

THE EXODUS
FROM
TRAVANCORE TO MALABAR JUNGLES

SURVEYS BY
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KERALA RELIEF CENTRE,
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Food Famine and Nutritional Diseases in Travancore.

*Surveys by Mr. K. G. Sivaswamy, Mr. K. K. Chandy
and ten doctors.*

Demi Size — 290 Pages — 33 Illustrations — Rs. 5/-

This book deals with famine conditions in certain parts of the west coast of India about which little is known to the outside world. It examines the number of deaths in 1943 and 1944, when the people suffered from food famine. The number of *excess* deaths over the annual normal of 15 per 1000 was 95,894 or 15.7 per thousand for the last two years, and 1,88,136 or 21.9 per 1000 for the last four years as against 28 per 1000 as officially estimated for 1943 for the Bengal famine.

By an analysis of the state medical and health reports and parish records of deaths, the book establishes the existence of similarity of conditions as in famine tracts, namely larger percentage of deaths by diarrhoea, dysentery and oedema, and a phenomenal increase in the number of diseases.

After a survey of the coastal areas during the aftermath of famine, Lt. Col. T. S. Shastry, Dr. T. V. S. Shastry, Dr. M. E. Naidu and seven other doctors have recorded an increase in anaemia, scabies, ulcers, neuritis, and chronic digestive troubles, all due to excessive consumption of tapioca unsupplemented by a protein diet.

The book concludes that the number of deaths and diseases would have been less with an earlier realisation from 1942 onwards of food famine by the Government of India, lower prices of food grains, less official corruption and black markets, more public co-operation, early introduction

The Exodus from the Kottayam Division of
Travancore State to Malabar
(1943 and 1944)

BY

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INTRODUCTORY

Between the years 1942 and 1944 a large number of small agriculturists left their native uplands in Kottayam division in search of a living. They have been preceded ten or fifteen years ago by enterprising Syrian Christians who cleared the jungle and developed rubber estates, and cultivated lemon grass and cashewnuts. With the fall of Burma and Malayas, and the need for rubber for war purposes, the Government of India began to encourage rubber estates. The investors in such estates began to induce the people around them to colonise in the jungly parts of distant Malabar. But they could bring only just the number that could be maintained by them. The existence of earlier settlers no doubt helped the new settlers in understanding the topography of the area and the extent of available lands for cultivation. But the exodus of about 12000 people could hardly be explained as due to enterprises for making money. It happened between 1942 and 1944 and the largest number came in 1943 and the early part of 1944.

This was the period when rice sold in the black market between Rs. 45 and Rs. 65 per bag of 182 lbs. in the Kottayam division of Travancore State as against a pre-war price of Rs. 8 and a controlled price of Rs. 30. State-wide rationing had not come into existence. Lands had become fractionised into holdings of 5 and 15 cents in Travancore. There was

severe competition for lands and the cultivating tenant had no legal protection against rack-renting and eviction. Conditions in Malabar were attractive. There was some sort of security of tenure under the Malabar Tenancy Act: Under this Act one could get from the landholder a lease of land for a period of 12 years. The landholder could dispossess a tenant only on payment of compensation for improvements. Large uncultivated tracts were available in the uplands of Malabar. As these tracts were situated in jungly malarial areas, very few dared to settle there and cultivate the lands. These Travancore settlers had experience in their own country of cultivation of uplands. They had to choose between partial starvation at home and the risks of cultivation in malarial tracts infested with wild animals which would easily destroy crops. They chose the latter.

The lands where they had settled are situated in two regions. There were the hilly uplands at the foot of the Western Ghats within a distance of 20 and 30 miles eastwards from the coast between Calicut and Kanhangad railway stations covering a distance of about 100 miles. Lands were also available above the Ghats in the Wynaad area. The settlers travelled between 100 and 250 miles by train and another 100 miles by bus, suffered all the travails of emigration from their native country to an inhospitable place and settled in the various tracts. They sold their small bits of land which brought fancy prices from the class of war-made rich who were troubled by the surplus money which got into their hands as a result of their doing business connected with the war. They sold their 10 or 15 cents of land for Rs. 200 or 300 and spent a part of it in travelling. Another part they spent in paying the portion of rent for the land as advance rent for 12 years. With the remaining sum they started life. They bought the necessaries of life at high prices. They could not meet the cultivation expenses nor could they maintain themselves till the jungles were cleared, crops were raised, and the harvest was gathered. A large number died unable to resist malaria, some returned to

their native home to struggle there for an existence and to die by deterioration in health caused by malnutrition. Some others who were owners of land leading the life of an independent peasantry in their native home turned into labourers. The Latin church in Malabar came to their rescue and did what they could by opening orphanages for the children left unprotected by their parents. A substantial number of the settlers who have stuck on have become indebted to the mopla traders and money-lenders and have pledged their small interest in the land. Many of them have deteriorated in health owing to malaria and want of nourishing food. An excessive use of carbohydrates, particularly tapioca, without the supplement of fish and cocoanuts, along with the attacks of malaria has led to an increase in the number of settlers suffering from anaemia and scabies. The majority among women and children look decidedly unhealthy. It is rather surprising that under such depressing conditions these settlers living in open huts and exposed to cold and rains should have been able to clear the jungles, level the slopes, irrigate the lands and raise different food crops, thereby adding to the essential war material of food in the country without any kind of aid either from the Government of Travancore or the British Government. It is the history of these colonists that is narrated in the following paragraphs. It is hoped that this publication will draw public attention to the needs of these settlers who are our national asset, and that they will receive every kind of encouragement and assistance in the great battle they are waging against nature for the agricultural development of the country with their paltry resources.

Koluthuvayal Colony

The biggest colony of Travancoreans is near Perambra on the 80th mile in the Calicut-Badagara road. The colony is called Koluthuvayal which is reached by a narrow ascending footpath of 5 miles from Perambra. The number of families were not more than 100 who settled between 1939-41.

About 400 families came in 1943 and another 100 in 1944. There is an adjoining colony called Athiyodi which could be reached by walking another distance of 5 miles on the hills. Dr. C. V. Narayanan, Secretary of the District Medical Association, Calicut and myself visited the first on 25th February 1945. There were 700 patients waiting for examination and he could examine only 200. It was a pitiable sight to see a large number of women and children struggling to be examined and supplied with some protective medicines and quinine tablets. The Father in charge of this colony referred to the terrible number of deaths during the monsoon period between June and September in 1943 and 44. The population in the colony of Koluthuvayal was 8000. According to the average death rate in India, the number of deaths should not exceed 75 for this population. But it was 350 in 1944. The Father of the church in this colony calculates the total births as 29 in 1944.

Athiyodi

The adjoining colony of Athiyodi comprised roughly a population of another 2000. It is impossible to know the conditions of the people in this area as it is hardly accessible. In fact, Government ought to immediately provide a road to these colonies from the main road if medical relief were to be made easily available.

Tamarasseri and Pudupady

The next colony of Travancoreans is on the Calicut-Vyithri Road, about 26 miles from Calicut. Here too about 200 Travancorean families have recently settled, partly for work in the rubber estates and partly on their own account for cultivation of jungly areas. Similar conditions have prevailed here. These centres, Tamarasseri and Pudupadi, were visited by me, the first along with Dr. Miss Atzorri on 5th March, and the second with Lt. Col. T. S. Shastri on 18th March. Some of the settlers started as cultivators of lands, but having lost money in them, became labourers in the tea

estates. One Mr. Kuriakose came with Rs. 4000 to Kannoth and today he has joined a tea estate as a labourer. Instances of a similar nature can be multiplied. A number of settlers gave us petitions narrating their desperate position, having lost everything by settling in the area and pleading for some loans so that they might re-start their lives in these jungly areas. Rev. Father Beretta was a large-hearted father and went forward by granting loans to a number of colonists so that they might be enabled to develop the lands. Unfortunately some of these colonists died in 1948 and the loans could not be returned. Malaria took its toll in 1944. To illustrate, 11 out of 20 died in a single joint-family. Mr. P. C. Jacob, a planter from Travancore, is opening out the jungles with the aid of local labour and the settlers from Travancore. Planters generally persuade their community men to emigrate from Travancore, but they find it difficult to retain even the few whom they bring owing to the ravages of malaria. Those who had hopes of getting some food and employment in their native country generally returned back to their places. Within 20 miles of this settlement is situated an orphanage run by the Latin church at Marikunnu. This orphanage gives protection to the poor children of the colonists in different settlements round about. Some of them have been stranded owing to the death of their parents or their return to their native country. Some are sent by poor parents who are unable to maintain them with their slender resources.

