38387 KENYA 38387

Leprosy.

Previous		Mr Crosley White	2/3
see 46503/48/38 EA.		Mr Parkin	
(visit of Dr. Innes to E Africa)		Dr. O. Brien	14/3
		89	31/3
		Dr Smart	
Subsequent		R 298	14/4
		98.	
1939.			
297	14/9		
309	18/9		
Mr Parkin			
Dr Smart	21/9		
→ Dr O'Brien	29/9		
Mr Parkin	30		
297	25/11		
309	4/12		
Mr Parkin	5/12		
R 298	13/12		
297			
R98	10/1		
R89	11/1		
Mr Parkin	12		
98	13/3		

FILE A.

(1537) Wt. 254... 5,000 ...57. S.P.Co. G.682/7A.

Medical — Report by Dr Muir on Leprosy in Kenya — 2
Nominal
(Forwarded by Sec. of British Empire Leprosy Relief Association)

This report is clear concise & interesting. It includes recommendations for the establishment of new leper settlements and for the alteration of present ones, & also advice as to treatment.

If nothing comes in from Kenya about it in the next 3 months (cf. 1) on 4041/2/38 2'bar) a letter ? should go saying the S of S will be interested to hear what action is being taken or proposed.

? B.U.

Clothier White
4/9

The report suggests a considerable reorganisation ... of leprosy in Kenya ... As ... one ... in due course ...

7/9

I have discussed this report with Dr Muir who has returned from East Africa. He informs me that the Kenya Govt. are going to make moves on their next years estimate for a leprosy worker who will be provided by the B.E.L.R.A. He will work in the Kavirondo area. There is also a proposal for the appointment of a specialist in leprosy for Tanganyika, Kenya, Uganda and Nyasaland.

to be paid partly by BELRA and partly by the four Governments. We will hear more about these appointments in due course & there is no need for us to take the matter up with the Kenya Govt. in the meantime.

G. Whitfield[?]
29/9

Then for the present this can be put by; but it shd. be brought up [illegible] in connection with any proposals submitted by Kenya, & in any case on 1/1/39 if no proposals have been received.

Noted 1/12.

J. J. Paskin[?]
30/9

[illegible]

Sec of State [illegible] 30/9

2 [illegible] [illegible]

day worker, with previous experience in Nigeria will be available for North Kavirondo about 1st July 1939 (Orig[l] regd – 46150/38 S'land)

Action on the original of this letter has so far been to acknowledge it [illegible] on 46182/38 and to deal with the Somaliland aspects.

Action on this file should now be to ? tell Kenya (S/o for Dr O'Brien's sig?) that the BELRA have sent us a copy (No 1) of Dr Muir's Report on Kenya, & that Dr Muir has now written as in para 3 of No 2.

The Kenya Draft Estimates (not sent on) do not appear to contain any expenditure estimate for the Leprosy worker. The item "Maintenance of ... leper establishments" remains the same as last year. Perhaps however the necessary provision will be made during the passage of the Estimates through Leg Co.

Head XX, 63

? The letter might mention that we had gathered that the necessary provision for the Leprosy worker would be made in the 1939 estimates, but that we have failed to find it in the Draft Estimates.

Draft course h'with

Clarkey White 1/12

PS. I have noted on the Somaliland file that action on paras 3 4 & 5 are being taken on this file, 40227/38 Uganda & 42318/38 respectively.

3 To: Dr Paterson 13.12.38

B.U. vide minute of 30/9.

J Jackson. 1598

11/1.

? Put by awaiting reply to (3).

C Corkey White

11/1

J.J. Paskin

12/1

B.U. no reply to No. 3.

W.H. Formoy

13/3

? Dr O'Brien should see this: he may perhaps have had conversation about it when in E.A.

C Corkey White

13/3

I discussed leprosy with Dr Paterson when in Kenya. His estimates had not been approved when I saw him so that I cannot say whether a not provision has been made for his appt. in the estimates. Dr Paterson is not enthusiastic about leprosy

A R O'Brien

14/3

Dr Smart

Mr Paskin spoke about this before going on leave. It seems that the opportunity opened in 33 of (2) may be lost if we

4

do not move again. If you think it desirable ? action as in D. L.

C Corkey White

3/1

Dr Paterson. 11/6 Cons

38387/38

C.O.

