

KERALA DISTRICT GAZETTEERS



KOTTAYAM

COMPILED AND EDITED

by

SRI A. SREEDHARA MENON

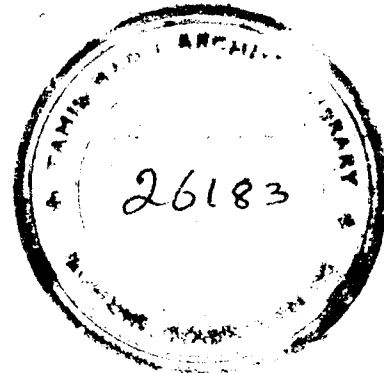
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PREFACE

The Imperial Gazetteer of India (1908), the District Gazetteers and the State Manuals published several decades ago have become obsolete and out of date. The work of revising and rewriting them is, therefore, being taken up and implemented as a national project by the Government of India, the State Governments and the Administration of the Union Territories. Under this project the Imperial Gazetteer of India is being revised and published in four volumes under the title 'Gazetteer of India: Indian Union', and new District Gazetteers are being compiled for all the Districts in the country.

The scheme of contents of the District Gazetteers and the organisational set-up for the implementation of the project have been drawn up by the Government of India in order to exercise unified central direction and control over the project. In July 1958 at the instance of the Government of India, the Government of Kerala in the Educational Department approved the scheme for the compilation of District Gazetteers for all the then existing nine Districts of the State and Shri A. Sreedhara Menon was appointed State Editor for the implementation of the scheme. In February 1959 an Advisory Board was constituted. This Board was reconstituted in December 1967 with the Minister for Education as Chairman and with the following members:

1. Editor, District Gazetteers, Ministry of Education, or his nominee.
2. Dr. A. Abraham, Professor of Botany, University of Kerala.
3. Sri K. V. Krishna Iyer, 9/20 Malavya Street, Ramnagar, Coimbatore-9.
4. Sri Elamkulam P. N. Kunjan Pillai, Sathya Nikethan, Thampanoor, Trivandrum.
5. Sri K. S. Lekshmana Panicker, Professor of Economics, University College, Trivandrum.
6. Sri K. C. Peter, Professor of Economics & History, Mar Athanasius College, Kothamangalam.
7. Sri Syed Mohideen Shah, Shah Manzil, Kurkancherry, Trichur.
8. Dr. V. K. Sukumaran Nayar, Professor of Politics, University of Kerala, Trivandrum.

9. Sri V. T. Induchoodan, Vallathol House, Cheruthu ruthy.
10. Sri E. Raghava Pisharody, Deshabhimani, Kozhikode
11. Sri K. Balakrishnan, Editor, Kaumudi, Trivandrum.
12. Sri K. Mohammed Ali, B. A. L. T., Gujarati School, Cochin.
13. Sri P. Oosman Koya, B. A. L. T., Retired Headmaster, P. O. Kuttayi, Via. Tirur.
14. Sri Chirakkal T. Balakrishnan Nair, Chirakkal P. O.
15. The Secretary, Education Department, Ex-officio Member.
16. The Director of Archaeology, Trivandrum.
17. State Editor, Kerala Gazetteers (Convener of the Board).

Sri A. Sreedhara Menon, Registrar, University of Kerala was also nominated in January 1970 as a member of the Advisory Board.

The Kottayam District Gazetteer is the eighth in the series of the Kerala District Gazetteers. The draft was prepared and edited by Sri A. Sreedhara Menon, who was State Editor till June 1968. The volume received the approval of the Government of India in July 1969. The work of sending the draft to the Press incorporating the suggestions made in the scrutiny note of the Central Gazetteers Unit was attended by Dr. C. K. Karim who was State Editor from January 1969 to July 1973. As the officer holding charge of the post of State Editor, Kerala Gazetteers, it has become my duty to publish the volume.

As the State Editor, I would like to place on record my sincere thanks and appreciation of the services rendered by Sri A. Sreedhara Menon and Dr. C. K. Abdul Karim in giving shape to this volume. I would also like to place on record my sincere thanks to all those individuals and agencies who co-operated with the work. Some of the sections of Chapter I have been contributed by specialists in the field or by concerned Departments of the Government of India. The account on Fauna was compiled and supplied by Dr. A. P. Mathew, Retired Professor of Zoology, University College, Trivandrum. Professor Malathy Raghavan, Department of Botany, N.S.S. College for Women, Karamana, compiled and supplied the section on Flora. Sri U. Jamal Muhammad, Principal, Government Arts College, Karur, Tiruchi District, Tamil Nadu, perused the section on Geography and offered valuable comments. The materials for the sections on Geology and Climate were supplied by the Geological Survey of India, Calcutta and Meteorological Department of India

Poona, respectively. The two outline maps for the volume were prepared by the Department of Survey, Kerala State.

Mention may also be made for the services rendered by late Mr. P. D. Nair, Retired Director of Agriculture, Sri T. P. Kuttiammu, Retired Chief Engineer, Irrigation and Dr. C. V. Kurien, Department of Marine Biology, Ernakulam in scrutinising the sections on Agriculture, Irrigation and Fisheries respectively and furnishing useful suggestions. The services rendered by Shri K. S. Menon, Retired Member, Board of Revenue in scrutinising the Chapters on General Administration and Revenue Administration are worth mentioning. Dr. N. Krishnan Thampi, Retired Director of Public Health and Dr. C. K. Ramachandran, Professor, Medical College, Kozhikode scrutinised the Chapter on Medical and Public Health Services and gave useful suggestions.

I must express my sincere thanks to the members of the Advisory Board who scrutinised the various Chapters or portions of this volume and helped with their valuable suggestions. The District Collector, Kottayam, the Tahsildars of the respective Taluks and other District Officers had also helped in the preparation of this volume.

I must also express my thanks to the staff of the District Gazetteers Department who worked as a team and rendered their services in the preparation and publication of this volume. Sri Adoor K. K. Ramachandran Nair, Research Assistant who helped a great deal in collecting the material for the various chapters and in giving shape to this volume, deserves special mention. I must also record my appreciation of the services rendered by Sri N. Raghavan, Stenographer who was closely associated in all the stages of the work of compilation and printing of this volume. Sri V. A. Abdul Khadir, Translator, Sri P. Balakrishnan Nair, Head Typist, Sri P. Thomas, Smt. P. Sulochana Bai and Smt. K. R. Syamalakumari, L. D. Typists, Sri K. Balakrishnan Achary, U. D. Clerk, Sri K. Janardhanan and Sri M. Kochahammed Pillai Peons have also co-operated with the work. Sri P. S. Raja Raja Varma, Clerk, Smt. S. Radhamma, and Sri M. Abdul Rahiman, L. D. Typists who left the Department recently have also rendered their services in the work of compilation of this volume.

I will be failing in my duty if I do not express my thanks to Dr. P. N. Chopra, M. A. Ph. D., Editor, District Gazetteers, Ministry of Education, New Delhi and the staff of the Central Gazetteers Unit, Union Ministry of Education, New Delhi, for their effective role in planning and co-ordinating the work of preparation of District Gazetteers. The Unit scrutinised the draft of this volume with great care and

made several helpful suggestions with a view to improving the standard and quality of the publication. It may also be mentioned here that a portion of the expenditure incurred on the compilation and printing of the district Gazetteer is being met by the Government of India.

Lastly I express my sincere thanks to Sri P. Kurien John, Superintendent of Government Presses, Trivandrum for taking up the work of printing this volume and making it ready for publication.

Trivandrum.
17-2-1975.

V. BHASKARAN NAIR,
Joint Secretary to Government.

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KOTTAYAM DISTRICT GAZETTEER

CHAPTER I

GENERAL

Origin of the name of the District

The Kottayam District derives its name from the location of its headquarters in Kottayam town. The word "Kottayam" is derived from the Malayalam word *Kottayakam* which means the interior of a fort. Tazhathangadi in the town was in the past the seat of the Munjunad Rajas and later of the Tekkumkur Rajas. It is significant that the ruins of certain fortifications and palaces are still seen here and the locality is known as *Kottavathil*. The place where the modern town of Kottayam has arisen was once the interior of the fort i.e. "Kottayakam". The word 'Kottayam' is a corruption of the word 'Kottayakam'.

**Location, General Boundaries, Total Area and Population*

The District of Kottayam is situated between the Western Ghats on the east and the Vembanad Lake and the paddy fields of Kuttanad on the west. It extends from 9° 15' to 10° 21' North Latitude and from 76° 22' to 77° 25' East Longitude. The District is bounded by the Ernakulam, Trichur and Coimbatore Districts on the north, the Madurai, Ramanad and Tirunelveli Districts on the East, the Alleppey and Quilon Districts on the South and the Alleppey and Ernakulam Districts on the West. At its longest point the District extends 112 km. from west to east and 116.80 km. from south to north.

The total area of Kottayam District is 6,359.49 sq. kilometers. According to the Census of 1971 the total population of the District is 2,085,134. The District gets the second rank among the Districts of Kerala in regard to area and the 7th rank in respect of population.

History of the District as an Administrative Unit and changes in its component parts

The present Kottayam District was historically a part of the erstwhile princely State of Travancore. In 1835 Travancore State consisted of two Revenue Divisions, viz., the Southern

* This Gazetteer deals with the former Kottayam District before the formation of the newly created Iddikkal District.

and the Northern Divisions and each Division was under an Officer designated the Dewan Peishkar. The Central Taluks were under the direct control of the Dewan. In 1035 K. E. (1868) two more Revenue Divisions were constituted. They were designated the Quilon and Kottayam Divisions. There was also for some time a special Devikulam Division, but it was subsequently abolished and its Taluks were added on to the Kottayam Division. At the time of the integration of the States of Travancore and Cochin in July 1949 there were three Revenue Divisions in Travancore viz., Trivandrum, Quilon and Kottayam each of which was under a Dewan Peishkar. With the formation of the United State of Travancore and Cochin the Revenue Divisions came to be called Districts and they were placed under District Collectors. Thus the Kottayam District formally came into existence in July 1949 and the Dewan Peishkar was redesignated as District Collector. The District at this time had a total area of 7,651.12 sq. kilometers and it consisted of 8 taluks, viz., Changanacherry, Kottayam, Vaikom, Meenachil, Devikulam, Peermade, Thodupuzha and Muvattupuzha. The Kanjirapally and Udumbanchola Taluks were formed on October 1, 1956 and the Kuttanad Taluk on November 1, 1965. When the Alleppey District was formed on August 17, 1957 the Kuttanad Taluk was included in the new District. Similarly when the Ernakulam District was constituted on April 1, 1958, the Muvattupuzha and Thodupuzha were separated from Kottayam and included in the new District.

Administrative Sub-Divisions

The Kottayam District at present consists of 2 Revenue Divisions, 8 Taluks, 20 Firkas and 101 Villages. The Revenue Divisions are Kottayam and Devikulam. The former comprises of Kottayam, Changanacherry, Vaikom and Meenachil and the latter of Udumbanchola, Devikulam, Peermade and Kanjirapally. Table I gives the Talukwise area, population and number of Revenue Villages in each districts.

Statement showing the Taluk-wise area, population and number of villages

Taluk	Population	Area in sq. Kms	No. of Firkas	No. of villages
District Total	2,085,134	6,359.49	20	101
Changanacherry	265,347	261.85	2	12
Kottayam	497,156	539.76	4	20
Vaikom	252,288	330.68	2	14
Meenachil	351,877	722.71	3	22
Kanjirapally	172,360	353.32	2	6
Devikulam	134,350	1,774.15	2	9
Peermade	146,841	1,307.00	2	6
Udumbanchola	264,913	1,071.40	3	12

The Table at Appendix I to this Chapter gives a complete list of Firkas and Villages in each Taluk of the District.

TOPOGRAPHY

Natural Divisions, Elevations etc.

The mountainous amphitheatre of the Western Ghats which bound the District on its eastern side, (except for the Anchanad Valley) dominates the topography of the Kottayam District. Based on physical features the District falls into three natural divisions, viz., the low-land, bordering the Vembanad Lake on the west, the midland consisting of the undulating country east of the low-land and the high-land on the extreme east covered by thick forests. The elevation of the low-land is only upto 15.13 metres above the sea-level, that of the mid-land between 45.72 metres and 457.20 cms. above the sea-level and of the high-land between 304.79 cms. to 2,438.40 cms. above the sea-level. The total area covered by the low-land in this District is not much. The bulk of the area of the District i.e., 73% consists of high-lands. The following statements gives the area of the District by natural divisions.

Natural Division	Total sq. Kms	Rural sq. kms	Urban sq. kms.
Total	6,360.0	6,263.4	96.61
High land	4,662.5	4,657.08	5.34
Midland	1,295.5	1,315.75	52.36
Lowland	399.37	390.57	8.81

The Taluk-wise classification of natural divisions for urban and rural areas is also given in the following table.

Area in Sq. kms. and number of

Taluk	Number Area	Villages lying in			Towns lying in		
		High-land	Mid-land	Low-land	High-land	Mid-land	Low-land
Changanacherry	No. 9 Area 211.94	..	9	3	..	1	..
Devikulam	No. 9 Area 1,774.15	..	..	..	..	..	..
Kanjirapally	No. 2 Area 204.09	..	4	..	1	1	..
Kottayam	No. 14 Area 337.99	..	6	177.67	..	23.96	..
Meenachil	No. 6 Area 299.40	..	16	..	..	1	..
Peermade	No. 6 Area 1,307.95	..	..	..	..	..	..
Udumbanchola	No. 12 Area 1,171.48	..	..	..	..	..	..
Vaikom	No. 5 Area 142.45	..	9	156.95	..	..	8.73

Mountains

The Kottayam District is noted for its mountains which with their great height and varied configuration present a grand and imposing spectacle. Some of the loftier ones are entirely detached from the neighbouring heights. The mountains rise to an elevation of more than 2,560 metres with high plateaus in between. The Western Ghats in this District present their highest elevation in the Anamudi (2,817.06 metres) which is the highest peak in Kerala and the highest in India, next to those of the Himalayas.* There are several other peaks more or less near the Anamudi which vary in elevation from 1,981.31 metres feet to 2,698.68 metres, the most prominent of them being:—

	Metres
Karinkulam or Sholeamala	2,698.68
Devimala	2,643.21
Tellitty or Coorcacomboo	2,132.67
Chockenmudy	2,224.11
Perumputty Kullu	1,981.31
Vagavarai	2,560.00
Alleamala	2,103.02
Eravimala or Hamilton's Plateau	2,381.01
Kattumala	2,590.47
Kumarikal	2,575.23
Chemmun Peak	2,163.14
Payratmala	2,254.58
Korumpara	2,529.53
Pampadum Chola	2,560.00

These hills together with the lower ground from which they rise form the High Ranges. Though often called a plateau, the tract of land known as the High Ranges is really a succession of high hills with deep valleys between them and contains several small plateaus, among which the most important are the following:—

1. *Gudarmala*. It lies between Karinkulam and Devimala with an average elevation of 1,828 metres and an area 10.36 square kilometres.

2. *Devikulam*. It lies to the west of the above with an average elevation of 1,828 metres and an area 7.77 sq. kms.

* Among the earliest to ascend the peak was General Hamilton of the Madras army (May 4, 1862). It is also worth mentioning that General Norton, General Geoffrey Bruce, and T. Howard Somerwell, all of Everest fame, have climbed to the summit of this peak. General Bruce climbed the peak on March 16, 1944 in order to acquire experience in Jungle warfare in preparation for the recapture of Burma in World War II.

3. *Anaycudoo*. It lies west of Devikulam plateau.

Eravimala. It lies north of Anamudi and is separated from it by a deep valley. It has an elevation 2,224.53 metres and an area of 46.62 sq. metres.

5. *Perumalmala*. The average elevation is 2,132.7 metres and area 7.77 sq. kms.

6. *Anchanad*. The elevation is 934.47 metres and area 7.77 sq. kms.

7. *Vattavada*. The elevation is 1,828 metres.

Some of the valleys in the High Ranges are Anaycudoo (west of Devikulam plateau; elevation 1,566.10 metres), Anchanad (elevation 934.47 metres) and Kundala (elevation 1,676.47 metres). The following is a description of the High Range by Munro, the first Superintendent of the Cardamom Hills.

They "rise suddenly from the lower plateau of the Cardamom Hills and form a complete range of their own. On the north-east corner, the High Ranges begin with Sholeamalla or Currincollum (2,698.68 metres) and run in a south-west direction to Gennewurra, thence still south-west to Corichy and thence to Ruddikut (1,828 metres) near Davycolam. From Puddikut, the line of walls runs in the same direction to Coorkacomboo (2,132.67 metres); then running slightly more west, the Hills rise to Chockennamudy (2,224.11 metres) from which the course in north-west to the gap where the Moonaur disappears. From the gap the Hills run slightly south-west and then north-west to Worray-parathundoo; thence north to Perumputty Kullo (1,981.31 metres) from which again the direction is north-east as far as Aunymuddy.

"From Aunymuddy the course is much broken and runs irregularly to Eravimalla where there is a deep dip into the valley of the Eravimalla Aur which separates the Eravimalla plateau (also known as Hamilton's Plateau) from the Perumalmala plateau. From this valley there is a steep rise to the north-west to Katoomalla (2,590.47 metres). To the west of Katoomalla, the High Ranges comprise the plateau within Chemmun Peak (2,163.14 metres) Payratmalla (2,254.58 metres) and thence eastward to Coomarikul (2,575.23 metres). To the east of Coomarikul and Katoomalla lies the low Unjenaad Valley which separates this part of the High Ranges from the highlands on the slope of Tertamalla, on which are situated the hill villages of Kelandoor, Kandal, Pootoor and Perumala at an average elevation of 1523.96 metres. In its upper part the Unjenaad valley is also called the Thallayar Valley where the elevation is above 1,219.49 metres sloping gradually to the north-east, it opens out into the Unjenaad Valley proper which is a level terrace. Three or five kilometres wide and 8 kilometres long lying at an elevation of 914 metres. Below and to the east of Unjenaad the land slopes down rapidly to the British

frontier probably at about 457 or 609.96 metres, a very feverish tract containing no resident population.

"To the south-east of Tertamalla runs a ridge separating the water-shed between Unjenaad and Moonaur and joining the high peaks bordering the Pulnies at a peak called Allear Kunnoo (2,102 metres). From Allear Kunnoo the course is bounded by a curve north-north-east to Pambadyshola (2,560 metres) and then runs north to Kuduvurratukal (2,011 metres), where there is a deep dip into the Wuttawudda river, and here the high land may be said to cease. From Allear Kunnoo southward, the line to Sholeamalla is marked by clear-cut cliffs averaging about 2,560 metres. Exclusive of the low Unjenaad Valley which is not above 944.47 metres, the area within these boundaries may be roughly estimated at 1,036 sq. kms. with an elevation of one of the peaks reaching as high as 2,692.76 metres."

From the High Range the land slopes in three directions to the Anchanad Valley on the north-east, to the Kandanpara valley on the west, and the Cardamom Hills and Peermade on the south. The steep slopes covered with forests towering up above Mlappara (Peermade Taluk) as boldly as the Western Ghats rise above the low country. Sloping gradually to the north-east the Anchanad Valley opens out into a levelled terrace 8.50 kilometres long and three to five kilometres broad with an elevation of not more than 609.96 metres. To the north, the valley slopes down gradually into the frontier of Madras State. On the west of Anamudi the slope is sudden, almost precipitous, descending to a great depth. To the south of the High Range the land spreads out into a hill-plateau of considerable extent. Near it are the Cardamom Hills the greatest height of which is 2,407.47 metres and the average height over 1,523.96 metres. Further south are the Peermade Hills averaging 843.47 metres with one peak of 1,459.09 metres. At a considerable distance to the south of Peermade are the Ponmudi Hills rising to an average height of 924.94 metres, one of them going up, however, so high as 1,828 metres. The famous Sabarimala (1,154.90 metres) is in Peermade Taluk.

Passes

There are a few passes across the mountains between this District and Madras State.

The Bodinaickannur Pass

This is the northern-most of the passes. It connects Bodinaickannur in Madurai district with the High Range and leads to Devikulam and Munnar.

The Tevaram Pass

This connects Tevaram with the Cardamom Hills. It reaches the top of the Western Ghats by a very steep ascent. The pass is little frequented as it traverses a very wild and mountainous region.

The Kambam Pass

Though rugged for 2460 kms. this is one of the best across the hill tract between Kottayam and Madurai District. Through this pass much trade passed in ancient days to and from Thodupuzha, but the route is practically closed now, the trade having been diverted along better routes.

The Gudallur or Kumili Pass

This pass connects Peermade and Kanjirapalli with Kambam and Uttamapalayam. Through this pass considerable traffic passes from Madras State to the planting district of Peermade. A road strikes off from this pass at Gopichetty Thavalam, 7.78 kilometres west of the Munjamulla Periyar and proceeds by the Codamurutty Ghat, a steep and difficult acclivity, to Irattupetta. South of Gudallur the Sivagiri Pass ascends the hills to Sabarimala, but it is of little importance and is only frequented by cattle.

River system and water Resources

The Periyar, the Muvattupuzha, the Manimala and the Meenachil rivers flow through this District. Of these the Periyar, the Muvattupuzha and the Manimala are inter-District rivers while the Meenachil river flows entirely through this District. Brief accounts of these rivers are given below.