Maruthankara and Padathukadavu

There are 2 other colonies where Travancorean families about 200 in number have recently settled. These are very near Badagara. Conditions here must be similar as in other areas. I had no occasion to make a personal visit to them.

Rajapuram

Going further northwards one finds two more recent colonies which might be called assisted colonies. These have

come into being on the initiative and direction of Rt. Rev. Mar. Alexander Choolaparambil, Kottayam and Mr. V. J. Joseph, Professor in the St. Aloysius' College at Mangalore. While the Rt. Rev. Bishop has extended his help by way of funds, Mr. Joseph has taken enormous pains in choosing the site, planning the colony, and establishing the Syrian Christians in these distant places. Conditions in these colonies might be said to be better than in others as they get some amount of protection from friends and sympathisers. There are 146 families in the Rajapuram colony. This colony is 18 miles east of Kanhangad which is a railway station distant by 100 miles from Calicut. There is a road to the colony. It seems the Government are clearing the forest and that malarial attacks are getting less.

Alexnagar

Another assisted colony is called Alexnagar colony, which I visited along with Dr. T. D. Nair on 24th March 1946. A full report of the conditions in this colony and of the health of the settlers will be found in the report of Dr. T. D. Nair published elsewhere. His conclusion is the following:—*“On the whole barring some, the men have not been run down severely by malaria and malnutrition, but a larger number of women and children than men decidedly look unhealthy.”*

Kunnoth

I reached Kunnoth on the early morning of 28th March by travelling in an open bullock cart for ten miles from the Alexnagar colony. The starting of the settlements here is a tragic and distressing story. At Kunnoth, out of 25 families who came in 1948 and 1944, half the number have left and about twenty died. At Aralam out of 50 families more than half have left the place. The number of dead was about twenty. At Peruvayal ten families came and about half left the place. Some went to Tellicherry hospital and died. The number of dead was 15. The chief representative of the Kunnoth colony told me of the big estates round about to

which mopla labour was brought from Ernad taluk of Malabar by mopla supervisors of labour (Kanganis) and how this labour was unwanted by employers in consequence of their reduced strength due to malaria, how they returned back to their native homes broken in health, and even some of them died on the road in 1948.

Vilakkode and Kakkayangad were the other villages occupied by about 80 families about whose conditions Dr. T. S. Nair has been good enough to report in his medical survey. According to the statistics of births and deaths for these villages, the deaths increased from 98 in 1948 to 158 in 1944, most of which were mainly due to malaria and its complications. But the greatest tragedy in this colonisation was the emigration of 12 Hindu families from Travancore to Vayathur and the return of all the families to their native homes after a year, suffering monetary losses and deaths of their dear ones in the colony and on the way. Some returned with malarial fever. The investments in the crops were a loss. The landholder returned back the advance rents he had received. But the tips and commissions paid to land brokers, agents of landholders, and several claimants to the land, could not be got back.

Peravoor

The next colony visited by me on 28th March was Peravoor. Here the settlers from Travancore have come mostly 10 or 12 years ago for forest work. A small number have emigrated after 1942. The Father of the church explained to me that the Catholic population was 1111 in 1940-'41. It increased to 1500 in 1941-'42 and to 2660 in 1942-'48. The excess emigrants have settled in surrounding villages and only a few at Peravoor. The number of deaths increased from 84 in 1942 to 188 in 1944. The Father of the church gave me terrible accounts of the death of children and old persons in 1944. A new disease in the area was cerebral malaria. The patient who suffered from it lost his senses and died in 8 days. The Father maintains an orphanage

with 8 children and sends also poor children to another orphanage at Kolayad. The Mother in charge of the convent at Kolayad described to me the number of children with mere skin and bone suffering from dysentery who were sent by the Father at Peravoor to their care. She also narrated the story of a Christian settler who left three of his children to the protection of the Kurichias (the local forest tribes.)

Kolayad and Pothukuzhi

I reached Kóláyad after travelling a distance of 10 miles again by an open bullock cart. This place is an older colony of Travancoreans. Six families have however settled recently. Also the adjoining village of Pothukuzhi had 65 settler families out of whom 60 have recently settled after 1942. The number of deaths here has been equally great as in other areas. To illustrate, a Nair family of Thodupuzha came to Tholampara near Pothukuzhi and the whole family of seven died by malaria.

Thalapoya and Manantody

The other colonies visited by me were all in the plateau of the Western Ghats in Wynaad taluk. I visited Thalapoya on 80th March. The number of families who settled in Thalapoya was 20 and at Tavinjal, a neighbouring village, 50. There were also 8 other villages on these hills round about Manantody which the settlers from Travancore have occupied. In all the total number of families who have settled between 1942 and 1944 was 295. The number of emigrants increased during these years by 1800. The following was the total number of births and deaths between June and June every year :-

| Year | Catholic population | For all the Roman Catholic population | | For the Travancorean settlers only | |
|---------|---------------------|---------------------------------------|--------|------------------------------------|--------|
| | | Births | deaths | Births | deaths |
| 1941-42 | 1684 | 58 | 51 | 18 | 31 |
| 1942-48 | 2282 | 61 | 108 | 81 | 78 |
| 1943-44 | 2880 | 61 | 148 | 87 | 105 |

Some of the families emigrated to Tamarasseri near Calicut,

as they found it impossible to live in these cold regions. More than 50 families have returned back to their native homes from Manantody. Each of them brought-between Rs. 500 and 1000, and spent it on lands and medicines. Many of them lost their dear ones in malarial fever. Being unable to work owing to reduced vitality and strength, they borrowed from the merchants and mortgaged everything they had. Unable to repay the loans and finding themselves helpless, many returned to Travancore and other places for a living. Others are holding on to this area out of a sense of shame and despair in making a living in their native country. The largest number of deaths was in the latter half of 1948. Cases of dysentery and diarrhoea were greater in number than in any other year. The swelling of the ankles and face was fairly common among a number of patients who came to the hospital. All the 40 beds were filled up in the Manantody hospital. Some of them died as inpatients. When questioned why they came to suffer here in malaria and die, their answer was that they had to choose between death by starvation at home and death by disease here. The number of outpatients increased in the hospital from 1000 to 2000. It was a pitiable sight to see some of these families returning home saying that they came as eight members and returned as two. Malarial deaths increased between May and July. During the monsoon the leaches cause leg ulcers among the settlers which hardly get cured in some cases. In 1948 there were a number of cases of nutritional oedema and anaemia in the hospital at Manantody. Deaths by cerebral malaria have also become common.

Sultan Battery

The next colony visited by me on 31st March was Sultan Battery which was about 40 miles from Manantoddy and 60 miles from Calicut on the road to Mysore. There were about 100 families of new settlers in this colony. 5 Hindu Thiyya families have also settled along with the

Syrian Christians. The number of deaths by malaria here too has been great. Government have stationed a malarialogist near this place for doing anti-malarial work. About 50 families have also left the area being unable to resist the malarial attack. Here the settlers have occupied Government lands and brought them under cultivation during the last 8 years. It seems eviction orders are being issued against these colonists asking them to leave the lands, possibly with a view to make provision for ex-soldiers.

Estimate of deaths and diseases

Deaths by malaria are naturally greater in these hilly plateaus than at the foot of the hills. The number who have recently settled from Travancore between the years 1942 and 1944 will range between 12,000 and 15000. A close scrutiny of the figures of deaths supplied by the Roman Catholic Fathers of churches shows that the average number of deaths per 1000 population for each year works to a figure of 117 or 284 for the 2 years 1948 and 44. The total number of deaths for the settler population of 12,000 will amount to 2808. The normal death rate among the Syrian Christians in Travancore is 12 per 1000. Even calculating the number of deaths according to the average Indian rate of 25 per 1000, the total number of deaths for these settlers should not exceed 600 for the 2 years. The number of excess deaths over the normal would therefore be not less than 2000 for the years 1948 and 44. A sufficiently substantial number have returned back, broken in health and fortunes, to their native homes. Of those who have been left behind a large number of women and children suffer from anaemia and scabies. About 50 percent and more of the men settlers have lost their vigour and strength to work on the land. Some of them will have to be maintained for their lives by their children. In the succeeding paragraphs we give an account of the occupation and incomes, and the food and diseases of the settlers and make a few suggestions for the development of these colonies.