Mr. Cooke-Yarborough 1/12
Mr. Parkin 8/12
~~Dr O'Brien~~ Smart 7/12 for Dr O'Brien's signature

Mr. A. J. Dawe.
Sir H. Moore.
Sir G. Tomlinson.
Sir J. Shuckburgh.
Permt. U.S. of S.
Parly. U.S. of S.
Secretary of State.

13 DEC 1956

DRAFT.

Dear Pat

Some time ago we ~~have been~~ received

Dr A.R. Paterson, CMG (1) a copy of Dr E. Muir's Report on Leprosy in Kenya direct from the British Empire Leprosy Relief Association, & we should ~~forward it for~~ like to have your comments as to what extent it is decided to put his recommendations into effect.

In conversation Dr O'Brien told Muir that he had heard a scheme was afoot to appoint a Leprosy Worker (in

FURTHER ACTION.

was to be provided by the B.E.L.R.A.,
and to make provision for his
salary in the 1939 Estimates.
We haven't found any such provision
in the draft Estimates; but we
may have missed it; ~~and perhaps~~,
if it is not yet there, it will be
included ~~before the Estimates are~~
~~passed in Legislative Council~~. I
thought, however, that I should
~~not delay in sending~~ you the
following extract from a letter
I have recently had from ~~Sir Hubert~~,
as it might possibly affect any
plans that may be brewing.
It reads as follows:—

[para 3 of No 2]

Original registered on 46132/38 Somaliland

COPY.

96

THE BRITISH EMPIRE LEPROSY RELIEF ASSOCIATION.

131 Baker Street,

Ref: [illegible]

London, W. 1.

4/10/38

Dear Dr. [illegible]rien,

1 Following our conversation over the [illegible] I enclose [illegible] of my letter to [illegible] [illegible] letter [illegible] [illegible] [illegible].

2 [illegible] re[illegible] to the [illegible] of a leprosy lay worker on the [illegible] of Sanitary Superintendent for leprosy work in British Somaliland, Mr. J. Maguire, of the Victoria Hospital Belfast, is recommended, and I understand from you that this appointment is likely to be made as from April 1st, 1939. If and when the appointment is made, he would go in the first instance to Uganda so as to study leprosy, especially in the Leper Settlements at Kumi and Ongino, in the Eastern Province of Uganda. He would remain in Uganda for about three months and then proceed to British Somaliland, by which time [illegible] will have returned and made arrangements for Maguire to begin work. I am writing to Miss [illegible] [illegible] her of the likelihood of our sending Mr. Maguire and asking her permission. I [illegible] also keeping [illegible] [illegible] in touch [illegible] progress that is being made.

3 [illegible] re[illegible] the recommenda[illegible] [illegible] of my [illegible] for the [illegible] leprosy lay worker in [illegible] to [illegible] C.M.S. Mission, but to be paid by the local Government we will have such a lay worker available [illegible] the [illegible],1[illegible], a man who has already spent [illegible] under [illegible] the largest and best leper settle[illegible] [illegible] are well trained in the latest [illegible]

4 In my Uganda report I recommended the appointment of another lay worker who would first of all spend some time in Western Uganda, and later in Lira, in North East Uganda, his salary to be paid by B.E.I.R.A. - who ... will have another similarly trained lay worker available about the 1st of July, 1[illegible], who will be suitable for this post.

5 I have already discussed this ... made in my Uganda report ... specialist for ... possible ... will be ... Plus ... Governments concerned, the balance of [illegible] by B.E.I.R.A. You yourself suggested ... that is, that the appointment be made ... office, B.E.I.R.A. ... paying in her ... for that purpose. The matter ... meeting of the Executive Committee of B.E.I.R.A. ... Association ... are prepared ...

6 At this meeting, ... should ... about the beginning ... Rhodesia, Southern ... the leper settlements ... also agreed that I should ... to Nigeria on the return journey.

Yours sincerely,

(Signed) [illegible]

Medical Secretary.

Dr. A.J.H. O'Brien ...,
Colonial Office,
Whitehall, S.W.1.

4 In my Uganda report I recommended the appointment of another lay worker who would first of all spend some time in Western Uganda, and later in Lira, in North East Uganda, his salary to be paid by B.E.L.R.A. - Foc H. We will have another similarly trained lay worker available about the 1st of July, 1939, who will be suitable for this post.