The Muvattupuzha River

The Muvattupuzha river which flows through the Vaikom Taluk of this District is formed by the three rivers Thodupuzha, Kaliyar and Kothamangalam, joining together near Muvattupuzha town (Ernakulam District). From Muvattupuzha, the combined discharges from the three rivers, flow in a westerly direction, under the name Muvattupuzha river, for about 12.870 kms, and then turns south passing through Ramamangalam and Piravam (Ernakulam District). From Piravam, the river flows through low swampy lands and at Vettikattumukku it bifurcates, and flowing west, empties its waters into the Vembanad Lake through Ithipuzha and Murinjapuzha at Vadakkemuri and Chembu respectively in this District. The maximum length of the river is about 120.750 kms. and the major part of it lies in the Ernakulam District. The most important town in the basin in this District is Vaikom, the famous pilgrim centre.

The Manimala River

The Manimala river flows through the Peermade, Kanjirapalli and Changanacherry Taluks. It has its source in the Mothavara hills, at an altitude of about 1,280 metres above sea level and follows a southward direction of flow. In its course down-wards, it is joined by the Kokkayar, a stream rising from the Peermade plateau. At Mundakayam (Kanjirapalli Taluk) another stream flowing from the left side of the river, also joins

it. The direction of flow of the river changes and it flows towards west for some distance. The Chit Aar joins the main river, at Chenapadi and at about 1.610 kms. upstream of Manimala, Kanjirappally taluk. Muleplakkal thodu also joins it. From Manimala, the river flows southwards again, up to Mavelidesom, and there it turns westwards up to Vellavur (Changanacherry Taluk) where it again restores its original direction of flow upto Kottangal. From there, it turns south up to Vennikulam (Alleppey District), wherefrom, it traces a south-westerly course till its confluence with the river Pampa at Valanjavattom. A branch of Manimala river from Mannabhagam flows along Kavumbhagam and joins the Pampa river at Muttar.

The total length of the river is about 91.770 kms. and during its course of flow it passes through the villages of Peruvanthanam, Mundakkayam, Yerumakuli and Manimala in this District. The total drainage area of the river is 802.9 sq. kms. comprising of portions in the Alleppey District. The important towns in the basin are Peermade and Mundakayam.

The Periyar River

The Periyar river the second longest river in the State, rises from the forest-clad Sivigiri Peak, 80.500 kms. south of Devikulam at an elevation of 2,560 metres above sea level, and flows through the Taluks of Peermade, Devikulam and Udumbanchola in this District before flowing into the neighbouring District of Ernakulam. It traverses through immense cliff of rocks and is joined at about 16.90 kms. downstream by Mullayar at an elevation of 843.47 metres. The river then turns due west and continues to flow in that direction for about 16.90 kms. in sandy bed. After 11.270 kms. below Mullayar confluence, the river course is through a gorge. After a winding course of 12.870 kms. it reaches Vandiperiyar and then passes through another narrow gorge below which it is joined by Perumthura River. Further down, it is joined by Kattapanayar and still lower down by Cherutoni, Chittar, Perinjankutty and Muthirapuzha successively. From the confluence of Muthirapuzha with the Periyar, the main river descends 243.96 metres within the next 4½ miles and flows west. There is also another cascade at Kokkanipara where the water falls over a cliff 30.47 metres. It is then joined by Deviar and flows into the Ernakulam District. At Alwaye it divides itself into two branches. The principal branch flows north west, joins with the Chalakudi river at Puthenvelikara and then expands itself to a broad sheet of water at Munambam. The other takes a southerly direction and is broken up into a number of small channels falling into the Vembanad lake at Varapuzha.

The total length of the Periyar river is 228.5 K. Ms. and during its course of flow, it passes through the taluks of Peerumade, Devikulam and Udumbanchola of Kottayam District and the Taluks of Kunnathunad and Parur of Ernakulam District.

The total drainage area of the river is 5,283.6 sq. kms. including the 787.36 sq. kms. upstream of the Periyar dam. 113.95 sq. kms. of the drainage area lies in the Madras State. Some of the important places in the Periyar basin in this District are Tekkadi, Kumili, Devikulam, and Munnar.

The Meenachil River.

The Meenachil river which flows through the Taluks of Peermade, Meenachil, Vaikom and Kottayam is formed by several streams originating from the Western Ghats. The Kadapuzha Aar, which has its source in the Araikunnu Mudi and Pazhavatti Mudi at altitudes varying from + 914 metres to + 1,907 metres above sea level, follows a southerly direction of flow. This stream is joined by the Konipad thodu to form the Kalathu-Kadavu Aar. The Trikkovil Aar, which originates from the Mavadi Malai, Kurusu Malai, Mar Malai, etc. also joins it at Cherippad. The southerly direction of flow is continued till Erattupettah. Here it is joined by the Poonjar River, which originates from the Talai Malai and flows in a westerly direction. At Erattupettah, the main river takes a sharp turn and flows towards west till Kondur.

At Kondur, it is joined by the Chit Aar which originates from Karimalai, Anangampadi and Alyampara Malai at an elevation of 457 metres above sea level. Thereafter, the river follows a westerly direction and through a series of meandering loops reaches Lalam. At Lalam, the river receives another important tributary, the Payappara thodu, which has its origin in the hills of Ramapuram, at an elevation of + 76.19 metres above sea level. From Lalam, the river again meanders and follows a south-westerly direction till it reaches Kottayam. Here, it splits itself up into several branches before emptying into the Vembanad Lake, through a series of crisscross channels.

In the initial 8.30 kms. of its journey, the river descends very rapidly, the river bed falling to about 76.19 metres above sea level and at Cheripad the bed level is less than 15.24 metres. For the rest of the distance, ie. 59.570 kms., the river flows through almost flat terrain, the bed level of the river dropping by 15.24 metres only.

The total length of the river is about 67.620 kms. During its course, it passes through the villages of Poonjar, Erattupettah, Kondur, Bharananganam, Lalam, Kummannum, Nirikkad and finally through Kottayam, Kumaragom etc. The total drainage area of the river is about 1,081.04 sq. kms. comprising of portions of the Peermade, Meenachil, Vaikom and Kottayam Taluks. The important towns in the basin are Palai, Poonjar, Ettumanur and Kottayam.

Systematic gauging of the river was started only in 1953 and the discharge data from the date onwards are available. The river gauging is done at Neelimangalam and Nagampadom.

The average run off of the river, based on actual observations so far taken, comes to 67,768 Mcft. or 211.12 Mcft. per 2.59 sq. kms. of the drainage area. Based on this data, the total run-off of the river, from its entire drainage area of 1,081.04 sq. kms., is estimated as 96.270 Mcft.

Lakes and Backwaters

The Vembanad Lake forms the western boundary of this District. It is the largest backwater in the State, the maximum length being 83.720 kms. and the maximum width 14.480 kms. The lake is used for purposes of fishing, inland navigation and collection of lime shell. The sacred town of Vaikom is located on the banks of the Vembanad lake. In addition to the Vembanad lake, there is the Periyar lake in the Peermade Taluk. The lake region abounds in most beautiful scenery and various species of wild life may be seen grazing peacefully and calmly in the natural surroundings of the lake or in the adjacent hills.

Sea-coast

The District has no sea-coast, natural harbours or islands. It may be mentioned that Kottayam is one of the few Districts of Kerala which has no sea-coast.

Springs and Spring-heads

There are small springs in the High Ranges of this District. The flow of water from these small springs increases the volume of water in the small rivers and canals and they are useful for minor irrigation purposes.

GEOLOGY

Soils

The soil in some parts towards the coast is brown and sandy; on the rising grounds in the interior it is gravelley; in the cultivated valleys it is brown loam; towards the mountains and in the forests it is black.

Weathering

The great depth of weathering and the frequent formation of laterite are largely due to tropical conditions.

Jointing and the difference in composition of the rock have brought about a peculiar erratic weathering wherein the presence of fresh 'boulder' or inner Kernel surrounded by altered rock is noted.

Another feature is that the junction of fresh and weathered rock is either sudden or gradual.

GENERAL

Geology

The geological succession of the area is given below:—

- | | | |
|-------------------------|---|----------|
| 1. Recent sediments | } | Recent |
| 2. Residual laterite | | |
| 3. Warkali beds—Miocene | } | Archaean |
| 4. Dolerite dykes | | |
| 5. Norite | | |
| 6. Gneisses | | |

Warkali beds

South of Kottayam the Warkali formation forms a fringe between the areas of backwater and the metamorphic rock.

Intrusives of the area (i.e., Dolerite, Norite, Gabbro)

Some dolerite dykes traverse the district in NW—SE direction. They are located in the eastern part of Meenachil, Lalam and north-west of Changanacherri. The composition of the dolerite is given below:—

Ignition loss	1.65	Percent
Silica (SiO ₂)	49.81	"
Alumina (Al ₂ O ₃)	18.10	"
Ferrous oxide (FeO)	8.05	"
Ferric oxide (Fe ₂ O ₃)	5.20	"
Lime (CaO)	12.47	"
Magnesia (MgO)	2.65	"
Potash (K ₂ O)	.31	"
Na ₂ O	2.40	"
Phosphoric anhydride (P ₂ O ₅)	.21	"
	100.85	Percent

An exposure of norite is noted in the bed of Periyar river about .21 km. above Poothathankettu.

The exposure which extends in a SE—NW direction is bordered on either side by gneisses, which are well exposed. The norite includes xenoliths of the adjoining gneisses. These xenoliths are joined into thin layers which are parallel to the adjoining gneissic strata. There are thin veins of quartz in the norite which also run parallel to the gneiss.

The gabbro dyke constitutes a conspicuous feature in north Travancore and it is seen to extend from Lalam (9°43' : 76°41'), Punalur (9°22' : 76°45') to near Ranni (9°43' : 72°47').

The gneissic group

Observations made in the bed of the Periyar river and its neighbourhood show that the gneiss either passes gradually into the charnockites or is underlain by it. Chacko (1922) described charnockite rich in hornblende near Ettumanur ($9^{\circ}40' : 76^{\circ}33'$).

There is an interesting exposure of garnet rock on the eastern side of the Mar Thomma Seminary in Kottayam.

Approximately at the junction of the leptynite and charnockite, cordierite bearing rocks have been recorded (Chacko I.C. 1922) from Kottayam ($9^{\circ}35' : 76^{\circ}31'$). Changancheri Z ($9^{\circ}26' : 76^{\circ}33'$) Thiruvella ($9^{\circ}23' : 76^{\circ}34'$) and Kozhencherry ($9^{\circ}20' : 76^{\circ}43'$).

Cordierite is usually an optically negative mineral. But in this rock some if not all, cordierite crystals are optically positive. A sample of cordierite carefully separated from this rock gave the following results on analysis.

Water (H ₂ O)	..	1.74	Percent
Silica (SiO ₂)	..	49.74	„
Ferric oxide (Fe ₂ O ₃)	..	5.65	„
Ferrous oxide (FeO)	..	3.00	„
Alumina (Al ₂ O ₃)	..	35.21	„
Lime (CaO)	..	1.05	„
Magnesia (MgO)	..	4.30	„
		100.69	Percent

The composition of the cordierite, like its optical character, is somewhat peculiar in that the percentage of ferrous oxide and magnesia is very low. It contains inclusions of monazite showing pleochronic halos.

ECONOMIC MINERALS

Precious stones

The pegmatite occurrence seen at Odara ($9^{\circ}22' : 76^{\circ}38'$) (Paulose C. V. 1957) is reported to carry some quantities of economic minerals i.e. aquamarine columbite, Beryl, etc.

Chalcopyrite

Chalcopyrite occurs in a working in Vadavathur about 4.8 km. east of Kottayam. The copper mineralisation observed is more of the nature of disseminations.

Glass making sands

White sands, considered suitable for the manufacture of glass, occur in various parts of the former states of Cochin and Travancore. Considerable reserves of such material is known to occur in the neighbourhood of Shertallai.

Clay

Extensive deposits of alluvial clay is found at Punnathurai between Ettumanur and Kidangur.

Limestone

A large deposit of limeshell is also reported to occur within the Vembanad lake, in the Kottayam district. This deposit constitutes the source of supply of lime for the cement factory of Messrs. Travancore Cement Ltd., a plant with an annual capacity of 101,500 tonnes (Brown and Dey, 1956).

Monazite

Monazite (containing Uranium), thorianite (with Uranothorianite) and cerianite (CeO₃) are reported to occur in the beach sands of the state (Devidson, P.198).

Seismology of the area.

The area is not in the Seismic Zone. It is known that earth tremors were experienced in these parts (Kottayam district in Particular) either due to teleseismic shocks or to local geological causes. The area is free from landslide scare. Local soil slide or bolder falls, are however, likely.

CLIMATE

The district has a tropical humid climate with an oppressive hot season in the plains of the district and plentiful rainfall throughout the district. In the eastern portions of the district, which are at higher elevations on the western ghats, known locally as the High Ranges and the Cardamom hills, the climate is cool and pleasant. The year may be divided into four seasons. The hot season from March to May is followed by the south-west monsoon season from June to September. October and November constitute the post monsoon or retreating monsoon season. The three months December to February form the north-east monsoon season, the rains associated with it ceasing early in January and with little rain thereafter.

Rainfall

Records of rainfall in the district are available for a good network of 14 stations for periods ranging from 32 to 70 years. Tables 2 and 3 give the details of the rainfall at these stations and for the district as a whole. The average annual rainfall in the district is 2,888.9 mm. The rainfall increases from the west to the east, being particularly heavy on the Cardamom hills (western ghats). But in the eastern slopes of these hills the rainfall decreases rapidly as one proceeds further east. The average annual rainfall varies from 5,164.8 mm at Peer-made on the High Ranges to 649.2 mm at Chinnar on the north eastern corner of the district on the eastern slopes of the western ghats. The south-west monsoon bursts over the district by about the last week of May generally and continues to

about the beginning of October. June and July are the months with the heaviest rainfall. The total rainfall in the four south-west monsoon months accounts for 62% of the annual total. Rainfall mostly as thundershowers is received in the hot season from March to May and in the post monsoon months of October and November. The rainfall in the hot season and the post monsoon season constitutes about 15% and 18% respectively of the annual rainfall. The variation in the rainfall from year to year is not large. In the fifty year period from 1901 to 1950, the highest annual rainfall occurred in 1924 when it amounted to 143% of the normal. 1934 was the year with the lowest rainfall in the fifty year period which was 79% of the normal considering the district as a whole rainfall less than 80% of the normal has occurred only once in the fifty year period. But at some stations such low rainfall has occurred more than once and in some cases even consecutive two or three years with rainfall less than 80% of the normal on two to four occasions in the fifty year period. It will be seen from table 3 that the annual rainfall in the district was between 2400 and 3400 mm in 37 years out of 50.

On an average there are 130 rainy days (i.e. days with rainfall of 2.5 mm — cents — or more) in a year. This number varies from 45 at Chinnar to 167 at Peermade.

The heaviest rainfall recorded in 24 hours at any station in the district was 483.9 mm at Devikulam on July 17, 1924. Six stations in the district had the record highest rainfall in a day in one of the three days July 15, 16 and 17, 1924.

Temperature

There is no meteorological observatory in the district. However the climatological conditions in the district are very similar to those in the nearby districts of Ernakulam, Alleppey and Quilon where there are meteorological observatories. The account of the climate which follows is based on the records at these observatories. As mentioned earlier, in the eastern parts of the district which are at higher elevations on the western ghats, the weather is generally very cool partially all the year round. After February temperatures increase progressively and March and April are generally the hottest months of the year. The mean daily maximum temperature in these months is about 31°C (87.8°F) and the mean daily minimum is about 25°C (77.0°F) in the western portions of the district. In the plains of the interior the temperatures may be a little higher. With the high moisture content in the air the heat is often oppressive particularly in the interior parts of the district when the cool sea breezes do not penetrate. Afternoon thunderstorms which are common in the hot season bring considerable relief from the heat. With the onset of the south-west monsoon in the last week of May, temperatures during day, decrease slightly and the whole of the monsoon season is more pleasant. After the withdrawal of the southwest monsoon by about the

beginning of October, day temperatures, increase gradually and the heat is nearly as intense as in the summer season.

Humidity

The air is highly humid nearly all the year round. The relative humidities are comparatively less in the interior of the district and in the High Ranges.

Cloudiness

Skies are heavily clouded to overcast in the south-west monsoons season. In May, (the post monsoon season) and in December skies are generally moderate to heavily clouded. In the rest of the year, clear or lightly clouded skies are common.

Winds

Winds are usually light to moderate with some increase in strength in the latter half of the hot season and the south-west monsoon season. Westerly or north-westerly winds are common in the south-west monsoon. During the rest of the year, winds are mostly easterly or north-easterly in the mornings and blow from directions between south-west and north-west in the afternoons, particularly in the western parts of the district.

Special weather phenomena

Thunderstorms are frequent in the summer months and the post monsoon and early north-east monsoon seasons. In the region of the western ghats the frequency of thunderstorms is much higher.

Flora and Fauna

The sections on flora and fauna are given as Appendix I at the end of the Book.

CHAPTER II

HISTORY

Pre-history

The pre-history of Kottayam District is shrouded in obscurity. There is no trace of Palaeoliths anywhere in the region. This is partly due to the absence of raw materials, namely, quartz and basic trap and partly to the lack of exploratory work in the impenetrable forest and mountainous tracts of the area. The District, however, forms part of the South Indian megalithic complex. Urn burials may be seen distributed all over the High Ranges and the Cardamom Hills. In the hills of Ghats are found a number of burials of the Kistaven type, supposed to belong to the *Mala Arayans*. Numerous vaults called *Pandukuzhies* are also found in these hills. Menhirs are found in a number of places in the region. But the most important monuments of the megalithic period are the dolmens.

The dolmens excavated from the Anjanad valley were on a flat table land in groups of three or four or five. Around each was found a circular packing of roughly hewn stones on boulders. The groups were distributed in a circle. The upright stones were rectangular in size and were 3x1.5x2.1 Metre. The cover slab was 3.2x2.1x2.4m. The floor was paved with a stone slab. Remnants of rubble stone packing were found over some of the cover slabs. There was also a semi-circular opening on one side.

Maraiyur is in the Anjanad valley in Devikulam Taluk. The place was considerably elevated and covered over with hill grass, wild lemon grass and strabulanthus. Trial diggings were made by the Department of Archaeology in 1947-48 at three places in Maraiyur. Three dolmens were opened during the excavation. In all cases, nothing was found in the hollow space between the stones which supported the top stone or cap stone. It was found that these stones were placed on a solid rock. In one dolmen however ashes, bones and an iron trident (*Trisulam*) were found.

Megalithic burial sites of the cists and menhir type were discovered from Kallarpatom colony in Udumbanchola. The circles and other surface indications were found badly tampered when some of the cists were opened.

The State Archaeology Department conducted extensive excavations in Tengakkal near Vandiperiyar on the High Ranges. The measurements of the capstone of one of the cists excavated were on an average 2.9 metre in length, 2.1 metres in breadth and 0.3m. in thickness, and the area excavated was 3x2.4 metres to a depth of 1.3 metres. Two burial urns were unearthed, one of which was 1.6 metres in circumference at the mouth, 2.2 metres in the middle and 0.86 metres in height. The smaller urn had a circumference of 1.1 metres at the mouth, 1.67 metres at the middle and 0.76 metres in height. They were found side by side with an intervening space of 0.4 metres. The thickness of the bigger urn is 0.018 metres, while that of the small one 0.012 metres. The bigger urn had all round it a ring chain with parallel symmetrical ends. There were two more cists in a stone circle whose circumference was 25.9 metres. The pottery of the burial urns at Vandiperiyar was not painted and had very little decorations. The larger urns had a chain pattern or bead pattern drawing on the exterior close to the mouth. The smaller pots found inside were of the thin slip variety. Two of the smaller pots inside were wide mouthed with deep narrow bodies and round bases. The relics of Vandiperiyar belonged neolithic period. Being half backed earthenware, they had become very fragile on account of being buried in damp earth and had all got so broken or cracked that they could not be removed.*

From the Excavations in the Bison Valley, a group of four dolmens came to light. These dolmens were parallel to each other and faced southwards the Muttukad Valley. Only the third from the west was in a state of good preservation. A cist was also found adjoining these dolmens. But it was considerably damaged. The discovery of more dolmens was made on the Venad side of the Bison Valley on the Muttukad ridge. Of these, the first was a group of four dolmens, three in front facing south, and the fourth in the back facing east. A dismantled rubble masonry surrounds this group and the inside is paved with stone slabs.†

At Thondimalai, Mr. Saunders excavated six of the graves found on hill tops. They were situated in a straight row, the graves being placed close to one another. After removing the broken stones that marked the spot was found a flat circular stone that gave a hollow sound to a light tapping with a crow bar. Underneath it was found a large urn, the mouth of which was 0.38 metres in diameter and the vertical height about 1.07 metre placed in a vertical position in the ground firmly embedded in clay and gravel. Each of the large urns contained eating and drinking vessels, vases, *chattis* of various sizes and shapes,

* Travancore Archaeological Administration Report, 1112 M.E., pp. 8-10.