Land Rents

The first thing the settlers did was to get uncultivated lands from the jenmis (land owners) for cultivation. The majority of them obtained a lease for twelve years of 5 to 10 acres. Land brokers belonging to the locality and to the settler community helped in these transactions, sometimes cheating the settlers too. After beginning the cultivation various interests might claim the land. They too had to be satisfied by the payment of some consideration. An advance rent varying from Rs. 10 to Rs. 40 had to be paid for every acre of land. In addition an annual rent ranging between 6 as. and Rs. 2 was paid per acre. Round about Peravoor and Kolayad the annual rents were high, even going up to Rs. 10 per year. For paddy lands the cash rent ranged between Rs. 12 and Rs. 15. In the Wynaad plateau conditions are different. The advance rent per acre of dry lands called parambas is Rs. 10 and the annual rent in addition ranges from Rs. 8 to Rs. 7. Paddy lands in valleys have to be fenced and costs of cultivation are high. One-third of the gross produce is claimed as annual kind rent from the tenant in addition to the payment of land tax of about Rs. three by him. No advance rent is collected on these paddy lands.

Tapioca

Most of the colonies in the uplands are situated near rivers. The common crops raised in the slopes of these uplands are tapioca, ginger, turmeric and plantains. In consequence of food shortage, tapioca rose in price as a supplementary food of the poorer classes. It had also its commercial value as starch used in textile mills. The Travancoreans were experts in growing this crop, as it formed not a small part in their daily menu of food in their native homes. Their settlement in Malabar increased the outturn of tapioca. It was a mixed crop raised in rubber estates too. While thus the quantity of the crop enormously increased, the Government of Madras banned its export. The

ban was intended to prevent famine in consequence of any possible breakdown in the present system of district-wide rationing. As a result of the ban there is a surfeit of tapioca in the district. Calculating an outturn of ten candies per acre, the total outturn would amount to 4,50,000 candies of raw tapioca. If growers of tapioca got a net profit of Rs. 15 to Rs. 30 per candy in 1943, it led to a net loss of Rs. 15 in 1944. Further, tapioca in the form of dried chips could not be kept for more than 8 months. Fearing the difficulties of storage many cultivators have not dug up the roots and harvested the crop. The Commissioner of Civil Supplies, Madras, has not been able to estimate the quantity available, and that required for consumption. If Travancore and Cochin States where food shortage is greater can permit of a certain amount of manufacture of sago pearls or starch out of tapioca, and their export, there is no reason why Malabar should not promote such exports. If such a permit is to usefully increase the purchasing power of the small cultivator, then preference should be given for exports by this class of growers. Tapioca today is sold by the growers at quarter anna per lb. in most of these upland areas. At Quilandy which is within twenty miles of one of the colonies, it is sold by merchants at 8 pies per lb. As compared to 1942-43 the price has gone down 8 times. The poor cultivator has to buy other necessaries of life by getting a profitable price for this crop. He raises this crop struggling against malaria and the ravages of pigs. At a time when better nourishment is required to resist the reduced vitality caused by malaria and the cultivator has to go in for protective foods and medicines, he finds that his crop cannot give him a fair price. If Government considers that tapioca is an essential commodity to tide over the present food shortage, it is all the more reason that they should protect this class of cultivators by special concessions. The credit necessary for domestic and agricultural expenses until the crop is sold ought to be made available to the cultivators if they are not to fall into the hands of rapacious local money-lenders. Marketing facili-

ties should equally be organised if the full benefit of the price paid by the consumer is to reach the producer. Government should immediately explore the limits up to which they could permit exports of tapioca, particularly in view of the better conditions that exist today in the matter of imports of rice and wheat.

Other crops

Not only tapioca, but also paddy, ginger and turmeric are raised in these uplands. The cultivators have brought the seeds for these crops from their native country. In some of the forest areas the bushes are burnt and a paddy crop is raised once in 5 or 6 years, for which a certain portion of the produce is paid as rent to the land-owner. The long-term crops raised in the area are plantains, cocoanut, mango, and jack trees. Going further up to centres like Kunnoth, which are on a high level, very little tapioca is raised. A good crop of paddy is harvested in September. From this month on, the cultivators consume more rice, while during the monsoon period they take rice gruel. Alongside of paddy dry cereals are raised as side crops. Plantains are grown here in greater quantities and used throughout the year as vegetables. Dhall is harvested in December and ginger in March. Green vegetables are also available in plenty in summer.

Going further down by another 20 miles to slightly lower levels, the crops raised by the settlers in centres like Kolayad differ very much. Tapioca, chillies and vegetables are raised in lands fenced by cashewnut trees. Very little of dry crops and paddy could be raised in these parts. In a few forest lands the bushes are burnt and one crop of paddy is taken for every 5 years.

Crops in Wynaad

Agricultural conditions are entirely different in the plateau area of Wynaad. Paddy is not raised in the bushy forest lands but only dry cereals and tapioca. One year of

dry cereals is followed by the cultivation of tapioca for two or three years. 7 years have to elapse before a second crop of dry cereals can be raised. But the lands can be reclaimed particularly in valleys and paddy raised. Paddy gives a good income to the cultivators if only it is not destroyed by pigs, monkeys and elephants. A certain amount of tapioca is sold by the cultivators to the estates. The long-term crops that are raised in these parts are pepper, coffee and oranges. The local people at Manantody are thankful to the settlers for raising vegetables as sweet potatoes, and other root vegetables and plantains.

Agricultural credit

Though thus there is plenty of scope for agricultural development, it is retarded by want of credit facilities. With the introduction of state-wide rationing and monopoly procurement of surpluses by the state, it has become difficult to get small paddy loans during the monsoon period to be returned at the harvest. These loans were used to be given at 50 percent interest for the season. For cash loans local money-lenders take pronotes for 50 percent more than the principal sum, to be returned at local rates of interest. The traders give advances on the tapioca crops on condition that for a loan of Rs. 10, tapioca to the value of Rs. 25 is to be given to them. On the Wynaad plateau conditions are harder. Loans are taken by pledging the lands. Cultivators also take to cooly work for buying rice and other necessaries of life. At Sultan's Battery the mopla traders give advances on the pledge of paddy, ginger, tapioca, and cattle. Paddy loans should be returned double at the harvest. An interest rate of 24 percent is collected on loans on the pledge of cattle. The better classes get cash loans at 6 percent interest by giving pronotes for Rs. 125 for a sum of Rs. 100 actually lent.

Livestock and fisheries

Some of the cultivators keep goats and cows in the

upland areas. But these are so costly that it makes it impossible for the small grower to invest money in livestock. In the higher regions the growers are afraid to keep poultry and goats and cows owing to the ravages of wild animals. In areas where the settlers have colonised on the banks of rivers it is possible to develop the fishing industry in certain seasons if the cultivators have not been run down in their health by malaria and could find the money for purchasing fishing nets.

The People's Diet

The food consumed by these settlers was not a nourishing one. They worked hard in reclaiming the lands from morning till evening. Tapioca and tea often without milk were taken twice during the day. It also formed a supplement to rice gruel or rice at noon and night among the poorer classes. The settlers were beef-eaters in their country. Fish also was available in large quantities in their native homes. But after the war both beef and fish became very costly. In the hills dried fish of poor quality is alone available, and that too only for the richer classes. The price of cocoanuts and cocoanut-oil has also increased. When the settlers came into Malabar in 1943 and 1944, rationing had not been introduced. In the Perambra area rice sold in May and June 1943 in the black market at Rs. 85/- per bag of 162 lbs. as against a control price of Rs. 80/-. The settlers could not buy the quantity of rice required for their consumption. They took to substitute foods as tapioca. The diet was ill-balanced for want of fish and cocoanuts. In the uplands mangos and jackfruits were largely consumed between May and August. Cold rice of the previous day was a common food of the poorer classes. This may be a source of exogenous micro-organisms in the stomach. Rice fermentation and these organisms may be a prominent cause of cirrhosis of the liver. The conditions in the higher regions as Kunnoth were better after the monsoon when the settlers harvested their paddy and grew also a lot of plantains. In

the Wynad plateau conditions were entirely different. The settlers could raise paddy crops, but they could not make full use of the lands as they caught malaria. They could not resist the severe cold of the area without taking a little of non-vegetarian food. The poor have no sufficient warm clothing. The settlers were also averse to continue their beef-eating and thus antagonise the Hindu population amidst whom they lived. Some among the poorer classes ate the cattle which died on the hills as a result of the unbearable cold weather.