5 I have already discussed with you the recommendation made in my Tanganyika report for the appointment of a leprosy specialist for East Africa, and, as you are aware, there is a possibility that Dr. Ross Innes, whom we are all agreed would be an ideal man for the post, may be available in about two years time. In my recommendation I suggested that part of the salary be met by grants from the various East African governments concerned, the balance of £350. being borne by B.E.L.R.A. You yourself suggested a modification of my scheme that is, that the appointment be made under the Colonial Office, B.E.L.R.A. paying in her quota to the Colonial Office for that purpose. The matter was discussed yesterday at the meeting of the Executive Committee of B.E.L.R.A., and the Association highly approved and recommended the scheme and are prepared to pay a sum of £350. a year for five years.

6 At this meeting yesterday it was agreed that I should make a further tour next year, visiting Nyasaland about the beginning of June, and thereafter visiting Northern Rhodesia, Southern Rhodesia, and Basutoland, and, if invited, the leper settlements of the Union of South Africa. It was also agreed that I should pay a visit of about a fortnight to Nigeria on the return journey.

Yours sincerely,

(Signed) E. Muir.

Medical Secretary.

Dr. A.J.R. O'Brien, C.M.G., M.C.,
Colonial Office,
Whitehall, S.W.1.

COPY

Ref: EM/HW. 11th October, 1938.

The Under Secretary of State for the Colonies,
Colonial Office,
Whitehall, S.W.1.

Dear Sir,

As you are aware I visited British Somaliland last August at the request of the Colonial Office and the Government of British Somaliland. You already have a copy of the Report which I drew up after that visit, and after discussion with the Governor and the Senior Medical Officer. Dr. Bell, the Senior Medical Officer, and I, had an opportunity of discussing the question of co-operation in dealing with leprosy on the Abyssinia-British Somaliland border with Sir Aldo Castellani recently, and he advised me to write, through the Colonial Office, to Surgeon General Andreani, Ministero Africa-Italiano Rome. I now enclose a letter to the Surgeon-General, and shall be glad if you will kindly forward it, along with a recommendation. If you think my letter requires any modification, I shall be glad to alter it according to your wishes.

I am, etc.

(Signed) E. MUIR.

Medical Secretary.

Ref: EM/HM. 11th October, 1938.

Surgeon-General Andruzzi,
Ministero Africa-Italiano,
Rome, ITALY.

Dear Sir,

I am writing as the Medical Secretary of the British Empire Leprosy Relief Association regarding the question of co-operation between the Italian Government and that of British Somaliland in dealing with the problem of leprosy as it affects the two countries, and especially the borderland between the two countries.

At the request of the Government of British Somaliland and the British Colonial Office, I recently paid a visit to British Somaliland to study the leprosy problem there. I enclose a copy of the Report which I drew up after discussing the matter with the Governor and Dr. Bell the Senior Medical Officer of British Somaliland. You will see from my Report that the leprosy problem in the two countries is intimately connected, especially as there is a great deal of coming and going between Abyssinia and the southern part of British Somaliland, and on account of the reported high incidence of leprosy in the region round Harar.

Dr. Bell, who is home on leave, and I, have discussed the matter with Sir Aldo Castellani, and Sir Aldo advised me to write to you explaining the circumstances and asking your co-operation. He also suggested that it would be advantageous if Dr. Bell could visit you on his way back to Somaliland, about April, 1939. I think that if leprosy on the borderland between Abyssinia and British Somaliland is to be dealt with effectively it will be well for the administrative and medical authorities of the two countries to discuss means of joint action, and seek to co-operate as far as possible.

I shall be glad to give any further advice that I can in the matter.

I am, etc.
(Signed) E.MUIR.
Medical Secretary.

LEPROSY IN KENYA.

By

Dr. E. Muir.

I arrived in Kakamega from Uganda on the 6th of June, 1938. On the 7th and 8th June, I visited the Leper Camp in company with Dr. Haines, and examined the patients and buildings. I found 170 inmates, 150 being patients and 20 children without signs of leprosy. I classified, as below, the inmates into five categories, and sub-divided these under men, women and children; deformed and undeformed. The five types were:- (a) open lepromatous (L_2 and L_3), (b) doubtful lepromatous requiring bacteriological examination to confirm, (c) with distinct tuberculoid patches, (d) with flat macules, (e) with no active signs.