† Ibid.

some of red clay, others black polished both inside and outside, of very thin material and very brittle to handle. They were firmly embedded in fine red clay that seemed to have silted in and partly filled up the large urn, and the small vessels were filled with the same clay very tightly packed, and were wedged in upon one another in such positions as to make it very difficult to remove them unbroken. Bones were found embedded in the vessels in one urn, and bones crumbled and mixed with clay in others. The Doctor was able to identify one of the bones as the hip bone of a man. On the top of one urn was found the blade of a sword, almost completely rusted through about 0.76 metres long with no sign of a handle. Inside the urn were found two spear-heads and the vessels found inside conformed to the various types of what is called "Iron Age Pottery" in the *Catalogue of Pre-historic Antiquities* in the Government Museum, Madras; some of which were taken from Tandikudi in the Palani Hills and other parts of the Madura district but most of which are from the Nilgiris, Coimbatore, Malabar and Tinnevely districts.*

There is a miniature menhir about 91 centimetres high at Marayur called Vathamkolli. The Travancore State Archaeological Department had also discovered four menhirs and a group of dolmens in the grassland by the side of the Devikulam-Periakanal road. They were in a damaged condition. Their contents showed earthenware domestic vessels, such as pots, pitchers, pot-stands, bowls and flat bottomed *Chattis* with red and black surface. The iron axe found on the site indicates that the monuments belonged to the Idon Age.

The above historical relics show a distinct characteristic of the pre-historic phase of civilisation. Even though the Muthuvass and Vellalas who live in the dolmen area in the Anjanad Valley at present evince no interest in the erection of dolmen, those excavated from here illustrate the loss of material side of culture and shows that regions now inhabited by them were once, the scenes of thriving civilisation.†

EARLY HISTORY

The ancient history of Kottayam can hardly be reconstructed with clarity because of the absence of authentic material on the subject. It is believed that in the ancient past the coast line of Kerala was different from what it is today and that it passed through the present Kottayam District, the Arabian sea having extended considerably into the interior of the area. A large portion of the Changanacherry, Kottayam and Vaikom Taluks bordering on the Vembanad lake seems to have been submerged under water. Marine fossils including coral reefs have been found at Vazhapally and this is considered proof of the fact

* Saunders, A. J., "Dolmens in the Palani Hills" (Madras Mail Annual 1928).

† The Census Report of Travancore 1931.

that the tract was once under sea. Geologists are of the view that volcanic factors might have operative to bring about the elevation of this land area from the sea. Some of the local place-names are cited as proof of receding of the sea. Thus Vaikom is literally taken to mean "new land" and Kadathuruthi, at present an inland town, "sea island". Perhaps, the old legend according to which Kerala was a gift of the Arabian sea to Parasurama has its origin in this geological fact of the elevation of land from the sea. Even if the theory of the recession of the sea and the consequent rise of the land area is not seemingly convincing, there is a possibility that the area in question was at one time an extensive swamp interspersed with sand-banks and mud-banks at various places. The rivers like the Periyar and the Pamba originating in the High Ranges of this District might have brought down in spate immense quantities of sand and silt and built up huge deltas which eventually jutted into the sea. Being fertile lands fit for the cultivation of paddy and other crops they might have attracted colonists in later years and become populated. Thus from the geological and geographical points of view the early history of Kottayam assumes a special significance of its own.

References in Classical Works

The antiquity of the Kottayam District is an undisputed fact. Like other parts of Kerala, Kottayam too played its role in promoting the commercial and cultural relations of Kerala with foreign countries. Some writers have sought to identify Vaikom in this District with the 'Perumathurai' of ancient Tamil literature. It is argued that at the time when the Arabian sea extended into the interior of this District Vaikom was "a great port" wherein foreign vessels called for purposes of trade. Some of the places mentioned in the works of classical writers like Pliny and Ptolemy have been identified by scholars with places in the present Kottayam District. Though the consensus of opinion among scholars is in favour of the identification of Barace (Bacare) with modern Purakkad, there are some who identify it with Vaikom and Vayaskara landing place alternately. The Adarima and Semne of Ptolemy have been identified with Atirampuzha and Chempur respectively. It is not possible to pronounce any conclusive verdict in regard to the validity of these identifications. It is, however, certain that this District must have played a decisive role in the international trade of ancient Kerala. Among the items of export in the ancient period ivory, teak-wood, sandal-wood, apes and peacocks had their place of honour. Considering the fact that the High Ranges of Kottayam District are particularly famous for the above items even today, it may be safely assumed that these might have gone abroad from the forests of this District in the distant past as well. It is worth mentioning that the Marayur Range in the Devikulam Taluk is one of the few places of Kerala where from sandal-wood of good quality is obtained at present.

Moreover, the District might have played its role in the spice trade of ancient period, for such spices as pepper, cardamom, ginger, etc. grew more in abundance in this District than elsewhere in Kerala from very ancient days.

Sangam Age and After

In the Sangam age which comprised the first five centuries of the Christian era Kottayam formed part of Kuttanad—one of the geographical divisions of the land. Some scholars are inclined to identify Kuzhumur, the capital of the early Cheras, with Kumili in the Peermade Taluk of this District. In the post-Sangam period the history of Kottayam is obscure. But by the beginning of the 9th century A.D. which coincided with the rise of Kulasekhara Varman the District came into the limelight. It is significant that Nammalvar (9th century A.D.) has sung hymns in praise of the Vishnu temple of Trikkodithanam (Changanacherry Taluk) which had attained fame by this time as one of the 13 *Divyadesams* or *Pukalpetta Vaishnava Kshetrams of Malainadu*. The temple has been described by him in his *Tiruvaymozhi* as being surrounded by Brahmin habitations resounding with the hymn of the Vedic chants. It may be mentioned in this context that by this time the Aryan immigrants had come from the north and established themselves in select areas of this District and set up their *Gramams*. Ettumanur, Nettasseri, Kumaranellur, Katamuri, Kidangur etc. were among the Brahmin villages so set up. Christianity too had got a firm foot-hold in the District by this time, for there are many churches here which trace their origin to the early centuries of the Christian era.

Political Divisions in the Kulasekhara Age

In the age of the Kulasekharas the Kottayam District formed part of the Kulasekhara Empire (800-1102 A.D.) as is evidenced by the Vazhapalli inscription of Rajasekhara (820-844), the Perunnai and Trikkodithanam inscriptions of Bhaskara Ravi Varman and the Perunnai inscription of Rama Varma Kulasekhara (1090-1102 A.D.). In the age of the Kulasekharas, the area comprising the present Kottayam District was included in three separate *Nadus* or administrative divisions, viz., Nantuzhainad, Munjunad and Vempolinad. The exact boundaries of these *nadus* are not known, but certain broad indications may be given on the basis of available evidence. Nantuzhainad comprised of the Changanacherry and Kanjirapally Taluks, a portion of the Meenachil Taluk, the whole of the High Ranges and also of the Tiruvalla and Chengannur Taluks of Alleppey District. Manjunad included the Kottayam-Ettumanur area and Vempolinad (Bimbalidesa of Sanskrit Literature) the Vaikom Taluk and portions of Meenachil. The inscriptions of the age do not help us to get a connected history of these kingdoms but they contain stray references to the names of some of the rulers and the arrangements made for their administration. All the *Nadus* were subordinate divisions of the Kulasekhara

Empire and they were ruled by feudatory chiefs appointed by the Chera Emperor of Mahodayapuram. The Trikkodithanam inscription dated the 14th regnal year (976 A. D.) of Bhaskara Ravi Varman (962-1019) informs us that Govardhana Marthanda, the ruler of Venad, was appointed to rule over Nantuzhainad also. Apart from a Perunnai temple inscription of the 11th century A. D. which mentions Adichchan Kodai of Manjunad, the Tiruvalla Plates of the early 12th century A. D. make mention of three members of the Manjunad family, viz., Raman Kodai Varman, Iraman Madevi and Kunran Raman, the last mentioned prince being referred to as *Yuva Raja*. All the members mentioned in the latter record are said as to have given donations of land to the Vishnu temple of Tiruvalla for meeting its requirements of oil, food and such other daily offerings. The Nedumpuram Tali inscription of the 17th regnal year (934 A.D.) of the Chera Emperor Goda Ravi Varma (917-1044 A. D.) informs us that a ruler of Vempolinad by name Kothai Iravi was appointed to rule over Nedumpurayarnad (Palghat-Chittur-Alathur area) also. Another ruler of Vempolinad by name Kothai Srikanthan figures as one of the signatories in the Jewish Copper Plate (1000 A. D.) of Bhaskara Ravi Varman. The rulers of Vempolinad are referred to in Sanskrit literature as 'Dambalisas'. It may be mentioned that the Vembanad Kayal (Lake) itself derives its name from Vempolinad.

Rise of Thekkumkur and Vadakkumkur

The kingdom of Vempolinad split itself into the kingdoms of Thekkumkur and Vadakkumkur by about 1100 A. D. In spite of this division, the rulers of both the kingdoms continued to be called indiscriminately "Bimbalisas". Manikantan was another common name used by the Vadakkumkur and Thekkumkur Rajas. The Tiruvalla Copper Plates refer to Ravi Srikanthan, the ruler of Vadakkumkur and Kumaran Iyakkan, the ruler of Thekkumkur as donating lands to the Tiruvalla temple for its daily expenses or for the performance of *pujas*. From the mention of these two separate rulers of Vempolinad in the Tiruvalla Copper Plate, it is clear that the kingdom had already split itself up into Vadakkumkur and Thekkumkur by the early 12th century A. D. The northern portion of the erstwhile Vempolinad kingdom became Vadakkumkur while its southern portion, together with Manjunad and portions of Nantuzhainad, constituted itself into the kingdom of Thekkumkur. Thus both Manjunad and Nantuzhainad lost their separate existence by the beginning of the 12th century A. D.

Vadakkumkur figures in some of the literary works of the 14th century. The *Sukasandesha* of Lakshmidasa composed in the first half of the 14th century and the *Unnunilisesandesam* make specific mention of the Vadakkumkur Rajas and the glories of Kadathuruthi, their capital. The latter poem mentions three illustrious princes of this family, viz., Goda Varma, Iravi Manikantan and Rama Varma. There is also a view that the

anonymous author of the exquisite Malayalam poem, *Unnunilisesandesam*, was himself a Vadakkumkur Raja.*

At the time when the Portugese landed on the Kerala coast in 1498, the kingdoms of Tekkumkur and Vadakkumkur had already begun, to play their part in Kerala politics as the allies of Cochin (Perumpadappu Swarupam), but in due course both the kingdoms became subordinate to Cochin, first under Portugese and later under Dutch influence. In addition to Vadakkumkur and Tekkumkur, the Punjar and Meenachil principalities had also come into existence in the north-eastern part of the District. The history of each of these kingdoms has not come down to us in the chronological order of the line of its rulers but such information as has been culled from indigenous literary accounts and foreign sources is given in the following sections.

Early History of Tekkumkur

Tekkumkur was the most powerful of the kingdoms which flourished in this District. It came to be so called not only because its territories comprised of the southern portions of erstwhile Vembolinad kingdom but also because they lay to the south of the Vadakkumkur kingdom. Its boundaries were as follows: *Illikkal Kodumudi* on the east, *Vembanad kayal* on the west, *Kanakkari kunnu* (1½ Km. north of Ettumanur) on the north and *Kaipatturkadavu* on the south. At its height Tekkumkur was an extensive kingdom which comprised within itself the Changanacherri and Kanjirappally Taluks, a portion of the Meenachil Taluk and the whole of the High Ranges of this District and also the Tiruvalla-Chengannur area of Alleppey District. The Tekkumkur Rajas set up their capital at various places in the course of their chequered history, e.g., Vennimala, Manikantapuram, Taliyil or Tazhathangadi (Kottayam town), Nettasseri etc. The Chempakasseri Rajas secured their home in Kudamalur in the outskirts of Kottayam town thanks to the generosity of the Tekkumkur family.† The hereditary Chief Ministers of Tekkumkur were from the family of Putiyedathu Unniyathiri. Though Tekkumkur was a subordinate ally of Cochin, there were occasional rivalries between the two powers. The kingdom had quarrels with Vadakkumkur also. A Sanskrit *Champu*, *Balarama Vijayam*, written in the 18th century by a Tamil writer, Sitarama, under the patronage of King Rama Varman of Vadakkumkur deals with the war between the Tekkumkur and Vadakkumkur principalities.

Dutch Treaties with Tekkumkur

With the coming of the European powers, Tekkumkur, like other kingdoms of Kerala, was drawn into the vortex of the

* *Sanskrita Sahitya Charitram*, Part II, Vadakkumkur Raja Raja Varma, p. 239.

† See *Alleppey District Gazetteer* for details.

struggle between these powers. Neither the Portuguese nor the Dutch seem to have had any regular factory in the Tekkumkur kingdom. Immediately after the Dutch capture of Cochin (1663) Henrick Van Rheede was called upon to enter into negotiations for a formal treaty with Tekkumkur but he failed in his mission. As enormous quantities of pepper grew in this kingdom, the Dutch Company was anxious to get the friendship of the Tekkumkur Raja. The Dutch representatives succeeded in their efforts and on April 19, 1664 Hustaert reported to Batavia that the Company had obtained the pepper monopoly from Tekkumkur. The formal treaty between the Dutch East India Company and Tekkumkur was concluded on June 16, 1664 after prolonged negotiations carried out by Ludolf Van Coustler.* Under the provisions of this treaty the Raja of Tekkumkur undertook to sell to the Dutch Company all the pepper and cinnamon produced in his kingdom at the rates current in the market from time to time. The Company also secured the monopoly to import and sell opium in the territory of the Raja at agreed rates. The Tekkumkur Raja also undertook not to give shelter to any Roman Catholic priest anywhere in his territory and the Company, in its turn, promised to befriend and favour the St. Thomas Christians of the Malankara Church. It was further agreed that the income derived from the seizure and sale of smuggled pepper, cinnamon or opium should be shared equally between the Dutch and Tekkumkur.

Another treaty was signed between the Dutch Company and Tekkumkur on August 16, 1674.† Henrick Van Rheede took a leading role in the signing of this treaty. It provided that the brigands who had committed atrocities in Cochin and taken refuge in the temple of Kumaranellur in the Tekkumkur territory should be caught and handed over to the Company and that if these operations were to be hindered by other unfriendly chiefs, the kings of Cochin and Tekkumkur and the Company should together wage war against them. The king of Tekkumkur also undertook to remain neutral in case of similar operations by the Dutch or Cochin Raja against rebellious elements who had sought asylum in temples under the authority of the Tekkumkur Raja in territories lying outside his political jurisdiction.

The Memoirs of Gollennesse, the Dutch Commander at Cochin (1735-43), also makes specific mention of certain contracts made between the Dutch Company and the Raja of Tekkumkur on the 16th June 1694 wherein "it is distinctly laid down that pepper must be paid for at such prices and with such commodities and specie, silver or gold, as the bazaar from time to time demands and as can be agreed upon with the traders or ordinary merchants".‡ It is worth mentioning in this context that

* For details of the treaty, See Poonnen, A. *Survey of the Dutch Power in Malabar*, pp. 150-54.

† Rr. T. I. Poonnen, *A Survey of the Rise of the Dutch Power in Malabar*, p. 154.

while the Raja of Vadakkumkur was often hostile in his attitude to Dutch Commercial interests and even connived at the smuggling of pepper from the kingdom by local merchants, the Tekkumkur Raja gave the Dutch preferential treatment. "The only bright spot for the Dutch in the whole of Malabar", says A. D. Gupta, "was the kingdom of Tekkumkur."¹

The letters of Canter Visscher, the Dutch Chaplain at Cochin (1714-21), throw some light on the condition of Tekkumkur and the friendly relations that existed between the Dutch and this kingdom in the early part of the 18th century. Speaking of Tekkumkur, he says "This is called Tekkumkur, and lies beyond the lake called the Broad River. The Rajah and lies beyond the lake called the Broad River. The Rajah possesses a beautiful territory, superior to any other I have yet seen in Malabar. The level part is low, and planted with rice; and in the vicinity of the mountains the land is elevated, and produces pepper, cardamom, and wax in great abundance. This country is also very populous, and possesses good roads and a fresh and pleasant climate. The Bishop Mar Gabriel resides in it, his church and dwelling being situated on a hill, along the foot of which runs a river. The Rajah lives on the other side of the river in the plain, having a neat palace, according to the native fashion. He is very courteous, and as soon as he heard from the Bishop of my arrival, he came with all haste from his country house at five miles distance to visit me, and presented me with two golden bracelets."²

The growing friendship between the Dutch and Tekkumkur alarmed the Zamorin of Calicut. In 1728 he proposed the adoption of a Tekkumkur princess to Calicut with the object of isolating Cochin and checking the Dutch designs in the area. With Vadakkumkur and Tekkumkur in alliance with him the Zamorin was confident of thwarting the aggressive designs of the Dutch and humiliating their vassal Cochin. In 1729 Johannes Bata, the Dutch Resident at Kayamkulam, reported to the Dutch Commandant at Cochin that the Zamorin had sent a message to Tekkumkur through his envoy by name Padmanabha Pattar asking the Raja of Tekkumkur and the Raja of Kayamkulam to attack jointly the Raja of Cochin and thereby help Calicut in the realisation of its aims.

Gollennesse makes the following observations about the conditions in the Tekkumkur kingdom in the first half of the 18th century. "It is a considerable State; it lies between Calicoilan, Berkencoor, the broad river of Carraporam and the hills; it exports much pepper and arrack. The State has 18 marambins (Matampies or noblemen) and two powerful Caimals

¹. Quoted in *Malabar in Asian Trade* Dr. A. D. Gupta, p. 29.

1. *A History of Kerala*, Vol. II, K. P. Padmanabha Menon, pp. 3-4.

(Kaimals—Chiefs) in the east next to the hills called Nawa-cadda and also Nanojattoo Caimals who do not take much notice of his Highness. Most of the pepper is brought up country to the Bazaars of Koon, Serepilly, Irataperha, Erunalur and Irroony, and from there it is fetched by Pandise menchants with their oxen; this is done notwithstanding the contract of 16th July 1664 in and no less will be carried up country than what is required for the sustenance of His Highness's subjects. The king resides at Cottatte (Kottayam); he is gently by nature and his only aim is to keep his State in peace and prosperity. His Highness has always shown good-will towards the Company and although he even now makes, since he has noticed that the Company is determined to take serious steps to make itself master of the pepper trade, open profession of his warm regard for the Company, still it is quite certain that he is of one accord with the other chiefs of Malabar to undermine and reduce the Company's power underhand."¹

Early History of Vadakkumkur

Vadakkumkur kingdom was so called not only because its territories formed the northern portion of the erstwhile kingdom of Vempolinad but also because they lay to the north of Tekkumkur. The legend tracing its origin to the Cheraman Perumal has no historical basis. The kingdom is alternately referred to as Venmalanad, Vempanad, Vempolinad, Venpalinad, Bimbali and Sitasailam in old literary works and as already mentioned, its rulers, like their counterparts in Tekkumkur, were called Bimbalisas. The eastern and western boundaries of Vadakkumkur were the same as those of Tekkumkur, viz., *Illikkal Kodumudi* and *Vembanad Kayal* respectively. It was bounded by Tekkumkur on the south and Alangad on the north. At its height the Vadakkumkur kingdom included the Vaikom-Ettumanur area and a portion of the Meenachil Taluk of Kottayam District, the Thodupuzha, Muvattupuzha and Kunnathunad Taluks of Ernakulam District and the Shertallai Taluk of Alleppey District. It may be mentioned here that the Thodupuzha-Muvattupuzha area originally comprised the Kizhumalainad kingdom with its capital at Karikode in Thodupuzha and it came to be absorbed in Vadakkumkur only by 1600 A. D. in the wake of the adoption of its Raja by the Rani of Vadakkumkur on failure of heirs to the throne.²

¹ Quoted in the *History of Kerala*, Vol. II. K. P. Padmanabha Menon, p. 85.

² Some time about 1530 the Zamorin adopted a prince from Vadakkumkur as the fourth prince of his own family. By adoption the adoptee did not lose his rights in the family of his birth. In Kerala it was one of the means by which the domains of a Raja were extended. This prince was killed in 1550 (K. V. Krishna Ayyar. *The Zamorins of Calicut* pp. 204-205 and foot note).

The Vadakkumkur Rajas were Nairs. The family had a number of *Tavazhis* and as such the kingdom had its capital at different places at different periods of its history, e.g. Kadathuruthi, Mannar (near Kadathuruthi), Kaipuzha, Lalom, Vellilipally, Thodupuzha, Vaikom etc. The Mannar *tavazhi* was the most powerful of the various branches. The Vakayil Kaimal whose ancestral home still exists at Vadayar was the Chief Minister of Vadakkumkur. The Vadakkumkur family had close relations with the Chempakasseri royal houses. A Chempakasseri Raja married a Vadakkumkur prince and Pulincunnu in Kuttanad was given by Raja to his wife. Thus a portion of the modern Kuttanad Taluk also came within the sphere of influence of Vadakkumkur.

In the Portuguese period the Vadakkumkur family produced some able rulers. There were famous warriors and men of letters among them. A Vadakkumkur king by name Goda Varma (16th century) figures in a number of Sanskrit works and he was, by all accounts, a prince of remarkable ability and talents. He is praised for his varied accomplishments in the Sanskrit poem *Bhrugasandesa* or *Bhramarasandesa*. Melpathur Narayana Bhattatiri (1560-1648) who composed the panegyric, *Bimbalisaprasasthi*, in praise of Goda Varma has bestowed lavish encomiums on him. The *Godavarmaya-sobhushana* by Arunagirinatha was written under the patronage of king Goda Varman and it contains a number of illustrative passages in praise of this ruler. The *Pallipattukal* or Church songs of the period contain references to the Vadakkumkur Rajas and the generous help rendered by them to their Christian subjects in the erection of Churches.

