the landlord's house at festivals,
(4) to thatch the big odam shed,
(5) to thatch the landlord's house,
(6) to paint the odam and put fish oil on it.

There were no other petitions of general interest.

37. I had a census taken on this island because of the cholera epidemic in 1894. In 1891 the population was 3,320 and by my census it is only 2,250 or a decrease of 1,004. The registration of births and deaths has been as follows between the two censuses:—

	Births	Deaths
1891	134	189
1892 ...	48	84
1893	59	100
1894	57	1,000
1895	76	70
Total ...	380	1,443

This gives a decrease of 1,031, *viz.* all the deaths have not been registered or there may have been a small immigration from the mainland. There were over 1,000 deaths from cholera principally in January 1894. As the District Medical and Sanitary Officer went to the island to make an enquiry into the matter, it is not necessary, I hope, for me to dwell on the matter.

38. The attempt to grow casuarina trees has been a failure on this as on the other islands.

39. The spinning jenny sent to the island is not used for making coir, but is used by the owners of large odams for making cables out of coir ropes. Coir cannot be made, as the material will not stand the strain. I hear that a smaller machine is used at Cochin for making coir and I will make enquiries on the point.

40. The mās boat built by the amin is not used, as the small fish required for bait cannot be found at Androth. The amin proposes to sell the boat to the late Minicoy Amin who now resides at Ameni.

41. The leaf disease is now confined to a very small part of the island and the trees are improving in condition. There has been great improvement since Mr. Dumergue's visit. I took specimen from the affected trees to send to Calcutta.

42. One of the clerks who accompanied me inspected the school in Malayalam. None of the party knew Hindustani. In the 1st class 22 boys were examined, of whom 9 passed, 1 was absent: in the second class, 11 were examined, of whom 8 passed, 2 were absent. I gave Rs. 8 in prizes. Rs. 2 to each of the two best boys in each class and request that my action may be approved.

43. A Public Works Department party went to this island to try and improve the entrance to the harbour by blasting; they widened the entrance about five yards. The tools they had did not enable them to work in more than three feet of water, and dynamite produces very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes.

44. *Minicoy Island.*—Four days were spent on this island. There are very few cases brought on this island. In 1894 there were seven criminal cases before the Amin and in 1895 four. One of each year was pending at the time of my visit. There were eight civil cases in 1894, of which four are pending owing to the absence of the parties. In 1895 there were only two cases, both of which are pending. The registers are not well kept, but better than at the time of the last visit.

45. There were 21 petitions for my disposal, several being for remission. All were disposed of except where the parties were absent.

46. The registration of births and deaths is not properly done. The figures registered are as follows for a population of 3,730:—

		Births.	Deaths.
1894	... ...	57	64
1895	... ...	55	55

47. From May to December 1895 the amin had only collected 34,727 cocoanuts from pandaram lands. Of course, it was said that the year was a bad one, but there has been a large falling off ever since the present amin took office. Toddy is now being collected from trees in the Big South Pandaram—58 men are drawing from 50 trees each which will give a revenue of Rs. 181–4–0. The amin has allowed these men to build a village in the South Pandaram; this was not sanctioned, and I am afraid is dangerous to the Government cocoanut revenue, though it will, to some extent, relieve the overcrowding in the present village-site.

48. I was agreeably surprised at the condition of the lepers in the settlement. They seemed to be well nourished and clothed; all but two of them are, I believe, fed by their relations, and these two are fed by the other islanders out of charity. Some of the lepers seemed quite willing to go to Cochin for treatment, but the owners of the island vessels would refuse to take them, and therefore Government would have to make special arrangements for their removal. The District Medical and Sanitary Officer will, I presume, make a more detailed report on this subject. I do not think it is necessary to feed or clothe the lepers from island funds, but it would be a good thing to build better huts than they have at present.

49. In paragraph 17 of Board's Proceedings, No. 487, dated 24th August 1893, I was ordered to report on the effect of the removal of restriction on trade. "The taxes levied were five candies of rice annually on each vessel trading with Bengal and 50 mas fish annually on each fishing boat." Since the abolition of these taxes, four new mas boats have been built and two more were being built at the time of my visit. No new vessels have been built to trade with Bengal.

50. The gumastah is also schoolmaster, only seven boys are attending the school, of whom four were presented for examination in Malayalam; two of them only knew the alphabet and the other two could not read fluently.

51. The Amin of Minicoy seems to take very little interest in his work and to know very little about the island. I hope that he will improve.

52. A Hospital Assistant accompanied me to the four northern islands, but I have no figures of the work he did. The District Medical and Sanitary Officer went to Androth and Minicoy.

53. I hope to submit in a few days a confidential report with reference to Board's Proceedings, Mis. No. 5508, Confidential No. 64, dated the 15th July 1895.

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 8th April 1896, Dis. No. 55-1st.

Adverting to paragraphs 37 and 52 of my inspection report of the Laccadives and Minicoy, No. 55-1st, dated the 24th March last, I have the honour to forward, herewith, copies of the reports of the District Medical and Sanitary Officer, Malabar, and the Hospital Assistant who accompanied me to the islands during the recent visit.

Enclosures.

From Surgeon-Lieutenant-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, to the Secretary to the Surgeon-General with the Government of Madras, dated Calicut, 19th February 1896.

In accordance with the orders of Government of Madras, I embarked on the steamer *Margarita* with the Collector and his staff on 5th December 1895 intending to do the inspection of the hospital at Minicoy and to report on the condition of the lepers on the island, but from some cause or other we could not land the island after steaming in all directions for 16 hours and as we were running short of coals it was decided to return to Calicut which we did on the Friday 13th following.

The Collector then arranged to go to do the other smaller islands and to send for me when he arrived at Androth.

I accordingly left Calicut on March the 25th January 1896, and arrived at Androth the next evening at 4.

Androth.—This island is situated about 150 miles from Calicut and is the largest of the northern group of the Laccadive Islands. The soil is a mixture of powdered coral and vegetable matter with an excess of the former on the north-east and south-western sides of the island, while on the east and southeast there appears to be a larger amount of vegetable débris with the result that trees growing in these parts of the island are distinctly stunted and better in all respects. The surface of the island is nearly covered with fallen cocoanut leaves and the cocoanut fibre which seem to be allowed to remain till they rot.

The country is flat with little mounds of earth of varying heights in places. The inhabitants are Mahommadans and the men are of excellent physique, but the former are a most apathetic lot. Their food consists chiefly of the following grains: rice, ragi and varaya, and fish, mutton, fowls, &c.

The water-supply appears to be sufficient, but the quality is not good. As it is hard and as the wells are in no way protected, a great deal of vegetable matter falls into them, and this is allowed to soak in the water. Besides this, nearly all the drinking-water wells are situated in the lowest and most shady parts of the island. I have suggested that a certain number of the lowest and most shady parts of the island. I have suggested that a certain number of these should be converted into draw-wells and that all trees within a radius of 30 feet be removed. Considering the important part the water plays in diseases attended by gastric symptoms, this matter should receive attention. The houses are fairly large and well built, the [illegible] are [illegible] and the roofs well covered with grass and leaves.

The conservancy of the island is sadly neglected. The compounds of the huts are filthy. The men should be persuaded to use the fields instead of the beach for the purposes of nature, and if the trench system were introduced, the soil in parts of the island might be improved. There were 45 cases vaccinated with 40 successful cases: the lymph had unfortunately begun to fail as it was getting old. There had been no epidemic of small-pox since 1884.

The chief diseases are eye-diseases, worms and rheumatism. The first is due to a great deal more to the irritation of the lime in the sand than to the coir reported before. I treated a large number of men suffering from granular lids, and they seldom or ever had anything to do with coir-beating or picking.

When Surgeon Beech visited the island in 1891, he saw five cases of leprosy; four of these have since died, and a young man who appears to be well looked after and is suffering from it in its early stage is the only one surviving. He objected very much to leave the island for treatment on the mainland.

The real purpose of my visit to this island was to enquire into the terrible epidemic of cholera which broke out here about the end of December 1893 and continued up to February 1894. The disease is reported to me to have been introduced by traders from Mangalore; the first attacks recovered, but as the days went on the disease increased in severity, and from the 18th of January there was as many as 150 deaths in a day. The total number of deaths registered was 976, but I believe there must have been 20 or 30 more. No special treatment appears to have been adopted as no medicines were available, and one may picture the misery and distress there must have been at the time when the smallness of the island is considered. The effect on the population has been to decrease it considerably as will be seen from the following statement:—

The population taken in 1891 was	3,299
Births registered in 1894	300
This leaves a population to be accounted for	3,599
Deduct deaths during the same period	1,121
	2,289

Present remaining population as registered while I was on the island, 2,259, so that a small balance of 30 had to be accounted for. This, however, shows a very serious decrease in the population and which of course is greatly due to the epidemic of cholera. Unless there has been some "cooking up" in the entries in the registers, this system of registration compares favourably with that in the mainland in even large municipal towns.

I had a quantity of medicines for the treatment of cholera brought out for this tour and have at all the islands inspected by the Collector left them with printed instructions as to their use, and some of the more intelligent of the natives were taught most carefully and simply the steps to be taken in any future epidemic, and it is to be hoped the inhabitants will not suffer so severely in future. Two curious facts were noticeable in this island and they were the very small excess of female children to males, viz., six in the total birth of five years and a mortality of 122 of females in excess of the males during the five years and 101 of these during the cholera epidemic.

I returned from Androth on the 28th January and arrived at Calicut in the afternoon of the 29th and left again early on Friday morning, the 31st of January, and arrived at Minicoy on the evening of the 1st of February.

On Sunday morning the Collector and I visited the leper settlement and had a long conversation with the poor afflicted. There were ten lepers in the island remaining from the nineteen when Surgeon-Major Beech visited the islands, all the others having died. Of these, three were admissions since 1893. Both the Collector and I were agreeably surprised to find the majority looking in fairly satisfactory condition, but this I think was chiefly due to the food supplied to them by the hospital assistant and the amin—each of them having given the lepers a bag of rice. The statements made by the late medical subordinate, though true to certain extent, appeared to the Collector and myself to be rather exaggerated. The majority of the lepers were very anxious to come across to India and be treated at the Lazaretto at Pallipeat where I am informed there is sufficient accommodation at present, but I am afraid that it would be almost impossible to do so, for the great difficulty would be to obtain the proper means of transport as owners of the "Odees" (native vessels) would not consent to carry them. The only steps that can be taken, I think, are that they should have a proper building constructed for them in the part of the island they are at present living, and that the hospital assistant in charge of the island dispensary be entrusted to look after them, and that the amin be directed to supply them with the food. Fresh food and vegetables might be obtained for them and sent through the "Board of Trade," Colombo, and the Commanders of the Lighthouse steamers, which I am told call every six weeks at the island and bring provisions for the men in charge of the Lighthouse. The following are the new admissions in the island from leprosy with a few notes regarding their family history:—

1. *Moosa*, 12 *years*.—Mother has leprosy, but for some reason or other she has not been ordered to the settlement by the Kazi, and his aunt is suffering from the disease in its early stage, but he has five sisters and three brothers who are healthy.

2. *Ali*, 18 *years*.—Both parents dead, but they had not suffered from leprosy. Aunt was in the settlement and died a year ago. Has three sisters, all healthy.

3. *Mahmood*, 14 *years*.—Mother is suffering from leprosy in its incipient stage, but is living in the village. Father healthy. Has no brothers or sisters.

The Hospital Assistant Sheik Tipperday been interesting himself on their behalf, and I saw several of the cases improving under treatment. The inhabitants of Minicoy have very curious ideas about leprosy, but as long as those suffering from the disease are allowed to remain in the village by the Kazi they mix freely with them, but when once transferred to the leper settlement they will have nothing to do with them and will not approach them within 200 yards. The Kazi, who is the responsible person, evidently thinks that the disease must be very far advanced before he orders their removal. If proper accommodations were built and food supplied, and if the Hospital Assistant, Kazi and Amin worked together, cases would be segregated while the disease was in its incipient stage and probably then the disease would in time be stamped out of the island.

I inspected the dispensary on two occasions and was pleased with the work done by the medical subordinate in charge.

The most common diseases appear to be rheumatism, worms, skin-diseases, eye-diseases, and in the rainy season fevers reported to be of a malarial type. I did not see a single case of enlarged spleen. There were fifty-seven cases of granular lids and opacities of the cornea and I also saw three cases of cataract. If I ever visit the islands again, I shall go prepared for a few operations on leper.

The hospital assistant's quarters are very comfortable. I would strongly urge the necessity of a young man being sent to the island to learn the language, as I found the people as to the class of medical subordinate for the island, the general opinion was that they objected strongly to a resident Hindu, but that they had no objection to a native Christian though they would prefer a Muhammadan. I would also suggest a Christian to live on the island, as the men at the Light-house could then get a supply of provisions consisting of tinned beef, mutton, vegetables &c., which could be sent from Colombo. I may mention here that the last meteorological clerk was a native Christian who was liked by the people and got on very friendly terms with the islanders for four years and he did not look as if he had suffered for his residence there and this was chiefly due to his having been able to get a variety of food and provisions from the Lighthouse men. There is no doubt that the Muhammadan suffers as he can get nothing but rice, fish and fowls. No fresh meat is procurable for a few days after their arrival there from the Isles of the mosquitoes. It would be worth trying whether the tough-hide buffaloes would stand the climate and mosquitoes.

There were in all 90 cases vaccinated and lymph was left for another 50. It is my intention to send a supply of lymph through Colombo every second or third month. The island appears to have been free from small-pox for several years.

The water-supply is sufficient, but the quality is not good.

The island during the time of the tour was kept fairly clean. The one great drawback to sanitation is that the men will resort to the beach for purposes of nature, and until the tide rises the smell is very objectionable, as after that the feculent matter is carried away by the receding tide.

In conclusion, I have to suggest that all correspondence, postings, &c., be made *via* Colombo. The following address is the one I would suggest for the present:—

Hospital Assistant, Minicoy,
Care of Commander, Lighthouse Steamer,
Board of Trade Office,
Colombo.

From 1st-Class Hospital Assistant M. KANNAN, No. 193, doing duty, Calicut, to the District Medical and Sanitary Officer, Malabar, dated 15th February 1896.

I beg to submit the following in connection with my recent visit in medical charge of the Collector's staff that proceeded on inspection duty in S.S. *Margarita* to the following islands (Laccadives), viz., Kalpeni, Kavaratti, Agatti and Androth.

The steamer *Margarita* left Calicut at about 7 A.M. on the 21st December 1895 and reached Kalpeni on the 22nd evening.

Kalpeni.—We remained here for seven days, during which time I afforded medical aid to 111 patients suffering from eye-diseases 25, rheumatism 18, worms 15, respiratory affections 28, diarrhœa 5, febricula 10, itch 6, and ring-worm 4.

I also vaccinated 50 cases, of which 30 were successful, 15 unsuccessful and 5 unknown.

Kavarathi.—We reached this place at about 7 A.M. on the 28th December 1895. Here I treated 125 patients suffering from eye-diseases 35, rheumatism 14, worms 23, respiratory affections 40, and skin-diseases 13, and vaccinated 45 cases, of which 32 were successful, 10 unsuccessful and 3 unknown.

As the sea became very rough the steamer on the 1st January 1896 had to leave for Agathi where we reached on the same evening.

Agathi.—Here 65 patients were under treatment for rheumatism 19, eye-diseases 16, worms 13, respiratory affections 17, skin-diseases 6, and boil 2, and 15 persons were vaccinated, of whom 33 were successful, 8 unsuccessful and 4 unknown. We returned to Kavarathi on the 8th January 1896 and remained there again for ten days. The cases treated and vaccinated on both occasions are mentioned above.

We left Kavarathi for Androth on the 16th and reached there on the 17th January 1896.

Androth.—I treated 203 patients here suffering from eye-diseases 50, rheumatism 31, worms 30, respiratory affections 41, itch 20, ring-worm 6, febricula 8, diarrhœa 4, abscess 3 and ulcers 10, and vaccinated 46 persons, of whom 31 were successful, 12 unsuccessful and 3 unknown.