TYPES.		MEN.	WOMEN.	CHILDREN.	TOTALS.	
Open Lepromatous (L_2 & L_3)						
	(deformed)	9	2	-	11)	
	(undeformed)	7	7	-	14)	25
Doubtful Lepromatous	(deformed)	13	6	-	19)	
	(undeformed)	10	3	-	13)	32
Tuberculoid	(deformed)	13	4	-	17)	
	(undeformed)	9	13	1	23)	40
Flat Macules.	(deformed)	12	13	-	25)	
	(undeformed)	9	5	-	14)	39
No active signs.	(deformed)	6	5	-	11)	
	(undeformed)	1	2	20	23)	34
	TOTALS:	89	60	21		170

One in six of the patients might be considered highly infectious. Probably one-third of the whole were infectious to a greater or less degree. Eighty-three were deformed and sixty-seven showed no signs of deformity. Many of the patients showed complicating skin diseases, such as scabies and tinea, the treatment of which would probably cause amelioration of the condition. The patients cultivate some of the surrounding land so as to supplement the diet supplied at the Camp. Some of them appeared strong and healthy, especially those engaged in active work. Later in the report I have added a note on the treatment recommended. There are certain paid posts given to lepers in connection with the Camp: 1 Dresser @ Sh.15/-; 2 Sub-dressers @ Sh.7/6; Headman @ Sh. 12/-; Teacher @ Sh. 12/-; Ayah for young children @ Sh. 5/-; 2 Builders @ Sh. 8/- each; 1 Dhobi @ Sh. 5/-; 6 Labourers @ Sh. 2/-. The Camp is supported by a Grant of £160. a year from the Local Chiefs' Council, and £330. from the Medical Department.

The daily diet allowance consists of Mealy-meal 1½ lbs., Chiroko beans 6 ozs., salt ½ oz.; there is also 8 ozs. of meal given twice weekly. This diet is supplemented by the agricultural produce of the patients.

Seventy of the patients have been in the Camp for 5 years or more, 31% of these have deteriorated, while 69% have improved or are stationary. The patients are housed in mud and thatch huts. The general sanitation of the camp is fairly good, though there appears to be a certain amount of overcrowding.

Of the 21 children, 8 are with their parents in their huts, and 13 are in a small creche where they are looked after by an African ayah. These latter appeared to be remarkably healthy: they are from 2 to 4 years of age, and the ayah is to be congratulated on her work. Only one of the children (one in the Camp) showed definite signs of leprosy - a tuberculoid lesion.

The Camp is situated within a few hundred yards of the General Hospital. This has the advantage of facilitating medical supervision, but it is too near the town and there is no room for expansion. I would suggest, for the improvement of the Camp as it exists at present: The treatment of complicating skin diseases; rubbing of the patients' skin with cheap bland oil, sulphur being added when necessary; encouragement of the patients to more frequent bathing; organisation of exercise and especially of various occupations; careful selection of cases for special treatment; the tuberculoid cases should do particularly well with intradermal injections.

I went into the question of the adequacy of the present Camp for dealing with leprosy in North Kavirondo. Recent returns collected from Chiefs makes the number of lepers 450 outside the Leper Camp, but it is possible that this is an underestimate. According to these returns, leprosy is chiefly concentrated in the western locations, especially in Marach, Buhaya and Itino, which have respectively 42, 111 and 80 lepers, more than half of the whole. I am told that while the eastern tribes of the district dread leprosy and drive out the lepers, those in the west are more indifferent. This is a possible explanation of the relatively high number. I went, in company with Dr. Jobson, the Medical Officer, to Marach, where we met a number of Chiefs and members of the Local Native Council. I explained the nature of leprosy and, as an example of what might be done to control the disease, I described the methods adopted in the Soroti District of the Eastern Province of Uganda. There, at Ongino, a settlement has been formed by Miss Lang, a trained Nursing Sister of the C.M.S. Mission. In this Settlement there are 400 lepers, 350 of whom support themselves by their own agriculture. Miss Lang has also formed a Leper Children's Home at Kumi, 3 miles from the Settlement; a children's home where there are 350 children who, besides receiving treatment, are being trained as carpenters, builders, tailors, nurses, teachers etc. In addition to this, there are about 350 lepers attending as out-patients. Model houses are constructed in both institutions by lepers themselves under Miss Lang's directions. Most of the patients show satisfactory signs of recovery due, partly, to regular treatment, but chiefly to good diet and constant healthy exercise. Well-planned and sanitary houses are constructed by the lepers under Miss Lang's supervision. These institutions are run on the very best lines and are second to none that I have seen in Africa, India or elsewhere. I would suggest that those concerned in leprosy work in Kenya should pay a visit to Miss Lang's institutions and study her methods. Those Chiefs and others whom we met at Marach showed much interest in the problem of leprosy, and asked many thoughtful questions about its control.