Relation between Vadakkumkur and Cochin

The Vadakkumkur kingdom was a vassal of the Raja of Cochin to whom its members were also allied by marriage, but the relations between the two were not always friendly and Vadakkumkur frequently sided with the Zamorin in his wars against Cochin. The conflicts between the two also brought the European powers into the areas. In 1550 there broke out a serious dispute between the two Rajas. The Vadakkumkur Raja or Vaduthala Raja, as he was called in Portuguese records expressed his willingness to abide by the arbitration of the Portuguese Captain. But the Portuguese who were bent upon precipitating a fight in their own interest insisted on the unconditional surrender of the Raja. As the Raja was not willing to do so, war broke out. He mobilised an army of 10,000 Nairs and faced the combined forces of Cochin and the Portuguese. In the battle of Vaduthala (Shertallai Taluk) the Raja was slain and his troops fled in panic. The Portuguese troops marched against the Vadakkumkur capital and set fire to the Raja's palace. But the Vadakkumkur army soon reorganised itself under the new ruler and mounted offensive against the Portuguese. The Portuguese troops suffered heavy

casualties and their captain Franceso de Silva was himself killed in battle. The Vadakkumkur forces promptly took advantage of the situation, invaded Cochin and inflicted heavy losses on the enemy. The Portuguese and the king of Cochin sought asylum within the fort. At this juncture the Zamorin of Calicut and the Raja of Tanur (Vettam) declared their open support to the Vadakkumkur cause and started a large scale offensive against Cochin and the Portuguese. Their army consisting of 1,40,000 Nairs occupied Vaduthala and challenged Portuguese military supremacy. Alarmed at these reverses the Portuguese king recalled the Governor Georges Cabral but his successor Dom Alfonso de Noronha failed to improve Portuguese prospects. The Zamorin effectively maintained his position of supremacy on land. The *Perumpadappu Swarupam Grandhavari* also records that the soldiers (*Amoucos*) of Vadakkumkur decisively avenged their disastrous defeat at Vaduthala by murdering the Cochin ruler Vira Kerala Varma (1537-65) at Putiyakavu on February 10, 1565. The war dealt a fatal blow to the trade of the Portuguese on the Malabar Coast, for the hostility of Vadakkumkur resulted in a stoppage of the supplies of pepper and other spices to the Portuguese at Cochin. It may be mentioned here that the Portuguese referred Vadakkumkur as the 'pepper country' (*Piementa*) as pepper of the finest quality grew here in abundance.

Vadakkumkur and the Dutch

It was the policy of the Dutch Company to maintain friendly relations with Vadakkumkur. This was essential not only because the kingdom bordered on Cochin, the ally of the Dutch but also because it produced enormous quantities of pepper. The Raja of Vadakkumkur was a subordinate ally of Cochin and had supported the reigning *Mutha Tavazhi* branch to capture power in Cochin with Dutch assistance. This helped the Dutch Company in seeking friendly relations with the Vadakkumkur. In March 1665 the Raja of Vadakkumkur entered into a formal treaty with the Dutch according to which the former undertook to be a faithful ally of the Company, to sell exclusively to the Dutch all the pepper and cinnamon produced in his kingdom, to provide store-houses to the Company at select centres and above all, not to allow any Roman Catholic priest to reside in his kingdom.¹ In spite of this alliance with the Dutch the Raja was not very consistent in his loyalty to Cochin for in the wars of the Zamorin against Cochin Vadakkumkur often sided with the Zamorin. Early in the 18th century when Calicut and Cochin were at war the Zamorin even decided on the adoption of two princes and two princesses from Vadakkumkur into his family. The object of this move was to drive a deep wedge between the rulers of Cochin and Vadakkumkur.

¹. Dr. T. I. Poonen, *A Survey of the Rise of the Dutch Power*, pp. 145-46.

The Vadakkumkur Kingdom was an undependable ally of the Dutch. When the Dutch Company in Kerala embarked on a policy of active intervention and territorial expansion, they evolved a plan for the conquest of portions of the Vadakkumkur kingdom as well. But the Dutch plan was upset by the rise of Travancore (Thiruvithamkode) under Marthanda Varma (1729-58) and the defeat of the Dutch forces in the battle of Colachel (1741).

Gollennesse writes as follows about the Vadakkumkur kingdom in the first half of the 18th century.¹ "This State comprises eight provinces called Badeatly. Among these are Taliaparambu, Cardutty, Mangoor, Dallachery, Pudicalu Manatty, Kilinoor, besides the large province of Kismalanadu in which lies the well-known bazaar, Toddopale or Carcotty. These provinces export a considerable quantity of pepper, and of this 1,000,000 candies must be supplied annually to the Honourable Company in accordance with a contract made in 1740, but what we said before in our general remarks regarding the limited power of the rulers in Malabar must be noticed here, for the prince-regent, who owes all to the Honourable Company and who is powerless without the Company's protection, would take care, as it is certainly in his own interests, that the contract is complied with if it were in his power, because His Highness has been given to understand in very significant terms that if he fails to fulfil his promise, the expelled prince will again be made regent.** He has done whatever was in his power but without success. For this reason it has been necessary to raise the price of pepper if we wished to buy it at all. However this expedient will not prove successful, because the natives secure still higher prices by smuggling the pepper."

Canter Visscher who wrote during the same period as Gollennesse observes as follows:—"Berkenkoor lies nearer to Cochin than Porcad, abutting on one side on the great river and on the other mountains. It is the second royalty of the Kingdom and produces pepper, Cardamom and wax."*

¹. *History of Kerala*, Vol. II, K. P. Padmanabha Menon, pp. 122-23

**Here there is an arithmetical error committed by K. P. Padmanabha Menon when he quoted Gollennesse. In 1758 it was calculated that the total produce of pepper in the whole of Travancore including these regions was only 11200 candies of pepper.

† The reference here is to a place coup that took place in Vadakkumkur in 1733. The reigning Raja was assassinated in that year and a civil war broke out. The Dutch had mediated in the quarrel at the request of the heir-apparent.

*. *History of Kerala*, Vol. II, p. 7, K. P. Padmanabha Menon.

The Annexation of Tekkumkur and Vadakkumkur by Marthanda Varma

The reign of Marthanda Varma (1729-1758) marked a crucial phase in the destinies of the Tekkumkur and Vadakkumkur kingdoms. Apart from the fact that their rulers maintained friendly relations with the Dutch, they also helped the kings of Elayadathu Swarupam, Desinganad, Kayamkulam and Ambalapuzha (Chempakasseri) in their wars against Marthanda Varma. When the ruler of Elayadathu Swarupam died in 1736 A. D. the princess of that kingdom escaped to Tekkumkur where she received a cordial welcome at the hands of the Raja. The Dutch promptly championed the cause of this princess even at the risk of precipitating a clash with Travancore. In 1741 Van Imhoff installed the princess as the ruler of Elayadathu Swarupam in defiance of the expressed wishes of Marthanda Varma. In the meantime, the Raja of Vadakkumkur showed his gratitude for the help rendered by the Dutch by granting them a site for the erection of a factory and a fort at Vechur (Vaikom Taluk).

The rulers of Tekkumkur and Vadakkumkur gave active help to Kayamkulam and Ambalapuzha in their wars against Travancore (Thiruvithamkode). Hence after the conquest of these kingdoms Marthanda Varma turned his attention to the subjugation of Tekkumkur and Vadakkumkur. His first target was Tekkumkur. The heir-apparent of the kingdom had advocated a policy of surrender to Marthanda Varma and thereby incurred the displeasure of his brother the reigning Raja. He left the kingdom and sought asylum in Travancore. The prince got into touch with Marthanda Varma and agreed to make a gift of Tekkumkur to him. The news of this secret understanding reached the Tekkumkur Raja. A rumour was set afloat that the mother of the Tekkumkur prince living in self-imposed exile was on her death bed and that she wanted to see her son. An emissary of the Tekkumkur Raja was sent to Travancore to convey the news to the prince. The prince returned home and was soon murdered. There is a view that the assassination of the Tekkumkur prince was brought about by the crafty Ramayyan Dalava (Chief Minister of Marthanda Varma) with the deliberate object of widening the rift between Marthanda Varma and the Tekkumkur Raja and precipitating a crisis. Whatever be the truth of this story, the fact is that the death of the Tekkumkur prince under suspicious circumstances worsened the relations between the two States. The Travancore army under Captain D' Lannoy was set in motion against Tekkumkur territory.

The Tekkumkur army which consisted mainly of Nair *Madampies* and their ill-disciplined feudal levies was no match for D' Lannoy's forces organised and equipped on modern lines. In his hour of trial the Tekkumkur Raja mobilised a large number of Brahmins and put them in the vanguard of his army in the hope that this would deter the Travancore army from decisive action, the killing of Brahmins (*Brahmahatya*)

being considered the most heinous of crimes according to Hindu *Sastras*. The tactics of the Raja did not, however, pay for Ramayyan, the redoubtable Brahmin Dalava, pressed a large body of 'low-caste' fishermen into the fight against the 'high-caste' Brahmins and compelled the caste-conscious Tekkumkur army to take to flight. The Travancore army now won victories in quick succession. In September 1749 Changanacherry and surrounding areas came into the hands of D' Lannoy's forces. The army then proceeded towards Kottayam and sacked the palace and fortress of the Tekkumkur Raja. Faced with this unprecedented crisis Tekkumkur could not offer effective resistance any more and the whole kingdom was annexed to Travancore (December 1749). After the annexation of Tekkumkur Marthanda Varma dedicated his kingdom comprised of "territories between the Tovala fort in the east and the Kavanar river in the west" to Sri Padmanabha (January 3, 1750). From the mention of Kavanar (Meenachil river) as the western boundary of the kingdom so dedicated it may be inferred that the conquest of Vadakkumkur took place only after this event.

The annexation of Tekkumkur made the assault on Vadakkumkur a foregone conclusion. Some time earlier there had been a palace coup in Vadakkumkur and the reigning Raja had been murdered by his junior brother. One of the princes of the family appealed to the Dutch and the ruler of Cochin to mediate between him and the usurper. But there were internal troubles in Cochin during this period and its ruler was therefore not in a position to respond to the call for mediation from the neighbouring State. The Dutch too maintained strict neutrality. The circumstances were thus favourable for Marthanda Varma to interfere decisively in the affairs of Vadakkumkur. The military operations against the kingdom were led by prince Karthika Tirunal Rama Varma himself. Vadakkumkur was conquered ere long without much serious fighting. The reigning Raja fled to the north and sought asylum in the Zamorin's kingdom. He was, however, permitted to return to Travancore at a later date and was given a modest pension. The family still lives at Vaikom.

Rebellion against Travancore

After the capture of the Tekkumkur and Vadakkumkur kingdom Ramayyan Dalava strengthened the defences in the north by raising fortifications along Chengannur, Kottayam, Ettumanur and Kumarakam upto the western Ghats at Kondur and garrisoning all strategic points. These measures stood Travancore in good stead at the time of the great insurrection which broke out in the newly conquered territories in the closing years of the reign of Marthanda Varma. The exiled Raja of Chempakasseri and the dispossessed chiefs of Tekkumkur and Vadakkumkur sought the help of the Cochin Raja in recovering their lost dominions. The Cochin army led by

Paliath Achan and Palliyil Idikkela Menon was joined by contingents raised from the territories of the dispossessed Rajas. In the famous battle of Ambalapuzha (1754) the confederate forces were decisively beaten.¹ Nevertheless, the members of revolt in the northern territories did not die out, for, in several areas, it had assumed the character of a mass upheaval inspired by a lofty spirit of patriotism. On the advice of Ramayyan, Marthanda Varma visited the affected areas and tried to pacify the local population. This did not have the desired effect. The Raja was now determined to crush the rebellion altogether and he took the unprecedented step of seeking the help of Haider Ali of Mysore against his rebellious subjects. When this tactical move of the Raja came to be known all signs of resistance collapsed and peace was restored. Hence the help offered by the Mysore ruler had actually not to be availed of. It may be mentioned that this was a potent cause of the later conflict between Travancore and Mysore.

In the meantime, Marthanda Varma made his position in the north still more secure by entering into treaty relations with Cochin. By the treaty of Mavelikara (1757) the Cochin Raja agreed to live in peace with Travancore. He also gave assurance that Cochin would thereafter have nothing to do with the deposed rulers of Vadakkumkur and Tekkumkur who were formerly his vassals. The terms of the treaty were repeated in the Travancore-Cochin treaty of December 1761 signed during the reign of the Dharma Raja (1758-98). These developments finally shattered all hopes of Vadakkumkur and Tekkumkur regaining their lost independence. The Political hegemony of Travancore over their territories now became a *fait accompli*.

Punjar.

In addition to Tekkumkur and Vadakkumkur, Marthanda Varma brought two more petty principalities in Kottayam District under his sway. These were Punjar and Meenachil. It would be relevant in this context to trace in brief the early history of these kingdoms and the events leading to their subjugation by Travancore. According to tradition recorded by K. P. Padmanabha Menon the ancestors of the Punjar Raja were kings of Pandya and their original home was Madurai.² The Chief of the family who migrated to Kerala was one Mana Vikrama Kulasekhara Perumal. The kingdom was subjected to the incessant onslaughts of the Poligars and Kulasekhara was forced to migrate with his family and treasures to the neighbouring Kerala country. The exact date of the alleged

1. See Alleppey District Gazetteer for details.

2. The story of the origin of the Punjar family given here is based on the account given by K. P. Padmanabha Menon in his *History of Kerala*, Vol. II, pp. 85-91.

migration is not known, but it is believed to have taken place before 364 K.E. (i.e. 1189 A. D.). Having wandered for a few years in north Kerala where he enjoyed the hospitality of certain Rajas and Namboothiris in succession he came to Edapalli. Here Kulasekhara and his wife passed away, leaving their children, nephews and other members of the family to the care of the Edapalli Raja. The Edapalli Raja settled the members of the refugee family in the island of Cochin which belonged to him and conferred certain dignities on them. The *Upanayanam* ceremony of the eldest prince and the *Talikkettukalyanam* of the princesses were duly performed according to Kerala custom. The Edapalli Raja himself married one of the princesses according to the Kerala custom of *Sambandham*. Thus the Punjar family gradually gave up the Tamil way of life and adopted Malayalam customs and manners. However, on the death of the Edapalli Raja, the young princess had to leave Cochin, the new chief being unfriendly to her. The princess proceeded southwards along with others of her family. On reaching Vadakkumkur Kulasekhara Perumal, the senior prince, became sick and he was treated and restored to health by Neytasseri Namboothiri who had entertained the members of the family as his guests.

During his sojourn in Vadakkumkur Kulasekhara came to know that the country known as Punjar lying to the west of the Western Ghats was available for purchase. The territory was under the suzerainty of the Tekkumkur Raja and a few Namboothiri emissaries were sent by Kulasekhara to negotiate the purchase of the tract with the Raja. The people of the area were consulted in the matter and they raised no objection to the proposed deal. The ministers of the Tekkumkur Raja and Punjar chief subsequently met and settled the terms of the transfer. At a later meeting of the Tekkumkur and Punjar Rajas, the territory of Punjar was formally transferred to Manavikrama Kulasekhara with all rights and dignities and the transfer deed was inscribed in a copper plate. Some important persons including the Raja of Edappalli, the Vanchipuzha Pandarathil and a few Namboodiri chiefs acted as witnesses on this occasion. The coronation of the Punjar Raja was also performed at Punjar with due éclat in the presence of the Tekkumkur Raja. Subsequently when the original family line of Pandyan stock became extinct the chief men of Poonjar chose the head of the Sarkara *Kovilakom* (a branch of the Cranganore Raja's family) as their chief with the concurrence of the Tekkumkur Raja. Gollennesse writing in the early 18th century refers to this adoption to the Punjar kingdom. He says:— "In the east of this State (i.e. Tekkumkur) next to the hills, is the principality of the Punjar Perumal, its ruler was adopted from the house of Charkara; much cardamom is found here."

The Punjar principality had a separate existence till it became subject to Travancore during the period immediately

following the annexation of Tekkumkur and Vadakkumkur (1749-51) by Marthanda Varma. Nevertheless, the Punjar Raja continued to possess extensive areas in the High Ranges from Peermade to Devikulam. He had acquired these hilly tracts from Tekkumkur in the 15th century. It was from the Punjar Raja that the English planters obtained vast stretches of land in the High Ranges for tea cultivation in the 19th century. An agreement concluded between Kerala Varma Valia Raja of Punjar and John Daniel Monroe on July 11, 1877 marked the origin of the famous Kannam Devan Hill Concession.

Meenachil

Meenachil was the last of the small principalities to be subdued by Marthanda Varma in this District. The origin of the Njavakkat Karthas, the rulers of the principality, is lost in obscurity. According to local tradition the family was descended from two ladies (Sri Devi and Ambika Devi) of Vengalur in Kumbhakonam who were married and brought to Kerala by the chiefs of the *Swarupams* of Elangallur and Elambrakkat. They gave birth to two sons Sri Vira Damodara Simharu and Sri Vira Rama Simharu. The former is recognised by tradition as the eldest and the first Meenachil chief. The ladies and their descendants lived for some time at a place which came to be called Vengalur after the original home of the family. It was situated at some distance north of Meenachil, but eventually the family moved to Meenachil and set up residence on a plot of ground called Pazhedathumparambu. While there is no historical evidence in support of the above tradition, we find reference to one Etiran Kaviran of Jnavarkkad in a Perunnai temple inscription of the 11th century which perhaps gives a clue to the real origin of the Meenachil family. The inscription records that Etiran Kaviran donated some paddy and land to the Perunnai temple for the feeding of 1000 Brahmins during the annual festival in Kanni (September-October). This must have marked also the beginning of *Sambandham* relationship between the ladies of Etiran's family and Namboothiri Brahmins. It is worth mentioning that the ladies of the Jnavakkat family in Meenachil married only Namboothiri Brahmins till recently. Thus there seems to be ample reason to assume that the Njavakkat family was descended from Etiran Kaviran.

The Meenachil rulers had their Chief Minister from the family of Arakkal Menon and Finance Minister from that of Valappil Menon. Both posts were hereditary, but the families which held them have now become extinct. The Meenachil chiefs had their family feuds with the neighbouring ruling houses, particularly Tekkumkur. Many battles were fought between Meenachil and Tekkumkur forces. Kadapattur near Palai was a major scene of battle.

Meenachil was annexed to Travancore by Marthanda Varma after his conquest of the Tekkumkur principality. He is said

to have taken this step with a view to avenging the help rendered by the Karthas to Tekkumkur in its hour of trial. On the approach of the Travancore army the Meenachil Karthas fled northwards with the other members of the family and sought asylum in the Zamorin's kingdom. This flight is said to have taken place on Meenam 20, 929 K. E. (1754). At the time of Haider Ali's invasion of Malabar in 1766 only two young female members of the family were alive. They left for Travancore with the members of the Zamorin's family from Malabar following the Mysorean invasion. The Dharma Raja granted asylum to the ladies and made suitable arrangements for their maintenance. A residence was built for the Njavakkat family at Mevada near Meenachil and provision was made for their family expenses. The Jnavakkat family had ever since been on the pension list of the Travancore Government.*

Social and Economic Life in the Portuguese and Dutch Periods.

↓ We have dealt so far mainly with the political history of the District. Before we proceed with the narrative, it may be appropriate to give in brief a sketch of the conditions of life that prevailed in the area in the Portuguese and Dutch periods. The Portuguese and Dutch sources give us interesting glimpses of contemporary social and economic life. The over-all picture that emerges is that of a multi-religious society wherein the common people lived in perfect amity and peace with one another, but the weaknesses of a feudal polity and the rigours of caste and social exclusiveness make this picture rather dark at times.

Kerala society in the middle ages had a typical feudal organisation. At the top of the secular hierarchy were the Rajas or chiefs. They came to the throne according to the matrilineal law of succession. Each Raja exercised vast powers and enjoyed innumerable sources of income in his domain, but he owed allegiance to someone superior to himself. Thus the Vadakkumkur and Tekkumkur chiefs in this District owed allegiance to the Cochin Raja. Vischer has observed that all the Rajas subordinate to Cochin had to show respect to him by removing their upper garment in his presence and remaining bare-shouldered till he gave them permission to resume it. Only the Purakkad and Parur Rajas, being Brahmins, had the privilege of being seated in his presence. But the Rajas enjoyed several immunities and privileges in their own kingdoms. Barbosa records that the members of the ruling families did not indulge in formal marriage but they had a number of Nair concubines who were given accommodation in the vicinity of the royal palace and were given regular maintenance allowances. The death of the Raja was followed by a state mourning which lasted for 13 days. During this period no male subject of the

* The account of the Meenachil principality given here is based on the article on the subject by C. Raman Menon in the *Kerala Society papers*, Vol. II, Series, 10, pp. 225-33.

kingdom was allowed to take an hair-cut or a shave or to chew betel. Non-vegetarian food was also tabooed during this period of mourning. Those who violated such restrictions were given exemplary punishments by the royal officials.