Malaria and other Diseases

Various diseases have been caused by malaria and malnutrition. The medical reports which follow will give an idea of these diseases. One main consequence of malaria has been the increase in the number of anaemic patients. The spleen rate has equally increased. Want of animal protein in the diet also increases anaemia and particularly nervous diseases. An ordinary disease among the poorer classes was peripheral neuritis. An excessive consumption of tapioca has led to many kinds of digestive troubles. Dysentery along with malarial fever was another common disease. Oedema cases were not rare. Scabies were quite common. Malarial deaths have largely increased as a result of food scarcity. These diseases and deaths are found not only among the Travancorean settlers, but also among all the people of Malabar residing in these jungly areas. The following extracts from para 22 page 121 of the Famine Enquiry Commission 1945 suggest some relation between food scarcity and malaria epidemic;—

The relation between malaria and famine is a more complicated problem. As regards fatality, medical witnesses told us that destitutes attacked by malaria often failed to respond to appropriate treatment and succumbed readily to the disease, while healthy people attacked by malaria in the same area recovered after treatment in the usual way. This would conform to the views of the

1901 Famine Commission and of earlier Famine Commission on "fevers and famine". Malaria is the most prevalent and lethal of the "fevers" both in normal and famine times in India. Fulminant epidemics of malaria have often been associated with food scarcity and famine. To give one example, in 1897, an epidemic of fever, occurring in famine districts in the Central Provinces, was the subject of a special inquiry. The theory was advanced that the fever was of a "specially malignant type" but this was not supported by the majority of observers. "Almost all the medical officers employed agreed in holding that the fever was ordinary malaria fever, which, though it attacked all classes more or less, was specially fatal only in the case of those who had suffered from privation."

"S. R. Christophers, in his investigations of the epidemiology of malaria in the Punjab, studied the relation between famine and the disease. He noted that, of twelve great epidemics of malaria which devastated the Punjab in the latter half of the nineteenth century, seven followed seasons of famine or acute scarcity. Taking the price of foodstuffs as an index of scarcity, he found a high correlation between scarcity and mortality from fever; the epidemics of 1870, 1872, 1878, 1879, 1881, 1887, 1890, 1892, 1900 and 1908 all occurred during periods of high prices."

The patients complained of other diseases. If one were to enquire of diseases, even children will show a surprisingly large stock of knowledge of the various ailments from which they suffer. The patients called one of their common diseases as 'Pitham'. When asked to describe the symptoms, they said 'yellow eyes, exhaustion, cough, giddy sensation etc.' Inflammation of the stomach is one of the diseases complained of. Owing to want of shelter and warm clothing, pneumonia is another fever apart from malaria, they suffered from. It is said that a disease called 'tapeworm' is found among some Travancoreans and this is attributed to the

eating of dead cattle. This requires medical investigation. The health department, it is suggested, should seal the cattle in approval of their fitness for consumption.

Some Remedies

The department of Public Health are no doubt doing their best for the eradication of malaria and for larger supply of quinine tablets during the current monsoon period. Certain long-term methods for preventing malaria are also adopted. As sunlight and still water are necessary for the growth of malarial mosquitos, steps are taken to eliminate these conditions. Certain plants are grown to give an arc-like shade to channels. Stone-paving of channels is attempted, so that water might rush instead of slowly flow. These methods take a long time for the eradication of malaria. Lt. Col. T. S. Shastri who recently visited Wynad has made a suggestion that the American method of spraying miles and miles of forests from aeroplanes should be adopted and that this method would cost less money and give immediate results.

It is a pity that the officers of the Health Department rarely visit these areas. The difficulties of travel in jungly areas are proving an obstacle to a visit to these parts by health and medical officers. Another suggestion of Lt. Col. Shastri is that these officers should be supplied with one or two 'jeeps' which can negotiate jungles, channels, irrigated fields etc.

The reason for the large number of deaths among the settlers has been their settlement in jungles before the clearance of the area. If all of them had stayed in habitable areas, cleared the jungles, levelled the grounds, put up their huts and thereafter settled in them, the number of deaths would surely be less by malaria. It is the duty of Government to prevent settlements either for rubber estates or for other cultivations without making the area malaria-free. It is unfortunate that just at the time these large settlements came into being, medical relief has become difficult to

obtain. Quinine tablets became scarce. The District Board closed many of its dispensaries for want of doctors and medicines. Medical relief should first be provided in these areas, before a settlement is permitted by Government. The settlers again had not the necessary funds to put up proper houses against cold and rains, nor had they enough warm clothing in the hilly areas. They had little credit facilities for raising short term and long term crops. Neither did they receive any help for marketing their produce. The possibility of giving permits for export of tapioca by small holders should be explored. Assistance will be required by the settlers in all these directions. Credit again for purchase of goats, cows, and fishing nets will help to balance the diet of these people. The attempts so far made by Government for developing colonies among the landless classes have not been successful. The settlements organised and assisted by Government in Coimbatore and Salem districts are a miserable apology for assisted colonies. The area provided for cultivation is insufficient in some places for the maintenance of a family. A considerable number of houses are untenanted in one colony. Non-agriculturists like goldsmiths have been chosen as settlers. Some of the men in charge have little faith in these colonies. In some cases the lands are gifts to agricultural labourers working in the land of other landholders. If Government really wanted to make a success of settlements, here are a fine set of men who are struggling to develop undeveloped areas with their little resources, unmindful of the death of their dear ones, the monetary and material losses, and their own deterioration in health. The future of agricultural development in this country rests on building a bold peasantry which will be helped in all ways to grow more food and thus to minimise famine deaths and diseases during periods of international wars of the present magnitude: May I make a humble appeal both to Government and the public to take an active interest in these settlements and thus save human lives and develop the human and agricultural resources of our country.

A Settlement of Travancoreans at Pudupadi

BY

Lt. Col. T. S. Shastri, I. M. S. (RETD.)

President, Indian Medical Association, (Madras Branch).

I visited the place Pudupadi which is at the 26th mile from Calicut on the Wynad road on 18th March and examined 46 cases. They were suffering mainly from malarial fever, spleen enlargement, (sometimes very hard spleen), scabies, anaemia, and a few from respiratory diseases. They have recently come from Travancore and cultivated these highlands with tapioca, plantains, cocoanuts, and rubber. On enquiry I found that an adult consumes 2 lbs. tapioca, 1 nazi of rice (9 oz.), milkless tea with jaggery, a little fish, vegetables, coconut oil and coconut not costing more than half anna in all. Their capacity for work has been reduced by malaria. While the reduced strength and lowered vitality caused by malaria may be counteracted by a rich food, it is unfortunate that these people are compelled to live on a poorer food deficient in protein and vitamin owing to want of resources. They have to sell their tapioca and buy other necessaries but owing to ban on exports, they are unable to sell them at a fair price. Government are doing their best for medical relief in Wynad area but a greater distribution of mepacrine pills in this area too will be largely helpful. Shark liver oil, oral liver extract tonic, calcium tablets and powders, and vitamin tablets will improve the health of these people. A larger use of fish, leafy vegetables, green mangoes, tamarind leaves where available and reduction in the quantity of tapioca consumed will supply the protein and vitamin requirements in the food to some extent.

I give below my analysis of the cases examined by me.

Analysis of cases examined on 18th March

[The number in bracket denotes the age.]

1. (25) Anaemia, malaria and inflammation in stomach.
2. (7) Scabies and bad teeth. 3. (20) Malarial fever. 4.

- (7) Scabies, and jaundice. 5. (15) Anaemia, breathing difficulty, malarial fever and spleen. 6. (20) Anaemia, malarial fever, legs and hands weak and giddiness. 7. (15) Scabies, anaemia, malaria and chronic spleen. 8. (15) Scabies; and malaria. 9. (16) Widespread scabies and big hard spleen. 10. (16) Anaemia, and malaria one year old. 11. (10) Malaria and scabies. 12. (12) Scabies and malaria. 13. (80) Anaemia, emaciation and weakness of legs and hands. 14. (20) Repeated respiratory infection, hard spleen and weakness of hands and legs. 15. (10) Scabies, anaemia, emaciation, spleen and malaria. 16. (28) Anaemia, repeated respiratory infection and malaria. 17. (80) Anaemia, weakness of hands and legs, malaria, inflammation of stomach, and spleen. 18. (85) Malarial fever. 19. (50) Scabies, malaria and spleen. 20. (40) Anaemia and malaria. 21. (25) Anaemia, and malaria. 22. (25) Anaemia, spleen and pain in the back. 23. (20) Scabies, anaemia, and pain in stomach. 24. (45) Anaemia and malaria. 25. (15) Scabies, anaemia, spleen and malaria. 26. (16) Hard spleen and malaria. 27. (18) Repeated respiratory infection, nervous pain in the back and weakness. 28. (18) Anaemia and difficulty of passing urine. 29. (nil) malaria. 30. (15) Anaemia and malaria. 31. (45) Anaemia, chronic digestive troubles and jaundice. 32. (15) Scabies, anaemia, giddiness and spleen. 33. (12) Malarial fever. 34. (85) Anaemia and malaria. 35. (10) Anaemia and worms. 37. (10) Scabies, hard spleen and bad teeth. 38. (84) Spleen and malaria. 39. (80) Anaemia and malaria. 40. (20) Glossitis, anaemia, and vitamin B deficiency. 41. (86) Cough, stomach pain, and worms. 42. (80) Anaemia, spleen, ankylostomiasis, kidney trouble, and nephritis. 43. (40) Anaemia and malaria. 44. (40) Scabies. 45. (15) Scabies. 46. (nil) Malarial fever.
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New Helpers in Malaria Control

BY

Lt. Col. T. S. Shastry, I. M. S. (RETD.)

