

LEPROSY NOTES

No. 2.

JULY, 1928.

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The British Empire Leprosy Relief Association.

The Association's Object :

TO RID THE EMPIRE OF LEPROSY.

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Leprosy Notes.

No. 2.

JULY, 1928.

To Rid the Empire of Leprosy. It can be done !

It is five years this month since the important decision was taken, at the inaugural meeting held at the India Office, to form The British Empire Leprosy Relief Association. At that meeting it was stated that the outlook was hopeful, that, indeed, it was not too much to say that many present might hope to see the day when the dread disease of leprosy would have been practically banished from most parts of the British Empire.

The progress made in the development of the methods of treatment of the disease during the past five years has been wonderful, and we would call special attention to the latest statement made by Dr. E. Muir, to be found in the first paragraph on page 3, and we would point out that this opinion is confirmed by many other workers.

Then, also, leprosy work is now being definitely organized on sound lines in every part of the Empire where the disease is present, so that the position now is much more cheering than it was when the Association was formed.

We are, therefore, more than ever convinced that the Association's object can be achieved if all will do their share.

The Campaign against Leprosy.

I. Is There a Cure?

Leprosy is a disease which excites the public interest in a way that no other disease does. Various contradictory reports have appeared in the press of late years with regard to the curability of leprosy and the possibility of its eradication. The object of the present article is to show what can be and is being done to deal with this terrible disease.

First with regard to "cure"—Leprosy resembles tuberculosis in being caused by an organism which has the power of hiding itself away in the tissues of the body like a seed falling into the crevice of a dry rock, ready to germinate if and when the circumstances become favourable for germination. In Europe for every person who develops tuberculosis there are many who are infected, but who live and die without showing any recognisable signs of that disease. Similarly in India, Africa and other places where leprosy is common, for everyone who becomes a leper there are many who are infected with leprosy, but in whom the disease either never develops or never reaches a stage sufficient to cause trouble or inconvenience. In both diseases this is because the causal germ has not found a congenial enough soil to grow in. There is a danger, however, that at a future time lowering of the general health of the patient may produce a suitable soil when the disease—tuberculosis or leprosy, whichever germs be lying latent—will light up and the patient will begin to suffer. It will be readily understood that when a patient suffering from either of these diseases has improved, either due to special treatment or to improvement in his health, there is always the possibility of some of the germs still lying latent in the body to cause a recrudescence should the patient's resistance be lowered once more. In neither of these maladies therefore does the wise physician pronounce a "cure." He continues treatment long after all active signs of disease have gone, and when he stops treatment he is always careful to warn the patient that the only way to be sure of continued exemption is to keep himself absolutely fit and strong. Only there is this difference between tuberculosis and leprosy, that the latter disease can be diagnosed with certainty and with much more ease at a much earlier stage than the latter, and, given equally favourable circumstances, leprosy is considerably more remediable.

In the treatment of leprosy the wholehearted, confident co-operation of the patient is necessary. There is no absolute specific which will ensure the recovery of the careless, indifferent or despairing patient. But given ordinarily favourable circumstances, a patient determined to get better and a doctor who understands his work and is willing to take trouble, there are few cases in which all active signs of leprosy cannot be stamped out. Naturally, the earlier the treatment is begun the sooner will recovery take place, and the last twelve months has given us a remedy which will search out and deal with disease foci where formerly they would have passed unnoticed.

It is important to recognise the effects the treatment now available have upon the campaign against leprosy :—

1. Instead of being an irremovable " infirmity " classified in the Indian census along with blindness, deaf-mutism and insanity, leprosy now becomes a disease within the scope of the physician. If, when leprosy remained untreated and the medical curriculum ignored it as being outside its range, this disease was more or less at a standstill in a country like India, it may surely be predicted that, with physicians everywhere diagnosing and treating it, the incidence must diminish rapidly.

2. With leprosy looked upon as hopeless, so that even in the earliest stages the leper was abhorred and looked upon as unfit for human society, the unfortunate sufferer naturally concealed his disability as long as possible, fear, shame and mental depression impairing his general health and leading to the more rapid development of symptoms.

Now looked upon as remediable, he seeks the physician as soon as possible, and, in the great majority of cases, recovers completely. The enlightened employer no longer dismisses the employee in the early uninfected stage, but has him put under treatment and asks for reports from the doctor as to his progress and fitness for work.

3. Patients in early stages hear of the treatment and attend clinics. The public generally take an interest and become able to recognise the signs. In this way it becomes known that there are many highly infectious cases employed in vocations which render them a danger to the community. Such dangerous people are forced to isolate themselves or are removed to places of segregation.

4. The effect of treatment of early cases is to prevent them going on to the later and more infectious stages. When infectious cases are treated they are often rendered much less so within a comparatively short time. In this way the widespread employ.

ment of treatment is being found to be a most effective method of prevention by shutting off the infection from others.

There is no infallible cure for leprosy and probably never will be, but there is something which is possibly better, for side by side with the eradication of this plague there must be sanitary and social reform, and it is the fear of such diseases that has always been, and will always be, the great lever to raise society. An infallible cure would remove the disease without changing society.

The second part of this article describes the method of dealing with leprosy through *Propaganda-Treatment-Survey* centres.

II. Propaganda-Treatment-Survey Centres.

The object of the first part of this article was to show that, although we have not in our possession an infallible specific which will cure all cases of leprosy, yet we have means at hand sufficient to cause a rapid diminution of the incidence of this disease in endemic countries.

I hope in this section to make clear general measures which are being found effective for this object, especially in India, where they were first adopted.

It is obvious that if means are to be taken to stamp out from any area a chronic disease which has been endemic in that area for centuries, one of the first things to be done is to institute a survey.

The objects of the survey are as follows:—

1. To find out in which places and among which communities the disease is most prevalent.
2. By comparing these places and communities with those which are more exempt, and by enquiring into histories and local conditions to ascertain the reasons for greater prevalence.

It is also easily understood, bearing in mind that the victims of leprosy regard their condition with shame and try to conceal it, that to carry out such a survey it is necessary to win the confidence of the patients and their friends, enlighten their misconception about the disease and demonstrate to them that leprosy is remediable and that it is their own real interest to come forward and place themselves under examination and treatment.

We have found that all these objects can be accomplished and a survey successfully instituted by means of Propaganda-Treatment-Survey Centres, styled for convenience—P.-T.-S. Centres. These are conducted as follows:—

An area is chosen which is known to be highly endemic. In India the most convenient unit is the thana or taluka with on an

average some 300 villages and a population of about 40,000 people. There are often between twenty and thirty such thanas in a district.