Two abscesses were incised by the District Medical and Sanitary Officer, Malabar, and the important cases were examined and prescribed for by that officer.

General Remarks.

Eye-diseases and respiratory affections prevail to a great extent in all the islands. The irritation caused by the particles of hand-twisted coir flying into the eyes is, I think, responsible for the former and the inevitable inhalation of the same and consequent irritation caused in the bronchial tubes probably result in the respiratory ailment.

The water-supply of these islands is chiefly from shallow wells. The water is no doubt with an admixture of saturated solution of lime and hard on account of lime-stone strata from which it is obtained. The least hard water is that of Kavarathi, but it is injurious owing to its proximity to burial grounds.

The sanitary condition of all the islands is not bad though it will admit of much or less improvement. The houses being situated far from each other, the inhabitants resort to sea-shore, cocoanut gardens, and waste land for answering calls of Nature, so they do not care much for latrine, &c.

I have advised the amins of these islands to get removed, as early as possible, all the accumulation of filth, rubbish, &c., neglected by some far away from dwelling places and precautions are to be taken to prevent these nuisances recurring by insisting on the prompt daily removal of all refuse matters to suitable places.

I have also advised them to get all the dirty houses lime washed as quickly as possible.

I have also left some supply of cholera medicines to each amin with clear directions as to their use at the time of necessity.

The increase in the number of unsuccessful cases of vaccination is, I was told, due to children having taken their baths in the sea water soon after the operation.

Endorsement by Surgeon-Lieut.-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, dated Calicut, 19th March 1896.

True copy forwarded to the Collector of Malabar.

Resolution—No. 166, dated 12th May 1896.

In the letters read above, the Collector of Malabar submits a report of his visit to the Laccadive Islands and Minicoy in December last.

2. The question of providing a steamer for the sole purpose of visiting the Laccadive and Amindivi Islands having been held over for future consideration, the Pearl Fishery Steamer *Margarita* was placed at the disposal of the Collector. She arrived at Calicut on the 6th of December and left for Minicoy on the 9th idem, but as Mr. Baker who was in charge was unable to find the island, the party had to return to Calicut on the 13th for coal and water. Five days were thus completely wasted. The *Margarita* started again on the 21st with another officer in charge and was available till the 7th February, so that the Collector was able to inspect the islands fully. The time spent on each island is shown below:—

	Days.
Kalpeni	5
Agathi	6
Kavarathi	12
Androth	11
Minicoy	4

3. The following points require notice:—

(i) An effort was made by a Public Works Department party, which accompanied the Collector, to improve the entrance to the harbour at Androth by blasting as desired in paragraph 2 of Government Order, No. 696, Political, dated 11th October 1895; but they merely succeeded in widening the entrance by about five yards. The Collector considers that dynamite can make very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes. The question has to be carefully investigated by an expert in submarine blasting. In addition to this, two rocks have to be blasted at the island of Kalpeni to improve the anchorage by making a passage into the reef. The amin of Kavarathi suggests a similar improvement and the Collector proposes to take soundings at the next visit.

(ii) The efforts made by Mr. Batten during his inspection in 1893 to introduce casuarina into the islands have proved unsuccessful. In the island of Agathi only nine young trees are reported to be alive, the rest having been destroyed by rats. In none of the other islands have they fared any better.

(iii) The leaf-disease referred to in previous reports on the inspection of the islands is now confined to a very small part of the island of Androth and the trees are improving in condition. The Collector has taken specimens from the affected trees to be forwarded to Calcutta.

(iv) The Collector's opinion of the amins is not favourable. The amin of Kalpeni is described as old and illiterate. He was left in office for another year and warned to be more prompt in the disposal of his work. The amin of Androth is young and a little afraid of trying important cases, while his brother official at Minicoy takes small interest in his work and knows very little about the island.

(v) The results of vaccination appear to be satisfactory.

The lepers at Minicoy are reported to be well cared for chiefly owing to the efforts made by the kazi and the hospital assistant. They want better habitation.

(vi) Education is not making any progress in the islands. Three schools opened under orders from Mr. Batten have been closed, ostensibly because the amins' gumastahs, the only persons who can teach, fell ill. In addition to the want of proper teachers, there is said to be a want of any general desire for education, the boys being sent out at a very early age to earn their livelihood owing to the poverty of their parents. Endeavours should be made to overcome the parents' objections. It is observed that the Collector is making enquiries about a competent teacher for the island of Kalpeni, and if good instruction can be provided, the schools would doubtless become more attractive.

(vii) The spinning jenny referred to in paragraph 16 of Board's Proceedings, No. 187, dated 24th August 1893, has been found to be unfit for making coir and is now used by the islanders in making cables. The Collector believes that a smaller one similar to those used at Cochin may be tried. Early steps should be taken to procure such an article for the island of Androth.

(viii) With reference to paragraph 17 of the Proceedings quoted above, the Collector reports that four new mâs boats have been built and two more are under construction; but that no new vessels have been built to trade with Bengal.

(ix) The Board supports the suggestion of the District Medical Officer that, if possible, a Native Christian should be appointed for the post of the medical subordinate of Minicoy.

(x) The Collector's inspection of the island of Androth showed that the deplorable mortality from cholera during the outbreak of 1893–94 had not been exaggerated. It is satisfactory that the District Surgeon has now left printed instructions on all the islands as to the steps to be taken in emergencies of this nature, and that a supply of medicines has also been provided. It is also observed that several of the more intelligent islanders were personally instructed in the matter.

4. The Collector's action in granting a remission of Rs. 250 a year for seven years in favour of the inhabitants of the small islands dependent on Agathi on account of the damage sustained during the storm of 1891 and in distributing Rs. 8 in prizes to the successful students of the school at Androth is approved.

5. The Board awaits the report on the future administration of the Laccadive Islands promised by the Collector.

(True Copies and Extract.)

(Signed) R. C. C. CARR,
Acting Secretary.

To the Chief Secretary to Government, Political Department.
„ Collector of Malabar.
Copy to the Secretary to Government, Revenue Department.

G.O., No. 1508 W., dated 14th May 1896.

Read—the following paper:—

From the Executive Engineer, West Coast Division, to the Superintending Engineer, IV Circle, dated 1st April 1896, No. 151-S.E.

With reference to G.O., No. 2797 W., dated 2nd November 1893, I have the honour to forward a report from Mr. J. Pereira, Supervisor, on the blasting and removing obstructions in the Androth harbour, Laccadive Islands, together with two tracings and an estimate amounting to Rs. 300, being cost incurred in carrying out the blasting operations, and to request an allotment of Rs. 300.

Enclosure.

Report from Mr. J. PEREIRA, Supervisor in charge Cantonment Works, Cannanore, No. 953, dated 25th February 1896.

In compliance with your No. 72-S., dated 18th January 1896, I beg to submit my report on the blasting operations conducted at the entrance to the Androth harbour, one of the Laccadive Islands.

I started from Calicut per S.S. *Margarita* on the 20th January 1896 with a party of four blasters kindly procured through the help of Sub-Divisional officer, Wynaad, from the Tamracheri ghât. We reached Androth on the evening of the 21st and returned to Calicut on the 29th forenoon. My stay in the island, exclusive of the time engaged on the voyage, is therefore between the 22nd and 27th or six working days.

2. *Position of the Island.*—Androth, one of the five inhabited islands of the Laccadives, at present under the Collectorate of Malabar, lies almost due west and 120 miles off the coast of Calicut. It is $2\frac{1}{2}$ miles in length east to west and 1 mile in breadth nearly, with a population of about 3,200 inhabitants, all Mappillas. It has a luxuriant tope of cocoanut plantation and its exports are cocoanuts and coir. The island depends for all its other necessaries of life from the west coast mainland, Mangalore and Calicut forming its chief ports of calling. It is protected by a natural barrier of coral reef. That on the north face comprises two arms, enclosing a lagoon, with a sandy beach sloping gradually into the sea, as shown in the survey. The barrier on the south face is an almost flat, close-grained, hard coral rock resembling white marble about 250 feet wide. This rock sheet is exposed during low tide. The surf along this rocky margin is generally rough. Beyond this line the rocky reef falls abruptly into fathomless sea.

3. *Rocky Obstructions.*—The services of the amin and a karnavan having been kindly deputed by the Collector, Mr. Hewetson, I inspected the inner harbour and noted the coral rock obstructions along the entrance to the lagoon, marking their positions by temporary buoys.

(a) Survey and Levels.—To elucidate my report, I append a survey and cross sections of the harbour, showing the positions of the rocky obstructions under complaint.

4. *Magnitude of Rocky Obstructions.*—A reference to survey and levels will give an idea of the magnitude of the rocky obstructions A, B, C, D and E as nearly as could be ascertained from soundings:—

Rock A—$55' \times 40' \times 9'$ or c. ft. 19,800
„ B—$40 \times 35 \times 11$ „ 15,400
„ C—$40 \times 30 \times 12$ „ 14,400 } = c. ft. 143,100.
„ D—$70 \times 50 \times 13$ „ 45,500
„ E—$80 \times 40 \times 15$ „ 48,000

5. *Nature of Rock to be blasted.*—The rock to be blasted is coral rock. It is porous in nature, whitish in colour. It is soft at the exposed surface but harder as it approaches the stem or root, with fissures and hollows in the body. It may be chipped off or cleaved at the edges with crowbar, but cannot be entirely removed unless by blasting. It is a lime-stone and is extensively used by the islanders.

6. *Tidal Observations.*—The depth of water over these stones is reduced to datum. The M.S. level arrived at —22·45—is from a temporary tide-gauge erected by me during the working days in the island, giving a mean reading of 2·80 as the difference between the low and high tides. The readings recorded are given in a table on the level sheet.

7. *Nature of Work.*—From the levels and the tidal observations, as also to the boring-irons—six feet steel jumpers—at my disposal, it is clear that I had no means to attempt at bore holes beyond $2\frac{1}{2}$ feet under water.

The rocks being also situated in $2\frac{1}{2}$ to 3 fathoms of water around them, due allowance for swells and breakers during the work should also be considered.

8. *Island Labour.*—The islanders are unwilling to take work under daily labour. They appear timid to engage themselves, being evidently accustomed to lethargic habits. Through the interference of the amin, however, I engaged eight men at As. 6 per day; of these, only four attended work fairly well. They, however, render gratuitous help in jumping bore-holes and removing debris lying under water. This haphazard labour lasts but a little while, and is given as suits their convenience. They are, however, good swimmers and divers, and, once they make up their mind to engage themselves, render good service in charging bore-holes in deep water.

In this connection their usefulness for submarine blasting is unquestionable as compared to the labour transported from the mainland.

9. *Blasting Work executed.*—As explained in paragraphs 6 and 7, rock A alone admitted of blasting operations being taken up on the 22nd, 23rd and 24th.

With the low tide of the 24th reading 3·50' I secured the services of the four island divers. With these I picked out eleven minor rocks perched on rocks B, C and D (see cross section) and measuring on an average $5' \times 3' \times 2'$ each. With some difficulty bore-holes of from 12" to 18" in depth were jumped on these boulders and fired with very good results. Boulders shattered disappearing from the surface of the main rock.

The low tides between the 25th and 27th, however, allowed some good work being done along the eastern faces of rocks B, C, D and E. The work on these rocks is shown in red ink shading in the survey and sections.

An approximate measurement of blasting work done on the different rocks between the 22nd and 27th is as follows :—

Rock A, 1,815 *cubic feet*.—Edges all round widened to average section of 4′×2′. Body reduced to a depth of 1½ feet. Existing body shattered to a depth of 2 feet preventing further bore-holes being jumped.

Rocks B, C, D and E, 1,041 *cubic feet*.—Minor boulders perched on main rocks blasted. Projecting ends on eastern faces removed and the entrance to harbour widened by an average of 5 feet.

Total 2,856 *cubic feet*.—Debris of rocks blasted lying in the deep and has to be removed by the islanders.

10. *Working Data*.—The direct cost per 100 cubic feet of rock blasted is Rs. 8, while the charges inclusive of batta and other sundry charges to work-people is Rs. 10 per 100 cubic feet.

The cost does not include the removal of debris blasted which are still lying in 2 to 3 fathoms of water. The amin and the karnavan of the island, however, promised to have this done.

I consider this should be insisted upon where the depth is less than 1½ fathoms.

11. *Result of blasting on Rock A*.—Projecting edges having been removed in a section of 4′×2′ all round, a few charges were fired on the body or surface of the rock, which reduced it in depth by 1½ feet. These charges have so much shaken the rock that the jumping of further bore-holes is not feasible, as they get clogged up with particles of sand below a few inches of the surface. I consider that crowbars can now be freely used to remove debris to further reduce the depth of this rock.

Proposals for future Operations.—From the results experienced in blasting the body of rock A, as explained in paragraph 11, it is evident that blasting with shallow bore-holes and small charges on coral rock is a drawback to blasting with ordinary jumpers, subsequent bore-holes being clogged up with sandy particles. The only advantage gained in blasting by this simple method is to detach projecting ends of rocks. This has more or less been effected.

The depth of water on rocks B, C, D and E does not also allow of blasting being done by ordinary jumpers to any satisfaction.

I therefore consider that the most effective method of removing these coral stones to the root is by deep bore-holes and heavy * charges.

* Forty lb. of dynamite and fifty coils of fuse being all the explosive actually used during the present operation.

This work in 2 to 3 fathoms of water should, in my humble opinion, be taken up by an experienced staff in submarine blasting. The best time, however, to commence work is at spring tide. The party deputed for the work should be allowed to start work at the beginning of the inspecting season. The Collector deferring his inspection to the island to the last.

This arrangement will allow the blasting party to work undisturbed and with the co-operation of the islanders, which is otherwise disturbed by the bustle of the Collector's inspection.

Endorsement thereon by the Superintending Engineer, IV Circle, dated 20th April 1896, No. 172 W.

Copy submitted to the Chief Engineer, Public Works Department, with reference to G.O., No. 2797 W., dated 2nd November 1893, with a request that an allotment of Rs. 300 may be made for the blasting operations carried out.

Order—No. 1508 W., dated 14th May 1896.

Mr. Supervisor Pereira's report will be communicated to the Political Department in continuation of G.O., No. 891 W., dated 21st March 1894.

2. The estimate will be returned to the Superintending Engineer, IV Circle, for sanction under Provincial Miscellaneous Public Improvements. An allotment is not now necessary as the expenditure was incurred in the past official year.

(True Extract.)

(Signed) F. J. WILSON,
Under Secy. to Govt., P.W.D.

To the Political Department.
" Superintending Engineer, IV Circle.

Proceedings of the Board of Revenue (Land Revenue), Mis. No. 2557, dated 4th June 1896.

Read—the following papers :—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 18th May 1896, Dis. No. 514-Isl.

As stated in paragraph 7 of my report on the inspection of the Laccadives and Minicoy, No. 33-Isl. of 1896, dated the 24th March last, I made enquiries for a schoolmaster for Kalpeni Island, and one Isak Sheriff (a Muhammadan), who can teach Malayalam and Hindustani up to the Primary School examination and English up to the III standard, has been recommended for appointment on a salary of not less than Rs. 15 per mensem, by the Sub-Assistant Inspector of Mappilla Schools, Northern Range. The present schoolmaster is the gumastah of the island, who is paid Rs. 3 a month for this extra duty. He is incompetent for the post. I have therefore the honour to request that the Board may be pleased to sanction the increased rate of pay to the schoolmaster. As the season is far advanced and as there are no Kalpeni vessels in the harbour, I have directed Isak Sheriff to hold himself in readiness to proceed to the island at the commencement of the fair season.

Resolution—Mis. No. 2557, dated 4th June 1896.

Submitted for the early sanction of Government in continuation of paragraph 3 (vi) of Board's Proceedings, No. 166, dated 12th May 1896.

(True Extract.)

(Signed) R. C. C. CARR,
Acting Secretary.

To the Chief Secretary to Government, Political Department.

Order—No. 373, Political, dated 11th June 1896.

Recorded.

