

REHABILITATION — THE INDUSTRIAL AND SOCIAL WORK OF A LEPER COLONY.

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The following is an account of the development, and progress of this side of a leper colony, begun 19 years ago at Itu, Nigeria. As there was nothing of the kind in Africa before, and very little elsewhere there was no one with experience to whom we could look for guidance, and progress was by trial and error. If one system did not work, it was scrapped and something else attempted.

Nigeria has been described as a "land of contrasts." There are some hundreds of highly educated men, who have been able to take degrees with credit in the various faculties at Universities in Britain, and there are millions, largely of the peasant class, who live as their forefathers have always lived before them, cultivating their farms with simple tools or plying their dug-out canoes on the rivers on the way to fishing

everything except the affairs of

between these two classes there are, of course, thousands in various stages of education, elementary or secondary. We work predominantly amongst the primitive people.

The Itu Leper Colony is on the Cross River, which flows into the Bight of Biafra on the Gulf of Guinea. It is about fifty miles from the town of Calabar, which is at the estuary.

Situated in the heart of the tropical forest which giant trees, bush and creepers made impenetrable apart from the roads and paths, a passage had to be cleared by men with cutlasses. Three streams pass through the residential area all the year round. There were oil palms and timber for building purposes, and unlimited firewood. It is about four degrees north of the Equator and on sea level, hot with a moist damp heat.

We obtained a lease of the first area of land to be acquired in 1928. The development is a long story, but to make a long story short, the land now extends to four square miles and we have 3,500 patients in residence. There is a hospital with 80 beds, a hospital annexe with 100 beds, a babies' home, five villages, or "towns" as they are called, a school, church, workshop, roads, a canal, residences for the staff—African and European, a court, a market, farms and farm steadings, and a community where medical, educational, industrial, agricultural, social and religious work are carried on.

The five villages are quite near each other separated only by

distances of 100 to 200 yards. Each is laid out in regular streets, which are named and the houses numbered. A board giving the name and registered number of each patient is on each house. The patient's dwelling is made, native style, of clay plastered into walls of crossed sticks and bamboos while the roof is thatched with leaves from raffia palms sewn into mats, and tied to a framework of crossed bamboos. The houses are semi-detached with a verandah and flower beds in front, and a kitchen in between or behind. Each street has a headman or, in the Women's Town, a headwoman, responsible for the behaviour of the occupants. There are, in all, about 1,000 houses, two to four children or adults in each, and they are inspected once a week to see if they are clean and kept in good order. By the adoption of this simple type of house, there is no "housing problem." We have plenty of land, and all the materials are on the spot.

Sanitary services have been instituted and the streets are swept daily. The latrines are of three kinds. In high ground, which is dry, the bore latrine has been adopted. The boring apparatus, which costs £4 to £5, makes a hole 15 inches in diameter, and 30ft. deep. A square cement slab with a slit in it covers the top. They are the most satisfactory form where water carriage is not available. In the low lying ground, where water is near the surface, the Army system is employed. A trench is made every day, 2½ft. deep, a shovel left beside it, and every morning it is completely filled in, and a new one dug. At the hospital itself, there is a septic tank.

The Colony is well supplied with water. In addition to the Cross River nearby, and the three streams passing through the residential area, there are many more in the agricultural land. A reservoir has been built in the valley near the villages. The water is led into various filtering beds, thence to a collection tank, from which it is pumped by an electric pump to a sunken tank on an eminence, and it falls by gravitation and is laid on to the hospital, public buildings, and the streets in the residential area.

Agriculture and Industries were started for various reasons:—

- (1) First and foremost, to enable the patients to earn sufficient money for food.
- (2) As the most economical way of spending such money as we got as a grant for support. We are a Mission institution, and Government pays about one fifth of the total running expenses.
- (3) As what is called "work therapy"—outdoor and manual labour—giving health to the body, tone to the muscles

and distributing the oil which is injected bi-weekly as a remedial agent.

- (4) To increase self-respect. The patients were, many of them, outcast and despised and considered useless. It is important to foster a spirit of independence, a feeling that they counted and were of value in the community.
- (5) As a contribution, or rather they became a contribution, to the general welfare and improvement of the community at large.

As the present standard treatment by injections of hydno-carpus oil has been described by an authority as being valued at only 15% of the general treatment, it follows that the other 85% is of considerable importance.