First of all, the information available from the decennial census returns is collected. This information, though not accurate, as it has been collected by enumerators who have no special knowledge of leprosy, is useful as a starting-off ground. Villages are visited, and with the aid of the Union Presidents and Village Watchmen known cases of leprosy are looked up and members of their families are examined for early signs of leprosy. By conversation, demonstration of charts and lantern lectures, the villagers are taught about leprosy—how it is contracted, how it may be prevented and how remedied. An out-patient clinic is opened at the headquarters of the thana and patients are treated there once or twice a week, while on the remaining days of the week other villages are visited.

Alongside of treatment and propaganda the survey proceeds. With the help of grateful and willing patients more and more cases of leprosy are found. The history of the invasion of villages, classes of the community and families is traced, written down and plotted out on maps and charts. In this way much useful information is collected which again is used in propaganda work.

The sufferers from leprosy are generally found to be eager for treatment. Within three or four weeks of starting such a centre as many as two or three hundred patients have been found to attend for treatment. Villagers are taught to isolate infectious cases in huts outside the village, and to discern the earliest signs of disease and bring their patients in the first stage in which leprosy is so remediable.

Often some other disease is found to be prevalent in a village which, by lowering the general health of the people, predisposes them to leprosy and which will tend to disappear once this predisposing cause has been removed. Many of these predisposing causes are easily preventable; to give one example, a village in the Satara district was an endemic leprosy centre and was also infested with guinea-worm due to the use of step wells. The digging of a new well at the top of the village and the laying on of a pipe water supply was followed by the rapid disappearance of guinea-worm and thereafter gradual disappearance of leprosy till there were only three or four cases at the time of my visit.

It is therefore apparent that if leprosy is to be stamped out, there must be a study of local conditions through the formation of P.-T.-S. centres, or in some similar way.

The Indian Council of The British Empire Leprosy Relief Association is at present initiating these centres in the various provinces of India. Model surveys have been conducted in Bihar, Bengal and Burma, and arrangements have been made for them in the Central Provinces and Bombay. It is hoped that each province will itself appoint a band of suitable medical men who, after thorough training in leprosy work, will continue the survey in two or three thanas of every district where leprosy is highly endemic. Thereafter it can be continued by district authorities till it is complete.

Wherever the survey has been conducted, clinics for the treatment of leprosy have been established which are attended by hundreds of patients, and are carried on by locally trained doctors after the survey officers pass on to a new area. It has been found also that large numbers of doctors attend the clinics and learn the diagnosing, treating and preventing leprosy. In Bengal a doctor appointed for this work trained over 200 doctors in various district centres during the last six months of 1927.

At the same time a large amount of valuable information has been gained concerning leprosy and the factors which have led to its high incidence in certain areas and among certain classes of the community.

The results of this survey have not yet been published in full, but a few of the more important items may be mentioned here. It has been conclusively shown:—

1. That leprosy is a disease which flourishes among certain castes of the people of India, especially semi-aboriginals who have left their primitive state but have not yet adopted the more settled and comparatively sanitary habits of the more advanced communities.

2. That it is specially rife in areas which from geographical, geological and climatic conditions are subject to frequent years of famine, such conditions lowering the resistance of the body to the disease.

3. That leprosy in areas where the soil is more fertile and famine conditions seldom obtain is frequently traceable to the immigration of infected persons from the more endemic, famine-stricken parts, who leave their homes in search of work. It is therefore useless to try to stamp out leprosy from large towns and less leprous areas while this immigration continues or while effective means are not taken to eliminate the disease from the chief endemic areas.

4. The disease is chiefly transmitted from friends, relations and household servants, by close and prolonged contact, to healthy

people ; the transmission from begging lepers in towns is probably of very rare occurrence.

E. MUIR, M.D.

Potassium Iodide in Leprosy.

The present article is no more than a brief sketch of the uses of potassium iodide in leprosy. Those desirous of using it in the diagnosis and treatment of the disease are referred to the 4th edition of the booklet 'Leprosy, its Diagnosis, Treatment and Prevention,' published by the Indian Council of The British Empire Leprosy Relief Association.

Potassium iodide was used by Danielssen about the middle of the 19th century. He recommended its use in confirming the recovery of patients apparently cured. In 1914 Leboeuf recommended it in three classes of cases:—

1. Those who fail to react to even large doses, *i.e.*, mild early and typical cases.
2. Those who display or fail to display a febrile reaction according to the dose administered.
3. Those that react even to the smallest doses (1 to 2 centigrams a day); these are far advanced and of the tuberculous type.

He recommended the inunction of chaulmoogra oil along with iodide given orally.

Some workers have recommended iodide because of the increase of nasal secretion induced as a help in finding acid-fasts in the discharge from the nose. Marchoux and one or two others considered that iodides might be of some therapeutic use, but most other writers have considered it dangerous, and a drug to be avoided.

In Calcutta we have been using it in small quantities to supplement injections of Hydnocarpus oil and its preparations for the last six or seven years, but were led to adopt its use more fully by the following considerations:—

1. The treatment of leprosy is twofold—building up the general strength and resistance of the patient, and breaking down the resistance of the leprosy bacillus. The latter, if carried out too fast or too suddenly, is apt to interfere with the former, weaken the patient and lead to an exacerbation of the disease; but it

the latter is carried out slowly and with due regard to the former, so that the patient, while having the leproma tissue cleared up, maintains his natural resistance, then improvement is steady and satisfactorily maintained.

Keeping the above principle in mind we require to have in our armamentarium the most powerful remedies both of the former and the latter type. Among the drugs which break down the leproma and the defences of the leprosy bacillus chaulmoogra or hydnocarpus oil and its derivatives have long held the foremost place. In some cases, however, they fail to act even in large doses, *i.e.*, in the nerve or "A" type of leprosy (the first class of Lebeouf). In these cases iodides either by themselves or in combination with hydnocarpus injections will continue this breaking down process and will often show up lesions which were not known to exist and then clear them up.

Then again there are the second and third classes of Lebeouf. It is possible in these cases (those of the B2 and B3 type) to produce the same effects by small doses of iodide given orally as are produced by large doses of hydnocarpus injected subcutaneously or intramuscularly; and not only that but also the degree of reaction aimed at can be much more accurately obtained, seeing that iodide is eliminated from the body within 48 hours, and the reaction (when the principles mentioned above are observed) only lasts as long as the iodide is in the body. In such cases iodide is given once a week, either by itself or along with a small injection of hydnocarpus; the required degree of reaction is obtained, as indicated by the rise of temperature and the other signs of reaction, and the patient has five days in which to recoup his strength and bring it up to the required level.