2. The sanction to the increased rate of pay to the schoolmaster for Kalpeni Island, which is requested in Board's Proceedings, Mis. No. 2557, dated 4th June 1896, is accorded.

(True Extract.)

Chief Secretary.

To the Revenue Department.
" Public Works Department.
" Board of Revenue (Land Revenue).
" Surgeon-General.
" Accountant-General.

1 K.A. Roll.

Govt. of {1896} Madras.

POLITICAL.

Communicated to the Supty Engr IV Circle

Issued

Read. Encl.

G.O., No. 373, 11th June 1896.

150 Sho dy 14-5-96
80 Lo dy 21-3-96
27376 dy 2-11-95

JUNE.

Laccadive Islands.

Recording Board's Proceedings reviewing the report on the inspection of the —, and sanctioning the pay of Rs. 15 per mensem to the schoolmaster for Kalpeni Island.

No. 373, Political, 11th June 1896.

GOVERNMENT OF MADRAS.

POLITICAL DEPARTMENT.

Read—again the following papers:—

G.O., No. 750, Political, dated 9th November 1893.

Abstract.—Recording Proceedings, Public Works Department, deputing Mr. Baker, Assistant Engineer, to inspect the lagoons in Androth and other islands and report whether it would be feasible to blast a passage into them.

G.O., Nos. 97, 98, Marine, dated 19th March 1894.

Abstract.—Passing orders on the question of purchasing a steamer for the use of Government officers proceeding on inspection duty.

G.O., No. 232, Political, dated 7th April 1894.

Abstract.—Recording Proceedings, Public Works Department, directing that Mr. Baker's deputation to the Laccadives be deferred till the next Government steamer visits the islands and that in the meanwhile the requisitions and materials be collected.

Read—also the following papers:—

Proceedings of the Board of Revenue (Land Revenue), No. 166, dated 12th May 1896.

Read—the following papers:—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Mangéri, 24th March 1896, Dis. No. 33-1-1.

I have the honour to submit my report on my recent visit to the Laccadive Islands and Minicoy.

2. The pearl-fishery steamer *Margarita* arrived at Calicut on the 6th December 1895 and left on the 9th for Minicoy with the District Medical and Sanitary officer and myself. As Mr. Baker failed to find the island, we returned to Calicut on the 13th for coal and water. Mr. Swann, Reserve Port officer, was sent to relieve Mr. Baker, and the *Margarita* left again on the 21st for Kalpeni. The islands were visited in the following order: Kalpeni, Kavarathi, Agathi, Kavarathi, Androth and Minicoy. On the second day of our stay at Kavarathi there was a heavy swell and we went on to Agathi, where the steamer can enter the lagoon and returned again to Kavarathi to finish the work there. From Androth the steamer returned to Calicut to bring the District Medical and Sanitary officer and a Public Works Department party to blast the entrance into the reef. After dropping the Public Works Department party at Calicut, the steamer proceeded to Minicoy and finally returned to Calicut on the 7th February 1896.

3. *Kalpeni.*—Five days were spent on this island. The lands granted on cowle by Messrs. Brodie and Underwood in 1880 and 1882 were inspected and the rents payable enhanced from 284 thulams and 13 paloms to 301 thulams and 56 paloms. Five plots of lands were also inspected, on which reduction of rent was claimed and remissions, amounting to 6 thulams and 30 paloms, were granted. One fresh cowle was given. Some lands converted into paddy flats had been assessed by the amin and his assessments were confirmed. The three plots of land, alluded to by Mr. Dumergue in paragraph 14 of his report and by Mr. Batten in paragraph 18 of his report, were inspected and found to have been fully planted up.

4. The amin only kept two registers—criminal and civil. He was ordered to open a third, or miscellaneous register, as the present arrangement leads to some very curious classification. A few cases were pending principally because of the absence of one or other of the parties. A register for applications for copies was ordered to be opened.

5. There were 81 petitions for disposal, some of them duplicates presented on the island, of petitions presented previously on the mainland. All were disposed of except two, which were left to be compromised. A few petty petitions were referred to the amin for disposal. None of them were of special interest or importance.

6. The amin Ibrahim Kutti is an old man who has been a long time in office. He does not wish to resign, and I left him in office for another year, with instructions to be a little more prompt in his work and to have his registers better kept. He is illiterate, and the permanent gumastah has been ill for the greater part of 1895.

7. The school had been open from the 1st January 1893 in accordance with Mr. Batten's order (paragraph 21 of his report), but was again closed about the beginning of April 1895, on account of the gumastah's illness, and the allowance of Rs. 3 a month will be withheld from the 1st April. No one on the island is competent for the post, and I am making inquiries on the mainland to see if I can get any one to go to the island at a reasonable rate of pay.

8. The anchorage at the island is exposed, but if two rocks were blasted, a passage into the reef would be available with a minimum depth of 11 feet of water.

9. The birth and death registers were not well kept: in 1895 the work had been neglected owing to the illness of the gumastah. The necessary orders were issued.

10. Government sanctioned a sum of Rs. 200 for building a new cutcherry on the island and Mr. Bradley promised to send the amin a plan. Nothing had been done up to time of my visit. I have now ordered the amin to pull down the cage in the present building in order to make it more suitable for a court room and to build another room for the accommodation of visiting officers. The cost will not exceed Rs. 75.

11. *Agathi.*—Six days were spent on this island. Five survey plots of pandarom land left in charge of the amin were inspected: progress has been made in planting them up, and the amin was ordered to use the nett receipts from the lands in further planting. Another piece of cowle land was resigned from 1st January 1896, and the amin ordered to take charge of it. Remissions, amounting to 1 thulam and 20 palams, were granted on two pieces of cowle land in consequence of trees having gone out of bearing.

12. The four islets of Bungarom, Tinnakara, Parli and Kalpitti are now in the hands of one man; he petitioned, in February 1894, for remission on the ground of damage done by the storm of 1891, and the matter had been left for disposal on the island. Pending disposal the rent due on the 1st April 1894 and 1895 had not been paid. Mr. Batten remarked that the damage done in Agathi was not as great as in Kavarathi, but that the dependent islets had suffered more than the main island. I remitted Rs. 250 a year for seven years from the 1st April 1894, as it was reported that 550 trees had been blown down and others rendered unproductive. Assuming 250 trees to have been rendered unproductive, the total is 800, which, at 5 annas a tree—the rate paid for pandarom trees on cowle land—gives Rs. 250. The balance due for two years was paid at once.

13. The amin keeps criminal and civil registers and a register of copy applications. In 1894 there were 11 and in 1895 2 criminal cases. All had been disposed of, but fines imposed in 1894, amounting to Rs. 36, had not been paid. I levied Rs. 31 and wrote off the balance, as the party fined had since died. One civil case of 1892 and four of 1895 had been reserved for my disposal and were disposed of. All the 13 cases of 1894 had been disposed of, but 4 of the 32 cases filed in 1895 were pending. Two connected cases were referred to me and the other two the amin promised to dispose of without delay. All the applications for copies had been disposed of, except one in which the copy was ready, but the applicant had not taken delivery.

14. There were 86 petitions for disposal: there were two complaints against the amin, but nothing was proved. There is a little ill-feeling against him on account of the attachment of property in a big civil suit, but the amin only acted under the Collector's orders and cannot be blamed. This suit is known as the "Pakermoopanadayil case," and, unfortunately, I found myself unable to dispose of it, as the parties had not got copies of some important papers, and I therefore adjourned the further hearing to Calicut. A few of the petitions were referred to the amin for disposal, and one I had to leave pending, as the defendant was absent from the island.

15. The school has been closed since September 1894; many of the boys go over to the mainland to earn their living and there does not seem any desire for education.

16. In 1894, 19 births and 27 deaths were registered, and in 1895, 39 births and 29 deaths, the population of the island being 1,354. The registration does not seem well done, and the gumastah was warned.

17. Mr. Batten gave the amin ½ lb. of casuarina seed. Nine young trees planted near the cutcherry are alive; all the other plants are stated to have been destroyed by rats.

18. The amin had built a sub-jail at a cost of Rs. 55, which was passed and included in his accounts. The amin had not been to the mainland in the spring of 1895 and his accounts were settled for two years to save him the trouble of coming to Calicut this year.

19. The usual complaints were made that their coir was only classed as second class and that 5 per cent. was deducted for dryage. They also complained of a recent order that all coir should be weighed before the amin. I have arranged to have samples of each description of coir sent to the islands for reference, as this seems not to have been done hitherto.

20. *Kavarathi.*—Twelve days were spent on this island, where petitions were, as usual, numerous. The pulli-pulli and swandham pandarom lands, given on cowle by Mr. Dunnergue in 1891, were inspected to see if the condition that they should be fully planted up within five years had been observed. Out of the 101 plots given something had been done on all but 15. The cowlehars in these 15 cases were warned that their plots would have to be resumed unless great improvement was shown before the next visit. Remissions were granted on four plots of land amounting to 6 thulams and 20 palams, and the amin, who is the lessee of all the bread-fruit trees standing on Ellakkal lands, was granted a remission, the number of trees having much diminished. Two fresh cowles were given.

21. The island of Suheli could not be visited, as the steamer did not carry sufficient coal and the wind was not favourable for an *odam* to go and return. The renter applied for a decrease in his rent, which I saw no reason to grant, as he took the lease at public auction. In any case nothing can be done until the island is inspected.

22. There were 162 petitions for disposal: several petty suits were referred to the amin for disposal, as the parties could give no reason for not having gone to his court. The other petitions were all disposed of. Disputes between landlords and tenants are common in this island, and suits for inheritance numerous. There were practically no complaints against the amin, though the late amin and the Suheli renter are not on good terms with him.

23. Twenty-four criminal cases were filed in 1895; all but two had been disposed of. One was a suspected forgery case in which the amin had not examined the person whose mark was supposed to have been forged. On this man being questioned, he admitted that he had affixed his mark and that the document was genuine. The case therefore fell through. The other case related to the burning of the amin's cutcherry; this occurred at the end of September 1895, and the amin at once reported that he suspected some of his enemies. There was no real evidence against any one, and it is quite possible the fire was accidental. If any one wanted to injure the amin they would set fire to his house and not to the Government cutcherry. The only evidence against the accidental nature of the fire is the finding of an anonymous petition attached to one of the pillars of the railings in front of the cutcherry, which ended by praying the

prophet to destroy by fire. If an officer could have been sent over to inquire as soon as news of the fire reached the mainland, something might have been made of the case. As things were, I could come to no certain conclusion: none of the neighbours, who must have been roused by the fire, would give any information; they all said they did not leave their house until the conch was blown. The amin was ordered to re-roof the cutcherry before the monsoon bursts.

24. The amin had fined a man Rs. 6 for adultery, which is not an offence on the islands, and he had also convicted five men of escaping from lawful custody, which is not one of the offences he is empowered to try. Of the fines imposed Rs. 30 had not been paid, but the money was brought to me and handed over to the amin.

25. In the civil register cases were pending from 1891. Nine cases of 1891 were pending; three English petitions had been referred to the amin by Mr. Dumergue; the amin sent them to the mainland for translation into Malayalam, but they had not been returned to him. One was compromised before me, and others were pending for production of records or because parties were absent. Two cases of 1892 and thirteen of 1894 were pending, but none of 1893. I issued orders to the amin to give adjournments for fixed periods and to take up cases again at the expiry of the time given. At present if an adjournment is given to get copies from the mainland or some similar reason, nothing is done unless and until the parties voluntarily appear. Of 13 cases filed in 1895, 13 are still pending.

26. The amin keeps a register of Muktiarnamas, of which he registered 28 in 1894 and 37 in 1895. In almost all cases before me one or both of the parties appeared by agent.

27. One register is kept for miscellaneous petitions and copy applications. Two miscellaneous petitions relating to the registration of a marriage were pending. Of 83 copy applications, 72 had been complied and 11 were pending. Of the latter had not been produced, and 7 because the applicants had not taken delivery of the copies. The amin asked permission to levy copying fees in advance, but this did not seem necessary, as only one copy made in 1894 is still undelivered and most of those of 1895 still undelivered were applied for at the end of the year.

28. In 1893, 97 births and 51 deaths were registered. In 1894, 57 births and 47 deaths were registered and in 1895, 60 births and 58 deaths were registered. As the population of the island is 2,126, the registration of births appears to be defective and the gumastah was warned.

29. The gumastah gets Rs. 3 as schoolmaster, but owing to his illness the school had to be closed since June 1895. The allowance will be stopped from July 1st until the school is re-opened, which was ordered to be done as soon as the inspecting party left the island. Some of the islanders asked to be taught Hindustani, but the majority agreed that there was no chance of a second language being learnt when they had not sufficient energy to learn to read and write their own. The men excused themselves for not sending their boys to school by the plea that they were poor and that the boys had to earn their own living from a very early age.

30. The boat entrance to the lagoon is at the north-east; the amin said that if a few rocks were blasted away, a steamer of the *Margarita* draught could enter and anchor in 9 feet of water. Soundings might be taken on the next visit to verify this statement.

31. Half a pound of casuarina seed was given to the amin by Mr. Batten, but the seed and the young plants were eaten by ants and rats. Another attempt should be made.

32. Though there were no complaints against the amin, a petition signed by 64 persons including most of the karanadars complained that the amins we appointed had no education or belonged to some big tarwad, and hence gave unjust decisions; that the Inspecting officer coming once in two years and able to stay only a week was in a great hurry and sometimes failed to understand their petitions and that, in any case, there was great delay in disposing of their appeals. They compared their

condition with that of the Canara islanders who were said to have educated officers and plenty of supervision. They also brought up the usual grievance in connection with the monopoly, but agreed that they preferred it to the alternative of free trade and a tree tax. They also complained that their coir was spoilt in the Calicut Custom office, as the wind blew sand in, through the walls of the godown which are only of bamboo, and that they had to pay Rs. 3 a maund for salt. I pointed out that in 1880 they were informed they could buy salt duty free but they said they could not afford to buy elsewhere than at Calicut. All these general questions will be dealt with in my report on the future administration of the island.

33. *Androth.*—Eleven days were spent on this island. The sixteen plots of cowle land referred to in paragraph 7 of Mr. Batten's report were inspected and the rent raised on four plots by three thulams. On one plot a further reduction of 6 thulams, 20 paloms had to be granted. There were 64 petitions for remission, and remission amounting to 116 thulams and 2 paloms were granted. Remission was refused where no planting had been done. One fresh cowle was granted.

34. In 1895 there were 34 criminal cases, of which the amin had disposed of 24. Fourteen cases were also shown as pending from the year 1891. In one of these the accused was dead and others had been reserved for the officer visiting the islands; some were shown as pending, because no evidence was forthcoming. I gave orders which enabled most of these cases to be struck off the file. There were 87 civil cases in 1895, of which 51 were pending. Sixty cases of previous years were also pending, but this was a large reduction on the number pending at the beginning of 1895. The large number of pending cases was ascribed to the gumastah's absence from the island for fifteen months in 1894 and 1895 and to the outbreak of cholera at the beginning of 1894. The amin was given orders which I hope will ensure quicker disposal of work in future. He is still young and a little afraid of trying important cases.

35. I had to try two cross-rioting cases which arose out of a civil dispute. Mr. Dumergue passed orders in January 1891, but the orders were suspended by Mr. Bradley in 1893, pending the visit of another officer to the islands. The suspension order was not understood and led to the parties taking the law into their own hands. I acquitted one party on the ground that they acted in self-defence and imposed fines in the other case amounting to Rs. 50.

36. There were 23 petitions for disposal, many of them were claims for remission. Some of the petitions had to be left pending, owing to the absence of one or other of the parties and some petty cases were referred to the amin for disposal. In one case the following list of the customary services due by a tenant to his landlord was agreed to by both parties:—

(1) to sail in the landlord's big odam,
(2) to sail in the small odam for fishing,
(3) to serve in the landlord's house at festivals,
(4) to thatch the big odam shed,
(5) to thatch the landlord's house,
(6) to paint the odam and put fish oil on it.

There were no other petitions of general interest.