Those who are able to work are divided into three categories. Adopting Army symbols, the C1 class is composed of semi-able bodied men and women, who are physically fit for work of any kind on the farms, oil palm plantations, in the workshop, or in any one of the administrative services, such as nursing, police or work in the kitchen, while the children go to school. The C2 class are able to do light work and to go about, but are not, expected to walk long distances. In the C3 category are the debilitated, the old, and the crippled, commonly known as the "sit-down company." We consider it a triumph to get work for these people of any kind, as formerly they did nothing and received food from the kitchen. They do the sorting of the palm kernels, beans, seeds, and sew the mats of raffia leaves for roofing, as they cannot move about. All receive a sum weekly for their services, sufficient to buy food and a little more. More than that we are not able to give. There is a fourth class—those too old or too debilitated or crippled or blind to do any work at all. They are fed at the communal kitchen.

As far as possible, work is on contract, and the remuneration depends on what they do. The introduction of the contract system was of the utmost value, as where there are hundreds of work people working on "time," close supervision is essential. On contract, it is reduced to a minimum. The people work in companies of 16 or so in number with a headman or headwoman in charge, and each company maintains its own discipline and sees that each member does a fair share of work. They do not work long. On two half-days they are "off" for treatment, and of course Saturday afternoons and Sundays. No trade union would quarrel with our working week, which is about 34 hours. In the African way of life, they are not accustomed to working day after

day for twelve months on end, and it is advisable to give them occasionally a week off for rest.

In agriculture cassava roots, yams, and rice, are the staple crops. Cassava is easily grown, and by a simple process the juice which is slightly poisonous is extracted, and the grated root is cooked to form a coarse meal called gharri. From cassava comes the home product known as tapioca.

The yam is a tuber like the potato but more fibrous in texture, and grows to an enormous size, anything up to 15 lbs. or more. To grow it, a small piece of yam with a sprout or eye is planted on the top of a mound of earth. Later it puts out a long vine, which has to be trained to a stick, or tree, 10 feet high. Yams demand a good deal of attention. They have to be weeded, their vines re-tied after a tornado, and when harvested they are tied up separately to walls of crossed sticks open to the sky to prevent rot.

About 120 acres of rice are under cultivation. The seeds are planted in a nursery, and the seedlings, when ready are taken out by the women and planted one by one by hand in the prepared soil. The area is then flooded, by the turning of streams into the fields, and left flooded until about a month before it is ready for harvesting, when the water is drained off. Rice cultivation is a job pre-eminently for women, who do it very well. Recently, through the generosity of B.E.L.R.A., a tractor has been acquired which will do a great deal of the heavy work. When harvested, the seed or "paddy" is beaten off the stocks, hulled, and winnowed in the workshop on special machines.

Other products are groundnuts, Indian corn, cocoa-yams, pumpkins, leaves and small nuts for flavouring soup, sugar cane, bananas and plantains, soya beans, and the various citrus fruits.

Owing to the absence of fertilisers, ground used in one or two successive years cannot be planted again for two or three years, when the bush is burnt and the ash dug in, restoring the salts to the soil. It follows that large areas of farm land are required.

As well as arable farming, there is a stock farm with over 200 sheep, goats, pigs and cows, not to mention donkeys and rabbits. The herd of goats was started several years ago, and two goats from home were imported to improve the local strain. For many years now the milk has been in regular use for feeding the uninfected babies of leper mothers, and the hospital patients. Within more recent years, cow's milk has also been obtained.

In felling large tracts of forest, a proportion of trees is always of use as timber. About 50 sawyers—pit sawyers—have been employed continually cutting up trees for use in the carpenter's shop, for building purposes and also for sale to outside concerns.

As well as the communal farms, many acres are set aside every year for private farms, each man and woman fit to look after it is given a plot and the produce is their own. This is extremely popular and few fail to claim them. Apart from them the teachers, the clerks and nurses would have no regular manual work in the open air.

The land in the Colony is a tumble of small hills, valleys and swamps and was originally covered with forest giants and dense undergrowth interspersed with oil palms. Palm oil is practically the only source of fat, and as such is very valuable. These palm trees were left when the forest was cut. The fruit grows at the top of the tree, and a man might have to climb 70 feet in order to obtain it. The supply of oil obtained was small and the method of extraction somewhat primitive. The fruit was placed in a large container, possibly an old canoe, or a hole in the ground lined with stones. It was pounded with sticks until the pericarp or outer covering of the nut was a slimy mess. Hot water was then poured on and the oil released by the pounding floated to the top.