The dose of iodide ranges from half a grain to 240 grains, and the dose tolerated by each patient is ascertained by beginning with small doses and gradually increasing them as the leproma is eliminated from the body and the patient *pari passu* tolerates larger doses.

In potassium iodide, therefore, we have a most powerful *leproma-breaking-down* remedy, especially when it is supplemented with hydnocarpus injections and the local applications of such caustics as trichloracetic acid; only (let me repeat) this instrument must be used with due respect to the maintenance of the patient's general health.

Iodides not only directly break down the leproma, but also indirectly produce autovaccination. The broken down products act as antigens in the body and produce antibodies, and this acquired immunity has in itself a marked therapeutic effect. It

must be remembered, however, that this process, if not wisely regulated, may also produce an opposite allergic effect, with the result that a continuous lepra fever is produced, sometimes with disastrous effects on the patient.

When this occurs, and also when the general strength of the patient needs building up, we have found that the heavy metals, antimony, copper, iron and arsenic, given in very small doses have a most beneficial effect. When the reaction is in the nerve trunks, ephedrine gives marked and often lasting relief.

2. The second consideration in the use of potassium iodide is its use as a means of diagnosis. In early cases where the diagnosis is doubtful, it will often show up lesions which help to confirm the diagnosis. This test is even more valuable when it is combined with the erythrocyte sedimentation test. Further details of this use of iodides, however, must be gathered from the booklet mentioned above.

3. The third use of iodides is that mentioned by Danielssen, *viz.*, to confirm the reality of cure. Indeed, we would go so far as to say that, generally speaking, no patient, whatever treatment has been used, should be allowed to stop treatment until he has taken maximum doses of potassium iodide (240 grains for adults) once or twice a week for a period varying from three to six months.

Details as to dosage and the principles regulating the dosage cannot be given in this short article, but may be found in the booklet referred to.

E. MUIR, M.D.

Results of Potassium Iodide Treatment.

Dr. Marie Wardman, of the C.M.S., who is now in charge of the medical work at the Home for Lepers at Purulia, Bihar, India, writes that she has fifty cases on this new treatment, and much hard work is involved in keeping the records up-to-date and accurate. The temperature of every patient is taken four times a day. Dr. Wardman adds:—

The treatment seems well worth while, even though involving much suffering in some cases. All cases are voluntary, of course. We are already seeing changes in about six weeks as great as in nearly a year by hydnocarpus oil injection. It is truly working wonders, more especially in the bad cases. Also it seems to offer a new means of diagnosis in early doubtful cases. Daily we have more and more applications for the new treatment.

The Bearing on Prophylaxis of Recent Advances in Treatment.

In the Association's Annual Report for 1927, under the heading of "Remarkable medical progress," I gave a brief account of the present position in the treatment of leprosy, and emphasised the evidence of Dr. E. Muir and others to the effect that nearly every case of leprosy can now be cleared up and prevented from going on to the infective stage, and I pointed out how this would enable the disease to be reduced rapidly in countries sufficiently advanced to carry out the following simple plan. Whenever a leper is discovered, all his household and other close contacts should be examined for early cases of the disease, and this should be repeated every six months for five years. There is strong evidence, which is given in the work on leprosy by myself and Dr. Muir, that 80 per cent. of infections are obtained by living in the same house as a leper, and that in 80 per cent. the incubation period before the early symptoms appear is under five years. From this it follows that some 80 per cent. of new infections should thus be discovered in an early stage, when they can be cleared up by the modern treatment, and the numbers remaining reduced by 20 per cent., and in another five years the number of new infections would theoretically be reduced to 4 per cent. of the original numbers, and that within a single decade. As most of the infective advanced nodular cases would have died off in that time, and the nerve ones would have become uninfected, it is clear that where this plan is practicable leprosy might rapidly be reduced to small proportions, and it is being taken up on my advice in several European countries.

Unfortunately, some British papers, just before our annual meeting, quoted me as saying that every case of leprosy is curable, and that the disease could be stamped out of our Empire within ten years, which is very far from my actual statement, as given above, and this exaggerated account was telegraphed to some countries, whose medical authorities naturally contradicted such a grotesque perversion of our position in the matter. We at once issued, through Reuters and the Associated Press, a correct statement of our position, and I emphasised this at our annual meeting, pointing out that the statements contradicted in some cables had never been made by us, but as it is very difficult to catch up a false rumour, I am taking this opportunity to contradict it once more.

In a paper on "Recent Advance in the Treatment of Leprosy and its bearing on Prophylaxis," published in "The Practitioner" of April, 1928, I have dealt more fully with the present position, and have emphasised our contention that the sole reliance on compulsory segregation, unmodified by the adoption of our suggestion to allow early, for the most part uninfected, cases to be treated at hospitals and clinics, is likely at the present day to actually do more harm than good by leading the early amenable cases to be hidden, for fear of lifelong imprisonment, until the early curable stage is past, and we have distributed this paper widely, and shall be glad to forward it to any interested. The following recent figures from Honolulu serve to emphasise the curability of the early stages of leprosy. In 486 admissions to the Kalihi Leper Hospital (from 1921 to 1926), 143, or 29.42 per cent., have been paroled as apparently cured, and only 28 had shown any signs of relapse, mostly in advanced nodular cases. Among 204 advanced cases, only 16, or 7.84 per cent., recovered; of 212 moderately advanced ones, 82, or 38.68 per cent., recovered; but among 70 early cases, no less than 45, or 64.29 per cent., were paroled as recovered. Thus the recoveries were eight times as high in early as in advanced cases; clearly indicating the necessity of attracting lepers in the early stages of the disease to come for treatment, instead of repelling them by compulsory imprisonment, if this scourge is to be reduced rapidly.

LEONARD ROGERS.

Encouraging News.

Dr. A. B. Macdonald, of The United Free Church Mission at Itu, Southern Nigeria, writes:—

"So far I have treated 1,000 lepers. On the whole **the work has been most encouraging**, even with the little I was able to do for them. I took in all stages, and consequently I have had 6 per cent. deaths. Most of those who died looked hopeless cases when they came in, but, being more or less flung out of their own towns, I took them in. After 9 to 24 months' treatment, other 5 per cent. showed apparent cure, while 90 per cent. were vastly improved. Sensation returned, they felt stronger, the nodules had subsided to a large extent, and the white leprous patches were darker."