37. I had a census taken on this island because of the cholera epidemic in 1894. In 1891 the population was 3,320 and by my census it is only 2,259 or a decrease of 1,061. The registration of births and deaths has been as follows between the two censuses:—

	Births.	Deaths.
1891	134	189
1892	48	81
1893	97	100
1894	57	1,064
1895	60	59
Total	396	1,493

This gives a decrease of 1,031, *viz.*, all the deaths have not been registered or there may have been a small immigration from the mainland. There were over 1,000 deaths from cholera principally in January 1894. As the District Medical and Sanitary Officer went to the island to make an enquiry into the matter, it is not necessary, I hope, for me to dwell on the matter.

38. The attempt to grow casuarina trees has been a failure on this as on the other islands.

39. The spinning jenny sent to the island is not used for making coir, but is used by the owners of large odams for making cables out of coir ropes. Coir cannot be made, as the material will not stand the strain. I hear that a smaller machine is used at Cochin for making coir and I will make enquiries on the point.

40. The mās boat built by the amin is not used, as the small fish required for bait cannot be found at Androth. The amin proposes to sell the boat to the late Minicoy Amin who now resides at Amen.

41. The leaf disease is now confined to a very small part of the island and the trees are improving in condition. There has been great improvement since Mr. Dumergue's visit. I took specimen from the affected trees to send to Calcutta.

42. One of the clerks who accompanied me inspected the school in Malayalam. None of the party knew Hindustani. In the 1st class 22 boys were examined, of whom 9 passed, 1 was absent; in the second class, 11 were examined, of whom 8 passed, 2 were absent. I gave Rs. 8 in prizes. Rs. 2 to each of the two best boys in each class and request that my action may be approved.

43. A Public Works Department party went to this island to try and improve the entrance to the harbour by blasting; they widened the entrance about five yards. The tools they had did not enable them to work in more than three feet of water, and dynamite produces very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes.

44. *Minicoy Island.*—Four days were spent on this island. There are very few cases brought on this island. In 1894 there were seven criminal cases before the Amin and in 1895 four. One of each year was pending at the time of my visit. There were eight civil cases in 1894, of which four are pending owing to the absence of the parties. In 1895 there were only two cases, both of which are pending. The registers are not well kept, but better than at the time of the last visit.

45. There were 21 petitions for my disposal, several being for remission. All were disposed of except where the parties were absent.

46. The registration of births and deaths is not properly done. The figures registered are as follows for a population of 5,730:—

	Births	Deaths
1894	57	64
1895	55	55

47. From May to December 1895 the amin had only collected 34,727 cocoanuts from pandaram lands. Of course, it was said that the year was a bad one, but there has been a large falling off ever since the present amin took office. Toddy is now being collected from trees in the Big South Pandaram—58 men are drawing from 50 trees each which will give a revenue of Rs. 181–4–0. The amin has allowed these men to build a village in the South Pandaram; this was not sanctioned, and I am afraid is dangerous to the Government cocoanut revenue, though it will, to some extent, relieve the overcrowding in the present village-site.

48. I was agreeably surprised at the condition of the lepers in the settlement. They seemed to be well nourished and clothed; all but two of them are, I believe, fed by their relations, and these two are fed by the other islanders out of charity. Some of the lepers seemed quite willing to go to Cochin for treatment, but the owners of the island vessels would refuse to take them, and therefore Government would have to make special arrangements for their removal. The District Medical and Sanitary Officer will, I presume, make a more detailed report on this subject. I do not think it is necessary to feed or clothe the lepers from island funds, but it would be a good thing to build better huts than they have at present.

49. In paragraph 17 of Board's Proceedings, No. 487, dated 24th August 1893, I was ordered to report on the effect of the removal of restriction on trade. The taxes levied were five candies of rice annually on each vessel trading with Bengal and 50 mās fish annually on each fishing boat. Since the abolition of these taxes, four new mās boats have been built and two more were being built at the time of my visit. No new vessels have been built to trade with Bengal.

50. The gumastah is also schoolmaster, only seven boys are attending the school, of whom four were presented for examination in Malayalam; two of them only knew the alphabet and the other two could not read fluently.

51. The Amin of Minicoy seems to take very little interest in his work and to know very little about the island. I hope that he will improve.

52. A Hospital Assistant accompanied me to the four northern islands, but I have no figures of the work he did. The District Medical and Sanitary Officer went to Androth and Minicoy.

53. I hope to submit in a few days a confidential report with reference to Board's Proceedings, Mis. No. 3506, Confidential No. 64, dated the 15th July 1895.

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 8th April 1896, Dis. No. 53-1st.

Adverting to paragraphs 37 and 52 of my inspection report of the Laccadives and Minicoy, No. 53-1st, dated the 24th March last, I have the honour to forward, herewith, copies of the reports of the District Medical and Sanitary Officer, Malabar, and the Hospital Assistant who accompanied me to the islands during the recent visit.

Enclosures.

From Surgeon-Lieutenant-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, to the Secretary to the Surgeon-General with the Government of Madras, dated Calicut, 10th February 1896.

In accordance with the orders of Government of Madras, I embarked on the steamer *Margaret* with the Collector and his staff on 7th December 1895 intending to do the inspection of the hospital at Minicoy and to report on the condition of the lepers on the island, but from some cause or other we could not find the island after steaming in all directions for 16 hours and as we were running short of coals, it was decided to return to Calicut which we did on the Friday 11th following.

The Collector then arranged to do the other smaller islands and to send for me when he arrived at Androth.

I accordingly left Calicut on Monday, the 25th January 1896, and arrived at Androth the next evening at 5.

Androth.—This island is situated about 159 miles from Calicut and is the largest of the northern group of the Laccadive Islands. The soil is a mixture of powdered coral and vegetable matter with an excess of the former on the north-east and south-western sides of the island, while on the east and southeast there appears to be a larger amount of vegetable débris with the result that trees growing in these parts of the island are distinctly sturdier and better in all respects. The surface of the island is nearly covered with fallen cocoanut leaves and the cocoanut fibre which seem to be allowed to remain till they rot.

The country is flat with little mounds of earth of varying heights in places. The inhabitants are Mahomedans and the men and boys of excellent physique, but the former are a most apathetic lot. Their food consists chiefly of the following grains: rice, ragi and varagu, and fish, mutton, fowls, &c.

The water-supply appears to be sufficient, but the quality is not good. As it is hard and as the wells are in no way protected, a great deal of vegetable matter falls into them and this is allowed to soak in the water. Besides this, nearly all the drinking-water wells are situated in the darkest and most shady parts of the island. I have suggested that a certain number of these should be converted into draw-wells and that all trees within a radius of 50 feet be removed. Considering the important part the water plays in diseases attended by gastric symptoms, this matter should receive attention. The houses are fairly large and well built, the walls being built of lime stone and the roofs well covered with cocoanut leaves.

The conservancy of the island is sadly neglected. The compounds of the huts are filthy. The men should be persuaded to use the fields instead of the beach for the purposes of nature, and if the trench system were introduced, the soil in parts of the island might be improved. There were 45 cases vaccinated with 40 successful cases; the lymph had unfortunately begun to fail as it was getting old. There had been no epidemic of small-pox since 1884.

The chief diseases are eye-diseases, worms and rheumatism. The first is due to a great deal more to the irritation of the lime in the sand than to the coir reported before. I treated a large number of men suffering from granular lids and they seldom or ever had anything to do with coir-beating or picking.

When Surgeon Beech visited the island in 1891, he saw five cases of leprosy; four of these have since died, and a young man who appears to be well looked after and is suffering from it in its early stage is the only one surviving. He objected very much to leave the island for treatment on the mainland.

The real purpose of my visit to this island was to enquire into the terrible epidemic of cholera which broke out here about the end of December 1893 and continued up to February 1894. The disease is reported to me to have been introduced by traders from Mangalore; the first attacks recovered, but as the days went on the disease increased in severity, and from the 18th of January there was as many as 150 deaths in a day. The total number of deaths registered was 976, but I believe there must have been 20 or 30 more. No special treatment appears to have been adopted as no medicines were available, and one may picture the misery and distress there must have been at the time when the small-ness of the island is considered. The effect on the population has been to decrease it considerably as will be seen from the following statement:—

The population taken in 1891 was	3,229
Births registered in 1894	399
This leaves a population to be accounted for	3,710
Deaths during the same period	1,121
	2,589

Present remaining population, as registered while I was on the island, 2,259, so that a small balance of 330 had to be account for. This however, shows a very serious decrease in the population and which of course is greatly due to the epidemic of cholera. Unless there has been some "cooking up" in the entries in the registers, this system of registration compares very favourably with that in the mainland in even large municipal towns.

I had a quantity of medicines for the treatment of cholera brought out for this tour and leave at all the islands inspected by the Collector left them with printed instructions as to their use, and some of the more intelligent of the natives were taught most carefully and simply the steps to be taken in any future epidemic, and it is to be hoped the inhabitants will not suffer so severely in future. Two curious facts were noticeable in this island and they were the very small excess of female children to males, viz., six in the total birth of five years and a mortality of 122 of females in excess of the males during the five years and 101 of these during the cholera epidemic.

I returned from Androth on the 28th January and arrived at Calicut in the afternoon of the 29th and left again early on Friday morning, the 31st of January, and arrived at Minicoy on the evening of the 1st of February.

On Sunday morning the Collector and I visited the leper settlement and had a long conversation with the poor afflicted. There were ten lepers in the island remaining from the nineteen when Surgeon-Major Beech visited the islands, all the others having died. Of these, three were admissions since 1894. Both the Collector and I were agreeably surprised to find the majority looking in fairly satisfactory condition, but this I think was chiefly due to the food supplied to them by the hospital assistant and the amin—each of them having given the lepers a bag of rice. The statements made by the late medical subordinate, though true to certain extent, appeared to the Collector and myself to be rather exaggerated. The majority of the lepers were very anxious to come across to India and be treated at the Lazaretto at Pallipart where I am informed there is sufficient accommodation at present, but I am afraid that it would be almost impossible to do so, for the great difficulty would be to obtain the proper means of transport as owners of the "Odees" (native vessels) would not consent to carry them. The only steps that can be taken, I think, are that they should have a proper building constructed for them in the part of the island they are at present living, and that the hospital assistant in charge of the island dispensary be entrusted to look after them, and that the amin be directed to supply them with the food. Fresh food and vegetables might be obtained for them and sent to each by the "Board of Trade," Colombo, and the Commanders of the Lighthouse steamers, which I am told call every six weeks at the island and bring provisions for the men in charge of the Lighthouse. The following are the new admissions in the island from leprosy with a few notes regarding their family history:—

1. *Mussa*, 12 *years*.—Mother has leprosy, but for some reason or other she has not been ordered to the settlement by the Kazi, and his aunt is suffering from the disease in its early stage, but he has five sisters and three brothers who are healthy.

2. *Ali*, 18 *years*.—Both parents dead, but they had not suffered from leprosy. Aunt was in the settlement and died a year ago. Has three sisters, all healthy.

3. *Mahamad*, 14 *years*.—Mother is suffering from leprosy in its incipient stage, but is living in the village. Father healthy. Has no brothers or sisters.

The Hospital Assistant Sheik Tippu has been interesting himself on their behalf, and I saw several of the cases improving under treatment. The inhabitants of Minicoy have very curious ideas about leprosy, for as long as those suffering from the disease are allowed to remain in the village by the Kazi they mix freely with them, but when once transferred to the leper settlement they will have nothing to do with them and will not approach them within 200 yards. The Kazi, who is the responsible person, evidently thinks that the disease must be very far advanced before he orders their removal. If proper accommodations were built and food supplied, and if the Hospital Assistant, Kazi and Amin worked together, cases would be segregated while the disease was in its incipient stage and probably then the disease would in time be stamped out of the island.

I inspected the dispensary on two occasions and was pleased with the work done by the medical subordinate in charge.

The most common diseases appear to be rheumatism, worms, skin-diseases, eye-diseases, and in the rainy seasons fevers reported to be of a malarial type. I did not see a single case of enlarged spleen. There were a fairly large number of granular lids and operations of the cornea and I also saw three cases of cataract. If I ever visit the islands again, I shall go prepared for a few operations on the eye.

The hospital assistant's quarters are very comfortable. I would strongly urge the necessity of a young man being sent. The Collector and I questioned the people as to the class of medical subordinates for the island and the general opinion was that they objected entirely to a caste Hindu, but that they had no objection to a native Christian though they would prefer a Mahamedan. It would not be useful for a native Christian to live on the island, as the men at the Light houses are of that class and they have a stock of provisions consisting of tinned beef, mutton, vegetables &c., which the hospital assistant may, without injuring his caste, eat and for which he would have to pay a nominal price. I may mention here that the last meteorologist clerk was a native Christian who left Minicoy after his residence there and this was chiefly due to his having been able to get a variety of food and provisions from the Lighthouse men. There is no doubt that the Mahamedan subordinate suffers as he can get nothing but rice, fish and fowls. No fresh meat is procurable for goats die soon after their arrival there from the bites of the mosquitoes. It would be worth trying whether the tough-hide buffaloes would stand the climate and mosquitoes.

There were in all 20 cases vaccinated and lymph was left for another 50. It is my intention to send a supply of lymph through Colombo every second or third month. The island appears to have been free from small-pox for several years.

The water-supply is sufficient, but the quality is not good.

The island during the time of the tour was kept fairly clean. The one great drawback to sanitation is that the men will resort to the beach for purposes of nature, and until the tide rises the smell is very objectionable, as after that the decadent matter is carried away by the receding tide.

In conclusion, I have to suggest that all correspondence, postings, &c., be made *via* Colombo. The following address is the one I would suggest for the present:—

Hospital Assistant, Minicoy,
Care of Commander, Lighthouse Steamer,
Board of Trade Office,
Colombo.

From 1st Class Hospital Assistant M. KANNAN, No. 193, doing duty, Calicut, to the District Medical and Sanitary Officer, Malabar, dated 15th February 1896.

I beg to submit the following report in connection with my recent visit in medical charge of the Collector's staff that preceded on inspecting duty in S.S. *Margarita* to the following islands (Laccadive), viz., Kalpeni, Kiltan, Agatti and Androth.

The steamer *Margarita* left Calicut in charge 7 p.m. on the 21st December 1895 and reached Kalpeni at the 4th evening.

Kalpeni.—We remained here for seven days, during which time I afforded medical aid to 111 patients suffering from eye-diseases 25, rheumatism 18, worms 15, respiratory affections 28, diarrhœa 5, febricula 10, itch 6, and ring-worm 4.

I also vaccinated 50 cases, of which 30 were successful, 15 unsuccessful and 5 unknown.

Kavarathi.—We reached this place at about 7 A.M. on the 28th December 1895. Here I treated 125 patients suffering from eye-diseases 35, rheumatism 14, worms 23, respiratory affections 40, and skin-diseases 13, and vaccinated 45 cases, of which 32 were successful, 10 unsuccessful and 3 unknown.

As the sea became very rough the steamer on the 1st January 1896 had to leave for Agathi where we reached on the same evening.

Agathi.—Here 65 patients were under treatment for rheumatism 10, eye-diseases 16, worms 13, respiratory affections 17, skin-diseases 6, and boil 2, and 45 persons were vaccinated, of whom 33 were successful, 8 unsuccessful and 4 unknown. We returned to Kavarathi on the 8th January 1896 and remained there again for ten days. The cases treated and vaccinated on both occasions are mentioned above.

We left Kavarathi for Androth on the 16th and reached there on the 17th January 1896.

Androth.—I treated 203 patients here suffering from eye-diseases 50, rheumatism 31, worms 30, respiratory affections 41, itch 20, ring-worm 6, febricula 8, diarrhœa 1, abscess 3 and ulcers 10, and vaccinated 46 persons, of whom 31 were successful, 12 unsuccessful and 3 unknown.

Two abscesses were incised by the District Medical and Sanitary Officer, Malabar, and the important cases were examined and prescribed for by that officer.

General Remarks.