President, Indian Medical Association (Madras Branch).

One type of reconstruction schemes is to subdue some forest areas, make them habitable and healthy, develop agriculture and grow various crops. But some forest areas contain the threat of deadly malaria. I tried to make an agricultural settlement about 80 years ago in the Giddalore Taluk of Kurnool District and had to give up after about 10 years' effort with great loss of money as well as health of the workers. We were beaten by malaria.

As a Medical Officer on military duty, I had a great part in stamping out malaria from the Bellary Cantonment in 1917. We had good results after much campaigning—cutting out low scrub, making channels to get rid of stagnant pools, oiling those pools and wells which could not be kept dry, spraying Paris Green etc. But today approved methods are inadequate, too costly, and perhaps impossible in large forest areas like those in Wynad and Vizagapatam.

I understand that the Government propose to clear some forests in Wynad and in Vizag and to make them safe for agricultural colonists. The success of these schemes depends mostly on stamping out the malaria peril. All other plans must wait till malaria is really and effectively killed. Roads and other communications, construction of townships, raising crops etc. can be taken up only after the large number of workers there survive the attack of malaria. Many workers will either die of malaria or become permanent invalids and become positive carriers of malaria in those parts of the presidency which are at present free of the disease.

The Americans had a number of their soldiers working in the Assam and Arakan areas and now in Burma. Wherever they went they took with them and carried out on an

'American' scale their new chemical invention D. D. T. and sprayed miles and miles of the forest and other infested-areas from aeroplanes. They are said to have achieved a large amount of real success in making it safe for their troops to work there. D. D. T. is American, the aeroplanes are American, and the very idea of spraying large areas of malaria-ridden country including forest areas and hill-sides from aeroplanes is American. It is time that our Government adopt seriously and on an adequate scale this method of anti-malarial campaigning. What is wanted is a few aeroplanes, enough supplies of D. D. T., and a few Medical Officers and subordinates who know malaria control. These Medical Officers must be sent out to American Army Units to be trained in this method for a few weeks. Squads of spraying planes and spraying M. O.s should try their art first at the Vizag and Wynad settlements. If found successful they must be switched on to the Tungabhadra project and Pattukottai and Mettur and Papanasam and other areas. In all these areas millions of rupees are being spent, have been spent, or will be spent on the existing methods with slow and indifferent or varying results. In much less time, with less malaria mortality, and surely with less outlay of money malaria can be really and speedily stamped out.

Another acceptable American product is the "jeep" which is the only vehicle that can negotiate all the areas of black cotton-soil, sandy-soil, hill-sides, low channels, irrigated fields and country tracks.

Every Government Department and District Board or planning body should have an adequate number of 'jeeps' e. g. in all new schemes for agricultural settlements, under the Tungabhadra Project, and the North Vizag district, the 'jeep' is the only useful and quick vehicle. It is doubtful if the true extent of the disability, distress and disease prevailing in the long stretch of the cyclone affected area of the North Vizag District is known, as the area is laid up under deep sand, and the villages are many and widely spaced. The 'jeep' is the only vehicle that can take investigators to every

village. It is only then that adequate help can be sent there. Hence I proposed some months ago through the Indian Medical Association that the Government should get from the military at least two 'jeeps' to speed up the amelioratory work already undertaken by Departments and welfare agencies like the Indian Medical Association, Servants of India Society, and the Multivitamin American Agency.

Colonies of Travancoreans at Alexnagar Colony and Kunnoth

By

Dr. T. D. Nair, L.A.S., D.T.M. (London), L.M. (Dublin),
*Civil Assistant Surgeon (Retd.) East Africa, Member,
Institute, Hygiene, London, Rural Medical Practitioner, Irukkur.*

As a subsidised rural medical practitioner at Irukkur, I have been in close contact with the people of Alexnagar colony since April 1948. The colony is six miles distant from Irukkur which is reached by public buses from Cannanore distant by sixteen miles. It was planned by Mr. V. J. Joseph, lecturer in physics, Mangalore College who devoted his time and resources in purchasing the land, surveying and distributing them to the colonists in the first half of 1948. The settlers were selected from the uplands of Kottayam (Travancore) and helped in all ways to start life by His Grace the Bishop of Kottayam, Rev. Father Chulaparambil, Mr. V. J. Joseph and other sympathetic friends. Many of them brought money for paying the preliminary advances for the lease of land and have acquired twelve year leases of sloping highlands, generally ranging between 5 to 20 acres each. A few of them have been advanced monies for this purpose by the organisers. The settlers are Syrian Christians of Travancore who were attracted to the scheme by the security of tenure and compensation for improvements available under the Malabar Tenancy Act, the cheapness of the investment, the difficulty of making a

living under exorbitant prices for rice in 1941 and 1942 in Kottayam division, and underemployment in their country.

The main feature of the settlement is the natural exodus of the people for cultivating lands without any extraneous aids as state credits and grants for the settlers. The colony comprises an area of 2000 acres and is situated on the bank of a river. It extends to 8 miles on the bank. 108 families comprising a population of 647 first settled in the colony. These lands have come under cultivation only owing to the capacity for hard work and the spirit for achievement at any cost against any odds of these Syrian Christians. They were prepared to die of hunger only after every ounce of their energy has been spent in making something out of these lands. They have put up thatched huts with mud floor much exposed to sun, wind, and rain and in the midst of snakes, wild pigs, and other wild animals. They reclaimed the land. Some of them have begun paddy cultivation which crop may be raised once in 5 or 6 years after burning the bushes and for which a certain portion of the produce has to be paid to the landowner. They have brought with them ginger and tumeric seeds and cultivated them. They have widely grown tapioca. A little plantains are also raised. A few keep a goat and a few others a cow. There is scope for small fishing in the river.

They have spent all their resources in the purchase of the land and maintain themselves. Rev. Father Syriac Matthathil advances from out of the funds placed at his disposal by sympathisers of the scheme small amounts for maintenance till the crops are raised.

The colonists came just before the S. W. monsoon of 1948. They caught malaria. Their capacity for work was reduced. During the monsoon period (June to September) they had to be maintained. Some families had no rice food for one week. I have seen cases of chronic diarrhoea and dysentery during this period of partial starvation and an unusual number of deaths under such conditions. Rev. Fr. Syriac came to their rescue with his slender resources. The

settlers suffered also by the ravages of the crops by wild animals. They struggled and got their crops in December and January but tapioca which is their major crop could not fetch a proper price, with the result that they have little money to purchase their other food requirements.

The conditions of health of the settlers are then the following:-

Many of them caught malarial fever which had affected their blood, made them emaciated, and reduced their capacity for work. The number of malarial patients treated by me in the Local Fund Hospital between May and August 1943 increased from about 400 in 1943 to about 1000 and more in 1944. I may say that most of these cases came from this colony. At a time when the hard work of reclamation of lands required a more nourishing diet for the settlers and when patients suffering from malaria required an equally nourishing diet, they could not even get the usual food to which they were accustomed in their native country. Fish, beef and mutton are more costly. Vegetables could not be grown sufficiently, this being the first year of the settlement.

I have been doing my little bit of propaganda to persuade them during my visits last year to the colony to grow some leafy vegetables as 'Thavara' so that they might get some minerals and vitamins in their food.

The food of the colonists is both a deficient and an ill-balanced one. The majority take rice and tapioca, the quantity of rice increasing in the case of those who have raised their own paddy or who could buy their full ration in the ration shops. They dress boiled tapioca with $1\frac{1}{2}$ oz. of dry fish called chemin, and spices, and eat it thrice morning, noon and afternoon. Some of them mistakenly believe raw rice brings on malaria and so they avoid buying it. This being the season of mangoes, they are largely used in the place of vegetables. When they fish in the river, they use it once or twice in a month. Other classes of dried fish eaten by them are called 'Ayila' measuring 8" long and 1" broad and 'mathi' a smaller type. They buy masala articles as chillies,

salt, tamarind, coriander, and mustard costing between 2 and 11 as per week. They buy fish every week costing between 4 as. and 1 Re. The purchase of cocoanuts ranges from 1 to 3 every week. Cocoanut oil for consumption costs between 2 and 4 as. and amounts to between 6 and 12 oz. per family per week. They take four meals a day owing to the hard work they have to do, tea often without milk, and boiled tapioca in the morning, rice gruel, tapioca and mangoes at noon, tea often without milk and tapioca in the afternoon, and one rice meal at night with fish and mangoes and without tapioca. I examined the diet of four families. The following is the range of their intake per adult per day:-

| | |
|--------------|--|
| Rice | 2 oz. to 6 oz. |
| Tapioca | 82 oz. to 24 oz. |
| Fish | $\frac{1}{2}$ oz. to 1 oz. |
| Cocoanut | $\frac{1}{3}$ oz. to 1 oz. |
| Cocoanut oil | $\frac{1}{8}$ oz. to $\frac{1}{2}$ oz. |
| Mangoes | 2 oz. to 2 oz. |

This diet is mainly a tapioca cum mango diet. Jack fruits will also increase in consumption in the coming months. The diet in the case of a majority of people comprises mainly carbo-hydrates with little protein and fats.