The Tai Foong Chee Treatment.

A very simple treatment for leprosy, which has been very successful during the last few years at the leper asylum at Kuala Lumpur, in the Federated Malay States, is called the Tai Foong Chee treatment.

Tai Foong Chee is the Chinese name for *Hydnocarpus Anthelmintica*, which has been known in China as a remedy for leprosy for many years.

It is given in the form of a powder, with a small amount of Hempseed (*Cannabis Indica*) and is prepared as follows:—

The *Hydnocarpus Anthelmintica* seeds are carefully selected, all rancid kernels (these are bright yellow or black and are easily distinguished from the sound kernels, which are light grey in colour) being rejected.

The kernels are crushed in a mortar and the pulpy powder is pressed through a sieve, the residue is again crushed and sieved in the same manner. The *Cannabis Indica* seeds are crushed and sieved in the same way. The powders, in the proportion of three parts of *Hydnocarpus Anthelmintica* to one part of *Cannabis Indica*, are then mixed well together and given in doses of half a drachm twice daily, preferably after food. The results of this treatment have been very satisfactory, and eighty-one per cent. of the lepers have shewn decided improvement. Over eleven per cent. of cases under treatment for between one and two years have apparently recovered and shew no signs of leprosy. They have been carefully examined at the Institute for Medical Research at Kuala Lumpur and were bacteriologically negative. Many of them have returned to their normal life and have shewn no signs of recurrence.

Cleanliness and active exercise are essential aids to treatment. at Kuala Lumpur the whole of the work of the asylum is carried out by the lepers. The steward, schoolmaster, attendants, water-carriers, sweepers, gardeners, washermen and dressers are all lepers.

There are carpenters, blacksmiths and masons among the inmates, and all repairs, erection of buildings, etc., are carried out by the inmates.

Every effort is made to keep them employed and amused. There is a club, built and managed by themselves, an excellent theatrical company, a band using English Instruments, another with Tamil, and a third with Chinese instruments. Several games are played, the most popular being rounders, football and ping-pong.

All able-bodied lepers are made to bathe at least once a day.

The special advantages of the Tai Toong Chee treatment are as follows:—

1. The whole kernel is used. (It is possible that in the extraction of the oil, some especially valuable part of the nut may be left behind.)

2. The mixture is palatable and is taken twice daily without the least inconvenience. It is very popular with the lepers.

3. It is inexpensive, costing only about 3d. a month for each patient.

4. It is as easily taken by woman and children as by men, which is not the case with injection methods.

5. No skill is required, the crushing of the kernels and seeds, the preparation of the mixture and the actual dosing, can be done by the lepers themselves.

6. No instruments of any kind are required.

7. The general physique of the lepers is improved by the treatment. In nearly all cases they gain strength and put on weight. There is no doubt that the oil contained in the chaulmoogra nuts and hempseed acts as a nourishing food.

8. Reactions are more easily controlled than is the case with injection methods. (Dr. Rodriguez, of Culian, mentions choking, chest pain, headache and hæmoptysis, as occurring in one form or another in forty-three per cent. of the patients treated by the weekly injections of the ethyl esters of chaulmoogra oil). This is not the case under the Tai Toong Chee treatment.

The seeds of *Hydnocarpus Anthelmintica* can be obtained through The Secretary, The British Empire Leprosy Relief Association, 24, Cavendish Square, London, W.1, or direct from H. Olesen, Siam Industries, Bangkok, Siam. The hempseed can be obtained from most seedsmen and native druggists.

E. A. O. TRAVERS, M.R.C.S.

Leprosy in Cyprus.

Leprosy is fortunately not very prevalent in the Island of Cyprus. The incidence is said to be 0·2 per mille, and there are some 90 inmates in the Government Leper Institution.

Recently a good deal of attention has been given to the question of leprosy, and a Branch of The British Empire Leprosy Relief Association has been formed with the following officers:—

President: H.E. Sir Ronald Storrs, C.M.G., C.B.E.

Vice-President: Lady Storrs.

Chairman: R. P. Nicholson, Esq., C.M.G. (Colonial Secretary).

Leprosy in the Southern Anglo-Egyptian Sudan.

In the southernmost parts of the Anglo-Egyptian Sudan the leper problem is as difficult and as urgent as it well can be.

To appreciate the difficulties one has to visualise an area more than three times the size of England, peopled by a large number of primitive pagan tribes speaking more than twenty different languages. There are no railways and only a few of the best motor roads can stand up to a really heavy tropical downpour.

The incidence of the disease in the Northern and Central areas of the Sudan is small, and there is no evidence to suggest that it is on the increase. As one travels southwards, however, the incidence is found to be much higher until, in the extreme South, in the Provinces bordering on Uganda and the Belgian Congo, the proportion of lepers to the rest of the population is, on a very conservative estimate, not less than ten per mile.

What is of much more serious import is the fact that the disease is increasing.

In one small area where six years ago I could only find four cases, there are to-day fourteen.

The proportion of young and of very early cases to the older and so-called "burnt-out cases" is further evidence of this. Among the chief causes contributing to this increase are the vagaries of the weather and the improvidence of the people themselves. The annual rainfall is so erratic and in many places so inadequate that there are frequent periods of local famine. It is during these months of diminished resistance when children are reduced to mere skeletons that leprosy lays its deadly hand on them.

These people are unconsciously crying out for a modern Joseph, one who will not only introduce some compulsory system of communal reserve granaries, which would tide them over the lean months, but one who will introduce new and more nutritious food-stuffs.

Until this is done the best efforts to eradicate leprosy are doomed to failure.

Seven years ago the people among whom I am working imagined that leprosy was caused by the great Python-like spirit that lives where the rainbow ends. I could not persuade any of them to point the extended fingers at the rainbow because they believed that if they did those fingers would drop off within a year or two from leprosy.

Until quite recently the leper among the primitive pagans of those areas was allowed to live the normal village life. It was

a common sight in those days to see one or more lepers sitting round the evening fire with the other members of the community, and sharing the common pipe or common beer pot. As the result of our anti-leprosy propaganda, however, he is no longer welcome in the village, for the people now know, what they did not know before, that the disease is contagious. This public opinion is our best ally in getting the lepers into treatment centres without having to exercise any compulsion.

The confidence of the people in medical work is already assured. No one can claim more credit for this than the District Commissioners themselves, no sick person ever appeals to them in vain.

But what has this to do with leprosy? It is possible now to begin an intensive campaign against leprosy, for the confidence of the native in medical treatment has been won.