Eye-diseases and respiratory affections prevail to a great extent in all the islands. The irritation caused by the particles of hand-twisted coir flying into the eyes is, I think, responsible for the former and the inevitable inhalation of the same and consequent irritation caused in the bronchial tubes probably result in the respiratory ailment.

The water-supply of these islands is chiefly from shallow wells. The water is no doubt with an admixture of saturated solution of lime and hard on account of limestone strata from which it is obtained. The least hard water is that of Kavarathi, but it is injurious owing to its proximity to burial grounds.

The sanitary condition of all the islands is not bad though it will admit of much or less improvement. The houses being situated far from each other, the inhabitants resort to sea-shore, cocoanut gardens, and waste land for answering calls of nature, so they do not care much for latrine, &c.

I have advised the amins of these islands to get removed, as early as possible, all the accumulation of filth, rubbish, &c., neglected by some far away from dwelling places and precautions are to be taken to prevent these nuisances recurring by insisting on the prompt daily removal of all refuse matters to suitable places.

I have also advised them to get all the dirty houses lime washed as quickly as possible.

I have also left some supply of cholera medicines to each amin with clear directions as to their use at the time of necessity.

The increase in the number of unsuccessful cases of vaccination is, I was told, due to children having taken their baths in the sea water soon after the operation.

Endorsement by Surgeon-Lieut.-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, dated Calicut, 19th March 1896.

True copy forwarded to the Collector of Malabar.

Resolution—No. 166, dated 12th May 1896.

In the letters read above, the Collector of Malabar submits a report of his visit to the Laccadive Islands and Minicoy in December last.

2. The question of providing a steamer for the sole purpose of visiting the Laccadive and Amindivi Islands having been held over for future consideration, the Pearl Fishery Steamer *Margarita* was placed at the disposal of the Collector. She arrived at Calicut on the 6th of December and left for Minicoy on the 9th idem,

but as Mr. Baker who was in charge was unable to find the island, the party had to return to Calicut on the 13th for coal and water. Five days were thus completely wasted. The *Margarita* started again on the 21st with another officer in charge and was available till the 7th February, so that the Collector was able to inspect the islands fully. The time spent on each island is shown below:—

	DAYS.
Kalpeni	5
Agathi	6
Kavarathi	12
Androth	11
Minicoy	4

3. The following points require notice:—

(i) An effort was made by a Public Works Department party, which accompanied the Collector, to improve the entrance to the harbour at Androth by blasting as desired in paragraph 2 of Government Order, No. 696, Political, dated 11th October 1895; but they merely succeeded in widening the entrance by about five yards. The Collector considers that dynamite can make very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes. The question has to be carefully investigated by an expert in submarine blasting. In addition to this, two rocks have to be blasted at the island of Kalpeni to improve the anchorage by making a passage into the reef. The amin of Kavarathi suggests a similar improvement and the Collector proposes to take soundings at the next visit.

(ii) The efforts made by Mr. Batten during his inspection in 1893 to introduce casuarina into the islands have proved unsuccessful. In the island of Agathi only nine young trees are reported to be alive, the rest having been destroyed by rats. In none of the other islands have they fared any better.

(iii) The leaf-disease referred to in previous reports on the inspection of the islands is now confined to a very small part of the island of Androth and the trees are improving in condition. The Collector has taken specimens from the affected trees to be forwarded to Calcutta.

(iv) The Collector's opinion of the amins is not favourable. The amin of Kalpeni is described as old and illiterate. He was left in office for another year and warned to be more prompt in the disposal of his work. The amin of Androth is young and a little afraid of trying important cases, while his brother official at Minicoy takes small interest in his work and knows very little about the island.

(v) The results of vaccination appear to be satisfactory.

The lepers at Minicoy are reported to be well cared for chiefly owing to the efforts made by the kazi and the hospital assistant. They want better habitation.

(vi) Education is not making any progress in the islands. Three schools opened under orders from Mr. Batten have been closed, ostensibly because the amins' gumastahs, the only persons who can teach, fell ill. In addition to the want of proper teachers, there is said to be a want of any general desire for education, the boys being sent out at a very early age to earn their livelihood owing to the poverty of their parents. Endeavours should be made to overcome the parents' objections. It is observed that the Collector is making enquiries about a competent teacher for the island of Kalpeni, and if good instruction can be provided, the schools would doubtless become more attractive.

(vii) The spinning jenny referred to in paragraph 16 of Board's Proceedings, No. 187, dated 24th August 1895, has been found to be unfit for making coir and is now used by the islanders in making cables. The Collector believes that a smaller one similar to those used at Cochin may be tried. Early steps should be taken to procure such an article for the island of Androth.

(viii) With reference to paragraph 17 of the Proceedings quoted above, the Collector reports that four new mâs boats have been built and two more are under construction, but that no new vessels have been built to trade with Bengal.

(ix) The Board supports the suggestion of the District Medical Officer that, if possible, a Native Christian should be appointed for the post of the medical subordinate of Minicoy.

(x) The Collector's inspection of the island of Androth showed that the deplorable mortality from cholera during the outbreak of 1893-94 had not been exaggerated. It is satisfactory that the District Surgeon has now left printed instructions on all the islands as to the steps to be taken in emergencies of this nature, and that a supply of medicines has also been provided. It is also observed that several of the more intelligent islanders were personally instructed in the matter.

4. The Collector's action in granting a remission of Rs. 250 a year for seven years in favour of the inhabitants of the small islands dependent on Agathi on account of the damage sustained during the storm of 1891 and in distributing Rs. 8 in prizes to the successful students of the school at Androth is approved.

5. The Board awaits the report on the future administration of the Laccadive Islands promised by the Collector.

(True Copies and Extract.)

(Signed) R. C. C. CARR.
Acting Secretary.

To the Chief Secretary to Government, Political Department.
„ Collector of Malabar.
Copy to the Secretary to Government, Revenue Department.

G.O., No. 1508 W., dated 14th May 1896.

Read—the following paper:—

From the Executive Engineer, West Coast Division, to the Superintending Engineer, IV Circle, dated 1st April 1896, No. 154-S.E.

With reference to G.O., No. 2797 W., dated 2nd November 1893, I have the honour to forward a report from Mr. J. Pereira, Supervisor, on the blasting and removing obstructions in the Androth harbour, Laccadive Islands, together with two tracings and an estimate amounting to Rs. 300, being cost incurred in carrying out the blasting operations, and to request an allotment of Rs. 300.

Enclosure.

Report from Mr. J. PEREIRA, Supervisor in charge Cantonment Works, Cannanore, No. 953, dated 25th February 1896.

In compliance with your No. 72-S., dated 18th January 1896, I beg to submit my report on the blasting operations conducted at the entrance to the Androth harbour, one of the Laccadive Islands.

I started from Calicut per S.S. *Margarita* on the 20th January 1896 with a party of four blasters kindly procured through the help of Sub-Divisional officer, Wynaad, from the Tamracheri ghât. We reached Androth on the evening of the 21st and returned to Calicut on the 29th forenoon. My stay in the island, exclusive of the time engaged on the voyage, is therefore between the 22nd and 27th or six working days.

2. *Position of the Island.*—Androth, one of the five inhabited islands of the Laccadives, at present under the Collectorate of Malabar, lies almost due west and 120 miles off the coast of Calicut. It is 2½ miles in length east to west and 1 mile in breadth nearly, with a population of about 3,200 inhabitants, all Mappillas. It has a luxuriant tope of cocoanut plantation and its exports are cocoanuts and coir. The island depends for all its other necessaries of life from the west coast mainland, Mangalore and Calicut forming its chief ports of calling. It is protected by a natural barrier of coral reef. That on the north face comprises two arms, enclosing a

lagoon, with a sandy beach sloping gradually into the sea, as shown in the survey. The barrier on the south face is an almost flat, close-grained, hard coral rock resembling white marble about 250 feet wide. This rock sheet is exposed during low tides. The surf along this rocky margin is generally rough. Beyond this line the rock reef falls abruptly into fathomless sea.

3. *Rocky Obstructions.*—The services of the amin and a karnavan having been kindly deputed by the Collector, Mr. Hewetson, I inspected the inner harbour and noted the coral rock obstructions along the entrance to the lagoon, marking their positions by temporary buoys.

(a) Survey and Levels.—To elucidate my report, I append a survey and cross sections of the harbour, showing the positions of the rocky obstructions under complaint.

4. *Magnitude of Rocky Obstructions.*—A reference to survey and levels will give an idea of the magnitude of the rocky obstructions A, B, C, D and E as nearly as could be ascertained from soundings:—

Rock A = 55 × 10′ × 9′ (or c. ft. 19,800)
„ B = 40 × 35 × 11 „ 15,400
„ C = 45 × 30 × 12 „ 14,900 } = c. ft. 113,100
„ D = 70 × 50 × 13 „ 46,550
„ E = 80 × 40 × 13 „ 48,000 }

5. *Nature of Rock to be Blasted.*—The rock to be blasted is coral rock. It is porous in nature, whitish in colour. It is soft at the exposed surface but harder as it approaches the stem or root, with fissures and hollows in the body. It may be chipped off or cleaved at the edges with crowbar, but cannot be entirely removed unless by blasting. It is a lime stone and is extensively used by the islanders.

6. *Tidal Observations.*—The depth of water over these stones is reduced to datum. The M.S. level arrived at = 22·45—is from a temporary tide-gauge erected by me during the working days in the island, giving a mean reading of 2·80 as the difference between the low and high tides. The readings recorded are given in a table on the level sheet.

7. *Natural Work.*—From the levels and the tidal observations, as also to the boring-irons—six feet steel jumpers—at my disposal, it is clear that I had no means to attempt at bore-holes beyond 2½ feet under water.

The rocks being also situated in 2½ to 3 fathoms of water around them, due allowance for swells and breakers during the work should also be considered.

8. *Island Labour.*—The Islanders are unwilling to take work under daily labour. They appear timid to engage themselves, being evidently accustomed to lethargic habits. Through the interference of the amin, however, I engaged eight men at As. 6 per day; of these, only four attended work fairly well. They, however, render gratuitous help in jumping bore-holes and removing debris lying under water. This haphazard labour lasts but a little while, and is given as suits their convenience. They are, however, good swimmers and divers, and, once they make up their mind to engage themselves, render good service in charging bore-holes in deep water.

In this connection their usefulness for submarine blasting is unquestionable as compared to the labour transported from the mainland.

9. *Blasting Work executed.*—As explained in paragraphs 6 and 7, rock A alone admitted of blasting operations being taken up on the 22nd, 23rd and 24th.

With the low tide of the 21th reading 3·50′ I secured the services of the four island divers. With these I picked out eleven minor rocks perched on rocks B, C and D (see cross section) and measuring on an average 5′×3′×2′ each. With some difficulty bore-holes of from 12″ to 18″ in depth were jumped on these boulders and fired with very good results. Boulders shattered disappearing from the surface of the main rock.

The low tides between the 25th and 27th, however, allowed some good work being done along the eastern faces of rocks B, C, D and E. The work on these rocks is shown in red ink shading in the survey and sections.

An approximate measurement of blasting work done on the different rocks between the 22nd and 27th is as follows:—

Rock A, 1,815 *cubic feet.*—Edges all round widened to average section of 4′×2′. Body reduced to a depth of 1½ feet. Existing body shattered to a depth of 2 feet preventing further bore-holes being jumped.

Rocks B, C, D and E, 1,041 *cubic feet.*—Minor boulders perched on main rocks blasted. Projecting ends on eastern faces removed and the entrance to harbour widened by an average of 5 feet.

Total 2,856 *cubic feet.*—Debris of rocks blasted lying in the deep and has to be removed by the islanders.

10. *Working Data.*—The direct cost per 100 cubic feet of rock blasted is Rs. 8, while the charges inclusive of batta and other sundry charges to work-people is Rs. 10 per 100 cubic feet.

The cost does not include the removal of debris blasted which are still lying in 2 to 3 fathoms of water. The amin and the karnavan of the island, however, promised to have this done.

I consider this should be insisted upon where the depth is less than 1½ fathoms.

11. *Result of blasting on Rock A.*—Projecting edges having been removed in a section of 4′×2′ all round, a few charges were fired on the body or surface of the rock, which reduced it in depth by 1½ feet. These charges have so much shaken the rock that the jumping of further bore holes is not feasible, as they get clogged up with particles of sand below a few inches of the surface. I consider that crowbars can now be freely used to remove debris to further reduce the depth of this rock.

Proposals for future Operations.—From the results experienced in blasting the body of rock A, as explained in paragraph 11, it is evident that blasting with shallow bore-holes and small charges on coral rock is a drawback to blasting with ordinary jumpers, subsequent bore-holes being clogged up with sandy particles. The only advantage gained in blasting by this simple method is to detach projecting ends of rocks. This has more or less been effected.

The depth of water on rocks B, C, D and E does not also allow of blasting being done by ordinary jumpers to any satisfaction.

I therefore consider that the most effective method of removing these coral stones to the root is by deep bore-holes and heavy * charges.

This work in 2 to 3 fathoms of water should, in my humble opinion, be taken up by an experienced staff in submarine blasting. The best time, however, to commence work is at spring tide. The party deputed for the work should be allowed to start work at the beginning of the inspecting season. The Collector deferring his inspection to the island to the last.

This arrangement will allow the blasting party to work undisturbed and with the co-operation of the islanders, which is otherwise disturbed by the bustle of the Collector's inspection.

* Forty lbs. of dynamite and fifty coils of fuse being all the expl sive actualy used during the present operation.

Endorsement thereon by the Superintending Engineer, IV Circle, dated 20th April 1896, No. 172 W.

Copy submitted to the Chief Engineer, Public Works Department, with reference to G.O., No. 2797 W., dated 2nd November 1893, with a request that an allotment of Rs. 500 may be made for the blasting operations carried out.

Order—No. 1508 W., dated 14th May 1896.

Mr. Supervisor Pereira's report will be communicated to the Political Department in continuation of G.O., No. 801 W., dated 21st March 1894.

2. The estimate will be returned to the Superintending Engineer, IV Circle, for sanction under Provincial Miscellaneous Public Improvements. An allotment is not now necessary as the expenditure was incurred in the past official year.

(True Extract.)

(Signed) F. J. WILSON,
Under Secy. to Govt., P.W.D.

To the Political Department.
" Superintending Engineer, IV Circle.

Proceedings of the Board of Revenue (Land Revenue), Mis. No. 2557, dated 4th June 1896.

Read—the following papers:—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 18th May 1896, Dis. No. 514-51.

As stated in paragraph 7 of my report on the inspection of the Laccadives and Minicoy, No. 33-51, of 1896, dated the 24th March last, I made enquiries for a schoolmaster for Kalpeni Island, and one Isak Sheriff (a Muhammadan), who can teach Malayalam and Hindustani up to the Primary School examination and English up to the III standard, has been recommended for appointment on a salary of not less than Rs. 15 per mensem by the Sub-Assistant Inspector of Mappilla Schools, Northern Range. The present schoolmaster is the gumastah of the island, who is paid Rs. 3 a month for this extra duty. He is incompetent for the post. I have therefore the honour to request that the Board may be pleased to sanction the increased rate of pay to the schoolmaster. As the season is far advanced and as there are no Kalpeni vessels in the harbour, I have directed Isak Sheriff to hold himself in readiness to proceed to the island at the commencement of the fair season.

Resolution—Mis. No. 2557, dated 4th June 1896.

Submitted for the orders of Government in continuation of paragraph 3 (vi) of Board's Proceedings, No. 1106, dated 12th May 1896.

(True Extract.)

(Signed) R. C. C. CARR,
Acting Secretary.

To the Chief Secretary to Government, Political Department.

Order—No. 373, Political, dated 11th June 1896.

Recorded.

2. The sanction to the increased rate of pay to the schoolmaster for Kalpeni Island, which is requested in Board's Proceedings, Mis. No. 2557, dated 4th June 1896, is accorded.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Revenue Department.
" Public Works Department.
" Board of Revenue (Land Revenue).
" Surgeon-General.
" Accountant-General.

Ed. A. Rait.

Govt. of {1896} Madras.

POLITICAL.