Let me now describe the nature of the diseases of these people. The following is an analysis of the diseases of 89 patients examined by me on 25th March at the Colony:-

| | |
|-----------------------------|----|
| Malarial fever | 21 |
| Malarial fever and spleen | 28 |
| Spleen enlargement | 20 |
| Anaemia | 46 |
| Scabies | 25 |
| Chronic digestive trouble | 18 |
| Poor nutrition | 17 |
| Oedema | 7 |
| Muscular emaciation | 6 |
| Soreness of angles of mouth | 4 |
| Roughness of skin | 5 |
| Phrynoderma | 1 |

| | |
|-------------------------------|---|
| Night blindness | 8 |
| Lachrymation | 8 |
| Respiratory diseases . | 5 |
| Irregular action of the heart | 1 |
| Gastric ulcer | 1 |
| Neuralgia | 1 |
| Neuresthenia | 1 |
| Aches and pains | 1 |

Malaria and use of excess tapioca not supplemented by protein and fat diet are the chief causes of the large number of anaemia patients. Some were cases of hard spleen. 5 of the anaemic patients were very bad. Many of these anaemic patients who had also malaria complained of stomach pain, constipation, inflammation in the stomach, want of appetite and general weakness. 18 out of 18 cases of chronic digestive trouble had both anaemia and malaria or spleen. 12 of these anaemic cases were specially marked as of poor nutrition. Six of these showed signs of general emaciation.

Gastro-intestinal disorders are one the chief complaints. My experience shows that the number of cases treated in the dispensary for digestive troubles has increased by more than 50% between 1943 and 1944. There were seven cases of oedema mostly of the face, eyelids and legs.

Other symptoms in these anaemic cases were skin diseases. There were 25 cases of scabies, five cases of roughness of skin and one case of phrynoderma.

A few among the patients had other diet-deficiency diseases, sore mouth 4, lachrymation 3, and night blindness 3. Patients with eye defects complained that they got them only after coming here.

On the whole barring some, the men have not been run down severely by malaria and malnutrition, but a larger number of women and children than men decidedly look unhealthy. A dozen families have returned to their native homes owing to malaria and ravages of wild animals. In 1944 the number of deaths was 26, 24 of which happened before September 1944. The number of births was 10, which is certainly a low birth rate.

If some agency will help these settlers with loans, one may fairly expect them to repay them from the proceeds of ginger and turmeric. Tapioca will give a better income when once the ban is raised and is allowed to be exported for commercial purposes. The settlers want money to buy rice, fish, and coconuts so that their diet may be well-balanced. They want money to buy a goat or a cow, or a net to catch fish. They should be taught to raise leafy vegetables in addition to roots, and to raise fruits as tomatoes. If only money were available, the poorer families would buy the rice and wheat ration fully instead of living on tapioca. Considering the fact that they are raising food crops as hill paddy, plantains, tapioca, and vegetables and growing fruit trees, the loans advanced and the benefits given to ryots under the 'Grow more food campaign' should be made available to them. They should get seeds, manures and implements and assistance for reclamation of lands and digging of wells. More than all, an anti-malarial drive should be undertaken in these areas. Medicines should also be distributed for treating hook-worm diseases.

Malnutrition Survey - Kunnoth

I visited Kunnoth on 27th March. The place is about 80 miles from Cannanore on the Virarajapet road. I examined 65 cases of Travancore settlers who have settled in this area from 1942 onwards at Kunnoth, Aralam, and Poravayal. The following is an analysis of their diseases. 33 suffered from malaria and spleen, 8 from malaria, 8 from malarial fever, 28 from anaemia, and 20 from scabies, and 6 from other skin diseases. Other diseases were chronic digestive trouble 2, muscular emaciation 5, soreness of mouth 2, peripheral neuritis 3, respiratory infection 4, lachrymation 4, irregular action of the heart 4, jaundice 1, dental pain 1, stunted growth 1, ulcer-foot 1.

Representatives of 10 families met me and explained the inability of the patients to come to the place of examination. These cases suffered from malarial fever.

Digestive trouble and general weakness were complained of in 10 cases. The diseases that were commonly found in combination with malaria were anaemia, scabies and emaciation. Digestive trouble was also found in a few of these cases along with anaemia. It is rather worse here than in Alexnagar colony in as much as the settlers have not the help of outside friends. It is all a story of malarial fever with spleen, general debility followed by anaemia. As these settlers cannot afford to have a good protein and fat diet and as they live mainly on starchy foods, they suffer from digestive troubles. The settlers have done a great deal in bearing the brunt of malaria and clearing the jungles. If they are given credit for their cultivation, the distribution of quinine pills is intensified and anti-malarial measures are undertaken, it will be a great relief to them.

Medical Survey of Colonies of Travancoreans at Manathana, Vilakkod, Kakkayangad and Pothukuzhi

By

Dr. T. S. Nair, L. M. & S., Peravoor

I examined 161 patients of the Travancoreans settled in these villages since 1942 in April 1945. The following is the classification of their diseases.

Chronic malaria & spleen 60; Debility due to malaria 89; Malarial cachexia 8; Splenic anaemia & anaemia due to worms 108; Scabies 58; Dermatitis, phrynoderma & roughness of skin 82; Poor nutrition 80; Digestive trouble 50; Respiratory infection 89; Soreness of angles of mouth glossitis and spongy gums 87; Discolouration of the conjunctiva 55; Xerophthalmia 16; Night blindness 18; Rickets and emaciation of lower limbs 35; Lack of sub-skin fat 10; Dental abnormalities 4; Oedema 11; Round worms 7; Peripheral neuritis 21; Ankylostomiasis 7; Jaundice 1; Heart diseases 2.

Chronic malaria, spleen enlargement, debility and anaemia are generally found in combination in many of the cases. Chronic digestive trouble and repeated respiratory infection are also found in a few of the malarial cases. There were 8 cases of malarial cachexia. Rickets and emaciation of lower limbs were found among children who have suffered from malaria. Peripheral neuritis was another disease among those malarial patients who were also suffering from digestive trouble.

Almost all have got infection with malarial parasites. A large number, I will put it as 75% of the malarial patients, had enlarged spleen. This was found to be more in Pothukuzhi rather than in Vilakkod or Kakkayangod. Here people are living near the river in a lower elevation. They are victims of virulent attacks. Kakkayangod is better than the other two places.

Along with anaemia there were a large number of cases with eczema especially of the extremities. The anaemia cases may be divided into two classes; those having splenic anaemia formed $\frac{2}{3}$ rds, and those having secondary anaemia owing to the infection of hook-worm formed a third. Syphilitic ulcers congenital in the case of children and acquired in the case of adults were found among a few.

Many of the children suffer from ascariasis due to the infection of round worms. This disease also results in the death of many children. The skin diseases, scabies and eczema, may be traced to their non-consumption of milk even during periods of malarial fever when they were taking quinine treatment, and also to their exorbitant use of salt in their meals. Deaths by cerebral malaria are due to the absence of treatment in the early stages. A fourth of the patients had swellings of the extremities partly due to malnutrition, and a majority among them were children.

A large number of malarial cases also suffer from diarrhoea. Amaebic dysentery is also common. Some of the malarial patients get also the secondary complication of amaebiasis. Pneumonia affects about 80% of the settlers

owing to their exposing themselves to cold draught in their open huts,

Pregnant women suffer from primary anaemia and splenic anaemia. Scabies are common. Though mortality before or after confinement or during labour is very few, abortions are common owing to attacks of malaria, consequent anaemia, and negligence of treatment. There is calcium deficiency in their food leading to skin diseases. Mortality is more among children than adults and among males more than females. My experience in this area is that there has been an increase during the last 8 years in malaria, scabies, diseases of the nervous system, and intestinal diseases.