All that we need, to ensure having ninety per cent. of the lepers in that particular area coming to a leper treatment centre, is:—

- (a) Good food.
- (b) Kindly treatment.
- (c) Some prospect of recovery.
- (d) Decent accommodation.

Given these, ninety per cent. of the lepers will come in of their own accord. Public opinion will drive the remaining ten per cent. Unfortunately, all this costs money.

My own experiment among the Moro lepers in the S. Sudan has been most encouraging, despite the fact that it was not given a fair chance. I seldom had more than fifty per cent. of any of the essential things required; even the drug was received so irregularly that there were frequent periods of interrupted treatment. I began in May, 1926 with fifty patients. There are now ninety-five undergoing treatment. Of the original fifty cases two died; five boys and one girl have been discharged after periods of treatment varying from nine to fifteen months; four more young adults are awaiting discharge, all apparent signs of the disease having cleared up in those ten cases. It is, of course, too soon to speak of them as being permanently cured. Of the others a few show no signs of improvement except in general health, but most of the other not-too-far-advanced cases are slowly but distinctly improving.

To emphasise the importance of good feeding and intensive treatment, may I describe the following cases.

A young adult, the much valued servant of a European, came to me with well-marked leprous patches of about six to eight months' duration. His master gave me *carte blanche* to feed the boy and give him every possible chance. This I did. He was a

most intelligent lad, and used to come to me for surreptitious injections over and above what the other patients received. After eight months of this intensive treatment and high feeding, he appeared to be cured. I saw him a year later and he was then well.

No one willing to devote his time to the prevention and cure of this disease should be hampered by lack of funds.

K. G. FRASER, F.R.C.S., Ed.

M. M. S., Yilu, S. Sudan.

The League of Nations and Leprosy.

In view of the information placed at its disposal by its President and various members in regard to leprosy, the Health Committee of the League of Nations recently proposed the following resolution:—

“ The Health Committee :

“ Recognising the international importance of the leprosy problem in view of (1) the report of the President on his visits to Latin America and the Far East ; (2) the reports presented by Professor Carlos Chagas since April, 1926 (document C.H. 466), and (3) the communications of the members from Japan and India ;

“ Decides to give at once, in its programme of work, a place to the study of leprosy suitable to its importance and to entrust to Professor Carlos Chagas, Surgeon-General Cumming, Colonel Graham and Professor Nagayo the preparation of a plan of international investigation of leprosy, requesting them to consult those experts whose opinion it would be desirable to obtain ;

“ Requests the Medical Director to get into touch with the public health services which have made or may make the request, in order to discover the best method of organising an international enquiry.

“ The Committee is pleased to note that the Federal Government of the United States of Brazil offers special facilities for the study of leprosy, and also learns with much satisfaction that, in addition to the funds which will be devoted to these studies by the Federal Government, Mr. Guinle, founder of various sanitary undertakings in Brazil, offers an annual contribution equivalent to \$10,000.

“ The Committee is ready, within the limits of its possibilities, to designate one or more experts to collaborate in the study of leprosy with the public health services which request such collaboration, utilising particularly the facilities offered by the Federal Government of Brazil ; and

“ Recommends that the Council be requested to ask the public health services of the interested countries what they might be ready to contribute to the studies on leprosy in the way of facilities for investigation and financial support on the basis that the League is prepared to participate in the expenses occasioned by the nomination, travelling expenses and work of the experts designated by the Health Committee.”

This Resolution was considered and adopted at the Fiftieth Session of the Council of the League, recently held at Geneva.

The Anti-Leprosy Campaign in Teso, Uganda.

The Teso people are a Nilotic tribe in the N.E. of the Uganda Protectorate. The Administrative district of Teso, with which this attempt is concerned, contains 300,000 people of whom roughly 3,000 are said to be lepers, *i.e.*, one per cent. or five times the average rate for India and the East generally, which is about two per thousand. The country is an unhealthy one, very flat, and full of swamps which are backwaters of the Nile, the average altitude being about 3,000 feet. This district was chosen for an experiment in the regular routine treatment of leprosy by modern methods, as it was thought that here, with the influential support of the British and Native Government (of which I am assured), fairly regular attendance by lepers over a prolonged period could be relied upon, if the treatment was made accessible to them. The people usually ignore leprosy entirely and they have no fear of it, and I am afraid that it will be uphill work teaching them to endeavour to prevent the spread of, and to avoid, infection. They are a very backward race, ignorant and stupid; their housing conditions are dreadful, and they appear to be more immoral than most tribes.

Syphilis and over-indulgence in native beer are working havoc among them. Unfortunately, they appear to be content with their huts and their condition generally, and all do the very minimum of work. From my hospital experience during the last six months, I expect to find *every* leper also suffering from Syphilis, Malaria, and intestinal parasites, and (if an adult) chronic alcoholism. Much preliminary treatment will therefore be necessary, but the greater will the improvement in leprosy be if these intercurrent diseases can be eradicated.

Though I arrived at Ngora at the end of October last, just six months ago, I have not yet begun routine treatment owing to some expected and some unforeseen causes of delay. The Director of Medical and Sanitary Services informed me, soon after my arrival, that nothing could be officially approved until after the first meeting of the Leprosy Committee recently appointed by H.E. the Governor, as a result of Mr. Oldrieve's visit to Uganda, and that the meeting would be held in January. November and December were spent in finishing my house, and building the necessary out-houses, kitchen, garage, boys' houses, etc. Among the measures approved by the Leprosy Committee at the meeting in January (which I attended as representative for the C.M.S. Diocese of the Upper Nile), were :—

1. My proposals to treat lepers in Teso as outpatients from six centres.

2. The appointment of a District Leprosy Committee for Teso.

3. The printing of a small pamphlet on leprosy for general circulation and use in all schools. This I was asked to write, in the form of short simple lectures or lessons, and I wrote it in January. The Honble. Director of Education, the Honble. Director of Medical and Sanitary Services, and Dr. Albert Cook, C.M.G., of the C.M.S. Hospital, Namirembe, have all approved the text, but I have not yet received the necessary official approval. When I get this, the pamphlet will be translated into Kiswahili and Luganda for general use in the Protectorate, and into Ateso for use in this district.