In Nigeria the rain is devastating and care must be taken when cutting down the forest lest the soil be washed off the hills into the valleys. Bush-felling must be followed by planting. It was decided for this reason that the planting of young palms, quite apart from the monetary return, should be begun. So gradually the hillsides became dotted with serried rows of dark green palms, first a few inches, and then a few feet in height. As these grew up and bore fruit, the old ones were cut down. The young palms were planted at 30 feet intervals and, having plenty light and air, did not grow so high, and the fruit, instead of being cut 70 feet high was now obtained by the collector standing on the ground. The output grew so large that primitive methods were found to be inadequate, and something had to be done about it. To purchase and transport a steam mill from home would have cost two to three thousand pounds, and that was not possible. Fortunately at this time, information came about a derelict palm-oil plant at a village 10 miles down the river from Itu. It had been years before and abandoned by a trading company. True it was half buried in the bush, but ultimately it was purchased for £25, and the herculean task accomplished of dismantling it and transporting it in a lighter to the Colony beach. Then, by pulling, shoving and easing it along the path, it was brought to the Colony workshop. After certain new brass fittings were purchased, and a boiler weighing several tons obtained, it was complete. It worked and has been going for nine years now.

The palm-oil industry provides work for the largest number

of men chosen from amongst the strongest and healthiest. Forty are employed in the mill alone, preparing the fruit and feeding it into the mill. Others are engaged in transporting and in weeding and re-planting as required. After the oil has been extracted, the nuts are separated, dried on a floor above and descend by two chutes into the cracking machine. The kernels are separated from the shells and the weaker patients do the grading. The shells, with firewood, form the fuel for the furnace. A community of 3,500 requires an enormous amount of palm-oil for food. Soap in large quantities is made from it. It is of great value in providing work and wages and the largest single item which makes it possible for us to house, maintain and treat patients for a fee of 15/- a year.

The workshop buildings are sheds roofed with iron supported on cement pillars, and they are about one acre in extent. They house the mill driven by steam. To the driving shaft are attached by belts the machines for rice processing, the circular saw, planing and ton, electric light for all the public buildings, the houses of the staff and power for the water-pump.

The carpenters make all the doors and windows and prepare the building materials, and, with the bricklayers, erect permanent buildings. They also make quite creditable furniture. Owing to a shortage of galvanised iron, six of the permanent buildings, the babies' home, the library, the central kitchen and staff dwellings have been roofed with wooden shingles cut by the circular saw.

From clam oyster shells placed in a kiln and burned with firewood, whitewash is obtained which is a great boon to us and many outsiders.

Around the town and between the palm trees in the near areas, lemon grass is grown. This is cut periodically by the weaker people, and carried to the workshop, where it is steamed and oil of lemon grass is obtained.

In another part of the Colony, are two large sheds, where there are several minor industries. One of great importance is tailoring. A tailor is the name given to anyone who owns a sewing-machine. A great variety of garments for men, women and children are made. They are independent, but the Colony employs them for making the large quantities of hospital linen required, the uniforms for the nurses, for the Police, the Scouts, Guides, Cubs and Brownies, and clothes for children and destitute adults unable to work.

Then there are blacksmiths, who keep the farm instruments in good order, make nails and repair pots and pans and all domestic utensils.

An important subsidiary trade is the making of raffia sacks for holding the palm kernels, the rice and the gharri, as for many years hessian bags were unobtainable. In the same shed are carpet makers, who weave carpets from bamboo and raffia. There you can also have your umbrella re-covered and your shoes repaired.

As a result of all these activities, the spirit of the people is good. There is nothing worse for morale, than to have hundreds of people going about with nothing to do — “ roving idle, unemployed.” They are cheerful and not just sick people to be pitied but a people well able to look after themselves and even give a lead to their countrymen when they go home.

The work is arranged in such a way that it does not clash with treatment. On Monday and Thursday the men receive treatment in the forenoons, while the women come on the same afternoons. The children are brought up after a bathing parade supervised by the teachers, following the forenoon school on Tuesdays and Fridays. Temperatures are taken morning and evening by a staff of 98 so called “ temperature clerks,” mostly senior children from the school, who have been taught how to take them and they are paid for their work.