Obviously, the present Leper Camp at Kakamega, though useful in segregating a certain number of infectious lepers, does not get down to the root of the problem. To do this it would be necessary to admit far more of the lepers in the district. The present Camp is more than full, and it would not be advisable to increase its present size because of its proximity to the town and the absence of sufficient cultivatable land.

The most suitable plan seems to be to begin a new agricultural settlement on the lines of that at Ongino. Such a settlement, if situated between North and Central Kavirondo, would be established for the lepers of both districts, as there appears to be a considerable amount of leprosy in Central Kavirondo, though probably less than in North Kavirondo. In choosing a suitable site, there are certain points to keep in mind:- (a) sufficient land for building and cultivation; (b) sufficient water; (c) a healthy site, especially as regards malaria; (d) easy accessability; (e) sufficient distance from towns or large villages; (f) proximity to a mission which will supply or sponsor the superintendence of the settlement. To make such a settlement a success, there must be a suitable, trained, whole-time European worker.

I discussed the matter with the Medical Officers and the District Commissioner at Kakamega, and later with the Provincial Commissioner, District Commissioner of Central Kavirondo, and the Senior Medical Officer at Kisumu. It was suggested that a suitable site might be available at Bukura, where the present Agricultural training school is situated. It is understood that there is a proposal to move this training school to another site. If this takes place, several hundred acres of land, two permanent houses, and a large number of huts would be vacated, and might be available for a leper settlement. The site is healthy and only some 24 miles from Kakamega. It is about 10 miles from Butere, where there is a C.M.S. Station, with a teachers' training school.

I suggest that, if this site is available and the C.M.S. Mission is willing to co-operate, the B.E.L.R.A. should be asked to supply a suitable trained European health worker, similar to those who are so satisfactorily doing this type of work in Nigeria and elsewhere. His salary, which would be on the scale of that of a missionary, would be paid by the administration to the mission for this special purpose. The site is in North Kavirondo, but near the border of Central Kavirondo. The settlement would be available for lepers from both districts. The expenses would be met by the Local Native Councils of the two districts, and by a grant from the central Government. The able-bodied patients in the Kakamega Camp would gradually be transferred to the settlement, only disabled patients being retained in the Camp. Once the settlement was firmly established and people with able-bodied, hopeful patients, some of the disabled patients might gradually be transferred, till the Kakamega Camp could be finally closed down, the present grants to that institution being transferred to the settlement.

In addition to its effect in controlling leprosy, I would point out the importance from a general sanitary and from an agricultural point of view, of a leper settlement such as that at Ongino, on the lines of which I suggest that a Kavirondo Leper Settlement be formed. This means a large community living in hygienic houses as approved by the Sanitary Department, and farming the land under control as advised by the Agricultural Department. Many of the patients, after spending some months or years under these conditions, would recover and return to their own villages, carrying with them improved methods.

On June 11th I crossed the Kavirondo Gulf to Kendu, in South Kavirondo. There I visited the Leper Camp attached to the S.D.A. Hospital, in company with Dr. Madgewick of that Mission, and Dr. Carothers, the Government Medical Officer. There are now only 12 patients in this Camp, 2 of which are highly infectious [illegible]

lepromatous type. Dr. Madgwick has suspended admission of new cases pending action by Government. I discussed the leprosy situation with the doctors and with Chief Paul Umbova, of the Karachuonya Location. He had lately sent in 170 names of lepers in his location, which has a population of about 30,000, but he considered that there were many others, probably 500, in the location. If the latter figures are correct, it would make an incidence of 1.7 per cent. The Chief is of the opinion that leprosy is spreading. He says that up to 25 years ago people dreaded leprosy and drove out the lepers; now. they no longer fear the disease to such an extent, and the lepers are allowed to mix freely with the people. To this he attributes the high incidence and the increase of leprosy.

I described the Ongino Settlement, referred to above, and Dr. Madgewick said that his Mission would be willing to carry on work on similar lines if the expenses were supplied. A suitable site for a South Kavirondo settlement was discussed. It was considered that suitable land would be available about 30 miles from Kendu on a site lying south of the road to Kisumu, between Oyngis and Miriu River, and near the boundary between South Karachuonya and Kisii. I discussed the question of this settlement later with the Provincial Commissioner and the Senior Medical Officer. They agreed that suitable land might be procured in this position and that the site would be healthy and have sufficient water.