Issued

Read. *Encl.*

G.O., No. 373, 11th June 1896.

JUNE.

Laccadive Islands.

Recording Board's Proceedings reviewing the report on the inspection of the —, and sanctioning the pay of Rs. 15 per mensem to the schoolmaster for Kalpeni Island.

No. 373, Political, 11th June 1896.

GOVERNMENT OF MADRAS.

POLITICAL DEPARTMENT.

Read—again the following papers:—

G.O., No. 750, Political, dated 9th November 1893.

Abstract.—Recording Proceedings, Public Works Department, deputing Mr. Baker, Assistant Engineer, to inspect the lagoons in Androth and other islands and report whether it would be feasible to blast a passage into them.

G.O., Nos. 97, 98, Marine, dated 12th March 1894.

Abstract.—Passing orders on the question of purchasing a steamer for the use of Government officers proceeding on inspection duty.

G.O., No. 232, Political, dated 7th April 1894.

Abstract.—Recording Proceedings, Public Works Department, directing that Mr. Baker's deputation to the Laccadives be deferred till the next Government steamer visits the islands and that in the meanwhile the requisite men and materials be collected.

Read—also the following papers:—

Proceedings of the Board of Revenue (Land Revenue), No. 166, dated 12th May 1896.

Read—the following paper:—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Manjéri, 24th March 1896, Dis. No. 353-1.

I have the honour to submit my report on my recent visit to the Laccadive Islands and Minicoy.

2. The pearl-fishery steamer *Margarita* arrived at Calicut on the 5th December 1895 and left on the 9th for Minicoy with the District Medical and Sanitary officer and myself. As Mr. Baker failed to find the island, we returned to Calicut on the 13th for coal and water. Mr. Swann, Reserve Port officer, was sent to relieve Mr. Baker, and the *Margarita* left again on the 21st for Kalpeni. The islands were visited in the following order: Kalpeni, Kavarathi, Agathi, Kavarathi, Androth and Minicoy. On the second day of our stay at Kavarathi there was a heavy swell and we went on to Agathi, where the steamer can enter the lagoon and returned again to Kavarathi to finish the work there. From Androth the steamer returned to Calicut to bring the District Medical and Sanitary officer and a Public Works Department party to blast the entrance into the reef. After dropping the Public Works Department party at Calicut, the steamer proceeded to Minicoy and finally returned to Calicut on the 7th February 1896.

3. *Kalpeni*.—Five days were spent on this island. The lands granted on cowle by Messrs. Brodie and Underwood in 1889 and 1882 were inspected and the rents payable enhanced from 284 thulams and 43 paloms to 301 thulams and 56 paloms. Five plots of lands were also inspected, on which reduction of rent was claimed and remissions, amounting to 6 thulams and 30 paloms, were granted. One fresh cowle was given. Some lands converted into paddy flats had been assessed by the amin and his assessments were confirmed. The three plots of land, alluded to by Mr. Futtergue in paragraph 14 of his report and by Mr. Patterson in paragraph 18 of his report, were inspected and found to have been fully planted up.

4. The amin only kept two registers—criminal and civil. He was ordered to open a third, or miscellaneous register, as the present arrangement leads to some very curious classification. A few cases were pending principally because of the absence of one or other of the parties. A register for applications for copies was ordered to be opened.

5. There were 81 petitions for disposal, some of them duplicates presented on the island, of petitions presented previously on the mainland. All were disposed of except two, which were left to be compromised. A few petty petitions were referred to the amin for disposal. None of them were of special interest or importance.

6. The amin Ibrahim Kutti is an old man who has been a long time in office. He does not wish to resign, and I left him in office for another year, with instructions to be a little more prompt in his work and to have his registers better kept. He is illiterate, and the permanent gumastah has been ill for the greater part of 1895.

7. The school had been open from the 1st January 1893 in accordance with Mr. Batten's order (paragraph 21 of his report), but was again closed about the beginning of April 1895, on account of the gumastah's illness, and the allowance of Rs. 3 a month will be withheld from the 1st April. No one on the island is competent for the post, and I am making inquiries on the mainland to see if I can get any one to go to the island at a reasonable rate of pay.

8. The anchorage at the island is exposed, but if two rocks were blasted, a passage into the reef would be available with a minimum depth of 11 feet of water.

9. The birth and death registers were not well kept: in 1895 the work had been neglected owing to the illness of the gumastah. The necessary orders were issued.

10. Government sanctioned a sum of Rs. 200 for building a new cutcherry on the island and Mr. Bradley promised to send the amin a plan. Nothing had been done up to time of my visit. I have now ordered the amin to pull down the cage in the present building in order to make it more suitable for a court room and to build another room for the accommodation of visiting officers. The cost will not exceed Rs. 75.

11. *Agathi.*—Six days were spent on this island. Five survey plots of pandarom land left in charge of the amin were inspected: progress has been made in planting them up, and the amin was ordered to use the nett receipts from the lands in further planting. Another piece of cowle land was resigned from 1st January 1896, and the amin ordered to take charge of it. Remissions, amounting to 1 thulam and 20 paloms, were granted on two pieces of cowle land in consequence of trees having gone out of bearing.

12. The four islets of Bungarom, Tinnakara, Parli and Kalpitti are now in the hands of one man; he petitioned, in February 1894, for remission on the ground of damage done by the storm of 1891, and the matter had been left for disposal on the island. Pending disposal the rent due on the 1st April 1894 and 1895 had not been paid. Mr. Batten remarked that the damage done in Agathi was not as great as in Kavarathi, but that the dependent islets had suffered more than the main island. I remitted Rs. 250 a year for seven years from the 1st April 1894, as it was reported that 550 trees had been blown down and others rendered unproductive. Assuming 250 trees to have been rendered unproductive, the total is 800, which, at 5 annas a tree—the rate paid for pandarom trees on cowle land—gives Rs. 250. The balance due for two years was paid at once.

13. The amin keeps criminal and civil registers and a register of copy applications. In 1894 there were 11 and in 1895 2 criminal cases. All had been disposed of, but fines imposed in 1894, amounting to Rs. 36, had not been paid. I levied Rs. 31 and wrote off the balance, as the party fined had since died. One civil case of 1892 and four of 1893 had been reserved for my disposal and were disposed of. All the 13 cases of 1894 had been disposed of, but 4 of the 32 cases filed in 1895 were pending. Two connected cases were referred to me and the other two the amin promised to dispose of without delay. All the applications for copies had been disposed of, except one in which the copy was ready, but the applicant had not taken delivery.

14. There were 86 petitions for disposal: there were two complaints against the amin, but nothing was proved. There is a little ill-feeling against him on account of the attachment of property in a big civil suit, but the amin only acted under the Collector's orders and cannot be blamed. This suit is known as the "Pakermoopanodayil case," and, unfortunately, I found myself unable to dispose of it, as the parties had not got copies of some important papers, and I therefore adjourned the further hearing to Calicut. A few of the petitions were referred to the amin for disposal, and one I had to leave pending, as the defendant was absent from the island.

15. The school has been closed since September 1894; many of the boys go over to the mainland to earn their living and there does not seem any desire for education.

16. In 1894, 19 births and 25 deaths were registered, and in 1895, 39 births and 29 deaths, the population of the island being 1,354. The registration does not seem well done, and the gumastah was warned.

17. Mr. Batten gave the amin ½ lb. of casuarina seed. Nine young trees planted near the cutcherry are alive; all the other plants are stated to have been destroyed by rats.

18. The amin had built a sub-jail at a cost of Rs. 55, which was passed and included in his accounts. The amin had not been to the mainland in the spring of 1895 and his accounts were settled for two years to save him the trouble of coming to Calicut this year.

19. The usual complaints were made that their coir was only classed as second class and that 5 per cent. was deducted for drying. They also complained of a recent order that all coir should be weighed before the amin. I have arranged to have samples of each description of coir sent to the islands for reference, as this seems not to have been done hitherto.

20. *Kavarathi.*—Twelve days were spent on this island, where petitions were, as usual, numerous. The pathi-pathi and swandham pandarom lands, given on cowle by Mr. Dunergue in 1891, were inspected to see if the condition that they should be fully planted up within five years had been observed. Out of the 104 plots given something had been done on all but 15. The cowledars in these 15 cases were warned that their plots would have to be resumed unless great improvement was shown before the next visit. Remissions were granted on four plots of land amounting to 6 thulams and 20 paloms, and the amin, who is the lessee of all the bread-fruit trees standing on Iliakkal lands, was granted a remission, the number of trees having much diminished. Two fresh cowles were given.

21. The island of Suheli could not be visited, as the steamer did not carry sufficient coal and the wind was not favourable for an *odam* to go and return. The renter applied for a decrease in his rent, which I saw no reason to grant, as he took the lease at public auction. In any case nothing can be done until the island is inspected.

22. There were 162 petitions for disposal: several petty suits were referred to the amin for disposal, as the parties could give no reason for not having gone to his court. The other petitions were all disposed of. Disputes between landlords and tenants are common in this island, and suits for inheritance numerous. There were practically no complaints against the amin, though the late amin and the Suheli renter are not on good terms with him.

23. Twenty-four criminal cases were filed in 1895; all but two had been disposed of. One was a suspected forgery case in which the amin had not examined the person whose mark was supposed to have been forged. On this man being questioned, he admitted that he had affixed his mark and that the document was genuine. The case therefore fell through. The other case related to the burning of the amin's cutcherry; this occurred at the end of September 1895, and the amin at once reported that he suspected some of his enemies. There was no real evidence against any one, and it is quite possible the fire was accidental. If any one wanted to injure the amin they would set fire to his house and not to the Government cutcherry. The only evidence against the accidental nature of the fire is the finding of an anonymous petition attached to one of the pillars of the railings in front of the cutcherry, which ended by praying the

prophet to destroy by fire. If an officer could have been sent over to inquire as soon as news of the fire reached the mainland, something might have been made of the case. As things were, I could come to no certain conclusion: none of the neighbours, who must have been roused by the fire, would give any information; they all said they did not leave their house until the conch was blown. The amin was ordered to re-roof the cutcherry before the monsoon bursts.

24. The amin had fined a man Rs. 6 for adultery, which is not an offence on the islands, and he had also convicted five men of escaping from lawful custody, which is not one of the offences he is empowered to try. Of the fines imposed Rs. 30 had not been paid, but the money was brought to me and handed over to the amin.

25. In the civil register cases were pending from 1894. Nine cases of 1894 were pending; three English petitions had been referred to the amin by Mr. Dunnergue; the amin sent them to the mainland for translation into Malayalam, but they had not been returned to him. One was compromised before me, and others were pending for production of records or because parties were absent. Two cases of 1892 and thirteen of 1894 were pending, but none of 1893. I issued orders to the amin to give adjournments for fixed periods and to take up cases again at the expiry of the time given. At present if an adjournment is given to get copies from the mainland or some similar reason, nothing is done unless and until the parties voluntarily appear. Of 13 cases filed in 1895, 13 are still pending.

26. The amin keeps a register of Muktiarnamas, of which he registered 28 in 1894 and 37 in 1895. In almost all cases before me one or both of the parties appeared by agent.

27. One register is kept for miscellaneous petitions and copy applications. Two miscellaneous petitions relating to the registration of a marriage were pending. Of 83 copy applications, 72 had been supplied and 11 were pending, 1 because paper had not been produced, and 7 because the applicants had not taken delivery of the copies. The amin asked permission to levy copying fees in advance, but this did not seem necessary, as only one copy made in 1894 is still undelivered and most of those of 1895 still undelivered were applied for at the end of the year.

28. In 1893, 97 births and 51 deaths were registered. In 1894, 57 births and 47 deaths were registered and in 1895, 60 births and 58 deaths were registered. As the population of the island is 2,126, the registration of births appears to be defective and the gumastah was warned.

29. The gumastah gets Rs. 3 as schoolmaster, but owing to his illness the school had to be closed since June 1895. The allowance will be stopped from July 1st until the school is re-opened, which was ordered to be done as soon as the inspecting party left the island. Some of the islanders asked to be taught Hindustani, but the majority agreed that there was no chance of a second language being learnt when they had not sufficient energy to learn to read and write their own. The men excused themselves for not sending their boys to school by the plea that they were poor and that the boys had to earn their own living from a very early age.

30. The boat entrance to the lagoon is at the north-east; the amin said that if a few rocks were blasted away, a steamer of the *Margarita* draught could enter and anchor in 9 feet of water. Soundings might be taken on the next visit to verify this statement.

31. Half a pound of casuarina seed was given to the amin by Mr. Batten, but the seed and the young plants were eaten by ants and rats. Another attempt should be made.

32. Though there were no complaints against the amin, a petition signed by 64 persons including most of the karanadars complained that the amins we appointed had no education or belonged to some big tarwad, and hence gave unjust decisions; that the Inspecting officer coming once in two years and able to stay only a week was in a great hurry and sometimes failed to understand their petitions and that, in any case, there was great delay in disposing of their appeals. They compared their

condition with that of the Canara islanders who were said to have educated officers and plenty of supervision. They also brought up the usual grievance in connection with the monopoly, but agreed that they preferred it to the alternative of free trade and a tree tax. They also complained that their coir was spoilt in the Calicut Custom office, as the wind blew sand in, through the walls of the godown which are only of bamboo, and that they had to pay Rs. 3 a maund for salt. I pointed out that in 1880 they were informed they could buy salt duty free but they said they could not afford to buy elsewhere than at Calicut. All these general questions will be dealt with in my report on the future administration of the island.

33. *Andrott.*—Eleven days were spent on this island. The sixteen plots of cowle land referred to in paragraph 7 of Mr. Batten's report were inspected and the rent raised on four plots by three thulams. On one plot a further reduction of 6 thulams, 20 palams had to be granted. There were 64 petitions for remission, and remission amounting to 116 thulams and 2 pulams were granted. Remission was refused where no planting had been done. One fresh cowle was granted.

34. In 1895 there were 34 criminal cases, of which the amin had disposed of 24. Fourteen cases were also shown as pending from the year 1894. In one of these the accused was dead and others had been reserved for the officer visiting the islands; some were shown as pending, because no evidence was forthcoming. I gave orders which enabled most of these cases to be struck off the file. There were 87 civil cases in 1895, of which 51 were pending. Sixty cases of previous years were also pending, but this was a large reduction on the number pending at the beginning of 1895. The large number of pending cases was ascribed to the gumastah's absence from the island for fifteen months in 1894 and 1895 and to the outbreak of cholera at the beginning of 1894. The amin was given orders which I hope will ensure quicker disposal of work in future. He is still young and a little afraid of trying important cases.

35. I had to try two cross-rioting cases which arose out of a civil dispute. Mr. Dunnergue passed orders in January 1891, but the orders were suspended by Mr. Bradley in 1893, pending the visit of another officer to the islands. The suspension order was not understood and led to the parties taking the law into their own hands. I acquitted one party on the ground that they acted in self-defence and imposed fines in the other case amounting to Rs. 50.

36. There were 93 petitions for disposal, many of them were claims for remission. Some of the petitions had to be left pending, owing to the absence of one or other of the parties and some petty cases were referred to the amin for disposal. In one case the following list of the customary services due by a tenant to his landlord was agreed to by both parties:—

(1) to sail in the landlord's big odam,
(2) to sail in the small odam for fishing,
(3) to serve in the landlord's house at festivals,
(4) to thatch the big odam shed,
(5) to thatch the landlord's house,
(6) to paint the odam and put fish oil on it.

There were no other petitions of general interest.

37. I had a census taken on this island because of the cholera epidemic in 1894. In 1894 the population was 3,320 and by my census it is only 2,259 or a decrease of 1,061. The registration of births and deaths has been as follows between the two censuses:—

	Births	Deaths
1894	134	129
1892	48	84
1893	59	100
1894	57	1,009
1895	56	59
Total ...	300	1,381

This gives a decrease of 1,031, *viz.*, all the deaths have not been registered or there may have been a small immigration from the mainland. There were over 1,000 deaths from cholera principally in January 1894. As the District Medical and Sanitary Officer went to the island to make an enquiry into the matter, it is not necessary, I hope, for me to dwell on the matter.