The Hindu society of the age was organised on the basis of the caste system. The Namboothiris were at the apex of the caste hierarchy. They alone married the ladies of the ruling families. They enjoyed the monopoly of Government offices and dignities in the state and were held in the highest esteem by the ruling chiefs. As only the Namboothiri Brahmins were well-versed in the *Sastras*, it was their prerogative to give judgements in all important cases. The penal code was extremely severe in its application to the lower castes, but the Brahmins were exempted from its provisions and punished only with loss of caste even for the worst of crimes. Moreover, being the trustees of all the major temples and owners of vast landed properties, they had a privileged status in society. Next to the Namboothiris the Nairs had a dominant place in public life. The more aristocratic among them were employed as ministers and captains of war. The Nairs as a caste formed the core of the fighting force, their traditional occupation being war. They always appeared in public with sword in hand. It was also their privilege to be employed as scribes (*Menons*) to take down the letters or oral orders of the Rajas and other high officials with an iron style on *Olas* or to record public affairs. The Nair women enjoyed a large measure of freedom. They dressed themselves in the best of clothes and thronged public places in the company of their husbands. The system of polyandry prevailed among them. In spite of the high social position occupied by the Nairs, their economic condition was far from satisfactory.

The members of the caste inferior to the Nairs were subjected to manifold social disabilities. Unapproachability and untouchability existed in a dreadful form. A Namboothiri who happened to be 'seen' by a Nayadi was considered to have been polluted. The Pulaya had to keep a distance of 60 feet from a Nair. The Nair nobles who walked along the public roads were preceded by an attendant who shouted "PO PO" (Get away, Get away) so that no person of low caste would ever pollute them even by an accidental encounter within the prohibited distance. If a person of low caste failed to make way for Nairs on such occasions, he was put to death with the connivance of the officers of the king. The upper caste Hindus who were polluted under any circumstances had to take a dip in a tank or river and only thereafter could they take any food. Mention may also be made in this context of the primitive custom of *Pulappedi* or *Mannappedi* according to which the members of the lower castes like Pulayas, Mannans etc., enjoyed the privilege of roaming about and molesting women of the Nair caste in certain months of the year. The custom was that those women who were carried away by Pulayas or Mannans or at least polluted by their touch or even hit by a stone or stick

thrown at by them were treated as outcastes or mercilessly put to death by their own kith and kin.

In view of the pre-eminent position held by the Syrian Christians in the public life of the District, it would be relevant to the scope of this Chapter to give a separate account of the way of life and customs of this community. The Syrian Christians of the age were noted for their sturdy physique and smart appearance. They were a highly enterprising and intelligent people. They showed a high degree of respect for their parents and elders and seldom sat in their presence. The foreign writers of the age testify to their courteous manners and dignified bearing. Unlike the Hindu women of the age, the Syrian Christian women were fully dressed covering the upper part of their body. They wore a large number of gold and silver ornaments. The Syrian Christian male resembled his Nair counterpart in appearance for he too wore the tuft and the ear-ring. Only the very old among them or those who went on pilgrimage to Mylapore had recourse to hair-cut. Like the Nairs, the Christians also underwent a regular course of military training in the *Kalaries*. They moved about in public with a sword and shield in hand and did so, to the embarrassment of foreign missionaries, even when they attended the church for prayer. The Portuguese and the Dutch enlisted the Syrian Christians in large numbers in their armies. In spite of their training in arms they were generally peace-loving.

The Syrian Christians engaged themselves in agriculture, trade and commerce. They cultivated coconut, pepper etc., in the compounds of their houses and traded in these commodities on an extensive scale. They were honest in their business transactions and seldom committed fraud. A peculiar feature of their domestic life was the preference for vegetarian food. Their main dishes were rice, curry and milk. Sugar, butter and salted fish were served on festive occasions or while entertaining guests. Beef eating had not come into vogue. The Christians as a community were not addicted to liquor during this age. While only the members of the lower strata of Christian society drank toddy and arrack, the upper classes took only milk. All civil disputes among them were settled through the mediation of the church but in criminal cases the authority of the Raja was supreme.

The Syrian Christians followed several Hindu customs and manners as well. They had belief in astrology and witchcraft. They took to purificatory bath. Untouchability and caste distinctions were observed. They also took part in Hindu celebrations connected with Onam. The system of trial by ordeal (*Satyapariksha*) was prevalent among them. The Synod of Diamper (1599) issued a series of ordinances to wipe out all traces of Hindu influence from among the Christians. Nevertheless, they did not achieve the desired objective in full. The Christians continued to subscribe to the age-long notions of

caste superiority as is testified to by the evidence of Canter Vischer (1717-23). The Dutch Chaplain says, "It seems that they keep very strict genealogical records and they will neither marry nor in any way intermingle with the new low caste Christians being themselves mostly *Castade Nairros*, that is, nobility of the Nair caste, in token of which they generally carry a sword in hand as a mark of dignity."*

The relations between the different communities inhabiting the land were on the whole friendly. There was no religious rancour of any kind. The Hindu rulers of the age followed an enlightened policy of religious toleration and gave facilities to the Christian missionaries to carry on proselytising activities. The Vadakkumkur and Tekkumkur Rajas helped substantially in the progress of Christianity in their kingdoms by donating lands and timber free of charge for the erection of churches. The innumerable churches and temples standing in close proximity to one another in different parts of the District even today proclaim the exciting story of the mutual trust and goodwill in which the members of the different communities lived and worked through the centuries.

Kottayam during the reign of the Dharma Raja.

We may now resume the narrative of political events. The reign of the Dharma Raja (1758-1798) saw the consolidation of the territorial gains made by Marthanda Varma. The Kottayam District of today then formed part of the *Vadakkemukhom* or Northern Division, one of the three Divisions into which the Raja had divided his kingdom. The period of the Dharma Raja's reign was one of unusual stress and strain for the newly expanded State of Travancore as it had to live under the shadow of the Mysore menace. Haider Ali and Tipu Sultan had been waiting for an opportunity to settle accounts with Travancore. Hence the Dharma Raja bestowed special attention on strengthening the defences in the northern part of the kingdom. The Kottayam District had a key place in the new defence system built up by Chief Minister Raja Kesava Das and Captain D' Lannoy.

Apart from this, the Kottayam District afforded asylum to a number of refugee princes who left Malabar in the wake of the Mysore invasion. The royal family which lives with its seat at Mariapally in this District takes its origin from the members of the Chirakkal family (Kolathiri) who came from north Malabar during this period. Similarly a branch of the Pazhancheri or Aliyakot Kovilakam, Parappanad, which was originally given asylum at the Valiakoikal palace, Trivandrum was settled in 1790 by the Dharma Raja at the Neerazhikettu palace of the old Tekkumkur Raja at Changanacherry. This family later on shifted its residence to the nearby Lekshmipuram Kottaram (1812) constructed for its members by Rani Lekshmi

* *History of Kerala*, Vol. II, K. P. Padmanabha Menon, p. 41,

Bai. It may be mentioned that the famous poet Kerala Varma Valia Koil Tampuran belonged to this palace. Moreover, the royal family which lives at present, with its seat at Pallom in Kottayam Taluk, is an offshoot of the Aliyakot branch which set itself up at Changanacherry.

Kottayam District won a pre-eminent place in the cultural life of the Travancore court during the Dharma Raja's reign. The main reason for this was the migration to Trivandrum of Ramapurathu Warriar, the famous poet of Vadakkumkur, following the annexation of that territory by Marthanda Varma. He adorned the court of the Travancore Raja for several years. Warriar has immortalised himself in the history of Malayalam literature by his famous literary compositions, the *Kuchelavrutham Vanchipattu* and the *Bhashashtapati*.

Malayali Memorial (1891) and other Agitations.

The Kottayam District has played its role in all the political agitations of modern times. The "Malayali Memorial" agitation which heralded the commencement of the struggle for democratic rights in Travancore may be said to have had its origin in Kottayam. The Memorial which was presented to the Maharaja Sri Mulam Tirunal on January 1, 1891 was drafted at a public meeting held in the Kottayam Public Library. The meeting was convened on the initiative of leaders like Kandathil Varghese Mappila and G. P. Pillai. The "Malayali Memorial" was formally presented to the Maharaja by a deputation of 6 members chosen at the meeting with K. P. Sankara Menon as the leader. The "Explanatory Memorial" which was later submitted to the Maharaja on July 3, 1891 was also given shape to at a meeting held in the same Library. This was also formally presented by a six man deputation chosen for the purpose with G. P. Pillai, K. P. Padmanabha Menon, M. K. Padmanabha Pillai, Syriac Nidhiri, Kavalam Nilakanta Pillai and Sivan Pillai as members. It is worth mentioning in this connection that the "Malayali Memorial" which sought to secure better representation for educated Travancoreans in the Travancore civil service as against Tamilians from outside marked the emergence of the educated middle class as a force in the public life of Travancore. The event marked the beginning of the modern political movement in the State.

Another significant agitation of the early days was the one organised against the reform of the Travancore State Legislature carried out in 1920. It was a strictly constitutional agitation. Meetings of small groups were held in various parts of the State in order to register public dissatisfaction at the inadequacy of the reform and to request the Maharaja to reconstitute the State Legislature with an elected majority. The leader of this constitutional agitation was Changanacherry Parameswaran Pillai who hailed from this District. As a result of this agitation the Legislature was reconstituted in

1922 with an elected majority, 28 of the 50 members being elected non-officials.

In the meantime, a movement aimed at the achievement of equality of citizenship (*Powrasamatwawada Prakshebbhanam*) was being sponsored by the backward classes among the Hindus with the powerful backing of the Christian and Muslim communities. The agitation was led by leaders like E. J. John and T. K. Madhavan. It was in response to the representation made by the leaders of this movement that two separate Revenue and Devaswom Departments were created in Travancore in 1922 by the bifurcation of the existing Land Revenue Department and *Avarnas* and non-Hindus were offered appointments in the new Revenue Department. It may be mentioned that till then non-Hindus and non-caste Hindus alike were being denied appointments in the Land Revenue Department on the ground that they would not be able to enter the temples for their management. The new measure put an end to this unfair discrimination and ensured equality of opportunities for all classes of subjects to the limited extent possible at that time.

Vaikom Satyagraha.

An epic struggle that took place in this District in the early twenties was the famous Vaikom Satyagraha (1924-25). It was started as part of the great movement for eradication of untouchability. It may be noted in this context that the Harijans and other backward classes in Travancore were not only denied entry into temples but even access to the approach roads leading to them. Nevertheless, public opinion in the State had expressed itself clearly against the continued observance of untouchability in any form. The movement for social equality and justice received an impetus from the activities of Sri Narayana Guru and the work of communal organisations like the *Nair Service Society* and *Sri Narayana Dharma Paripalana Yogam*. The Indian National Congress which had by this time intensified its activities in Kerala also championed the cause of the Harijans and campaigned for the early eradication of untouchability. T. K. Madhavan who was one of the leading political figures of the day threw himself heart and soul into the movement. He attended the Coconada Congress (1923) and enlisted the support of Gandhiji for the great cause. Madhavan's immediate aim was to get the approach roads to temples opened to the *Avarnas* as he considered such a step as the *sine quanon* for the successful conduct of the bigger campaign for temple entry itself. Vaikom the seat of the celebrated Siva temple, was chosen as the venue of the symbolic Satyagraha to be started on this issue.

The historic Vaikom Satyagraha began on March 30, 1924 under the auspices of the Kerala Provincial Congress. It attracted the attention of people in all parts of the State and the country. Mahatma Gandhi himself blessed the venture

and extended his full moral support to the Satyagrahis. Kerala leaders like T. K. Madhavan, Mannath Padmanabhan, K. P. Kesava Menon, Changanacherry Parameswaran Pillai, C. V. Kunhiraman, M. N. Nair, A. K. Pillai, K. Kelappan, George Joseph and Alummottil Channar, (A. K. Govinda Das) actively guided the Satyagraha. All India leaders like C. Rajagopalachari, S. Srinivasa Ayyangar, Swami Sradhdhanand, Acharya Vinobha Bhave and E. V. Ramaswami Naiker also visited Vaikom and gave encouragement to the Satyagrahis. A group of Akalis from the Punjab came down to Vaikom and set up a free kitchen for the benefit of the volunteers. The Satyagrahis had to suffer untold hardships in view of the stringent measures adopted by the police to suppress the movement. They were arrested in batches and sentenced to varying terms of imprisonment. Among the leaders who courted arrest the names of K. P. Kesava Menon, T. K. Madhavan and A. K. Pillai deserve special mention.

One of the highlights of the Vaikom Satyagraha was the "*Savarna Jatha*" organised by the Caste Hindus under the leadership of Mannath Padmanabhan. The members of the Jatha which started from Vaikom to Trivandrum (Thulam 16, 1100, i.e. November 1, 1924) received a rousing reception at the hands of the common people all along the way. They carried with them a placard bearing the slogan "Freedom of travel is the birth-right of all citizens." At Trivandrum the leaders of the Jatha met the Maharani Sethu Lakshmi Bai (November 12, 1924) under the leadership of Changanacherry Parameswaran Pillai and presented a mass petition signed by 25,000 persons requesting the Maharani to take immediate steps for the eradication of untouchability. On March 9, 1925 (Kumbham 26, 1100) Mahatma Gandhi himself visited Vaikom and held discussions with the Police Commissioner and other State officials on the terms for the early termination of the Satyagraha. The discussions bore fruit and the approach roads to the Vaikom temple were thrown open to all Hindus, irrespective of caste. The boards which were put up at the entrance of these roads banning admission to the *Avarnas* were removed.

Tiruvarpur Satyagraha.

Though the Vaikom Satyagraha ended in a creditable victory, the restrictions on the entry of the *Avarnas* into the approach roads leading to temples in other parts of the State still continued. Hence similar Satyagrahas were organised in other select centres as well. Tiruvarpur, in the suburbs of Kottayam, was the venue of one such Satyagraha. C. Kuttan Nair and C. K. Kunhikrishnan who led the Satyagrahis here were man-handled by some of the hooligans of the locality and the situation in Tiruvarpur became tense. In October, 1927 Gandhiji again visited Travancore. A deputation of Congress leaders under T. K. Madhavan met him at Alleppey and acquainted him of the situation in Tiruvarpur and other places where

the *Avarnas* were still being denied entry into the approach roads to temples. Gandhiji denounced the continuance of such restrictions as an infringement of the terms of his earlier agreement with the State authorities on the issue of the Vaikom Satyagraha. His public pronouncement in this regard had the desired effect. The approach roads to temples at Tiruvarpu and other places in Travancore were before long thrown open to all Hindus, irrespective of caste, under the orders of the Travancore Government.

Agitation for Responsible Government.

The "Nivarthana" agitation of the early thirties had considerable support in this District. The movement had the limited objective of securing adequate representation for the non-caste Hindus, Christians and Muslims in the State Legislature, wherein to the chagrin of these communities, the Nairs held seats far in excess of their population strength. This objective having been realised the leaders of the movement organised the Travancore State Congress (February 1933) to fight for the broader objective of responsible government for Travancore. The Kottayam District was one of the strongholds of the agitation carried on under the auspices of the State Congress for the achievement of this goal. Among the leaders of the State Congress from this District in its early days special mention may be made of A. J. John, Acchamma Cherian and P. J. Sebastian. Changanacherry Parameswaran Pillai a retired High Court Judge, joined the State Congress in the turbulent days which followed the arrest of the State Congress leaders like Pattom Thanu Pillai and T. M. Varghese (August 26, 1938). The Travancore Government with Diwan Sir C. P. Ramaswami Ayyar at the helm of affairs resorted to a series of repressive measures to crush the movement. Orders were issued stopping the pension of Changanacherry Parameswaran Pillai. The *Malayala Manorama of Kottayam*, was banned for its open support to the Congress causes. Puthupalli in the suburbs of Kottayam was one of the scenes of police firing in the State during the agitation.

Recent Constitutional Developments.

The agitation for responsible Government in Travancore ended in triumph in August 1947 with the exit of Sir C. P. Ramaswami Iyer from the scene. Elections to a Constituent Assembly for Travancore were held in February 1948 on the basis of adult franchise. The State Congress obtained a thumping victory at the polls. A. J. John, a prominent State Congress leader from this District was elected as the President of the Constituent Assembly. But as India as a whole was soon going to have its own constitution embracing the States as its constituent units, the Constituent Assembly of Travancore decided to function as a Legislative Assembly and the first

popular Ministry of the State under the Chief Minister-ship of Pattom Thanu Pillai assumed office on March 24, 1948. The Thanu Pillai Ministry fell on October 17, 1948 owing to internal dissensions in the Congress Party. The T. K. Narayana Pillai Ministry which replaced the Pattom Ministry on October 22, 1948 included among its members A. J. John who resigned the Speakership of the Assembly to accept ministerial office. A. J. John functioned as a Minister for some time also in the C. Kesavan Ministry which assumed office on February 28, but was dropped at a later stage when it was reconstituted. Following the General Elections of February 1952, A. J. John was elected the leader of Congress Party in the Travancore-Cochin Legislature Assembly and formed a Ministry with the support of the Tamilnad Congress, but the John Ministry fell in September 1953 in the wake of a no-confidence motion passed by the Legislative Assembly, though it continued as a Care-taker Ministry till the midterm elections of February 1954. The John Ministry resigned office following the failure of the Congress to strengthen its position at the polls. A. J. John was a member in the Panampalli Ministry which ruled the State from 1955 to 1956. He was later appointed as Governor of Madras and died in harness.

In the General Election of 1957, a Communist Ministry headed by E. M. S. Namboothiripad came to power. This ministry was dismissed by the President of India consequent to an all Kerala agitation in which this District also figured prominently. In February 1960 a Congress-P. S. P. Coalition Ministry was formed. It also fell in September 1964 due to internal dissensions. The dissidents formed a new party under the name of Kerala Congress which has its stronghold in this District.

Cultural Contributions of Kottayam.

Kottayam has its place of honour in the cultural map of Kerala. It is in the field of literature that the District has made the most significant contributions. The rulers of Vadakkumkur and Tekkumkur were generous patrons of learning. According to one school of thought the *Unnini-sandesam* the exquisite Malayalam poem written by an anonymous author was composed by a Vadakkumkur Raja, though there is no conclusive evidence in support of this view. In the 18th century the District produced Ramapurathu Warriar (1703-53) one of the celebrated names in Malayalam literature. Warriar's *Kuchelavrutham Vanchipattu* which deals with the story of Kuchela is one of the best poems in the language. A devotional work of exquisite charm, it has given to Ramapurathu Warriar an immortal name among the greatest poets in Malayalam.

The Christian missionaries working in the District in the 18th and 19th centuries enriched Malayalam literature by their valuable works. One of the most interesting and valuable

works in Malayalam is the *Varthamana Pusthakam* or *Travel to Rome* (1778) written by Paremakkil Thoma Kattanar (1740-99). It is the first travelogue in Malayalam and is noted for the authors' shrewd observations on men and affairs. The C. M. S. Missionaries who made Kottayam the centre of their activities compiled several works in Malayalam. Rev. Benjamin Bailey who founded the C. M. S. Press, Kottayam (1821) published in 1846 a Malayalam-English Dictionary. Rev. Richard Collins who was the Principal of the C. M. S. College, Kottayam published a Malayalam Dictionary of his own in 1865.

A leading Malayalam writer of the District who flourished in the course of the 18th century was Vaikom Pachu Mathatu (1814-1883). He wrote in 1863 a short history of Travancore a pioneering work in the field. He is also remembered for having published in 1870 a short Autobiography, also the first of its kind in Malayalam.

In the closing decades of the 19th century and the beginning of the 20th century Kottayam shot into the limelight as the nerve centre of all literary and cultural activities in the erstwhile Travancore. Kottarathil Sankunni (1855-1937), the celebrated author of the '*Aithihyamala*', was a leading literary figure of Kottayam. Kandathil Varghese Mappila (1858-1904) who founded the *Malayala Manorama* (1890) was the patron of all promising young writers of the age. Kerala Varma Valia Koil Tampuran (1845-1914) who was born at Lakshmi-puram palace, Changanacherry was actively associated with him in all his literary and cultural activities. The *Kavi Samajam* founded in 1892 on the initiative of these stalwarts developed later into the *Bhasha Poshini Sabha* and provided a common forum for the writers of Kerala. Kandathil Varghese Mappila himself composed several works of literary merit. His *Ebraikutty* is one of the earliest of modern dramas in Malayalam. Its value lies in the fact that it incorporated some of the features of the English Drama. Varghese Mappila also translated Shakespeare's *Taming of the shrew* into Malayalam with the title *Kalahinidamana*. K. C. Mammen Mappilai who guided the *Malayala Manorama* for nearly 50 years (1904-1953) was also a leading writer of the District in modern time. Kattakayathu Cherian Mappila the author of the poem *Sri Yesuvijayam* written in *Mahakavya* style, also deserves mention among the prominent writers of the District. Kottayam is associated with some of the leading names in present day Malayalam literature. Vaikom Muhammed Bashir, Vadakkumkur Raja Raja Varma, Ponkunnam Varkey and Karur Nilakantha Pillai deserve mention in this context. K. P. S. Menon, former Indian Ambassador to the Soviet Union and a leading writer in English, also hails from this District. Thus the contribution of Kottayam to the literary heritage of Kerala is by no means insignificant.