The opinion is held by all whom I consulted that the people of South Kavirondo would not be willing to go to a settlement in North or Central Kavirondo, and the people of the latter districts would not, likewise, be willing to go to a settlement south of the Gulf. Two settlements are, therefore, necessary to deal with the control of the disease.

For one in the north, there would be little need of capital outlay, at least at first, if the site mentioned can be obtained. But judging from the figures at the Ongino Settlement, an expenditure of about £500. a year, addition to £250. a year for the Health Worker, would be necessary.

For the southern settlement there would, in addition to a similar yearly expenditure, be the need for at least £1,000. of capital outlay for buildings, apart from any expense that there might be for acquiring the land.

As a stranger to Kenya, I feel diffident in putting forward the above suggestions The opinion has been expressed that as the general hygienic condition of the people improves, such diseases as leprosy will gradually die out. I should, however, suggest that the other view be carefully considered, whether the establishment of one or two well-planned leper settlements would not be one of the best means of improving general hygiene.

LEPROSY IN KENYA.

(Part 2.)

By

Dr. E. Muir.

I arrived at Nairobi from Kisumu on 14.6.38. In the afternoon I visited the Infectious Diseases Hospital with Dr. Martin. There are 8 lepers in this hospital at present, 6 of which are advanced open (L.3) cases. They receive symptomatic treatment as required.

On 16.6.38 I set out by motor to visit the Nyeri and Meru Districts at the foot of Mt. Kenya. At Tumutumu I visited the Church of Scotland Mission Hospital under Dr. Brown. There is a leper ward at a short distance from the hospital with 12 lepers, of whom I saw 10. Of these 6 were advanced open (L3) cases, and 2 showed Tuberculoid lesions. Only one was a woman. Dr. Brown had recently persuaded the patients to take more active exercise, cultivating the garden and keeping the roads clear of weeds etc. The majority of the patients, however, looked as if they required more exercise. The patients are lodged in a neat stone building divided into several rooms, two patients being lodged in each room.

The next day I went to Chogoria, where the Church of Scotland have a hospital under the charge of Dr. Irvine. There is a small leper camp at a short distance from the hospital. There I saw 15 patients, other 5 being absent on leave. Of these 20 patients, 9 were advanced lepromatous (L3) cases, 1 was slightly infectious, 9 had tuberculoid lesions and 1 had no active signs. Dr. Irvine gives special as well as general treatment to the patients and several have already recovered and returned home. The patients are lodged in two buildings with separate rooms, the one building being used for infectious and the other for non-infectious cases.

Both at Tumutumu and Chogoria, one of the chief difficulties is to give the patients sufficient work and exercise, occupation therapy being the principal part of leprosy treatment. Their arable land is at present not sufficient and more is difficult to obtain. It is difficult to keep the patients actively employed without constant supervision, which it is difficult for the Doctor, with his many duties, to supply. To make a leper settlement successful (as mentioned in the former part of this report) it is necessary to have a European whole-time health worker in charge, and to have the settlement sufficiently large (200 to 400 patients) to justify the employment of such a health worker.

The question arises whether there are in the Central Province sufficient lepers to justify the formation of such a settlement. Most of the Medical Officers whom I questioned were of the opinion that the incidence of leprosy in the Central Province is considerable, though less than in Kavirondo. I would suggest that a leprosy census be undertaken, similar to that carried out in Northern Kavirondo. This could be done with the aid of the Chiefs, Medical Assistants and others, and the Missions could gather information by means of their Medical Assistants and school teachers scattered throughout the villages.

If the incidence is found to be sufficiently high, say some 2000 cases, then an agricultural settlement similar to that recommended for North and Central Kavirondo, might be formed on a healthy site where sufficient arable land and water are available. The site would have to be central to the highly endemic areas and within reach of a Medical Mission which would undertake supervision.