38. The attempt to grow casuarina trees has been a failure on this as on the other islands.

39. The spinning jenny sent to the island is not used for making coir, but is used by the owners of large odams for making cables out of coir ropes. Coir cannot be made, as the material will not stand the strain. I hear that a smaller machine is used at Cochin for making coir and I will make enquiries on the point.

40. The mās boat built by the amin is not used, as the small fish required for bait cannot be found at Androth. The amin proposes to sell the boat to the late Minicoy Amin who now resides at Amini.

41. The leaf disease is now confined to a very small part of the island and the trees are improving in condition. There has been great improvement since Mr. Dunergue's visit. I took specimen from the affected trees to send to Calcutta.

42. One of the clerks who accompanied me inspected the school in Malayalam. None of the party knew Hindustani. In the 1st class 22 boys were examined, of whom 9 passed, 1 was absent; in the second class, 11 were examined, of whom 8 passed, 2 were absent. I gave Rs. 8 in prizes. Rs. 2 to each of the two best boys in each class and request that my action may be approved.

43. A Public Works Department party went to this island to try and improve the entrance to the harbour by blasting; they widened the entrance about five yards. The tools they had did not enable them to work in more than three feet of water, and dynamite produces very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes.

44. *Minicoy Island.*—Four days were spent on this island. There are very few cases brought on this island. In 1894 there were seven criminal cases before the Amin and in 1895 four. One of each year was pending at the time of my visit. There were eight civil cases in 1894, of which four are pending owing to the absence of the parties. In 1895 there were only two cases, both of which are pending. The registers are not well kept, but better than at the time of the last visit.

45. There were 21 petitions for my disposal, several being for remission. All were disposed of except where the parties were absent.

46. The registration of births and deaths is not properly done. The figures registered are as follows for a population of 3,730:—

	Births.	Deaths.
1894	57	64
1895	55	55

47. From May to December 1895 the amin had only collected 34,727 cocoanuts from pandaram lands. Of course, it was said that the year was a bad one, but there has been a large falling off ever since the present amin took office. Toddy is now being collected from trees in the Big South Pandaram—58 men are drawing from 50 trees each which will give a revenue of Rs. 181-4-0. The amin has allowed these men to build a village in the South Pandaram; this was not sanctioned, and I am afraid is dangerous to the Government cocoanut revenue, though it will, to some extent, relieve the overcrowding in the present village-site.

48. I was agreeably surprised at the condition of the lepers in the settlement. They seemed to be well nourished and clothed; all but two of them are, I believe, fed by their relations, and these two are fed by the other islanders out of charity. Some of the lepers seemed quite willing to go to Cochin for treatment, but the owners of the island vessels would refuse to take them, and therefore Government would have to make special arrangements for their removal. The District Medical and Sanitary Officer will, I presume, make a more detailed report on this subject. I do not think it is necessary to feed or clothe the lepers from island funds, but it would be a good thing to build better huts than they have at present.

49. In paragraph 17 of Board's Proceedings, No. 487, dated 24th August 1893, I was ordered to report on the effect of the removal of restriction on trade. The taxes levied were five candies of rice annually on each vessel trading with Bengal and 50 mas fish annually on each fishing boat. Since the abolition of these taxes, four new mas boats have been built and two more were being built at the time of my visit. No new vessels have been built to trade with Bengal.

50. The gumastah is also schoolmaster, only seven boys are attending the school, of whom four were presented for examination in Malayalam; two of them only knew the alphabet and the other two could not read fluently.

51. The Amin of Minicoy seems to take very little interest in his work and to know very little about the island. I hope that he will improve.

52. A Hospital Assistant accompanied me to the four northern islands, but I have no figures of the work he did. The District Medical and Sanitary Officer went to Androth and Minicoy.

53. I hope to submit in a few days a confidential report with reference to Board's Proceedings, Mis. No. 3506, Confidential No. 64, dated the 15th July 1895.

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 8th April 1896, Mis. No. 35-1-1.

Adverting to paragraphs 37 and 52 of my inspection report of the Laccadives and Minicoy, No. 33-1-1, dated the 24th March last, I have the honour to forward, herewith, copies of the reports of the District Medical and Sanitary Officer, Malabar, and the Hospital Assistant who accompanied me to the islands during the recent visit.

Enclosures.

From Surgeon-Lieutenant-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, to the Secretary to the Surgeon-General with the Government of Madras, dated Calicut, 10th February 1896.

In accordance with the orders of Government of Madras, I embarked on the steamer *Margosa* with the Collector and his staff on 5th December 1895 intending to do the inspection of the hospital at Minicoy and to report on accommodation of the lepers on the island, but from some cause or other we could not find the island after steaming in all directions for 16 hours and as coal was running short of coals, it was decided to return to Calicut which we did on the Friday 11th following.

The Collector then arranged to do the other smaller islands and to send for me when he arrived at Androth.

I accordingly left Calicut on Monday, the 27th January 1896, and arrived at Androth the next evening at 4.

Androth.—This island is situated about 130 miles from Calicut and is the largest of the northern group of the Laccadive Islands. The soil is a mixture of powdered coral and vegetable matter with an excess of the former on the north-east and south-western sides of the island, while on the east and south-east there appears to be a larger amount of vegetable débris with the result that trees growing in these parts of the island are distinctly sturdier and better in all respects. The surface of the island is nearly covered with fallen cocoanut leaves and the cocoanut fibre which seems to be allowed to remain till they rot.

The country is flat with little mounds of earth of varying heights in places. The inhabitants are Muhammadans and the men and boys of excellent physique, but the former are a most apathetic lot. Their food consists chiefly of the following grains: rice, ragi and varaya, and fish, mutton, fowls, &c.

The water-supply appears to be sufficient, but the quality is not good. As it is hard and as the wells are in no way protected, a great deal of vegetable matter falls into them, and this is allowed to soak in the water. Besides this, nearly all the drinking-water wells are situated in the darkest and most shady parts of the island. I have suggested that a certain number of these should be converted into draw-wells and that all trees within a radius of 50 feet be removed. Considering the important part the water plays in diseases attended by gastric symptoms, this matter should receive attention. The houses are fairly large and well built, the walls being built of lime stones and the roofs well covered with cocoanut leaves.

The conservancy of the island is sadly neglected. The compounds of the huts are filthy. The men should be persuaded to use the fields instead of the beach for the purposes of nature, and if the trench system were introduced, the soil in parts of the island might be improved. There were 15 cases vaccinated with 10 successful cases; the lymph had unfortunately begun to fail as it was getting old. There had been no epidemic of small-pox since 1884.

The chief diseases are eye-diseases, worms and rheumatism. The first is due to a great deal more to the irritation of the lime in the sand than to the one reported before. I treated a large number of men suffering from granular lids and they seldom or ever had anything to do with coir-beating or picking.

When Surgeon Beech visited the island in 1891, he saw five cases of leprosy; four of these have since died, and a young man who appears to be well looked after and is suffering from it in its early stage is the only one surviving. He objected very much to leave the island for treatment on the mainland.

The real purpose of my visit to this island was to enquire into the terrible epidemic of cholera which broke out here about the end of December 1893 and continued up to February 1894. The disease is reported to me to have been introduced by traders from Mangalore; the first attacks recovered, but as the days went on the disease increased in severity, and from the 18th of January there was as many as 150 deaths in a day. The total number of deaths registered was 976, but I believe there must have been 20 or 30 more. No special treatment appears to have been adopted as no medicines were available, and one may picture the misery and distress there must have been at the time when the smallness of the island is considered. The effect on the population has been to decrease it considerably as will be seen from the following statement:—

The population taken in 1891 was	3,320
Births registered in 1891	300
This leaves a population to be accounted for	3,710
Deduct deaths during the same period	1,421
	2,289

The present remaining population as registered while I was on the island, 2,259, so that a small balance of 30 had to be accounted for. This, however, shows a very serious decrease in the population and which of course is greatly due to the epidemic of cholera. Unless there has been some "cooking up" in the entries in the registers, this system of registration compares more favourably with that in the mainland in even large municipal towns.

I had a quantity of medicines for the treatment of cholera brought out for this tour and have at all the islands inspected by the Collector left them with printed instructions as to their use, and some of the more intelligent of the natives were taught most carefully and simply the steps to be taken in any future epidemic, and it is to be hoped the inhabitants will not suffer so severely in future. Two curious facts were noticeable in this island and they were the very small excess of female children to males, viz., six in the total birth of five years and a mortality of 122 of females in excess of the males during the five years and 101 of these during the cholera epidemic.

I returned from Androth on the 28th January and arrived at Calicut in the afternoon of the 29th and left again early on Friday morning, the 31st of January, and arrived at Minicoy on the evening of the 1st of February.

On Sunday morning the Collector and I visited the leper settlement and had a long conversation with the poor afflicted. There were ten lepers in the island remaining from the nineteen when Surgeon-Major Beech visited the islands, all the others having died. Of these, three were admissions since 1893. Both the Collector and I were agreeably surprised to find the majority looking in fairly satisfactory condition, but this I think was chiefly due to the food supplied to them by the hospital assistant and the amin—each of them having given the lepers a leg of rice. The statements made by the late medical subordinate, though true to certain extent, appeared to the Collector and myself to be rather exaggerated. The majority of the lepers were very anxious to come across to India and be treated at the Lazaretto at Palliport where I understand there is sufficient accommodation at present, but I am afraid that it would be almost impossible to do so, for the great difficulty would be to obtain the proper means of transport as owners of the "Odees" (native vessels) would not consent to carry them. The only steps that can be taken, I think, are that they should have a proper building constructed for them in the part of the island they are at present living, and that the hospital assistant in charge of the island dispensary be entrusted to look after them, and that the amin be directed to supply them with the food. Fresh food and vegetables might be obtained for them and sent through the "Board of Trade," Colombo, and the Commanders of the Lighthouse steamers, which I am told call every six weeks at the island and bring provisions for the men in charge of the Lighthouse. The following are the new admissions in the island from leprosy with a few notes regarding their family history:—

1. *Moosa*, 12 *years*.—Mother has leprosy, but for some reason or other she has not been ordered to the settlement by the Kazi, and his aunt is suffering from the disease in its early stage, but he has five sisters and three brothers who are healthy.

2. *Ali*, 18 *years*.—Both parents dead, but they had not suffered from leprosy. Aunt was in the settlement and died a year ago. Has three sisters, all healthy.

3. *Mahomed*, 14 *years*.—Mother is suffering from leprosy in its incipient stage, but is living in the village. Father healthy. Has no brothers or sisters.

The Hospital Assistant Sheik Tippu has been interesting himself on their behalf, and I saw several of the cases improving under treatment. The inhabitants of Minicoy have very curious ideas about leprosy, for as long as those suffering from the disease are allowed to remain in the village by the Kazi they mix freely with them, but when once transferred to the leper settlement they will have nothing to do with them and will not approach them within 200 yards. The Kazi, who is the responsible person, evidently thinks that the disease must be very far advanced before he orders their removal. If proper accommodations were built and food supplied, and if the Hospital Assistant, Kazi and Amin worked together, cases would be segregated while the disease was in its incipient stage and probably then the disease would in time be stamped out of the island.

I inspected the dispensary on two occasions and was pleased with the work done by the medical subordinate in charge.

The most common diseases appear to be rheumatism, worms, skin-diseases, eye-diseases, and in the rainy seasons fevers reported to be of a malarial type. I did not see a single case of enlarged spleen. There were a fairly large number of granular lids and opacities of the cornea and I also saw three cases of cataract. If I ever visit the islands again, I shall go prepared for a few operations on the eye.

The hospital assistant's quarters are very comfortable. I would strongly urge the necessity of a young man being sent. The Collector and I questioned the people as to the class of medical subordinates for the island and the general opinion was that they objected entirely to a caste Hindu, but that they had no objection to a native Christian though they would prefer a Mahammadan. It would not be so bad for a native Christian to live on the island, as the men at the Lighthouse are of that class and they have a stock of provisions consisting of tinned beef, mutton, vegetable, &c., which the hospital assistant may, without injuring his caste, eat and for which he would have to pay a nominal price. I may mention here that the last meteorological clerk was a native Christian who had lived there on very friendly terms with the islanders for four years and he did not look as if he had suffered for his residence there and this was chiefly due to his having been able to get a variety of food and provisions from the Lighthouse men. There is no doubt that the Mahammadan suffers as he can get nothing but rice, fish and fowls. No fresh meat is procurable, for goats die soon after their arrival there from the bites of the musquitoes. It would be worth trying whether the tough-hide buffaloes would stand the climate and musquitoes.

There were in all 20 cases vaccinated and lymph was left for another 50. It is my intention to send a supply of lymph through Colombo every second or third month. The island appears to have been free from small-pox for several years.

The water-supply is sufficient, but the quality is not good.

The island during the time of the tour was kept fairly clean. The one great drawback to sanitation is that the men will resort to the beach for purposes of nature, and until the tide rises the smell is very objectionable, as after that the feculent matter is carried away by the receding tide.

In conclusion, I have to suggest that all correspondence, postings, &c., be made *via* Colombo. The following address is the one I would suggest for the present:—

Hospital Assistant, Minicoy,
Care of Commander, Lighthouse Steamer,
Board of Trade Office,
Colombo.

From 1st-Class Hospital Assistant M. KANNAN, No. 193, doing duty, Calicut, to the District Medical and Sanitary Officer, Malabar, dated 10th February 1896.

I beg to submit the following in connection with my recent visit in medical charge of the Collector's staff that proceeded on inspection duty in S.S. *Margarita* to the following islands (Laccadive), viz., Kalpeni, Kavarathi, Agathi and Androth.

The steamer *Margarita* left Calicut at about 7 P.M. on the 21st December 1895 and reached Kalpeni on the 22nd evening.

Kalpeni.—We remained here for seven days, during which time I afforded medical aid to 111 patients suffering from eye-diseases 25, rheumatism 18, worms 15, respiratory affections 28, diarrhœa 5, febricula 10, itch 6, and ring-worm 4.

I also vaccinated 50 cases, of which 30 were successful, 15 unsuccessful and 5 unknown.

Kavaratti.—We reached this place at about 7 A.M. on the 28th December 1895. Here I treated 125 patients suffering from eye-diseases 65, rheumatism 14, worms 24, respiratory affections 10, and skin-diseases 12, and vaccinated 45 cases, of which 32 were successful, 10 unsuccessful and 3 unknown.

As the sea became very rough the steamer on the 1st January 1896 had to leave for Agathi where we reached on the same evening.

Agathi.—Here 65 patients were under treatment for rheumatism 10, eye-diseases 16, worms 13, respiratory affections 17, skin-diseases 6, and boils 2, and 1 person was vaccinated, of whom 33 were successful, 8 unsuccessful and 14 unknown. We returned to Kavaratti on the 8th January 1896 and remained there again for ten days. The cases treated and vaccinated on both occasions are mentioned above.

We left Kavaratti for Androth on the 19th and reached there on the 17th January 1896.

Androth.—I treated 203 patients here suffering from eye-diseases 50, rheumatism 31, worms 30, respiratory affections 41, itch 20, ring-worm 6, febricula 8, diarrhœa 4, abscess 4 and ulcers 10, and vaccinated 46 persons, of whom 31 were successful, 12 unsuccessful and 3 unknown.

Two abscesses were incised by the District Medical and Sanitary Officer, Malabar, and the important cases were examined and prescribed for by that officer.

General Remarks.

Eye-diseases and respiratory affections prevail to a great extent in all the islands. The irritation caused by the particles of husk-twisted coir flying into the eyes is, I think, responsible for the former and the inevitable inhalation of the fume and consequent irritation caused in the bronchial tubes probably result in the respiratory ailment.

The water-supply on these islands is chiefly from shallow well's. The water is mixed with an admixture of saturated solution of lime and hard on account of lime-stone strata through which it is obtained. The least hard water is that of Kavaratti, but it is deficient owing to its proximity to burial grounds.