The Teso Leprosy Committee met in February and approved my scheme. Plans of the suggested buildings were passed and a sub-committee appointed to choose suitable sites. Six sites were chosen for the eight counties (in two instances one treatment centre does for two counties), but, unfortunately, prolonged drought and widespread famine (including total lack of water over a large area) has delayed the programme very considerably, and it is only in the last fortnight that work has been begun on these sites. The Native Government is supplying the unskilled labour and contributing towards the cost of the skilled labour. The vote of £800 from The British Empire Leprosy Relief Association is providing the rest, *viz.*, cement, doors, windows, roof, general equipment, and initial stock of drugs. The sites, each of five acres, are now cleared, foundations dug, stones and sand are being brought and bricks are being made, while I have all the doors and windows ready, also the timber and corrugated iron sheets for the roofs. Indents for the necessary equipment and drugs were sent home in March so that I hope to start treatment work in earnest in August at the latest. Good rains have fallen during the last three weeks so that by that date crops should be ready to harvest and normal conditions again prevail.

Three hundredweight of Hydnocarpus seed arrived in Uganda in December last, but until now there has been no chance of planting them in this district. The Agricultural officer in charge of the Government Experimental Farm at Serere (in Teso) has a large quantity, and he has sent me some for the chief to plant at the Lener Treatment Centres.

Seeing no chance of starting systematic treatment for some time (for the Committee did not think it wise for me to begin until the buildings were erected), in February I answered the Government's appeal for volunteers to assist in Famine Relief work. I was

appointed Famine Relief Officer for Ngora County, and have fed people daily since the beginning of March. During the first week I fed 986, last week I fed 10,858, and the numbers are still increasing. The Relief work has been very well organised, and there has been no starvation in this district, in spite of the enormous distances over which the very large amount of food (maize flour from Kenya) has to be conveyed. Though it is not the work for which I came out I feel my time is not wasted as I am getting to know the chiefs and people, and am trying to learn enough of the language to talk to my patients direct, as with them both Luganda and Kiswahili are quite useless. I have also done a good deal of work, especially surgery, in the C.M.S. General Hospital here. We operated on one leper, who also had elephantiasis, removing a mass of 65 lbs weight, to the patient's great relief.

Dr. Hunter has placed two rooms in his Administrative block at my disposal, and these are being fitted up, one as a laboratory and the other as a store. Dr. H. Lyndhurst Duke, Deputy Director of Laboratory Services, is very kindly training a boy for me, at Entebbe, especially in the examination for intestinal parasites and their ova, and in the staining of the leprosy bacillus.

When my treatment centres are ready I propose to visit each regularly as follows :—

Aloit	for Soroti	County, 40 miles away	on Mondays.
Achungu	„ Amuria	„ 65	„ „ „ Tuesdays.
Ngodingodi	„ Usuku and Napak	„ 80	„ „ „ Wednesdays.
Kapusi	„ Serere and Kasilo	„ 30	„ „ „ Thursdays.
Kanyum	„ Kumi	„ 12	„ „ „ Fridays.
Adakari	„ Ngora	„ 5	„ „ „ Saturdays.

Owing to the great distances, my elder daughter (who will accompany me as Assistant for keeping the records and supervising the sterilisation of needles, etc.) and I will generally sleep in a neighbouring rest camp on Monday and Tuesday nights to save travelling expenses.

I propose to use “Alepol” as the main routine treatment, with “Avenyl” as an alternative. At first it will only be possible to give weekly injections, but if funds are available, and suitable trained native assistants are procurable, and if it is found that the lepers will attend so often, the injections will be given twice a week. Also at first there will be no in-patients. The question has often been discussed as to which will be the better plan: to take in-patients at each centre or to bring them all in to one hospital here at Ngora. Dr. Hunter and I prefer the latter, on the score chiefly of convenience of supervision and of expense, while the Native chiefs prefer the former. One hospital would also

require less staff, but the patients would certainly prefer to be nearer their own homes. In either case the initial cost will be heavy. The matter will be decided later on, when I know what the out-patients centres are going to cost when in full working order, and when definite estimates of the two plans can be made out in detail. The main cost of upkeep would be a reliable trained Muganda medical assistant at each centre at 50s. to 60s. a month, a total of £200 a year. This is not allowed for in the vote granted me this year by The Mission to Lepers. I hope it will be forthcoming later on if the buildings can be arranged for and if in-patient treatment is found to be essential. The Native Government may be relied upon to provide all unskilled labour required for growing food, fetching water, etc.

C. A. WIGGINS, C.M.G., M.R.C.S., L.R.C.P. (Lond.).

Grants for Leprosy Work.

The Executive Committee of The British Empire Leprosy Relief Association have recently made the following grants of money:—

	£
Italian Consolata Mission, Iringa, Tanganyika . . .	300
Benedictine Mission, Ndanda, Tanganyika . . .	350
White Fathers' Mission, Dar-es-Salaam, Tanganyika	50
Universities Mission, Liuli, Tanganyika . . .	140
White Fathers' Mission, Mua, Nyasaland . . .	100
Dutch Reformed Church Mission, Mkhoma, Nyasaland	100
Church of Scotland Mission, Zomba, Nyasaland . .	100
Seventh Day Adventist Mission, Malamulo, Nyasaland	50
Church Missionary Society Hospital, Yilu, Sudan .	400
Church Missionary Society Hospital, Kigezi, Uganda	200
Seventh Day Adventist Mission, Fort Jameson, N. Rhodesia	100
For blankets for seven Leper Treatment Centres, Nyasaland	140

These grants were made for the provision of dispensaries, simple housing accommodation for lepers undergoing regular treatment, equipment, etc. Applications for financial aid will be sympathetically considered by the Committee, and full particulars may be sent to the Secretary.

Leprosy Work in the West Indies.

THE CHACACHACARE LEPER SETTLEMENT, TRINIDAD, W.I.

The Leper Settlement maintained by the Government of Trinidad is situated upon a small island, Chacachacare, lying in the Strait separating north-western Trinidad from Venezuela. The island is, in many respects, well suited to its present purpose; it is amply large enough, yet it has been found practicable entirely to reserve it; it is near to Trinidad, so that inmates' friends can visit at nominal cost by weekly steamer, yet its distance is such as to make segregation effective; the climate is sub-tropical rather than tropical; the days are rarely unduly hot, the nights are cool; the rainfall is low.

The men's and women's quarters each stand a little above the beach of two adjacent bays; they consist of cottages most of which accommodate eight or ten inmates, and which are essentially dormitories. The occupants of each cottage are, in so far as possible, lepers of the same type and in the same general condition. There are infirmaries for the more helpless patients. A hospital with forty beds is occupied by those who are acutely ill, who require special treatment or who are, for any reason, under observation. This building also contains the laboratory and the dispensary. The children live in a large bungalow near the women's quarters. There are two large dining-halls, each with its kitchen which, as also the bakery, is staffed by healthy employees. There are workshops for the men; a large laundry and sewing-room are situated near the women's quarters.