There are eight miles of roads on which a good deal of labour is spent, especially during the wet season. About three years ago a canal was cut from the workshop to the farthest boundary of the farm area. It was a romantic achievement. On the average it is 12 feet wide and 3 feet deep, and covers a distance of about 3 miles. Every day there operates on it a fleet of about thirty canoes. The canoes are made in the Colony, and their production is an interesting and skilled occupation. The tree is felled and is cut to the length required and the canoe axe does most of the work and the adze and plane the finishing touches. By the ingenious use of levers and wedges and what amounts to a steaming process, the canoes are made much wider than the trees from which they were obtained. The canal was not made easily. The surveying for it had to be carried out in dense tropical forest, and at times meant wading waist deep through liquid mud. To extract the roots of the trees felled in the path meant a good deal of trouble, and often necessitated the men working with their spades and axes below water. Where sections traverse deep swamp, and where the ground was high, it had to be cut to a depth of 10 feet. Four different streams were led into it. There were no bull-dozers. The men worked with spade, axe and often with bare hands. Forty or fifty men were employed six hours a day for nearly a year—the cost was about £300, but it was well worth while. Transport by canoe is much cheaper than by road and especially so in these

days when lorries are difficult to obtain and keep in order. Some of the canoes are long and spacious, and can carry a load equal to that of a 3-ton lorry. At intervals along the canal there are beaches, where the produce is collected and loaded into the canoes. The canal serves to transport palm fruit, the rice, the roofing material, the fire-wood for the mill, the yams and gharri, and the great baulks of timber. It enables the weaker patients to get to the farms, fresh and able for work, and is invaluable in saving the patients from carrying many heavy loads in the tropical heat and rain.

Among the 3,500 patients are 650 children, 350 being Adoptees under the BELRA Child Adoption Scheme. These, if at all able, go to school. There is a large well-built school of 12 classrooms, an assembly hall and rooms for teachers and a store. Most of the children who come, have never been at school before, and thus the classes for beginners are by far the largest. Others are for infants and Standards 1 to 6. Up to Standard 1 teaching is in the vernacular, thereafter in English. Handicrafts occupy an important place and the children also do gardening. The boys do soft wood carving, basket and brush making, and can make quite a presentable arm-chair, while the girls are taught spinning and weaving, sewing, embroidery and knitting. The hours are 8 till 11.30 a.m., which would be most popular with children at home. Then they proceed to the kitchen where they get a cooked meal. In the afternoons they assemble for light work. They divide up into companies and are allocated to jobs according to their age and strength.

Education is compulsory, too, for adults, who are unable to read. Evening schools are held two nights a week for each section, to which all must come, unless they are too old or too weak to make the effort. When they are able to make words out of letters, they are presented with a Bible. Many hundreds have been taught to read in this way and we know of villages where the only woman who can read is one discharged and returned from the Colony. The teachers are all patients and are 28 in number.

Recreation is important in any community and especially so in one like this and it takes various forms. Football is played by the schoolboys and young men who have been at school. Surprisingly, youths without education had little use for the game, considering it a waste of time. Teachers and clerks play a rather gentle game of tennis. There are draughts and many native games of a similar kind. On different evenings the Brownies and the Cubs, the Guides and the Scouts, hold their meetings, work for their tests, and engage in various games, outdoor and indoor,

singing and dancing. Some are members of the choir and the brass-band, and many young anglers are to be found along the canal bank or the Cross River where there are plenty of fish.

The centre of social life, however, is the market, the scene of petty-trading, for which all seem to have a natural affinity. It is held at 5 o'clock every evening and there are to be found for sale foodstuffs from the farms, cloths, beads, household utensils, stationery, and even cosmetics. It serves as the principle means of communication and passing the gossip of the day. Then there is the Colony shop, where the food from the communal farms, the palm-oil, the rice, the gharri, etc., is sold at a cheap price.

Next to the market is the library, where books, magazines and papers of various kinds are there for those who can read English.

Then there is the brass band of eighteen players, who have been taught to read staff music and play the hymns at church service, and entertain us on Friday nights and on other occasions. Every opportunity is taken to make the Colony as attractive as possible. The main avenues are lined with flower beds, and patients are encouraged to grow flowers in front of their houses.