CHAPTER III

PEOPLE

Total Population according to Sub-divisions

According to the 1971 Census the total population of the Kottayam District is 2,085,134. Kottayam gets the ninth rank in population among the Districts of Kerala and the proportion of the population of the District to the total population of the State is 9.86%. The details of the distribution of population are given below:—

Rural and Urban Population, 1971			
	Persons	Male	Females
TOTAL	2,085,134	1,054,965	1,030,169
Rural	1,871,990	947,139	924,851
Urban	213,144	107,826	105,318

The Taluk-wise figures of the rural and urban population as per 1971 Census with sex-wise details are also given below:—

Taluk-wise Population figures, 1971				
Taluk		Persons	Males	Females
Vaikam	Total	252,288	125,954	126,334
	Rural	232,274	116,099	116,175
	Urban	20,014	9,855	10,159
Kottayam	Total	497,156	249,981	247,175
	Rural	421,727	211,919	209,808
	Urban	75,429	38,062	37,367
Changanacherry	Total	265,947	132,583	132,764
	Rural	216,802	108,383	108,404
	Urban	48,545	24,195	24,350
Kanjirapally	Total	172,360	87,808	84,552
	Rural	127,859	64,857	63,002
	Urban	44,501	22,951	21,550
Poormede	Total	146,841	74,714	72,127
	Rural	146,841	74,714	72,127
	Urban	..	..	..
Udumbanchola	Total	264,913	137,488	127,425
	Rural	264,913	137,488	127,425
	Urban	..	..	..
Meenachil	Total	351,879	176,856	175,023
	Rural	331,606	166,564	165,042
	Urban	20,273	10,272	9,981
Devikulam	Total	134,350	69,581	64,759
	Rural	129,968	67,110	62,858
	Urban	4,382	2,471	1,911

Density of Population

According to the Census of 1971 the density of population per sq. kilometre in Kerala comes to 549 persons as against 435 in 1961. The density in Kottayam District is only 326 persons per sq. km., the figures for the rural and urban areas being 298 and 1,895 respectively. Kottayam is the least populous among the Districts of Kerala in regard to density of population.

Sex Ratio

Kottayam gets the lowest rank among the Districts of Kerala in regard to the sex ratio. There are only 976 females in this District for every 1,000 males. This is less than State average of 1,016.

The following statement shows the changes in the proportion of sexes (females per thousand males) in the District from 1901 to 1971.

Proportion of the sexes 1901-71
(Females per 1,000 males)

Year	Total	Rural	Urban
1901	951	951	950
1911	948	948	940
1921	938	935	916
1931	941	943	912
1941	946	947	937
1951	970	974	941
1961	963	963	967
1971	976	976	977

The statement below gives the sex-ratio by Districts for both rural and urban areas of the State.

Sex ratio for 1961 and 1971
Number of females per Thousand males

State/District	Total		Rural		Urban	
	1961—1971	1961—1971	1961—1971	1961—1971	1961—1971	1961—1971
KERALA	1,022	1,016	1,027	1,020	991	997
Cannanore	1,035	1,017	1,041	1,019	1,010	1,008
Kozhikode	992	991	995	990	983	995
Malappuram	1,057	1,041	1,057	1,042	1,056	1,031
Palghat	1,077	1,056	1,084	1,062	1,024	1,021
Trichur	1,093	1,081	1,097	1,083	1,065	1,067
Ernakulam	997	983	1,012	994	944	955
Kottayam	963	976	963	976	967	977
Alleppey	1,027	1,028	1,030	1,030	1,013	1,020
Quilon	996	1,001	999	1,002	951	988
Trivandrum	1,005	1,008	1,013	1,012	984	996

Growth of Population and connected problems

As in other Districts of the State, there has been a steady growth of population in Kottayam District since the turn of century. The population of the District has recorded an increase of 264.79% during the period 1901 to 1961. In the decade 1961-71 alone there has been an increase of 20.78% in the population of Kottayam. A statement showing the percentage increase in population during each of the decades from 1901 to 1971 is given below:—

Percentage variation of population 1901—1971

Decade	Total	Rural	Urban
1901—11	264.49	253.33	420.08
1911—21	17.79	18.93	1.78
1921—31	16.03	12.38	75.59
1931—41	36.92	36.85	37.69
1941—51	21.77	21.91	20.31
1951—61	22.55	18.16	68.67
1961—71	30.52	34.10	4.16
	20.78	19.93	28.81

Considered Taluk-wise, the Udumbanchola and Peermade Taluks show the highest percentage increase in population since 1921 and Changanacherry the lowest.

The causes of the growth of population in Kottayam District are not different from what they are in other parts of the country. The primary cause of the high population growth is the increase in the expectation of life in India. In 1951 it was estimated at 32.45 for males and 31.66 for females and it has been estimated at a little more than 45 in 1961. The average expectation of life in India as a whole has increased every year by more than an year. This increase is due to various reasons like better control of epidemics, massive B. C. G. campaign against tuberculosis, improvement in public health and sanitation etc. Naturally therefore there has been a decrease in death rate and corresponding growth in population all over the country.

Apart from the general causes mentioned above the growth of population in Kottayam may also be ascribed to the high fertility of the soil, particularly in the hilly Taluks, which attracts immigrants from other parts of the State and outside. The possibility of establishing rubber plantations has attracted many people. Moreover, the successful campaign against Malaria has rendered vast portions of the High

Range areas fit for cultivation and human habitation in recent years. People from the interior parts of the Taluk have therefore settled in large numbers in these areas, e. g., Udumbanchola and Peermade. Government have also been following a systematic policy of encouraging colonisation of select areas of the High Ranges by people from the low country. There are also a large number of plantations and estates in the Peermade, Udumbanchola and Devikulam Taluks of this District and they have attracted immigrant labourers, particularly from the Tamil region of Madras State. These Tamil labourers from mostly a floating population. As for emigration, it cannot be said that there has been organised movement of people to areas outside the District. However, there are individual cases of families going out to North Malabar and other areas in search of land for cultivation.

Distribution of Population between Rural and Urban areas

The majority of the population of the Kottayam District live in rural areas. Out of a population of 2,085,134 in 1971 only 213,144 live in urban areas. The urban area in this District comprises of seven towns of which four are municipal towns and three non-municipal towns. The municipal towns are Vaikam, Kottayam, Changanacherry and Palai and the non-municipal towns are Ettumanur, Kanjirapally and Munda-kayam.

The concept of the town has changed at successive censuses and it is therefore difficult to compare the urban population in one census year with that in another. In the Census of 1951 there were 13 towns in this District because all municipal towns and conservancy towns were then considered as towns. In the Census of 1961 a new definition of town was adopted and applied uniformly throughout India. The new criterion required in the case of places other than municipalities, cantonments and civil lines are that there should be a minimum population of 5,000, density of not more than 1,000 persons per sq. mile and at least 75 per cent of the male population should be engaged in non-agricultural pursuits. Judged by these standards six place in this District viz., Thalayola-parambu, Erattupetta, Ponkunnam, Munmar, Azhutha and Vandiperiyar which were towns in 1951 ceased to be so and were classified as villages in 1961. Consequently, the percentage increase in urban population in this District during the decade 1951-61 is negligible when compared with what has been registered in other Districts. The urban population in Kottayam increased only by 4.16 per cent during this period while in 1961-71 it marked a tremendous increase of 28.81. This increase in urban population has caused subsequent fall in the percentage increase in rural population. In 1951-61 the percentage increase of the rural population of this district was 34.20 whereas in 1961-71 it fell to 19.93. The percentage decade variation of the district compared with the State is as follows:

Percentage increase in population

State/District	Total population (1971)	Percentage increase in population			
		Total		Urban	
		1951-61	1961-71	1951-61	1961-71
KERALA	21,347,375	24.76	26.29	22.40	39.89
Kottayam	2,085,134	30.59	20.78	34.20	4.16

Distribution of population on the basis of mother tongue

Malayalam is the predominant language spoken by the people of the District. Tamil is the language which is next in importance. There are Tamil settlers in the Devikulam, Udumbanchola and Peermade Taluks which comprise the High Ranges of this District. Tamil is the mother tongue of a large section of people living in these areas. The extent of bilingualism is not, however, significant enough to deserve any detailed analysis. The following statement furnishes the 10 important languages of the District according to the Census of 1961.

Mother Tongue	Total Speakers
Malayalam	1,550,336
Tamil	174,088
Telugu	3,599
Konkani	1,735
Kannada	1,288
English	546
Thulu	396
Hindi	262
Urdu	100
Adi Dravida	95

Difference in Dialect

Kerala is broadly divided into three regional dialects, viz., the southern dialect, the middle dialect and the northern dialect. The Kottayam District falls within the area where the middle dialect is in vogue. The distinguishing feature of the middle dialect is that it contains a large admixture of Sanskrit words. As in the case of other languages there are differences between the colloquial language spoken by different classes of people in the District and the written dialect in Malayalam. A distinction between the upper class dialect and lower class dialect is also possible. The Scheduled Castes who have lived for centuries in illiteracy and social isolation speak an unrefined form of Malayalam which reveals certain peculiarities in pronunciation and syntax. The hill tribes of the District speak a kind of primitive dialect in Malayalam or Tamil which is unintelligible to the vast majority. The Karavazhis speak a primitive Tamil dialect with many Malayalam words and

phrases. The Kochuvelans speak Malayalam with a peculiar assent which makes it difficult for others to understand them. The Kurumbas speak a dialect of Tamil while those in the Anchanad valley speak a very unintelligible form of Malayalam. The Mala Kuravans speak a crude dialect of Malayalam with many Tamil phrases. Similarly the Mala Pandarams speak a poor dialect which is a mixture of Tamil and Malayalam words and phrases. The Palliyar speak a poor dialect of Tamil with many Malayalam words and phrases. The other tongue of the Uralis is also a primitive dialect of Tamil and Malayalam. It may however be mentioned that the difference in dialects spoken by different classes are narrowing down in recent years owing to the growth of communication and the spread of education.

Scripts Used

The modern Malayalam script is in vogue all over Kerala. It has developed out of the *Grandha* script or *Arya Ezhuthu* which was popularised by Thunchathu Ezhuthachan who lived in the 17th century A. D. The monopoly of the Brahmins in using *Grandha* script gave way to the reformed script in course of time when the Malayalam language began to be popularly used by other sections of the society. It may be pointed out that the oldest alphabet current in Kerala was *Vattezhuthu*, otherwise called *Nanammonam*, which was in vogue even before the 8th century A. D. The increasing popularity of the *Grandha* script resulted in the decline of *Vattezhuthu*.

Religion and Caste

The most important religious communities of the District are the Hindus, the Christians and the Muslims. According to the Census of 1971 out of a total population of 2,085,134 in Kottayam District the Hindus number 1,014,039, the Christians 978,553 and the Muslims 92,250. The above figures represent 48.6 per centage of the total population in the case of the Hindus, 46.8 per centage in the case of Christians, and 4.5 per centage in the case of Muslims. The Kottayam District has the largest Christian population among the Districts of Kerala. Apart from the major communities mentioned above there are 12 Sikhs, 3 Jains and 272 other religionists. The details of the distribution of population according to religion are given in the following table.

Distribution of population by religion—1971

Religion	Total
All religions	2,085,134
Hindus	1,014,039
Christians	978,553
Muslims	92,250
Sikhs	12
Buddhists	Nil
Jains	8
Others	272

Hindus

The Hindu community in this District, as elsewhere in the State, is organised on the basis of the caste system. The Brahmins who are at the apex of the caste hierarchy form only a small minority of the Hindu population. They come under two broad divisions—Indigenous and Non-indigenous Brahmins. Indigenous Brahmins are the Namboothiris. They live mainly in Changanacherry, Kottayam, Chengannur and Meenachil Taluks where they number only a few hundreds. The Tamil Brahmins and the Gowda Saraswaths (Konkanis) are the chief sects among the *Paradesi* or non-indigenous Brahmins. While the former may be seen in all the Taluks, the latter are to be seen mainly in the Vaikom and Kottayam Taluks and to some extent in Changanacherry too. The Gowda Saraswaths are immigrants from Goa, the southern-most part of Konkan and they came to Kerala in the wake of the Portuguese occupation of Goa. They are preeminently a mercantile community. Vaishnavites in religious matter, their spiritual head is the Swamiyar of the Kassi Mutt Samsthan.

The Kshatriyas, though numerically, small, from an important caste group in this District. They include the Koil Tampurans, the Rajas or Tampurans, the Tampans and the Tirumulpads. The Koil Tampurans form a small community descended from the immigrant Kshatriya families from certain parts of North Kerala. There are ten such families of Koil Tampurans in erstwhile Travancore. Of these the Changanacherry and Pallam families belong to this district. They claim descend from a branch of Aliakkodu family comprising 8 persons who immigrated from Malabar during the period of Tipu's invasion in Malabar. The Dharma Raja (1758-98) received them hospitably and gave them the *Nirazhi Kottaram* (Palace) of the Tekkumkur Rajas whose territories had been annexed to Travancore. As the family increased in numbers, they found it inconvenient to live under the same roof. One of the ladies, probably the eldest, remained at Changanacherry along with the youngest, while the others migrated to convenient localities nearby and settled down at Pallam (Kottayam), Paliyakkara (Thiruvalla) and Gramam (Mavelikara). Later on two more branches left Changanacherry and fixed their residence at Anantapuram (Karthikapally) and Chemprol (Karthikapally). The Koil Tampurans are related to one another by blood and observe birth and death pollutions. They are an exogamous community. The males marry into the families of Rajas or take Nair wives, while the females are married to Nambuthiri Brahmins. There has, however, been a recent move to give their girls in marriage to the Rajas as well. They have the usual Brahmanical *Samskaras*. They follow the matrilineal law of inheritance.

The Rajas belong to the nine families in erstwhile Travancore, each known by the locality in which they reside—Pandalam,

Punjar, Mavelikkara, Ennakkad, Prayikkara, Tiruvalla, Karthikapally, Aranmula and Mariyapally. Of these only Punjar and Mariyapally branches are in this District. The immigration of the Pantalams and the Punjar Rajas who are representatives of the dynasty of Pandyan kings is believed to have taken place more than eight hundred years ago. The Punjar chief who was one of the most important noblemen in Travancore owned extensive tracts of land known as the Punjat Edavaka. The original home of the remaining seven families was Kolathunad in North Malabar. Their immigration into Travancore took place during the period of the invasion of Malabar by Tipu Sultan. The Rajas, like the Koil Tampurans, have the prescribed Kshatriya *Samskaras*. Priestly functions are performed by the Namboothiris. As regards marriage, the bride-groom is selected from among Koil Tamprans. The *Kanyakadanam* or giving away of the bride is performed by the girl's uncle or brother. The males marry Kshatriya, Nair or Samantha women.

The Ambalavasis also form a small proportion of the Hindu population of the District. They live mainly in the Taluks of Changanacherry, Kottayam and Vaikom. They include the Warriors, the Pushapakans, the Poduvals etc., who are concerned with the performance of some function or other connected with the temples. It is a distinguishing feature of these communities that several among them have distinguished themselves in arts and letters.

The Nairs and Ezhavas form the most influential and numerous of the Hindu castes in the District. In the absence of up-to-date statistics to show their relative numerical strength, the distribution of population between the Nairs and the Ezhavas in the Census of 1941 in the erstwhile Taluks of Changanacherry, Kottayam, Vaikom and Meenachil which formed part of the old Kottayam Division of Travancore State is given below:

Distribution of population between
Nairs and Ezhavas, 1941.

Taluks	Nairs	Ezhavas
Changanacherry	37,831	38,788
Kottayam	39,755	51,822
Vaikom	22,708	49,422
Meenachil	29,722	29,267

The Nairs were originally a martial race but with the British conquest and occupation of the country, they gave up their traditional occupation of fighting and took to agriculture, government services and the learned professions and

callings. The Ezhavas were largely engaged in the cultivation of coconut palm and in the industries connected with its products eg:- toddy-tapping, manufacture of coir fibre etc. Many among them were agriculturists while a few earned their livelihood by other forms of manual labour such as rowing of country boats. The Ezhavas have distinguished themselves in the field of Ayurveda and Astrology. In recent years many of them have given up the traditional occupation of toddy tapping and taken to new pursuits.

Next to the Nairs and Ezhavas, the Kammalas form another important section of the Hindu community. There are various sub-divisions among them such as *Asaris*, *Kallasaris*, *Kollans*, *Tattans*, *Musaris* etc. The Kammalas, like the Nairs and Ezhavas, may be seen in all Taluks of the District. The Kudumis who are Konkani Sudras may be found in Changanacherry, Kottayam and Vaikom Taluks. They are also known as Muppans in some places. Like the Gowda Saraswaths, they are also Vaishnavites by religion though they have accepted Bhagavati also as their tutelary deity. The Kudumis are said to have immigrated into Kerala from Goa along with the Gowda Saraswaths. They are educationally backward. Manual labour is their chief source of livelihood.

SCHEDULED CASTES AND TRIBES

The Scheduled Castes and Scheduled Tribes form an important part of the Hindu community. According to the Census of 1961 the total population of the Scheduled Castes comes to 157,877 and that of the Scheduled Tribes to 21,391. The population of Scheduled Castes according to 1971 in this District is 182,071 and of the Scheduled Tribes is 23,172. The sex-wise details of the distribution of this population between rural and urban areas are as follows:—

Population of Scheduled Castes and Scheduled Tribes
1971.

	Scheduled Caste			Scheduled Tribes		
	Persons	Males	Females	Persons	Males	Females
TOTAL	182,071	92,036	90,035	23,172	11,786	11,386
Rural	170,958	86,390	84,568	23,050	11,705	11,345
Urban	11,113	5,646	5,467	122	81	41

A Taluk-wise statement of the distribution of the population of Scheduled Castes and Scheduled Tribes according to the Census of 1971 is also given below:—

**Taluk-wise distribution of population of
Scheduled Castes and Tribes—1971.**

Taluk	Scheduled Castes			Scheduled Tribes		
	Persons	Males	Females	Persons	Males	Females
<i>Devikulam</i>						
Total	39,055	19,839	19,216	6,691	3,407	3,284
Rural	38,785	19,661	19,074	6,678	3,400	3,278
Urban	320	178	142	13	7	6
<i>Udumbanchola</i>						
Total	15,761	8,198	7,563	3,633	1,836	1,797
Rural	15,761	8,198	7,563	3,633	1,836	1,797
Urban	Nil	Nil	Nil	Nil	Nil	Nil
<i>Peermade</i>						
Total	32,727	16,433	16,294	1,789	903	886
Rural	32,727	16,433	16,294	1,789	903	886
Urban	Nil	Nil	Nil	Nil	Nil	Nil
<i>Meenachil</i>						
Total	13,630	6,901	6,729	6,350	3,200	3,150
Rural	13,190	6,671	6,519	6,347	3,199	3,148
Urban	440	230	210	3	1	2
<i>Vaikom</i>						
Total	24,371	12,108	12,263	89	43	46
Rural	22,914	11,345	11,569	83	40	43
Urban	1,457	763	694	6	3	3
<i>Kottayam</i>						
Total	20,522	10,396	10,126	114	50	64
Rural	17,509	8,881	8,628	86	37	49
Urban	3,013	1,515	1,498	28	13	15
<i>Kanjirapally</i>						
Total	14,857	7,537	7,320	4,383	2,270	2,113
Rural	12,042	6,127	5,915	4,321	2,221	2,100
Urban	2,815	1,410	1,405	62	49	13
<i>Changanacherry</i>						
Total	21,148	10,624	10,524	123	77	46
Rural	18,080	9,074	9,006	113	69	44
Urban	3,068	1,550	1,518	10	8	2

It may be noted that the Scheduled Castes though may be seen in good proportion in almost all Taluks of the District they live in large numbers in the High Range taluks of Devikulam and Peermade. The most important sects among the Scheduled Castes are the Parayas (Sambavar) and the

Pulayas (Cheramar). The Scheduled Tribes, live mainly in the Taluks of Devikulam, Udumbanchola, Meenachil, Kanjirapally and Peermade. The main Hill Tribes in Kottayam District are the Karavazhis, Kochuvelans, Kurumbas, Mala Arayans, Palliars, Ulladans and Uralis. A brief account of each of the tribes is given below.

Karavazhis

The Karavazhis are found in the Chinnar and Marayur village (Anchanad valley) of Devikulam Taluk and are popularly known as Hill Pulayans. They claim to have come into the Anchanad valley as agricultural serfs attached to the Vellalas who came here long ago as immigrants from the Tamil country. While their men are half naked, the Karavazhi women wear blouses, coloured saris, beads, rings etc. They use a cloth and knot it over their right shoulder. This form of dressing is popularly known as *Kurathikettu*. The Karavazhis follow the patrilineal system of succession. They have the hereditary headmen called *Kudumbans* in all their settlements. Monogamy is the general rule among the Karavazhis. though cases of polygamy are also reported. Marriages among them are conducted after negotiations between elders. Divorce, desertion and re-marriage are common among them. Such deities as Kali, Mariamman and Aragalinichi, are popular Gods worshipped by them. The Karavazhis bury their dead, both young and old, the funeral procession being usually accompanied with music and drum.

Kochuvelans

The Kochuvelans are found in the Sabarimala reserve forests. They claim that they are the descendants of the ancestors of Ayyappan of Sabarimala. Dark brown in colour and medium in height, they have been animists in the past, though they now worship Hindu Gods. Their favourable deities are Chathan, Karimkutti, Nudian, etc., and they also believe in the malignant influences of demons and spirits. Ancestor worship is popular among them. They have blind faith in magic and sorcery. Marriages among the Kochuvelans are conducted with the consent of the parents of the bride and bridegroom. Divorce, desertion and polygamy are common among them. The Kochuvelans are non-vegetarians and are reported to eat bison meat. The Kochuvelans bury their dead in deep graves far away from their habitations and mark the locations of the graves with stones. Some of them cremate the dead.