The work of the settlement is very largely done by inmates who are paid. The men perform most of the routine labour of the establishment, and, under supervision of the Public Works Department, carry out new works. They do carpentry; they make and mend boots. The male infirmaries have inmate attendants who look after the more helpless patients, do what dressings in general are required and give injections. The men are encouraged to grow vegetables and the produce is bought on behalf of the settlement to be issued in rations. The women make, mend and wash clothes, etc. The more active occupations are allocated to those whose recovery is likely thereby to be promoted.

Regular active exercise is urged upon those able to take it; some appreciate its value, particularly in the form of swimming, in postponing the outset of deformities and to some extent in correcting them and in improving the general conditions; but, on the whole, the exercise taken is inadequate. Cricket and other games are

taken up spasmodically and are soon dropped.

The inmates arrange concerts, plays and dances at intervals. There is an open-air cinematograph theatre. Books, games and other means of pastime are very liberally provided by the Recreation Committee, an organisation of those interested in the leper's general welfare. There are small but growing libraries.

The settlement has two functions; firstly, it is an institute for the treatment of active leprosy; and, secondly, it is a shelter for mutilated or derelict ex-lepers, many of whom are permanently in need of medical treatment.

There are, at present, four hundred and forty-seven inmates, including two hundred and eighty-five men, one hundred and twenty-five women, and thirty-seven children. Among the active lepers there are few even moderately early cases; in most of them the disease has made very considerable progress.

Anti-leprotic treatment is voluntary. For rather more than two years it has consisted mainly in subcutaneous injection of oil of *hydnocarpus wightiana* in various dilutions with olive oil, and of the undiluted oil; in every case the injections contain one half per cent. of iodine. Injections are given twice weekly unless contra-indicated. Untoward effects have been few and unimportant.

For some months, "Alepol" has been used on a selected group of patients. Subcutaneous injections of four per cent. solution of "Alepol" with one half per cent. of carbolic acid have been given twice weekly. So far, the results have been rather better than those obtained with oil of hydnocarpus, while it is much less painful. Very dilute intravenous injections are about to be tried, so that the possibilities of "Alepol" have not yet here been fully explored.

Trichloroacetic acid in various dilutions is painted over suitable skin manifestations twice weekly. The results are often good and the patients have confidence in this procedure.

Potassium iodide given by Muir's methods* has lately been tried with a view to the selection of those fit for discharge, and also, in a few cases, as a form of treatment for those in the eliminating phase of leprosy; so far, the results are very promising.

The need to treat any accompanying disease is appreciated, and the value of such treatment has been very noticeable, particularly where syphilis is concerned.

The results of treatment by the methods indicated are beginning to reveal themselves. A few patients have been discharged; a fair

* Muir, E., Ind. J. of Med. Research, October, 1927.

number appear to be on the way to recovery ; many have considerably improved ; more show some improvement ; a very few have become worse or have died, and, of these, some were hopeless when treatment began. There appears to be reason for considerable optimism as regards the possibility of actual cure in the few fairly early cases available, also for much certainty as regards the prolongation of life in most of the more advanced cases, many of whom are likely to be tided over till they become non-infective. It should be remembered that almost all those treated have been lepers for several years, many are lepers of many years' standing, and that they therefore form very unpromising subjects for treatment. Little has yet been effected, but there are adequate grounds for expecting increased success.

T. B. WELCH, M.B., D.T.M. & H., Medical Superintendent.

Leprosy and Marriage.

Dr. T. F. G. Mayer, now organising leprosy work in Nigeria, writes that in some parts of Southern Nigeria—

“ When a youth wishes to marry their daughter the parents insist on examining his skin for the early signs of leprosy, after which he examines the girl's skin to see that she also is free.”

The Secretary will be glad to hear from other contributors if they can tell of anything of the kind taking place elsewhere.

Many Lepers in Nyasaland.

A nurse at the Malamulo Leper Treatment Centre writes :—

“ We have to turn away several leper patients every week. If we had the means and assistants a colony of several hundred patients would soon spring up, but, of course, the question of providing food for them means quite a large outlay.”

This nurse is now giving “ Alepol ” injections twice a week, and says :—

“ It is quite a long and tiring morning's work to administer intravenous doses to 84 people.”

Work of the Indian Council.

The Indian Council of The British Empire Leprosy Relief Association has now completed three years of its life. The first of these years was occupied with the issue of the appeal for funds and in making known the objects for which it was being issued, in order to bring about an enthusiastic response; and also with the formulation of its plans of action.

The appeal which was issued in January, 1925, was closed just a year after, when a sum of over twenty lakhs of rupees had been collected. With regard to its programme of work the Indian Council laid down the following fundamental principles:—

(1) That the aim of the Indian Council is to capitalise the entire collections made and to spend only the revenue thereof.

(2) That the primary obligation of the Indian Council is the effective discharge of its duty to India as a whole.

The collections were accordingly invested in Government Securities of the face value of Rs.20.21,000, calculated to yield a permanent revenue of about Rs.1.21,000 every year.

It was resolved to apply this revenue:—

- (i.) in the promotion of research into the various phases of the disease and into the methods of diagnosis and treatment;
- (ii.) in the training of doctors in the diagnosis and special treatment of leprosy;
- (iii.) in the publication of material with a view to propagate a true knowledge of the disease, its treatment and prevention, both for medical men and the laity;
- (iv.) in the annual subvention of Provincial Committees for the promotion of approved schemes of purely local scope.

In apportioning the revenue as between these various activities it was resolved that the first three items, which were placed in the charge of the Central Committee, should not use up more than 50 per cent., and the entire balance was to be distributed to Provincial Committees in the proportion of their contributions to the capital sum collected. In actual practice, however, the Central Committee has been able to carry on its task in well within 40 per cent. of the revenue, and has distributed the entire balance to the Provincial Committees. By reason of the adherence of the Central and Provincial bodies to their allotted spheres there has been no overlapping of activities, nor any waste of energy; and the pace of progress has been accelerated.

In the matter of research, the Council is acting in close co-operation with the School of Tropical Medicine and Hygiene, Calcutta, where Dr. E. Muir, M.D., F.R.C.S., had been carrying on leprosy research for a considerable time past. The Council has provided Dr. Muir with an assistant by appointing Dr. J. M. Henderson, M.B., Ch.B. (Glasgow), on a salary of Rs. 1200-75-1500, the necessary equipment, and other subordinate staff. In 1927 the Council spent over Rs.18,000/- on research, and since March, 1928, it has taken over the "Rat Leprosy Inquiry" from the Indian Research Fund Association.