A patient with a distinct genius was discovered, and under the guidance of Doctor's wife, made some very creditable statues of cement, which add much to the adornment of the place.

A cinema show is given periodically at an outdoor stadium. There the band plays popular songs and the children sing.

A communal kitchen, staffed by eighteen cooks, supplies food to those who are "on chop." Twice a day the bugles sound, and the children make their way hurriedly to join the queue. Over 600 meals twice a day are served—these are mostly for children and adults who are unable to work. The meals for the hospital and annexe are taken by the women to the wards on trays. The food is rice, yams, gharri and fruits in season. They also receive soup made of meat, fish, palm-oil, soya beans and other vegetables and the inevitable hot pepper, so palatable to the Nigerians, although it would remove the mucuous membrane from the mouth of the European. Each patient also receives a weekly supply of soap. Those on the kitchen food list, too—the children and those unable to work—receive clothing, mostly made by the Colony tailors supplemented by boxes of gifts from home.

THE ADMINISTRATION.

The staff is composed of the medical superintendent and his wife, who is a trained nurse, and four BELRA assistants. One is the accountant and the work of the office in a Colony of this size is enormous. Patients' particulars have to be filed, accounts kept

and money received and paid out, and a vast number of letters received and answered. All postal transactions for patients pass through the office as, of course, they are not allowed out to the public Post Office. The office is indeed the control room of the whole machine. One European is an electrical engineer, gifted in dealing with anything mechanical, and he it was who dismantled and re-assembled the derelict palm-oil mill. Another is the builder and supervises the carpenters and bricklayers during the erection of buildings, while a fourth relieves during furlough, and carries out the work of any of these departments, including the agricultural side. We receive also valuable help from the wives of BELRA assistants, one of whom has had secretarial training and does duty in the office and school, while another is a trained nurse working in the Colony hospital.

Like all other African communities, this has its own Chief. He is an important man, something like the sergeant-major in his position. On him depends much of the life and character of the Colony. There is a court house and the chief presides, assisted by three sub-chiefs and the headwoman of the Women's Village. The court meets twice weekly—at night. If it met in the day, there would be some difficulty in getting the ordinary work done. Considering that fifty different tribes are represented, there is really very little trouble. Minor offences do occur, for which a court is necessary, petty thefts, slanders, debts, infringements of Colony rules and occasional cases of immorality. The court does its best to settle disputes. If the accused is not satisfied, he can appeal to the Superintendent, who constitutes the Appeal Court. For that, however, he must put down sixpence and if he wins his appeal he gets the sixpence refunded.

A uniformed police force of men, and women for the Women's Town, maintain order and act as watchmen, particularly night-watchmen. They are indispensable, as much valuable property has to be guarded. They are also time-keepers and ring the hours and the half-hours day and night. Once a week they parade and they are given some elementary drill.

The predominant type of leprosy at Itu Leper Colony is neural, amounting to 73.25 per cent., N1 and N2. Of those considered N3, there are 30 only. Those showing diffuse depigmentation outnumber those with definite discrete macules. The tuberculoid cases, major and minor, form 8.5 per cent. of the total.

It has been noted that a tuberculoid case can become lepromatous but such an occurrence is infrequent. Nor has 'self-healing' leprosy been evident except on rare occasions.

Lepromatous cases amount to 18.25 per cent., and are kept in a special village or section by themselves. When they become bacteriologically negative, and 20 to 25 per cent. of these do under 'standard' treatment, they are transferred to the villages reserved for purely neural cases.

A beginning has been made with treatment by diasone—the number being limited by the resources of the Colony.

Such is the community of Itu Leper Colony. No attempt is made to make a European village but, retaining all that is good, to make a model African colony. The medical work does not come under review in this article but, of course, all expect to be "cured" or, if not "cured," relieved. No doubt patients are amenable, and discipline is maintained because of that hope, and they do appreciate

Neither is direct missionary work included, but this account would not be complete were it not made clear that the church is at the heart of the colony, and its influence, which cannot be described on paper, is real and deep. Relations between members of the comm

harmonious, and Government officials are often surprised that there are not numerous fights and quarrels amongst people drawn from so many tribes differing in customs and habits, and speaking several different languages.

The harmony and spirit of service, and cheerful acceptance of duties, rules and regulations, alien to their upbringing, is very considerably due to the Christian atmosphere which prevails.