Kurumbas

The Kurumbas live in the Anchanad valley of Devikulam Taluk. They are of medium height and dark complexion and have all the external features of the Dravidian tribes. They claim superiority over other Hill tribes on the ground that they do not eat buffalo meat and are not agricultural serfs. While

their men generally go about semi-naked, the women wear saris, blouses, rings, bangles, beads etc. They follow the patrilineal line of succession. The Kurumbas are food-gatherers and in certain months of the year they subsist solely on fruits, yam and fish. Marriages among them are conducted after negotiations between the parents of the bride and bridegroom. Marriages are usually exogamous. Marriage by purchase is the popular form. Polygamy is common among them, but not polyandry. Sororate is popular while levirate, though considered objectionable, is also found to exist. Divorce, desertion and remarriage are common. The Kurumbas have the institution of the hereditary headman (*Arasan*). They are animists and totemists and their favourite deity is Sanchali Karuppan who is supposed to be the manifestation of Siva. The Kurumbas bury their dead in grave yards close to their settlements.

Mala Arayans

The Mala Arayans may be seen in the Manimala Range of Kanjirapally Taluk and in certain areas of Meenachil and Peermade Taluks. The claim that they are indigenous to Kerala and that their early homes were Chinganpara and Karimala in the reserve forests. Arayan is the modified form of *Arasan* (king) and the term connotes king of the *Mala Hill*. The Mala Arayans are of medium height and their colour varies from light to very dark brown. Both men and women among them use rings and ear rings. They are non-vegetarians and use alcohol freely. They have six principal exogamous *Illams* or clans among them. Their women enjoy equality of social status with men and are also permitted to own property. Though in early days they followed *Marumakkathayam*, the rule of succession has since changed to *Makkathayam*. Marriages among them are arranged by the parents. Divorce, desertion and remarriage are common. Sororate and levirate marriages are practised. Polygamy is also popular among them, though it is discouraged. The Mala Arayans have the institution of the headman, formerly known as *Peramban* or *Kani*. The *Mantravadi* is a popular figure among them, and he lives on the income derived from the services rendered. The majority of the Mala Arayans profess Hinduism and worship such Gods as Durga, Bhagavathi, Sastha etc. Worship of the spirits of ancestors and *Bhoothams* (demons) is also common among them. The Mala Arayans bury their dead on the southern side of their habitations.

Mala Pandarams

The Mala Pandarams are seen in the forest areas of the District, particularly in the Manimala range, Karimala adivaram and in Kodapara in the Saharimala forests of Peermade Taluk. They are primitive hunters and food gatherers who prefer to roam about in the forests unnoticed by the advanced societies. They are of dark complexion and medium height and are generally energetic and healthy. Both sexes among them do not

cover the upper part of their body. The women use a long cloth, similar to a sari, dressed around the hip and thrown across the chest. Many use even *Maravuri* (barks of trees) to cover their nakedness. They like ornaments and wear many interesting articles found in the jungles. They have only one meal a day which they take at dusk. They are non-vegetarians who have no objection to alcohol or to smoke. The law of inheritance among them is now patrilineal as is evidenced by the custom of the implements of the father passing to the son. Marriage by exchange is popular among them. Run-away marriages are also common in view of the shortage of women in their society. Polygamy is not popular among the Mala Pandarams but levirate and sororate marriages are permitted. Like other tribes, the Mala Pandarams have also among them the institution of the headman known as *Kani* or *Moopan*. The headman and his wife are treated with respect. The former presides over the tribal Panchayat which deals with important social matters and disputes. The favourite deities of the Malapandarams are Sastha and Karupaswami. Some worship Kali Mariamman, Chaplamma and Kattlaparamma. There are a number of other forest deities whom they propitiate by performance of various rites. The primitive Malapandarams neither bury nor cremate their dead but leave the corpse where the death occurs. However, those who have become amenable to civilizing influences bury their dead in deep graves far away from their settlements.

Mala Ulladans

The Mala Ulladans (Ulladans) are seen in some of the forest areas of the District, particularly in the Meenachil and Kanjirapally Taluks. The name Ulladan is a combination of the words *Ul* (interior) and *nad* (country) and connotes that they are people of the interior. There are legends current among them which describe them as the progeny of sage Valmiki. Their colour varies from light brown to dark brown. Both males and females wear rings, bangles and ear rings. They are a cheerful people who dance to the tune of the flutes and drums they themselves make. The law of succession among them is a mixture of *Marumakkathayam* and *Makkathayam*. The great majority among the Mala Ulladans are nomads who subsist by food-gathering and hunting, though some of them are seen engaged in cultivation. They eat whatever is available. They also collect medicinal herbs and sell them for their income. The women folk of the Mala Ulladans seldom go for work. During their leisure time they make mats and baskets. The Mala Ulladans are supposed to be experts in the preparation of spurious talisman and in the *odi* and other cults that help them to injure those who have done them harm. They are essentially animists and devil worshippers. They propitiate the spirits of ancestors in order to protect themselves against wild animals and epidemics. They have faith in black magic and sorcery, and practically every adult male among them is

a magician or *Mantravadi*. Their favourite deities are Chakki, Kottia and Ayva. Those Mala Ulladans who are agricultural labourers live in huts built by them, but those who are nomads live in the hollow of trees and under over-hanging rocks. The Mala Ulladans have also the institution of the hereditary headman, known as *Muthu Kari*. The headman is an important figure in marriages and funerals. Marriage by purchase is popular among them. Desertion is practically unknown and divorce takes place by mutual consent of the husband and wife. The Mala Ulladans bury their dead in a solemn manner in remote places.

Mannans:

The Mannans are seen in the forest areas of Kanjirapally, Devikulam and Udumbanchola Taluks. According to a legend current among them they were originally the vassals of the king of Madurai who deserted their chief and joined the king of Punjar. They are of medium height and their colour varies from very light to very dark brown. The Mannans, both male and female, generally dress well. The former wear shirts and dhoties and the latter saris, blouses, bangles, rings etc. They are non-vegetarians who eat bison meat, but not beef. Though they drink alcohol, they avoid cow's milk. There are several clans among the Mannans and they observe the clan rules scrupulously for the good conduct of their society. The clans are usually named after the place of habitation. In the Vandanmedu range they are known as *Kudis*, *Marumakkathayam* or the matrilineal system is the popular rule of succession among the Mannans, though a few follow *Makkathayam* the patrilineal system. The Mannans practise independent cultivation and also work as agricultural labourers. They are also engaged in the collection and sale of hill produce like honey. Hunting is resorted to by them in order to supplement their diet. They have among them the institution of the headman called *Kani* or *Kanikkaran*. The headman is assisted by a *Mantri* who is highly respected and obeyed. The Mannans profess Hinduism and worship Hindu Gods and Goddesses. Marriages among them are conducted after negotiations between the elders. Cases of desertion and remarriage are common. Sororate marriages are practised but not levirate. The Mannans bury the dead in a solemn manner in deep graves far away from their habitations.

Muthuvans:

The Muthuvans are seen in the High Ranges of Devikulam Taluk. They claim to have come from the forests of the neighbouring Madurai District of Tamilnad. They are short in stature and long headed, with their complexion varying from very light to the very dark brown. There are several exogamous clans among them. The matrilineal law of inheritance prevails among the more primitive sections of the Muthuvans, while the more advanced among them have accepted the patrilineal rule. Their huts are grouped together as a measure of

defence against wild life. The Muthuvans follow different occupations. Some carry on cultivation in their small holdings while others collect hill produce and rear and sell goats and poultry. There are some who distil lemon grass oil. They prefer independent work and hate service under others. The Muthuvans have the institution of the *Kani* or headman in all their settlements. Marriages among them are conducted after negotiations between the parents. While polygamy is common, polyandry is forbidden among the Muthuvans. Levirate marriage is not popular and a widow is normally permitted to marry only someone other than a brother-in-law. Widows are generally permitted to marry anyone they like. The Muthuvans profess Hindu religion and their favourite Goddess is Madurai Meenakshi. They also celebrate Onam and other Hindu festivals. They bury their dead in graves far away from their habitation.

Paliyar:

The Paliyars (Palliyans) are seen in the tribal settlements at Kumili, Periyar Range, Chekupalam and Anakara of the Vandamedu Range in the Udumbanchola Taluk. They claim to have derived their names from Valli, the wife of Lord Subramonia. Their original home is said to be Cumbum in Madurai District and they have many customs and ceremonies in common with the Parayas of Tamilnad. They may be seen wandering in the higher elevations with sickles and digging sticks in their hands. The Palliyars, both males and females, generally dress themselves well. While the women wear blouses and coloured saris, the men wear shirts and short trousers. The more primitive among them still wear the bark of trees and leaves. The Palliyars have settled in groups and taken to cultivation in select areas. Much of the fertile land in the Cardamon Hills was brought under cultivation by them. However, most of them have been dispossessed of land by rural agriculturists and money lenders. The advanced groups among the Palliyars live in houses while the primitive ones live in huts made of bamboo or reeds and thatched with straw or leaves. They have the hereditary headman called *Kanikkaran* who is highly respected. Arrangements for marriage among the Palliyars are made by parents. Divorce is common and re-marriage is permitted. The Palliyars worship various deities and devils. Their favourite deities are Mariamman, Keruppaswami and Kali. The Palliyars generally bury their dead.

Uralis:

The Uralis are seen in the higher elevations in Devikulam and Peermade Taluks. The term Uralis is a combination of the word *Ur* (place) and *Al* (people) and connotes that the Uralis are people of the land. Their complexion varies from dark to very light olive brown. They claim that they are

aborigines of Aryan origin. Most of the Uralis are well dressed. They have several clans among them. Though the early rule of succession among them was *Marumakkathayam*, they have adopted the patrilineal system in recent times. The Uralis live in areas infested by wild animals and their settlements are identified even today by the presence of dolmens which indicate the location of the graves of their ancestors. They live in settlements of 4 to 6 huts as a measure of precaution against possible attacks by wild life. Some of them have their huts on the top of strong trees with ladders leading to them. The Uralis collect forest produce like honey, cardamon, etc., and exchange them for the necessities of life. A few also own small plots of land which they cultivate successfully. Marriages among them are negotiated by the parents of the bride and bridegroom. Polygamy is very popular among the Uralis. Sororate and Levirate marriages are permitted. They have the hereditary headman called *Kani* or *Velan* who is much respected by the community. The Uralis bury the dead in a very solemn manner in deep graves far away from their settlements.

Ulladan:

Another scheduled tribe worth mentioning is Ulladans. They were also called Kattalans. This race is almost extinct in other parts of Kerala. A few of them, however, is seen in the Meenachil taluk of this District. They eat bison meat and are non-vegetarians. The roots and fruits that are collected from jungles and forests, the small animals and fishes that are trapped by them also form their food. They have a hat made of arecanut palm and have sticks with sharp iron points inserted on them. These are used as weapons to catch fish and kill animals. These weapons like javeline are thrown at their targets. They are wandering tribe. They go half-naked. This people bear atmospheric pollution. They are animists.

Hindu Religious Beliefs and Practices:

The religious beliefs and practices of the Hindus of the District represent a fusion of Aryan and Dravidian ideas. There are a number of Non-Aryan religious beliefs and practices which have become part of the Hindu religious faith. Reference may be made in this connection to some of the most important of these beliefs and practices. The Hindus of the District are believers in serpent worship, and ancestor worship both of which are admittedly non-Aryan practices. The Naga shrines at Mannarassala and Vettikode in the neighbouring Alleppey District are visited by large numbers of them. Ancestor worship has also been an age-long practice. The deceased ancestors are looked upon as benefactors of the *taravad* and special *pujas* are performed on New Moon days to propitiate them. There are certain important shrines in this District, such as the one at Vedavyasagiri near Ettumanur

which are visited by people for performance of *Vavu Bali* on *Annavasi* or New Moon days. It may be mentioned that *Vavu Bali* is an important ritual connected with ancestor worship.

Apart from practising serpent worship and ancestor worship, the Hindus also venerate animals and birds like the cow, bull, garuda, peacock and the monkey. There are also certain plants which are considered by them as specially sacred. The *Aswatha*, the *Bilva* and the *Tulasi* may be particularly mentioned in this connection. *Pradakshinams* round the *Aswatha* tree are believed to bring religious merit. The *Bilva* is sacred to Siva and is largely used in his worship. The *Tulasi* is likewise sacred to Vishnu but it is also used in all temples for *pujas*, irrespective of the deity.

The Hindus of the District worship all the Gods and Goddesses of the Hindu pantheon such as Siva, Vishnu, Bhagavati, Sastha, Subramonia etc. Kottayam is famous for its great temples or *Mahakshetrams* dedicated to Siva. The Siva temples of Vaikom, Kaduthuruthi, Ettumanur, Tirunakkara, Tazhathangadi, Kadapattur, Lalom, Chriakkadu, Mariapally and Vazhapally are among the most famous of their kind in the District. The existence of such a large number of famous Siva temples in the same area perhaps shows the predominant influence exerted by the Saiva cult in this District in the ancient past. It is also significant that compared to the neighbouring District of Alleppey, there are only a few Vishnu temples of repute in Kottayam. The more important among them are those of Trikkodithanam, Tiruvarpu, Kudamalur, Bharananganam etc. At Aymanam, three miles north-west of the Tirunakkara temple, is an ancient temple dedicated to Vishnu in the form of Narasimha. There is also another Narasimha temple at Manganam to the east of Tirunakkara. In this District are two famous temples dedicated to Sri Rama. They are located at Tirumanivenkitapuram (Vaikom, taluk and Ramapuram (Meenachil Taluk). Within a radius of two miles from the latter temple are situated the temples of Kudappalam, Amanakara and Methiri dedicated to Lakshmana, Bharata and Satrugna respectively. The Tirumuzhikulam temple (Mulakkulam village) is dedicated to Lakshmana while the Vennimala temple is dedicated to both Sri Rama and Lakshmana. The existence of two separate flagstaffs side by side is a special feature of the latter temple. One of the famous Bhagavati temples of Kerala is located at Kumaranallur in this District. There are important Bhagavati temples at Peruvantanam, Perunnai and Cheruvalli. At Kanjirapally town and suburbs are many temples dedicated to Bhagavati, eg., Palliparambukavu, Iranjal Devi temple, Ambalakadavu Devi temple, Ponkunnathukavu, Karthiyani temple, Kilirur, Karthiyani temple, Erathikkal, Manarkkatkavu, etc. There are temples dedicated to Subramonia at Udayanapuram Kidangur, Edappadi, Perunnai and Munnar. The District is parti-

cularly famous for the Sastha cult. Sabarimala, the most celebrated of the Sastha shrines in the country, is situated in the Peermade Taluk of this District. There are also Sastha temples at Erumeli, Punjar, Devikulam, Kumarakam, Vedavyasagiri etc. Ganapathi is accommodated as a minor deity in many temples. In the Vazhapally Siva temple the worship of Ganapathi is more popular than that of the main deity, Svya. At Adityapuram near Kaduthuruthi there is a temple dedicated to Aditya, the Sun God. Panachikkad in Kottayam Taluk has a famous shrine dedicated to Saraswathy, the Goddess of Learning. As temples dedicated to the Sun God and Saraswathi are rare the Adityapuram and Panachikkad shrines assume special significance. At Olassa is a temple dedicated to Dhanwantari Deva.

Temple Rites:

The worship in the temples of the District is open to all irrespective of sex. The rituals are of a very elaborate nature prescribed in the *Tantras*. The *Puja* or worship is performed by the priest after he has purified himself by the performance of such external acts like *dhyanam* (meditation) and *japam* (prayer). This is followed by the offerings of water, flower, sandal, incense, camphor etc. The number of daily *Pujas* varies in different temples according to the importance of each. The maximum is five and minimum one. The daily *Pujas* are called *Nityanidanam*. Under this head comes the *abhishekam*, *puja*, *nivedyam*, *namaskaram*, *sribeli* etc. The devotees offer *vazhipadu* which consist of *nivedyams*, *archanas*, lighting etc. The *kanikka* or the depositing of coins is a common practice in most temples. Ornaments and other valuables are also offered by devotees to the deity. Each temple has its distinctive *vazhipadu*. If in Ettumanur temple it is the payment of money, in Vaikom it is the feeding of Brahmins. In Vazhapally the main *vazhipadu* is the *Appam* offered to Ganapathi and in Thiruvappu it is the *Uzhapayasam*. In Subramonia temples like Udayanapuram, Kidangoor etc. the main offering in the *Kavadi*. It consists of an offering of sandal, rose water etc. to Lord Subramonia carried in pots over the shoulders of the devotee, the pots being suspended from the ends of a pole well decorated with tapestry and feathers of the peacock. At Sabarimala the pilgrims make lavish offering of rupees and images in gold and silver. *Appam* and *aravan payasam* are also popular *vazhipadus* here. *Muzhukappu* or the artistic coating of the idol with sandal paste is an important *vazhipadu* in many temples. In most of the major temples there is an annual *utsavam*. The function consists of special services and processions. Exhibitions of various arts like *Kathakali*, *Ottam Tullal*, *patakam* etc., are conducted for the benefit of the devotees. During the processions the idol of the deity is taken round in *pradakshinam* inside the temple on the back of caparisoned elephants to the accompaniment of *nagaswaram* and other music. Some of the major temples have their own elephants and team of artists for the purpose.

The temples of the District are now open to all the Hindus irrespective of caste. However till a quarter of a century ago, the so-called *Avarnas* or backward classes were prevented from entering the temples. They could offer worship only from allotted places of prescribed distance. In course of time a feeling of self-respect asserted itself among the backward classes and the demand for temple entry took shape. The new movement secured the sympathetic support of large numbers of people belonging to the *Savarnas* or Higher Castes. The Vaikom Satyagraha which was conducted in 1924 under the auspices of the Indian National Congress to secure admission for the backward classes to the approach roads adjacent to the famous Vaikom temple was a turning point in the history of this movement. On November 2, 1936, His Highness Sri Chitra Thirunal issued the famous Temple Entry Proclamation throwing open the temples of Travancore to all Hindus irrespective of caste.

Fasts and Festivals:

The Hindus observe several fasts or *Vrithams* with a view to propitiating the various Gods and Goddesses and acquiring spiritual benefits. The important fasts are those undertaken on the *Shasthi*, *Ekadasi*, *Pradosham* and Full Moon days. In addition, a number of religious festivals are also observed by the Hindus. In *Chingam* (August-September) the *Ashtemi Rchini* the sacred day on which Lord Krishna was born, is celebrated. The *Vinayaka Chaturthi* which falls on the fourth day of the bright fortnight in *Chingam* (August-September) is sacred to Ganapati. People are prohibited to see the Moon on this day as it is supposed to bring miseries and misfortunes of all kinds. The *Navaratri* festival falls in *Kanni* (September-October). It is a nine day festival and is a favourable period for the worship of *Sakthi*. The last three days are set apart for the worship of Saraswathi. Throughout the *Durgashtami*, *Mahanavami* and *Vijaya Dasami* days the worshippers are prohibited from doing their customary work. The *Vijayadasami* or *Puja Eduppu* day is regarded as auspicious for the beginning of children's education-*vidyarambha*. It is customary in this District for the parents to take their children to such places as Vedavyasagiri and Panachikkad Saraswathi shrine in order to initiate them formally into the study of the letters (*Vidyarambha*). *Narakachaturdasi* or *Deepavali* falls in the month of *Tulam* (October-November). It is also known as the festival of lights. *Trikkarthika* is another festival which falls in the month of *Vrichigam* (November-December). Its main feature is the illumination of Hindu houses in the night. The *Thyppuyam* festival which falls in *Makaram* (January-February) is sacred to Subramonia and special offerings are made to the Lord on this day. *Thy pongal* and *Mattu Pongal* which fall on the first and second days respectively in the month of *Makaram* (January-February) are also important festivals. The former is the harvest feast of South India. On the occasion of the latter festival the cows and bulls which have been

of service to the people in the previous agricultural seasons are bathed, decorated and fed. The animals are not made to work on that day. *Maha Sivaratri* the day on which Lord Siva danced the *Thandava* dance, is celebrated in *Kumbham* (February-March). The *Sri Rama Navami* is a nine day festival which falls in the month of *Medam* (April-May). The *Navami* or the ninth day is the anniversary of the birth of Sri Rama.

The most important national festival of the District is *Onam* and it is observed by people without caste or creed. It is the harvest festival of Kerala and falls in the month of *Chingam* (August-September). The festival lasts for ten days of which the last four are more important than the rest. According to tradition it is celebrated in memory of Mahabali, the mythological king of Kerala whose reign was one of undisturbed peace and prosperity and who is supposed to revisit the land once a year. A portion of the front yard of every Hindu house is cleared and decorated with flowers on these days. On the last four days pyramid-shaped images of *Trikkakara Appan* (the deity of *Trikkakkara*), made of wood or clay, are set up at the place and *pujas* offered. The senior members of the family present cloths (*onapudava*) to the juniors and servants. A sumptuous feast is held on *Tiru Onam* day. The people make themselves merry by participating in various sports and field games.

The festival of *Vishu* which falls on the first day of *Medam* (April-May), the Malayalee New Year Day, is equally important. It coincides with the Tamil New Year Day (*Chithira Vishu*). The main ceremony connected with *Vishu* is *Kani Kanai* (literally having the first sight): On the night previous to the *Vishu* day the *Kani* is arranged. It consists of a number of things believed to be auspicious. Cadjan leaf-book, gold ornaments, newly white cloth, a measure of rice or paddy, bell-metal mirror, halved jack fruit, flowers of *Konna* tree, halved coconut, yellow cu-cumber and two standing oil lamps with coconut, oil emitting sparkling light are placed in a convenient room. On the morning of the *Vishu* day every member of the family gets up early and sees the *Kani*. The Malayalee believes that if he sees these auspicious things on the first day of the New Year, the whole of the year will be lucky for him. The *Sastha* shrine at *Sabarimala* is visited by Hindus in their thousands on *Vishu* day. Children and poor people get gifts of money from elders on the occasion of the *Vishu*. This is called *Vishu Kainittam*.