On 20.6.38 I went to Mombasa by train. The next day Dr. Proctor arranged for me to visit the leper camp at Msambweni, which lies about 34 miles south of Mombasa on the coast. I was shown round the camp by Dr. Wright, the District Medical Officer. It is about 2 miles from the hospital and is visited by the Medical Officer and Hospital Sister as required. A senior dresser, himself a leper, is in immediate charge. I examined the 42 patients and classified them as follows:-

		Men	Women	Totals	
Open lepromatous (L_2 and L_3)	(deformed	16	2	18)	26
	(undeformed	8	0	8)	
Slightly infectious (L_1)	(deformed	1	0	1)	5
	(undeformed		1	4)	
With tuberculoid lesions, non-infectious.	(deformed	4	0	4)	4
	(undeformed	0	0	0)	
With flat macules non-infectious	(deformed	0	3	3)	5
	(undeformed	0	2	2)	
With no active lesions.	(deformed	1	0	1)	2
	(undeformed	0	1	1)	
Totals		33	9	42	

Seventy per cent are infectious cases and 62 per cent are highly infectious. Nearly two thirds are deformed to a greater or less extent. At Kakamega only 16 per cent are highly infectious. From this comparison one may surmise either that leprosy in the coastal area is of a much more severe type, or that the less infectious types of patient are not attracted to or not retained in the camp. Sixty six per cent are deformed as compared with fifty-five per cent at Kakamega, which would indicate a more severe type in the coast region.

Nineteen patients were admitted last year, of which 6 were re-admissions and 13 new admissions. There were 9 deaths, 5 were discharged as non-infectious, and 4 absconded.

About half the patients are Waduruma. This, I am told, may be partly the result of the leper camp having been formerly in Waduruma territory. It may also indicate that leprosy is more common among the Wadigo, especially as the camp is now in Wadigo territory and the Waduruma have a considerably longer distance to travel. Almost half (20) of the patients are from outside the Administrative District, 8 being from Tanganyika Territory, the border of which is some 30 to 50 miles distant.

While a careful survey is necessary to ascertain with any certainty the extent and nature of leprosy in the district, the indications from the above figures are:-

a. That leprosy is a prevalent disease in this area.

b. That it is of a severe type.

c. That there are many lepers of types that spread the disease, still at large among the community.

d. That few early cases of leprosy seek admission to the leper camp.

e. That the great majority of those who are admitted to the camp are patients who have sought shelter only when mutilated or disabled, after having been a source of danger in their homes and communities for many years.

On 23.6.38 I visited Kaloleni with Dr. Clark, the District Medical Officer. This station is over 30 miles from Mombasa, with which communication is difficult on account of the nature of the roads. At Kaloleni, in connection with the Church Missionary Society Hospital, there is a small leper camp. Dr. Allen, the Doctor-in-Charge, was absent on leave, but we were shown round by Dr. Trant, who is acting as locum. Eleven patients are at present in the camp, all of them males. These may be classified as follows:-

	Deformed.	Undeformed.	Totals.
Open lepromatous cases (L_2 and L_3)	3	3	6
Slightly infectious (L_1)	1	-	1
With tuberculoid lesions.	-	1	1
With flat macules.	2	-	2
With no active signs.	1	-	1
Totals.	7	4	11

The spirit of the patients seems to be one of passive inactivity. Only two of the patients would at present benefit from special treatment. I understand that there is plenty of leprosy in the district. This was shown by the fact that a few years ago, during a time of famine, 100 lepers were admitted. I understand that more patients are not encouraged to come to the leper camp, partly from lack of funds, the expenses of the camp being met from private subscriptions.

I had an opportunity of discussing the question of leprosy control with the Provincial Commissioner and the Senior Medical Officer.

After studying the condition of leprosy in the coastal province as far as is possible during my brief visit, I would offer the following suggestions. In my opinion, leprosy seems to be a serious disease in this region. The two leprosy institutions at Msambweni and Kaloleni remove a certain number of the open cases from contact with the community, but this is not sufficient to control the disease to any great extent.

In the former part of this report I have recommended the formation of a central leper settlement for North and Central Kavirondo, to be conducted on certain definite lines. I suggest that a similar settlement be formed for the Coastal Province at some central and otherwise suitable place. The same requirements would apply as in the Lake Province.

a. Sufficient good arable land; probably a thousand acres would be necessary for 400 patients, the number that should finally be aimed at.

b. A healthy site, or one that could be rendered healthy, especially as regards malaria.

c. Sufficient water for agriculture and personal use.

d. A whole-time trained European worker, similar to those sent out by B.E.L.R.A. and Toc.H would be attached to a local Mission to undertake this work, and his salary etc. (£250 to £300 per annum) would be met from Government or L.N.C. sources.

e. Medical supervision by a Mission or Government Doctor; a visit once a week would ordinarily be sufficient.

f. Self-support would be aimed at as far as possible, but adequate initial and recurring grants would be necessary.