The following is the food consumed by these Travancorean settlers. In addition to rice a larger amount of tapioca is consumed. In seasons of mangoes and jack-fruits, large quantities of these are taken as additional dishes. Most of the families use home-grown chillies and turmeric. Dried fish is used throughout the year and almost daily. Two or three cocoanuts are used by poor families for every week. Majority of them take in the morning coffee without milk but with jaggery. Some poor families take coffee without both. They also consume 6 to 12 oz. of tapioca in the morning. Some take rice gruel with tapioca as an essential dish in the morning. At noon they take a sumptuous meals with rice, tapioca and fish. In the evening they take the same kind of food but fish is properly cooked with coconut oil and other spices. They visit very often tea and coffee shops during the day and also drink plenty of water and rice gruel. Their eating preserved foods of the previous night may have some relation to choleraic diarrhoea. They are also addicted to alcoholic drinks, mainly toddy. My experience is that these people take plenty of salt and raw chillies, the former more than the latter. The majority get affected with skin diseases, scabies and swelling of body extremities. This also synchronises with primary anaemia and splenic anaemia. As they are not accustomed to taking

milk during malarial attacks or after, they get easily debilitated. Raw bananas are used for making curries to be consumed along with food, but hardly ripe ones are taken. They also use home-grown vegetables.

The following is a statement of births and deaths for the villages Manathana, Vilakkod and Kakkayangad.

| | 1942 | 1943 | 1944 | Total for 8 years |
|---------------------------------------|------|------|------|----------------------|
| Births | 88 | 92 | 136 | 311 |
| Deaths | 112 | 98 | 153 | 363 |
| Causes of Deaths | | | | |
| 1. Fever (malaria & complications) | 91 | 66 | 110 | 267 |
| 2. Other diseases | 21 | 32 | 43 | 96 |

Nutritional Surveys of Malarial Villages – Talapoya and Thavinjal – Wynaad – North Malabar

By

Dr. P. A. Narayanan L. M. P., L. T. M.,
Group Medical Officer of Manantoddy Group of Estates

I examined on 29th April 1945, 118 persons who are settlers in the villages of Talapoya and Thavinjal from Travancore since 1942. Their occupation is cultivation of land.

The following is an analysis of the diseases of these persons: 37 Chronic Malaria: 34 Malaria: Malarial cachexia 1: Almost all of them were having enlarged spleens: Anaemia (moderate degree) 62: Anaemia (severe) 4: Nutrition good 28: Nutrition fair 57: and Nutrition poor 30: Chronic diarrhoea and digestive troubles 48: Peripheral neuritis 36: Respiratory trouble 12: Rough skin 28: Muscular emaciation 6: Lack of sub-skin fat and emaciation of lower limbs 6: soreness of angles of mouth and glossitis 45: discolouration of the conjunctiva 29: xerophthalmia and blindness 8: dental abnormalities 30:

The following is an Analysis of the Combination of Diseases in single Patient:

Cases of malaria, digestive trouble, skin diseases, poor nutrition and anaemia combined 12; cases of malaria and skin diseases and anaemia combined 25; cases of malaria and anaemia 52; cases of malaria and skin diseases 84; cases of malaria and digestive trouble 80; cases of digestive trouble and skin diseases 24; cases of digestive trouble and anaemia 27; cases of skin diseases and anaemia 82.

A large number of these settlers are having digestive troubles and hypo-vitaminosis B complex symptoms, as they live mostly on tapioca and sweet potatoes and take very little nitrogenous proteins and vitamins and take no milk or milk products. Almost all of them are having secondary anaemia as a result of malaria infection.

Malarial control measures such as larval control of the carrier species wherever possible and adult killing of mosquitoes with insecticides such as pyrethrum spraying or D. D. T. application in conjunction with improved housing conditions, well-balanced diets and easy accessibility of medical aid will go a long way in improving the present state of health of these settlers to a better standard.

Medical Survey - Koluthuvayal - Malabar- A Colony of Travancoreans

BY

C. V. Narayana Iyer, L. M. P., Calicut.

I visited on Sunday the 25th February Kolathuvayal near Perambra which is about 85 miles from Calicut, the last four miles were an ascent through foot-paths. About 800 families from Travancore comprising a population of 5000 have settled here during the last three years. I examined 208 patients. 75 of them were females. The following is a classification of their diseases:-

Malaria, chronic malaria, and spleen enlargement 92; anaemia 76; Diarrhoea 6; gastritis and other digestive

troubles 20; scabies 78; bilateral dermatitis and roughness of skin 11; perepheral neurities 18; respiratory troubles 7; hook worm 22; Ring worm 7; soreness of angles of mouth; glossitis and spongy bleeding gums 10; muscular emaciation 6; night blindness 5; Oedema 2 and irregular action of the heart 8.

Half the number of malarial cases were suffering from chronic malaria and enlargement of the spleen. Poor nutrition, anaemia, scabies and malaria were found together in many cases. The patients complained of inflammation of the stomach and the intestines possibly due to consumption of excess amount of tapioca and the absence of use of any milk products particularly by malarial patients. Every second case which I examined suffered from malaria or its after-effects like anaemia. I found scabies, one in every three examined by me. My suggestions are that quinine should be supplied in unlimited quantity, uni-scab ointment should be largely used, and that a road should be constructed to this colony to facilitate easy medical aid.

Tamrasseri - Malabar - A Colony of Travancoreans.

BY

Dr. Miss Atzorri,

Medical Mission, Marikunnu Malabar.

I visited Philomenapuram, Calicut Taluq on 5th March. I examined 19 local cases of moplabs, Chermumas (depressed classes), Thiyyas (Agricultural works), and also 58 cases of Travancore settlers in a newly opened estate. The following report is about Travancore settlers but what applies to them equally applies to the local residents. Malaria is endemic here. 28 have been infected with malaria but had no fever when I examined them. 17 had malarial fever on during the examination. Many had spleen enlargement, it was hard in the case of 2 patients. One was a case of stupidity brought on by malaria. 28 malarial cases complained

of stomach pain and digestive troubles. 15 malarial cases were anaemic. Headache, stomach pain, and vomiting were the other complaints of the malarial patients. Four had night fever. General weakness, difficulty to fold the hands, benumbness and pain in legs and hands were complained in 20 cases which were possibly the effect of malaria. I have classified these cases, 18 as peripheral neuritis and 7 as general debility and weakness.

Other cases were mostly skin diseases; dermatitis 5, scabies 11, and roughness of skin 5, in all 21. There were two cases of ulcer legs. 8 cases suffered from respiratory infection.

There were 8 oedema cases, swelling of legs, hands and face.

Other diseases were rheumatism 6, irregular action of heart 8 and worms 1. Nutrition was poor in almost all cases which complained of anaemia and digestive trouble.

Malaria is not due to malnutrition. It is an endemic disease of this jungly place. The place should be made malaria-free. A dispensary which will supply unlimited quantities of quinine tablets is necessary. Government should provide it at least in places where they permit the opening of estates for rubber.

NOTE

Statement of some children of Travancore settlers maintained by different orphanages in Malabar by the Latin Church.

It is indeed a distressing tale to hear the condition of the children of the settlers. The latter came from Travancore to make a living. As between partial starvation at home and struggling against malaria and wild animals for raising food crops, they chose the latter. The first result of these settlements was the death of parents by malaria, or emigration to more hospitable places, with the result that the children were left to the care of the Latin church. The following are the statements of children about why and how they came to the Orphanages.

Marikunnu Orphanage (Malabar) 5-3-'45.

(This place is within six miles of Calicut on the Wynad road. The orphanage here is maintained by the Latin Church mainly by the efforts of Rev. Fr. Beretta. This orphanage maintains the children of the Travancore settlers who left Travancore and settled near Tamrasseri during the last two or three years in the hope of finding food and living).

1. Thumi - Girl - My father bought two acres of land and lost it owing to the cleverness of a Mopia.

2. Mathai - Boy - My father came a year ago; lived for six months at Tamrasseri. He, my mother and six of my brothers and sisters returned back to Muvattupuzha in Travancore as they could not find a living here.

3. Thomas - My father is at Mukkam (Travancore). We came a year back. We comprise a family of 12 persons. We grow tapioca.

4. Varghese - We came a year back to Athiodi (one of the malarial places near Perambra 30 miles from Calicut on the Badagara road). My mother died of malaria. When I came a year ago they were all suffering from malaria.

5. Varghese - My family stays at Kunnoth. They all suffer from malarial fever. We came from Arikuzha in Travancore a year back.

6. Thomas - We came from Chenganacheri two years back. My family is at Kuthiyadi. They do not get much work. They are suffering from malaria.