A sum of Rs.15,000/- is allotted every year for the training of doctors. They are nominated from various Provinces and Indian States and are deputed to the School of Tropical Medicine and Hygiene, Calcutta, for a fortnight's course of training under Dr. Muir. Four classes are now being held each year, at different times of the year to suit the convenience of the doctors, and up to the end of the year 1927 no less than 184 doctors had been specially trained.

In the matter of propaganda the Council has issued pamphlets and leaflets, etc., on the following subjects, and this literature has mostly been distributed free:—

(1) "Leprosy: Diagnosis, Treatment and Prevention." The 4th edition of this book has just been published.

(2) "Popular Lecture on Leprosy." This book is copiously illustrated, and has a set of slides corresponding to these illustrations. It has gone through two editions within the course of a year.

(3) "What the Public Should Know about Leprosy." This is another illustrated booklet, published in 1926, which has proved so popular that it has become necessary to publish it in ten different vernaculars of the country.

(4) A set of 12 charts, illustrating the different phases of the disease, its prevention and treatment.

(5) "Six Technical Lectures." This book is illustrated with 105 pictures, which are also duplicated in coloured slides. The lectures are intended for doctors wishing to make a further study of leprosy and its special treatment.

(6) A film which depicts, through an interesting story, in a vivid and realistic manner, the causation, treatment and prevention of leprosy. Five copies of this film have been in demand from various parts of the country, and they have all been in constant exhibition for the last three years.

In addition to the above the Indian Council are financing an experimental survey of selected areas in the different parts of the

country to ascertain :—

- (a) The relative incidence of leprosy in different parts of India.
- (b) The classes of people among whom leprosy is most rife.
- (c) By comparison of leprosy with non-leprosy areas, and castes and classes of people among whom leprosy is common with those among whom it is not, the ascertainment of the causes which underlie high incidence.

The survey, in so far as it has been undertaken, has brought valuable information, and it is hoped that it will bring much new data to light which will greatly help the prosecution of the anti-leprosy campaign which has been inaugurated.

BULWANT SINGH PURI, Hon. Secretary, Indian Council.

Northern Nigeria—Vom Leper Hospital.

Dr. P. W. Barnden, of the Sudan United Mission, writes:—

“ In 1925 it was felt that in view of the great success of the new leprosy treatment, we were under moral compulsion to do something to ‘ cleanse the leper.’ An extension of the existing medical site was therefore obtained from the Government, and a Leper Dispensary was erected thereon. The two plots of land are separated by a road and each surrounded by a hedge. Treatment was then begun, and the inevitable happened—people came from a distance, and we had no accommodation. Thus leper quarters became a necessity in 1926, and a reality the following year. They were built to house 12 men, but are full up, and over-flowing into the mortuary! Now the next problem: we have two leper women in-patients and no accommodation. What are we going to do about women lepers?

“ The leper quarters erected consist of a building composed of cubicles with a verandah in front, the whole covering an area of 90 ft. by 25 ft. They include a kitchen, corn grinding room, store, indoor latrine, bathroom, and four rooms for patients. There are also outdoor latrines. All the buildings have stone foundations, ant-proof course of rivetted galvanised iron, cement floors, walls of sundried mud bricks, cement faced externally, match-boarded ceiling, and corrugated iron roofs. The patients all do manual work to pay for board, and their segregation is voluntary.

“ In addition to the dozen in-patients, there are as many out-patients, who are receiving “ Moogrol ” intramuscularly and Sod Gydnocardate pills by mouth.”

Leprosy in Japan.

Several estimates of the number of lepers in Japan have been made at different times. Recently the Central Social Work Association, a Japanese organisation, put the number of lepers in the country at 15,000. Dr. Albert Oltmans, however, who has been for many years engaged in work for Japanese lepers, and who is now General Secretary for Japan for the American Mission to Lepers, entirely disagrees with this, and states that there are probably at least 60,000 lepers in Japan.

Dr. Oltmans says, "Fifteen thousand does not come up by several thousands to the number actually registered with the Government, and those who know believe that the entire number of lepers in Japan is at least double the number registered with the authorities."

The Lighter Side.

Many people do not realise that lepers are still found in all parts of the world, and the following incidents prove this:—

The Secretary's wife was talking to a Scotch woman some time ago, and the latter asked, "What have you been doing in India?"

"We have been looking after lepers," was the reply.

"Are they worth taming?" was the next query, and a startling one.

Recently the Secretary addressed the weekly lunch of the Portsmouth Rotary Club. A doctor rose at the close of the address to propose a vote of thanks, and said that just before he came in to lunch he met, at his Club, an elderly retired Indian Colonel, and invited him to come to the lunch, saying "The speaker has a subject that ought to interest you."

"What is he talking about?"

"About lepers."

"Oh! I've shot hundreds of them," said the Colonel.

Zanzibar's Grateful Lepers.

The following comes from the *Zanzibar Official Gazette* :—

“ Very few people have heard of Funzi. It is a small island near Zanzibar and its sole population consists of 25 lepers. Recently the small European community in Zanzibar organised a charity concert and they devoted part of the proceeds to the afflicted of Funzi. They were well rewarded. Two of the lepers were appointed by their fellows to give suitable thanks and their letters will long be preserved in Zanzibar. One wrote : ‘ We pray that you may long be filled with confidence and love continually to be mindful of us who are infirm and that the dominion of the English may daily continue in might no less than the lords of the Government. For in olden times there was none to regard persons like ourselves, but now the majesty of England takes note of us and loves us . . . God protect the English rule.’ The second letter, no less quaint, began with the words ‘ Greetings, most Potent,’ and was signed ‘ The Sick of Funzi.’ ”

Literature.

“ **Leprosy** : Abstract Reviews of Current Literature.” This is a reprint of an excellent article which appeared in June issue of *The Prescriber*. It is now being issued in pamphlet form by the Association, and any reader not receiving a copy is asked to write to the Secretary and ask for one.

Various pamphlets, a list of which was given in No. 1 of **LEPROSY NOTES** have been issued by the Association, and others will be issued as time passes. Anyone wishing to receive the literature issued is requested to send his name and full postal address to The Secretary, The British Empire Leprosy Relief Association, 24, Cavendish Square, London, W.1.

The British Empire Leprosy Relief Association.

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