In such a settlement great care would have to be exercised in the types of cases first admitted. Patients should be attracted by the hope of recovery, and only hopeful cases, who would give active co-operation should be admitted at first. Only one of the present patients at Kaloleni, and a small proportion of those at Msambweni, would fall into this category. I believe, however, that suitable patients could easily be attracted from the outside leper population, and once the settlement had been established upon the right lines, other patients from the two present camps could be drafted into it. The remaining patients in these camps would gradually die out, when they could be closed down.

For further details of the methods of running a leper settlement, I would refer again to the excellent work of Miss Lang in the Eastern Province of Uganda.

I have recommended that the control of leprosy in Kenya be carried out by the formation and maintenance of a definite type of agricultural settlement, under a whole-time trained European, working in conjunction with a local Mission. Three or four such settlements would be necessary, viz. two in the Nyanza Province, one in the Coast Province, and, if the incidence is shown to be sufficiently high, one in the Central Province. I would suggest that if funds for all these settlements are not at first available, a beginning should be made with two, one in the Nyanza Province and one in the Coastal Province. I would also suggest the formation of a Kenya Branch of the British Empire Leprosy Relief Association, similar to those in Uganda and Nigeria, which would co-ordinate any anti-leprosy activity throughout the Colony.

Treatment. I have been asked for particulars of leprosy treatment by several doctors in Kenya, and the following note on this subject is added.

The chief emphasis should be placed on general treatment; suitable diet, treatment of accompanying diseases, attention to complications, improvement of physique by suitable exercise and especially by occupation.

The best drugs for special treatment are hydnocarpus oil and its esters. Expensive preparations of these are supplied by British, German and Italian firms. But where large numbers of patients have to be treated and expense is an important consideration, the oil supplied by certain Indian firms is by far the cheapest, the quality and effective value being at least equal to that of the more

expensive preparations.

At Jinja, in Uganda, the Superintendent has been using Hydnocarpus Oil supplied by the Ernakulum Trading Company in 4 lb. tins, and has found it most satisfactory. When the tin is opened the oil should at once be bottled in bottles of suitable size filled to the neck. Exposure to air renders the oil painful. It may be mixed with pure creosote to the amount of 4 per cent, but this is not entirely necessary. After bottling, it should be sterilised, preferably by heating to 120° C. in an oil bath or autoclave for half an hour. Another method when creosote is added is to heat the mixture for half an hour in a boiling water bath on three successive days. Whatever size the bottle is used, it is well not to leave a partly empty bottle standing for more than a week, as the oil tends to become irritating when thus exposed to the air.

Care should be taken in selecting suitable patients for special treatment. Only those who are physically fit and of good physique can tolerate any but the smallest doses. Those with good physique will tolerate 6 to 12 c.c. given once or twice a week. This may be given intramuscularly or subcutaneously in divided doses, the needle being partly withdrawn and re-inserted several times, and 1 c.c. injected at each point.

Intradermal injections are particularly useful in macular cases, especially those of the tuberculoid type, ½ to 1 minim being injected at each puncture, which should raise a wheal about the size of a sixpence. An area of 4 square inches may thus be infiltrated at each sitting. Care should be taken that the oil does not pass under the skin.

Hydnocarpus oil is viscid and should be injected as warm as the patient can tolerate, so as to render it less viscid and more suitable for infiltrating the tissues. Re-infiltration of the skin should not be made in any area before 4 weeks' time.

Painting with a 1 in 5 solution of trichloracetic acid is a useful adjunct to intradermal injections. When the solution dries painting should be repeated once or twice until a slightly white appearance is produced. As this solution loses strength when kept, it should be made up freshly at least once a month.

I would suggest that hydnocarpus oil be imported from the Ernakulum Trading Company, or some other reliable Indian firm, by the Uganda Medical Department, and that this and pure creosote and trichloracetic acid crystals be supplied to leper settlements either quarterly or twice yearly. Hydnocarpus oil should not be stored for more than a year, as it is apt to become painful and unfit for injection.

I would express my thanks to the Acting Director of Medical Services for arranging my tour in Kenya, and to acknowledge with gratitude the hospitality and help which I received from him and from Government Medical Officers, Missionaries and others, who spared no trouble in making my visit interesting and profitable.