The sanitary condition of all the islands is not bad though it will admit of much or less improvement. The houses being situated far from each other, the inhabitants resort to seashore, cocoanut gardens, and waste land for answering calls of nature, so they do not care much for latrine, &c.

I have advised the amins of these islands to get removed, as early as possible, all the accumulation of filth, rubbish, &c., neglected by some far away from dwelling places and precautions are to be taken to prevent these nuisances recurring by insisting on the prompt daily removal of all refuse matters to suitable places.

I have also advised them to get all the dirty houses lime washed as quickly as possible.

I have also left some supply of cholera medicines to each amin with clear directions as to their use at the time of necessity.

The increase in the number of unsuccessful cases of vaccination is, I was told, due to children having taken their baths in the sea water soon after the operation.

Endorsement by Surgeon-Lieut.-Colonel T. J. HACKETT-WILKINS, District Medical and Sanitary Officer, Malabar, dated Calicut, 19th March 1896.

True copy forwarded to the Collector of Malabar.

Resolution—No. 166, dated 12th May 1896.

In the letters read above, the Collector of Malabar submits a report of his visit to the Laccadive Islands and Minicoy in December last.

2. The question of providing a steamer for the sole purpose of visiting the Laccadive and Amindivi Islands having been held over for future consideration, the Pearl Fishery Steamer *Margarita* was placed at the disposal of the Collector. She arrived at Calicut on the 6th of December and left for Minicoy on the 9th idem,

but as Mr. Baker who was in charge was unable to find the island, the party had to return to Calicut on the 13th for coal and water. Five days were thus completely wasted. The *Margarita* started again on the 21st with another officer in charge and was available till the 7th February, so that the Collector was able to inspect the islands fully. The time spent on each island is shown below:—

	DAYS.
Kalpeni	5
Agathi	6
Kavaratti	12
Androth	11
Minicoy	4

3. The following points require notice:—

(i) An effort was made by a Public Works Department party, which accompanied the Collector, to improve the entrance to the harbour at Androth by blasting as desired in paragraph 2 of Government Order, No. 696, Political, dated 11th October 1895; but they merely succeeded in widening the entrance by about five yards. The Collector considers that dynamite can make very little impression on coral, because of its loose texture and the number of holes through which the force of the explosive escapes. The question has to be carefully investigated by an expert in submarine blasting. In addition to this, two rocks have to be blasted at the island of Kalpeni to improve the anchorage by making a passage into the reef. The amin of Kavaratti suggests a similar improvement and the Collector proposes to take soundings at the next visit.

(ii) The efforts made by Mr. Batten during his inspection in 1893 to introduce cocoanuts into the islands have proved unsuccessful. In the island of Agathi only nine young trees are reported to be alive, the rest having been destroyed by rats. In none of the other islands have they fared any better.

(iii) The leaf-disease referred to in previous reports on the inspection of the islands is now confined to a very small part of the island of Androth and the trees are improving in condition. The Collector has taken specimens from the affected trees to be forwarded to Calcutta.

(iv) The Collector's opinion of the amins is not favourable. The amin of Kalpeni is described as old and illiterate. He was left in office for another year and warned to be more prompt in the disposal of his work. The amin of Androth is young and a little afraid of trying important cases, while his brother official at Minicoy takes small interest in his work and knows very little about the island.

(v) The results of vaccination appear to be satisfactory.

The lepers at Minicoy are reported to be well cared for chiefly owing to the efforts made by the kazi and the hospital assistant. They want better habitation.

(vi) Education is not making any progress in the islands. Three schools opened under orders from Mr. Batten have been closed, ostensibly because the amins' gumastahs, the only persons who can teach, fell ill. In addition to the want of proper teachers, there is said to be a want of any general desire for education, the boys being sent out at a very early age to earn their livelihood owing to the poverty of their parents. Endeavours should be made to overcome the parents' objections. It is observed that the Collector is making enquiries about a competent teacher for the island of Kalpeni, and if good instruction can be provided, the schools would doubtless become more attractive.

(vii) The spinning jenny referred to in paragraph 16 of Board's Proceedings, No. 187, dated 24th August 1895, has been found to be unfit for making coir and is now used by the islanders in making cables. The Collector believes that a smaller one similar to those used at Cochin may be tried. Early steps should be taken to procure such an article for the island of Androth.

(viii) With reference to paragraph 17 of the Proceedings quoted above, the Collector reports that four new māis boats have been built and two more are under construction; but that no new vessels have been built to trade with Bengal.

(ix) The Board supports the suggestion of the District Medical Officer that, if possible, a Native Christian should be appointed for the post of the medical subordinate of Minicoy.

(x) The Collector's inspection of the island of Androth showed that the deplorable mortality from cholera during the outbreak of 1893-94 had not been exaggerated. It is satisfactory that the District Surgeon has now left printed instructions on all the islands as to the steps to be taken in emergencies of this nature, and that a supply of medicines has also been provided. It is also observed that several of the more intelligent islanders were personally instructed in the matter.

4. The Collector's action in granting a remission of Rs. 250 a year for seven years in favour of the inhabitants of the small islands dependent on Agathi on account of the damage sustained during the storm of 1891 and in distributing Rs. 8 in prizes to the successful students of the school at Androth is approved.

5. The Board awaits the report on the future administration of the Laccadive Islands promised by the Collector.

(True Copies and Extract.)

(Signed) R. C. C. CARR,
Acting Secretary.

To the Chief Secretary to Government, Political Department.
" Collector of Malabar.
Copy to the Secretary to Government, Revenue Department.

G.O., No. 1508 W., dated 14th May 1896.

Read—the following paper:—

From the Executive Engineer, West Coast Division, to the Superintending Engineer, IV Circle, dated 1st April 1896, No. 151-S.E.

With reference to G.O., No. 2797 W., dated 2nd November 1893, I have the honour to forward a report from Mr. J. Pereira, Supervisor, on the blasting and removing obstructions in the Androth harbour, Laccadive Islands, together with two tracings and an estimate amounting to Rs. 300, being cost incurred in carrying out the blasting operations, and to request an allotment of Rs. 300.

Enclosure.

Report from Mr. J. PEREIRA, Supervisor in charge Cantonment Works, Cannanore, No. 953, dated 25th February 1896.

In compliance with your No. 72-S., dated 18th January 1896, I beg to submit my report on the blasting operations conducted at the entrance to the Androth harbour, one of the Laccadive Islands.

I started from Calicut per S.S. *Margarita* on the 20th January 1896 with a party of four blasters kindly procured through the help of Sub-Divisional officer, Wynaad, from the Tamracheri ghât. We reached Androth on the evening of the 21st and returned to Calicut on the 29th forenoon. My stay in the island, exclusive of the time engaged on the voyage, is therefore between the 22nd and 27th or six working days.

2. *Position of the Island.*—Androth, one of the five inhabited islands of the Laccadives, at present under the Collectorate of Malabar, lies almost due west and 120 miles off the coast of Calicut. It is 2½ miles in length east to west and 1 mile in breadth nearly, with a population of about 3,200 inhabitants, all Mappillas. It has a luxuriant tope of cocoanut plantation and its exports are cocoanuts and coir. The island depends for all its other necessaries of life from the west coast mainland, Mangalore and Calicut forming its chief ports of calling. It is protected by a natural barrier of coral reef. That on the north face comprises two arms, enclosing a

lagoon, with a sandy beach sloping gradually into the sea, as shown in the survey. The barrier on the south face is an almost flat, close-grained, hard coral rock resembling white marble about 250 feet wide. This rock sheet is exposed during low tide. The surf along this rocky margin is generally rough. Beyond this line the rocky reef falls abruptly into fathomless sea.

3. *Rocky Obstructions.*—The services of the amin and a karnavan having been kindly deputed by the Collector, Mr. Hewetson, I inspected the inner harbour and noted the coral rock obstructions along the entrance to the lagoon, marking their positions by temporary buoys.

(a) Survey and Levels.—To elucidate my report, I append a survey and cross sections of the harbour, showing the positions of the rocky obstructions under complaint.

4. *Magnitude of Rocky Obstructions.*—A reference to survey and levels will give an idea of the magnitude of the rocky obstructions A, B, C, D and E as nearly as could be ascertained from soundings:—

Rock A—55′×40′×9′ or c. ft. 19,800 }
" B—40×35×11 " 15,400 }
" C—45×30×12 " 14,400 } = c. ft. 113,100.
" D—70×50×13 " 45,500 }
" E—80×40×15 " 48,000 }

5. *Nature of Rocks to be blasted.*—The rock to be blasted is coral rock. It is porous in nature, whitish in colour. It is soft at the exposed surface but harder as it approaches the stem or root, with fissures and hollows in the body. It may be chipped off or cleaved at the edges with crowbar, but cannot be entirely removed unless by blasting. It is a limestone and is extensively used by the islanders.

6. *Tidal Observations.*—The depth of water over these stones is reduced to datum. The M. S. level arrived at—22·45—is from a temporary tide-gauge erected by me during the working days in the island, giving a mean reading of 2·80 as the difference between the low and high tides. The readings recorded are given in a table on the level sheet.

7. *Nature of Work.*—From the levels and the tidal observations, as also to the boring-irons—six feet steel jumpers—at my disposal, it is clear that I had no means to attempt at bore-holes beyond 2½ feet under water.

The rocks being also situated in 2½ to 3 fathoms of water around them, due allowance for swells and breakers during the work should also be considered.

8. *Island Labour.*—The islanders are unwilling to take work under daily labour. They appear timid to engage themselves, being evidently accustomed to lethargic habits. Through the interference of the amin, however, I engaged eight men at As. 6 per day; of these, only four attended work fairly well. They, however, render gratuitous help in jumping bore-holes and removing debris lying under water. This haphazard labour lasts but a little while, and is given as suits their convenience. They are, however, good swimmers and divers, and, once they make up their mind to engage themselves, render good service in charging bore holes in deep water.

In this connection their usefulness for submarine blasting is unquestionable as compared to the labour transported from the mainland.

9. *Blasting Work executed.*—As explained in paragraphs 6 and 7, rock A alone admitted of blasting operations being taken up on the 22nd, 23rd and 24th.

With the low tide of the 24th reading 3·50 I secured the services of the four island divers. With these I picked out eleven minor rocks perched on rocks B, C and D (see cross section) and measuring on an average 5′×3′×2′ each. With some difficulty bore-holes of from 12″ to 18″ in depth were jumped on these boulders and fired with very good results. Boulders shattered disappearing from the surface of the main rock.

The low tides between the 25th and 27th, however, allowed some good work being done along the eastern faces of rocks B, C, D and E. The work on these rocks is shown in red ink shading in the survey and sections.

An approximate measurement of blasting work done on the different rocks between the 22nd and 27th is as follows:—

Rock A, 1,815 *cubic feet*.—Edges all round widened to average section of 4′×2′. Body reduced to a depth of 1½ feet. Existing body shattered to a depth of 2 feet preventing further bore-holes being jumped.

Rocks B, C, D and E, 1,041 *cubic feet*.—Minor boulders perched on main rocks blasted. Projecting ends on eastern faces removed and the entrance to harbour widened by an average of 5 feet.

Total 2,856 *cubic feet*.—Debris of rocks blasted lying in the deep and has to be removed by the islanders.

10. *Working Data*.—The direct cost per 100 cubic feet of rock blasted is Rs. 8, while the charges inclusive of batta and other sundry charges to work-people is Rs. 19 per 100 cubic feet.

The cost does not include the removal of debris blasted which are still lying in 2 to 3 fathoms of water. The amin and the karnavan of the island, however, promised to have this done.

I consider this should be insisted upon where the depth is less than 1½ fathoms.

11. *Result of Blasting on Rock A*.—Projecting edges having been removed in a section of 1′×2′ all round, a few charges were fired on the body or surface of the rock, which reduced it in depth by 1½ feet. These charges have so much shaken the rock that the jumping of further bore holes is not feasible, as they get clogged up with particles of sand below a few inches of the surface. I consider that crowbars can now be freely used to remove debris to further reduce the depth of this rock.

Proposals for future Operations.—From the results experienced in blasting the body of rock A, as explained in paragraph 11, it is evident that blasting with shallow bore-holes and small charges on coral rock is a drawback to blasting with ordinary jumpers, subsequent bore-holes being clogged up with sandy particles. The only advantage gained in blasting by this single method is to detach projecting ends of rocks. This has more or less been effected.

The depth of water on rocks B, C, D and E does not also allow of blasting being done by ordinary jumpers to any satisfaction.

I therefore consider that the most effective method of removing these coral stones to the reef is by deep bore-holes and heavy * charges.

This work in 2 to 3 fathoms of water should, in my humble opinion, be taken up by an experienced staff in submarine blasting. The best time, however, to commence work is at spring tide. The party deputed for the work should be allowed to start work at the beginning of the inspecting season. The Collector deferring his inspection to the island to the last.

This arrangement will allow the blasting party to work undisturbed and with the co-operation of the islanders, which is otherwise disturbed by the bustle of the Collector's inspection.

* Forty lb. of dynamite and fifty coils of fuse being all the explosive actually used during the present operation.

Endorsement thereon by the Superintending Engineer, IV Circle, dated 20th April 1896, No. 172 W.

Copy submitted to the Chief Engineer, Public Works Department, with reference to G.O., No. 2797 W., dated 2nd November 1893, with a request that an allotment of Rs. 300 may be made for the blasting operations carried out.

Order—No. 1508 W., dated 11th May 1896.

Mr. Supervisor Perelra's report will be communicated to the Political Department in continuation of G.O., No. 801 W., dated 21st March 1894.

2. The estimate will be returned to the Superintending Engineer, IV Circle, for sanction under Provincial Miscellaneous Public Improvements. An allotment is not now necessary as the expenditure was incurred in the past official year.

(True Extract.)

(Signed) F. J. WILSON,
Under Secy. to Govt., P.W.D.

To the Political Department.
„ Superintending Engineer, IV Circle.

Proceedings of the Board of Revenue (Land Revenue), Mis. No. 2557, dated 4th June 1896.

Read—the following papers:—

From J. HEWETSON, Esq., Acting Collector of Malabar, to the Secretary to the Commissioners of Land Revenue, dated Calicut, 18th May 1896, Dis. No. 54-1-1.

As stated in paragraph 7 of my report on the inspection of the Laccadives and Minicoy, No. 33-1-1, of 1896, dated the 24th March last, I made enquiries for a schoolmaster for Kalpeni Island, and one Isak Sheriff (a Muhammadan), who can teach Malayalam and Hindustani up to the Primary School examination and English up to the III standard, has been recommended for appointment on a salary of not less than Rs. 15 per mensem, by the Sub-Assistant Inspector of Mappilla Schools, Northern Ranges. The present schoolmaster is the gumastah of the island, who is paid Rs. 3 a month for this extra duty. He is incompetent for the post. I have therefore the honour to request that the Board may be pleased to sanction the increased rate of pay to the schoolmaster. As the season is far advanced and as there are no Kalpeni vessels in the harbour, I have directed Isak Sheriff to hold himself in readiness to proceed to the island at the commencement of the fair season.

Resolution—Mis. No. 2557, dated 4th June 1896.

Submitted for the early sanction of Government in continuation of paragraph 3 (vi) of Board's Proceedings, No. 166, dated 12th May 1896.

(True Extract.)

(Signed) R. C. C. CARR,
Acting Secretary.

To the Chief Secretary to Government, Political Department.

Order—No. 373, Political, dated 11th June 1896.

Recorded.

2. The sanction to the increased rate of pay to the schoolmaster for Kalpeni Island, which is requested in Board's Proceedings, Mis. No. 2557, dated 4th June 1896, is accorded.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Revenue Department.
„ Public Works Department.
„ Board of Revenue (Land Revenue).
„ Surgeon-General.
„ Accountant-General.

D.T.A. Rao.

Govt. of {1896} Madras.

POLITICAL.

Issued

Recd. *Encl.*

G.O., No. 373, 11th June 1896.

JUNE.

Laccadive Islands.

Recording Board's Proceedings reviewing the report on the inspection of the —, and sanctioning the pay of Rs. 15 per mensem to the schoolmaster for Kalpeni Island.