7. Chacko - My family stays at Kuthiyadi. My mother died 2½ months back from malaria. Another mother is there now.

8. Mary and Coochi-Thrasia (two sisters). We came from Travancore two years back for tapioca cultivation in these parts.

9. Anny and Eliza - Two years back mother died in Travancore. Father never comes and sees us.

10. Rose Thrasia and Eliya - We came from Chenganachery, a year and a half ago. My elder brother is maintaining the family.

11. Thrasia - We came from Minachil Tsatuk three years back. Our family is at Maruthankara for cultivation. We suffer from malaria here in the orphanage too. They too suffer from malaria. My younger sister died of Karapan (scabies of children).

12. Mariam - We came from Alleppey a year back. Our whole family is suffering from malaria and itches.

Peravoor Orphanage (28-3-'45)

The place is reached by bus from Cannanore (about 30 miles) or from Tellicherry via Nedumpoya (about 30 miles). This is an old settlement of Travancoreans but new families from Travancore have come and settled during the last three years. Rev. Fr. Joseph Kuthur maintains

at present 8 poor children of these settlers and sends away other needy children to the orphanage at Kolayad which is within 10 miles of this place. Fr. Kuthur has started this orphanage from July 1944.

Kolayad Orphanage

(This is an old orphanage maintained by the Latin Church).

1. Joseph and Chacko - Our family is at Perambra which is one of the biggest settlements of about 500 families colonised by Travancoreans during the last three years. At first we all came here but we thought that conditions should be better there and so we left for Perambra.

2. Thangam - I come from Kuthiyandi, a Travancorean settlement.

3. Anna - Elder sister Aly - We came three years back to Perambra. My father died of malarial fever a year ago.

4. Anna and Mary Thoresa - We came from Peravoor. Our mother settled at Peravoor a year ago from Travancore.

5. Rosia and Anna - My father came three years ago from Travancore. I have no mother.

6. Maria - My father came 4 years back to Maruthankara and returned home back because of malarial fever. It is now three years since I came here.

7. Anna and her two sisters - We came from Perambra three years back. My father and mother came to this colony recently.

8. Uruvulla and three others - We came from Peravoor. Our father settled here three years ago as an Ayurvedic doctor.

9. D. Maram and D. Devasi - It is only one year since we came to Peravoor. From there our father sent us to this orphanage.

10. J. Elizabeth - I come from this settlement. My father came here from Travancore two years back.

11. Thoresa - My father Abraham settled two years back. My mother died. We are taken care of by this orphanage.

12. T. B. Elizabeth and T. B. George - We settled in this area two years back. We came to this orphanage as our parents could not give us full protection.

13. P. Mathai, P. Chakko, and P. Ely - We settled in this area two years back. The orphanage is taking care of us.

14. K. Mary, K. Anna - We settled in this area one and half years ago. The orphanage is helping us.

Manantody

(This is the Taluk Headquarters of Wynad Taluk in Malabar. There is an orphanage maintained by the Latin Church. A large number of families have settled in this area during the last three years from

Travancore. A few children of those parents who could not protect them or died by malaria are also to be found in the orphanage.

1. Aly - My father came from Travancore and settled somewhere near Calicut. My mother died here in the hospital last year.

2. Theresa and her sister - My father and mother are at Peravoor. My father came for cultivation two years back.

3. Rosa - We came from vazhakulam from Todupuzha Taluk in Travancore. My father is a cultivator nearby.

4. N. J. Theresa and Anna - We are Travancoreans. We are here for the last two years.

(Some of the children in this home have gone to Travancore for the vacation and fuller enquiries could not therefore be made).

The Story of a Hindu Colony from Kidangoor (Travancore) to Vayathur (Malabar).

Due to conditions created by the war there was an abnormal rise, in the year 1118, in the cost of rice and other foodgrains and also of tapioca which was the main diet of the people. With the introduction of controlled distribution the quantities available also became quite insufficient. These conditions brought about untold sufferings to the peasant-folk of this thickly populated village. Unable to find a livelihood here, they were compelled to emigrate to Malabar. The comparatively low price of paddy and lands and the fertility of the soil in Malabar were also factors in tempting these people to emigrate there. Many people requested me to accompany them to Malabar and find out a suitable place for a settlement. Considering the better conditions prevailing in Malabar in regard to food, lands and labour, I agreed that it was a good idea and consented to accompany them, in spite of the fact that I had little time to spare, and my relations were against my going with them.

Myself and Mr. Kovur Sankara Pillai went round the whole of Malabar to find a suitable place. At last we secured a place in Padiyur amsom, Chirakal Taluk, which we fixed up with the Jenmi of Kalliyat. As I had no time to remain there, I sent Mr. Kovur Sankara Pillai with another gentleman, Mr. Mekat Balakrishnan Nair to Vayathur. They cleared some jungles there and constructed a shed which could accommodate a fairly large number of people. There were many people who desired to go to Malabar, but who had no money with them. These persons were taken by me to Malabar at my own expense. They were Mekat Irukukutty, Iyalik Mathan, Panamundayil Raman, Munda-kal Kochu, Pulikkalath Pachan, Nadukepuliyl Kunhuttan Pillai, Manakunnath Raman Pillai and some others. Some jungly places were cleared for them at my expense and they settled there for some time. But very soon all of them caught malaria and had to return back and I had again to

meet their expenses. Mr. Nadukepuliyl Kunhuttan Pillai succumbed to malaria and his widow is even now leading a miserable life. The rest of them recovered, though a lot of money was spent for their treatment.

Besides the above, there were some people who sold all their properties in Travancore and emigrated to Vayathur with their families. Some of them escaped the cruel clutches of malaria, but all had to fight against poverty and disease and having turned labourers, they are leading a wretched life. I have done whatever I could do to help these people also.

1. Mr. Nedungattil Raman Nair went to Vayathur with his wife and 2 children, and cultivated some paddy. But due to malaria he could not even reap the harvest and he lost about Rs. 800/-. With the exception of his wife all died on account of malaria.

2. Mr. Narayanan Nair, brother of No. 1 went with his wife and 5 children and cultivated some lands. But he had to return due to malaria. 2 children died. Lost about Rs. 800/-.

3. Mr. Vadakedath Govindan Nair went with 8 daughters and the husband of the eldest daughter. Caught malaria and returned. 2 daughters died. He lost Rs. 200/- and is even now in bed.

4. Mr. Nallammakuzhiyl Parameswara Marar went with his mother and his little brother and sister. Started cultivation. Caught malaria. All died except Mr. Marar who lost about Rs. 125/-.

5. Mr. Krishna Pillai and his wife Madhavi Amma went with their 4 children. They bought some lands and were running a small shop also. All the children died of malaria and they had to return. Now they are living somewhere near Poongar.

6. Mr. Varikathikal Narayanan Nair reached Vayathur and cleared some places. Returned with malaria. Spent about Rs. 50/-.

7. Mr. Pulichakunnel Kuttan Pillai went to Vayathur and cultivated some lands, but caught malaria and had to return. Spent about Rs. 150/-.

Messrs. Kovur Sankara Pillai, Kallari Gopala Pillai and Pannanparambil Kārunakara Pillai invested Rs. 1000, Rs. 200 and Rs. 1000 respectively and began cultivations along with me. The last two left immediately on account of fever. I had some paddy to be harvested. But due to malaria, lack of labour, and the ravages of wild animals, I could not even reap the harvest. Further, I had cultivated $2\frac{1}{2}$ candies ginger and $\frac{1}{2}$ candy turmeric which also I could not reap due to the same reason. I had also 2500 rubber plants, 5000 arecanut plants, 20,000 tapioca, 500 plantains, and a few other vegetable plants. About $\frac{3}{4}$ of these was destroyed by wild boars. Altogether I lost about Rs. 20,000/-.

From the month of Dhanu M. E. 1119 the cost of rice and paddy became very high in Malabar. As a result, the labourers could not maintain themselves and the works could not be carried on. Most of the emigrants returned with fever. 50 others who promised to emigrate and for whom lands have been purchased by me refused to do so, gaining by the experience of the previous emigrants. The few who were staying with me were mostly on the verge of death from malaria. I struggled for more than a year at Vayathur, in the hope of making something out of the land in which investments have been made by me. Finding I was only losing more I stopped my colony scheme and returned.

One Mr. Ayyappan Nair and 5 others have returned from another settlement at Chirakkadavu after suffering much loss and ill-health. Details about them are not known. This report is only about the Vayathur settlers.

There are many people who have emigrated to various places in Malabar from this division and especially from this hamlet. We can know their present circumstances by a detailed enquiry only. I conclude this report in the hope

that we, who have been the victims of such severe losses, debts and diseases, will get every possible help.

(Extracts from a Malayalam letter from the organiser of the colony to Mr. K. G. Sivaswamy).

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