Tiruvathira, another characteristic festival, is observed in *Dhanu* (December-January). It is of special importance to women as it is supposed to commemorate the death of *Kamadeva* (God of Love) who was reduced to ashes by Lord Siva while attempting to wake him up from his penance.

Hindu Customs and Manners

Each caste and community among the Hindus has had its own typical customs and manners. The *Talikettukalyanam*, *Tirandukuli*, *Puli Kudi*, etc., once formed the main customary ceremonies among the Nairs and the Ezhavas who followed the *Marumakkathayam* system. *Talikettukalyanam* was performed for all girls before they attained puberty. The essential part of the ceremony lay in the trying of the *Tali* (a small piece of gold attached to a string) round the neck of the girl by a male belonging to the same or higher caste. It may be mentioned that the *Tali* tier did not have any claim on the girls as the *Talikettukalyanam* was not a real marriage. It was done only with a view to giving the girl a marriageable status. The ceremony of *Tirandukuli* was celebrated when a girl attained puberty. The girl was kept in a separate room for about four days. In the room a lamp was lit and a brass pot with a bunch of coconut flowers was kept. The event was proclaimed by a *Kurava*. Friends and relatives were invited and treated to a sumptuous feast. The girl used to get presents from the guests. Another ceremony viz., *Pulikudi* (tamarind juice drinking) was quite essential for pregnant women in the ninth month of pregnancy. The ceremonies described above have now become defunct as social reformers worked hard to rouse public opinion against them.

Among the ceremonies which are still current among the Hindus may be mentioned *Namakaraanam*, *Chorunu*, *Vidyarambham*, *Upanayanam*, *Sardha* etc. The *Namakaraanam* or *namaring* ceremony is generally celebrated within a month of the child's birth. The father sits cross-legged before a lighted lamp, near which is placed a vessel containing the eight auspicious things *ashtamangalyam*. He then places the child on his lap and whispers the proposed name three times in its right ear. *Annaprasanam* or *Chorunu* takes place when the child is six months old. This is the first feeding of the child with rice. The child is placed on the lap of the father and is then given rice and curries. This ceremony is performed in temples also. *Vidyarambham* or initiation into the letters of the alphabet is gone through in the 3rd or 5th year of the child. Usually it takes place on the *Vijayadasami* day (*Puja Eduppu* day). The father takes the child on his knees and writes the alphabets, the letters being traced in rice by the father holding the ring finger of the child. *Upanayanam* which is common among the Brahmins is the investiture of the boy with the sacred thread. It is generally performed in the 8th year of the child. All Brahmins, both indigenous and nonindigenous, perform this ceremony. *Sardha* is the ceremony of making offerings to the departed spirits of forefathers. This is performed every year. Cooked rice, plantain fruits, coconuts, parched rice, etc.,

1 The eight auspicious things are a measure of paddy, rice, an absolutely white cloth, an arrow, a lighted lamp, a looking glass, a blossom of the coconut palm and a *Cheppu*. *History of Kerala*, Vol. III, K. P. Padmanabha Menon, p. 27.

are served as offerings on a plantain leaf and kept in a room with a lamp in front of it. After some time the room is opened and the offerings are distributed among the family members.

The Hindus generally cremate their dead bodies, while those of children under two or three years of age as well as those of persons who have died of small pox or cholera are buried. When a Hindu is at the point of death, the junior members pour a few drops of water or milk into his mouth from a small cup made of a leaf or two of the *Thulasi* plant. Relatives and others are immediately informed when the person dies. The body is placed at the central court-yard with the head to the south. It is then washed anointed and neatly clothed and marks of *bhasma* (sacred ash) and sandal pasts are made on the forehead and joints. The body is laid on a long plantain leaf after it is covered with new clothes. Then it is removed to a bed of fresh-cut bamboo and taken to the cremation ground on the shoulders by the nearest relatives, e.g. sons, nephews etc. Before the cremation blood relations put rice (*vaikari*) in the mouth of the dead body. While in some parts of the State cow dung is used for the purpose of cremation, it is seen that in various parts of this District the mango tree is felled down and cut into pieces and used as fuel for cremation. The Eldest son who is the chief mourner cuts a piece from the wrapped new cloth and wears it round the waist, tucking to his waist a piece of iron. This is done before setting fire to the pyre. The chief mourner with a pot of water goes round the pyre thrice letting the water out from a pierced hole. Then he allows the pot on the head to fall from his back. The *sanchayanam* or the ceremony of the disposal of the bones of the dead person is done on the 4th or the 7th day. The mourners collect unburnt bones and ash and these are put in a mud pot covered with another and is buried underneath a jack tree. On a later occasion they are carried to some holy place and consigned to the river. On the death of a person the *seshakriya* (making offering to the deceased) continues till the period of pollution is over which may be for 16 days or less. It has also the custom among certain castes to observe *diksha* (i.e. growing beard) for 41 days or a year following death.

Inter-Caste Relations

Inter-caste and inter-sub-caste relations among various Hindu communities were at one time very rigid in this District as elsewhere in Kerala. Hindu orthodoxy did not permit free social contacts between members of the various castes and sub-castes. The children of the upper castes who attended schools a few decades ago were not allowed free access into the interior of their houses on their return from schools as they were considered as having been polluted by members of the lower castes sitting along with them in the class rooms!! They had to keep their clothes in a corner of the house and

take their food only after taking a purificatory bath. Inter-dining was not permitted between members of various castes and sub-castes among the Nairs, the Ezhavas etc. Long established customs also prevented the members of the so-called lower castes from enjoying in full the rights of citizenship. The children of the lower castes were not admitted into Government schools. Nor were they given jobs in Government service. Those Ezhavas and other backward classes who possessed requisite qualifications for appointment under Government had to go outside the State in search of jobs. The classic example is that of Dr. Palpu who got employed in Mysore service after having been denied appointment in the Travancore State service on the ground of his being an untouchable. The members of the lower castes were also denied entry into temples and even prevented from using the approach roads. However, recent decades have witnessed the break-down of inter-caste and inter-sub-caste barriers. The progress of English education and liberal ideas, the migration of population from the rural to the urban areas, the expansion of the means of communication, the movement for temple entry sponsored by the Indian National Congress, the social reform movements led by Sri Chattampi Swamikal and Sri Narayana Guru and above all, the introduction of adult franchise are some of the general causes that contributed to the breakdown of caste barriers in Kerala in recent times. Special mention may also be made in this connection of the work done by Mannath Padmanabhan and the Nair Service Society in fighting social evils like untouchability and popularising the ideas of inter-dining and temple entry among the Hindus, particularly the Nairs. The S. N. D. P. Yogam, the representative organisation of the Ezhavas and its leaders like T. K. Madhavan, Dr. Palpu etc., also rendered meritorious service in the cause of the elimination of inter-caste barriers and removal of untouchability. Caste consciousness is today less strong in the minds of the new generation of Hindu youths. Inter-dining which was once looked upon with disfavour is now practically the order of the day. Inter-caste marriages take place not infrequently and the Kerala Government have even made it their policy to encourage such marriages with Harijans by making lump sum grants of Rs. 500 to deserving parties. Particularly significant is the fact that the sub-caste barriers which operated in the past in the case of marriages have now become defunct. This is a clear indication of the fact that the fusion of sub-castes among the Nairs, Ezhavas, etc., has an accomplished fact.

CHRISTIANS

As stated earlier, Kottayam has the largest percentage of Christian population among the Districts of Kerala. The Christians of the District come broadly under two divisions viz., Catholics and non-Catholics. Among the Catholics who owe

allegiance to the Pope of Rome, those who follow the Syro-Malabar rite form the vast majority. They live mainly in the Taluks of Vaikom, Meenachil, Changanacherry, Kottayam and Kanjirapally. Those who follow the Latin and Malankara (Malayalam) rites form only a relatively small proportion of the Catholic community.

The Catholics come under different episcopal jurisdictions. The Archbishops of Changanacherry and Erankulam and the Bishops of Palai and Kottayam exercise jurisdiction over the Syrian Catholics. The Kottayam Diocese, the oldest Catholic Diocese to be set up in this District, grew out of the Vicariate Apostolic of Kottayam created by Pope Leo XIII in 1887. In 1896 it was bifurcated and a new Diocese, viz., that of Changanacherry was formed. In 1923 Pope Pius XI by his letter *Romani Pontificis* established a Syro-Malabar Hierarchy with Ernakulam as Arch-diocese and Changanacherry, Kottayam and Trichur as suffragan dioceses. In the year 1950 the Diocese of Changanacherry was bifurcated and the new Diocese of Palai was formed. In 1956 the Diocese of Changanacherry was raised to the status of an Arch-diocese with the Archbishop of Changanacherry as Metropolitan and the Bishops of Palai and Kottayam as suffragans. The Diocese of Kottayam occupies a special position in the hierarchical set-up of the Catholic Church in so far as its Bishop has personal jurisdiction over the "Southists" of the Catholic community living throughout Kerala, parts of Mysore and Madras States¹. In addition, there is also the Latin Catholic Diocese of Vijayapuram which has its headquarters in Kottayam town. Constituted as a district Diocese in November

¹ The origin of the 'Southists' is traced to the 4th century A. D. The following is the story connected with it. It is believed that a large colony of Syrians under the leadership of a merchant priest called Canai Thoma or Thomas Cana immigrated into Kerala in 345 A.D. Thomas Cana brought with him 72 families consisting of about 340 members including a Bishop named Joseph and several priests. These Syrian immigrants were given a warm welcome by the local ruler who allowed for their residence a suburb of Muziris (modern Cranganore) in the southern side which in course of time they called Mahodayapattinam. The Syrian immigrants and the Malabar Christians soon entered into matrimonial relations and emerged into a single community. Thomas Cana himself married a Christian lady from Malabar. As these Syrians settled down on the southern side of Muziris, they were later on known as Southists. Even now they stand as a separate community with the Bishop of Kottayam having personal jurisdiction over all Syrian Southist Catholics in Kerala and outside, irrespective of their domicile. The Southists who are outside, the orbit of the Catholic Church also retain their separate individuality. For example, in the Orthodox Syrian Church there is a Knanaya Diocese which has no territorial jurisdiction but comprises all the members of the Knanaya community within that church, wherever they are.

1930 by the division of the Arch-diocese of Verapoly, it has jurisdiction over the Latin Catholics living in all parts of the District. The Diocese of Tiruvalla has jurisdiction over those Roman Catholics who follow the Malankara (Malayalam) rite in this District.

The Syrian Catholics of Kottayam have played an important role in the public life of the State. They have distinguished themselves as politicians, lawyers, businessmen, educationists, etc. To the Catholic community of the District also belongs the abiding honour of being associated with two "Servants of God" who have given prominence to Kerala in the annals of the Roman Catholic Church. They are Fr. Kuriakose Elias, Chavara and Sister Alphonsa.

MALANKARA ORTHODOX SYRIAN CHURCH

Early History

According to ancient tradition prevalent among the Orthodox Syrians the Malankara Orthodox Syrian Church was established in 52 A. D. by St. Thomas, one of the Apostles of Jesus Christ. It is believed that the Apostles landed in Malankara, at the ancient port of Muziris (the present Cranganore) in 52 A. D. and converted some high caste Hindus. The name Malankara came to be added to this Church probably from Maliankara, the first Christian centre in Kerala, from where Christianity spread to other parts of the country. From very ancient times the Kerala Church was connected with the churches of the Middle East and especially with the Persian Church. Bishops of the latter Church visited this place several times, remained here, and acted on its behalf.

Nestorian Connection.

According to one school of thought the Malankara Church was Nestorian from the 6th to the 16th century as the Metropolitans who came from Persia and Babylon were received indiscriminately. However, it is also held that the relation of this Church with the Nestorian Church of Babylon is not an established fact till 1490, i. e., a few years before the arrival of the Portuguese. Often Nestorian Bishops lived here and co-operated with this Church in all its activities and the Nestorian Patriarch of Babylon was considered as having suzerainty over it. But in regard to its management the Church was practically independent.

Roman Catholic Domination.

With the coming of the Portuguese Roman Catholicism became a religious force in Kerala, and with the help of the political power and military strength of the Portuguese, made a long and effective fight with the Nestorians for

supremacy over the Syrian Church. At the Synod of Diamper (Udayamperoor) in 1599, the Syrian Community was compelled to renounce the Patriarch of Babylon (Nestorian) and to accept the Pope and the Roman Catholic faith. This did not last long, for, in 1653, after the lapse of 55 years, the Syrian community in vast numbers effectively resisted the Roman Catholic domination at a well attended meeting held at Mattancherry in Cochin and broke off from the Papacy by the oath known as Oath of the "Coonen Cross." The separated community thence forward came to be called *Puthenloor* Syrians and those who still remained with the Romans were called *Pazhayakoor* Syrians. Immediately after, Mar Thomas was ordained as the Metran of Malankara, under the name Mar Thoma I. who became thus the Bishop in the known history of the Malankara Orthodox Syrian Church. Thereafter, for about 130 years (1665-1794) ecclesiastical dignitaries from the Orthodox Church of Persia and Syria made random visits to this place and ordained Metrans for the Malankara Syrian Church. From 1842 onwards the Jacobite Syrian Patriarchs of Antioch were directly connected with this Church. The Patriarch had come to be regarded as the supreme spiritual head of the Church and his supremacy consisted in ordaining the Bishops of this church, sending *mooron* (the Holy Oil used in baptism) and the spiritual supervision of this church ecclesiastical head of this Church.

Trust Fund.

An important development connected with the Orthodox Syrian Church early in the 19th century is the institution of the *Vattippanam* or Trust Fund. It is an amount of 3,000 Star Pagodas (Rs. 10,500) invested in the year 1808 by Mar Thoma VI (Mar Dionysius I), as a loan in perpetuity, with the then British Resident at Trivandrum, carrying interest at 8% per annum, for charitable purpose, to be drawn by the successive Malankara *Metrans*. The Old Seminary at Kottayam was erected by Joseph Ramban of Pulikkootil (later Mar Dionysius II) mostly by using the interest accumulated on the said Fund, for the free education of the *deacons* of the Church. The foundation stone of the Seminary was laid in February 1813 and the building was finished within a year. The education of the deacons began in March 1815.

Advent of the C. M. S..

The Church Missionary Society started its work in Kerala in the early 19th century (from 1816) and with it began a new era in the history of the Syrian Church. It was Col. Munro, the British Resident in Travancore (1810-1819), that gave the C. M. S. Missionaries the incentive to start work here. Ever since Col. Munro got acquainted with the Syrian Church in this land, it was his desire that the Church Missionary Society and the Syrian Church should collaborate with each

other, and as a result of this collaboration, the Syrian Church should be reformed and its faith brought into line with the faith of the Anglican Church. When the Kottayam Seminary was started, Col. Munro began to exert influence upon Mar Dionysius (i. e., Ittop Ramban who had become Metran by this time) and the Metran and the community had to allow the co-operation of the Church Missionary Society in the conduct of the college at Kottayam, though unwillingly. Accordingly missionaries like Norton, Fen and Peet were allowed to work as teachers in the Seminary. From the financial point of view the collaboration of the C. M. S. was a gain to the community, since large sums of money and land were granted to the college by the Government and by others under the influence of Munro and the Missionaries. This alliance which began in the time of Dionysius II continued during the administration of Dionysius III (of Punnathara) and Dionysius IV (of Chepad). It began as a mission of help. But gradually it increased in scope and significance. Properties came to be bought in the joint names of the Metropolitan and the Missionaries, and the management began to be exercised jointly. The missionaries were able to win over the confidence of a section of the Syrian Community, especially some of the young priests and deacons in the Seminary. In and out of class rooms, they began to spread their reformed views among the Syrians.

Mavelikara Synod.

Chepad Dionysius, the Metropolitan, perceiving the danger of the situation and realising that this association would finally destroy the faith and even the individuality of the Syrian community, wanted to sever its connection with the C. M. S. and to bring it into effect, convened in 1838 a meeting of the representatives of the Churches, at Mavelikkara, known usually as the Mavelikkara Synod and affirmed by a decision the connection of this Church with the Patriarch of Antioch and declared publicly its severance with the missionaries and made a statement (*Padivola*) to that effect. The above decision led to disputes between the C. M. S. and the Syrian Church, especially about the properties, jointly owned. The dispute was finally decided by arbitration and the properties jointly possessed were divided by the award known as the 'Cochin Award' on the 4th of April 1840. The Syrian community received as their portion what the assets they had before their co-operation with the missionaries, namely the Trust Fund and the properties acquired with its interest. All the other properties were given to the C. M. S. although they were received or bought for the benefit of the Syrian community.

Schism in the Patriarchate.

Patriarch Peter III died in 1894 and was succeeded by Abdul Messiah (1895-1915). It seemed to the leaders of the church that the time had now come for establishing the Catholicate by installing Mar Joseph Dionysius as the Catholicos with the consent of the Patriarch, for Patriarch

Abdul Messiah was reported to be sympathetic to the needs of the Malankara Church. He at first refused, but before he could be persuaded to give his consent, the situation in Turkey had changed. The Sultan paying heed to the intrigues of certain prelates of the Church withdrew the *firman* (i.e., permission to function in Turkey) of Abdul Messiah in 1905 and issued a fresh *firman* in favour of one Abdulla II who accordingly began to perform the duties of the Patriarch in 1906. As the removal of Abdul Messiah was not done by the Synod of the Church, but only by the Sultan of Turkey, Abdul Messiah was looked upon by a major section of the community as the canonical Patriarch, although he was unable to act in the Turkish territory without offending the Sultan. The dignity was also claimed by him.

Schism in the Malankara Church.

Soon after the changes that took place in Turkey, a corresponding turn of events took place in Malankara also. On July 11, 1909, Mar Joseph Dionysius died and was succeeded by Mar Geevarghese Dionysius. In 1908 he had got himself ordained as Metropolitan along with another Paulose Mar Curilos, by Patriarch Abdulla II. Abdulla II visited Malankara in 1909 very soon after Geevarghese Mar Dionysius became the Malankara Metropolitan. Patriarch Abdulla too resented the decision of the Civil Courts here with regard to the power of the Patriarch over the temporalities of the church and wanted to re-establish his authority in this matter by obtaining *Udampadies* (documents of agreement) from Bishops and Churches conceding his temporal authority. Geevarghese Mar Dionysius declined to execute such an agreement. Paulose Mar Curilos (who was ordained along with him in 1908) sided with the Patriarch and executed the required *Udampady*. To strengthen the Patriarch's position in Malankara, Abdulla II next reported to the method of ordaining as Bishops only those who supported his move. Paulose Mar Athanasius was ordained as Metropolitan of the Diocese of Ankamali, which had remained without a Bishop for some time. He also sought to win the favour of the Kananaya community by constituting a separate Diocese for it and ordaining Geevarghese Mar Severios (of Edavazhikal) as its Metropolitan. Both the new Bishops executed registered *Udampadies* to the Patriarch acknowledging his temporal powers. Mar Geevarghese Dionysius continued unyielding. Abdulla II excommunicated him on May 31, 1911. Paulose Mar Curilos who had executed the *Udampady* was appointed at Malankara in October 1911, after issuing a *Kalpana* to his followers to treat Mar Geevarghese Dionysius and his followers as aliens to the Malankara Church.

The Canonical Patriarch, Abdul Messiah, was immediately informed of the excommunication by the parties of Mar Geevarghese Dionysius and he declared it null and void as Abdulla was not according to him the Canonical Patriarch but an usurper. The older Bishops, Paulose Mar Ivanios (Bishop

of Kandanad) and Mar Julius Alvaris, (Bishop of the Mangalore Brahmavar-Onavar churches) stood with Geevarghese Mar Dionysius, while Paulose Mar Curilos and the new Bishop, who were consecrated by Patriarch Abdulla, while he was in Malankara, stood ranged against him. Abdul Messiah himself came to Malabar in 1912 (June) and conceding the necessity of a Catholicos in Malankara in order to preserve the Malankara Syrian Church in the true faith and in the Orthodox Syrian policy, revived the ancient Catholicate of the East here and installed Mar Ivanios, Metropolitan of Kandanad, as the Catholicos of the East on September 17, 1912 with Baselios as his official name and issued the necessary orders to continue the Catholicate. He also ordained three other suffragan Metropolitans for Malankara, Geevarghese Mar Gregorius (Metropolitan of Niranam, Quilon, and Thumpamon, Yooyakin Mar Ivanios (Metropolitan of Kandanad, who died 1923) and Geevarghese Mar Bhiloxenos (Metropolitan of Kottayam, who became second Catholicos). Abdul Messiah left Malankara on February 24, 1913.

Both Patriarchs Abdul Messiah and Abdulla died in 1915, one after the other. The Patriarchs who came after them (Elias, Ephrem and Yakoob) desiring still the prerogatives and prestige of the throne of Antioch followed in the steps taken by Patriarch Abdulla. From 1909, two rival groups thus arose in Malankara, who conveniently came to be called the "Patriarch Party" and the "Metran Party" or Catholicos Party. They resorted to litigation. A long drawn suit which started in 1913 lasted for 15 years, during the pendency of which Paulose Mar Curilos, Malankara Metropolitan of the Patriarch Party died and Paulose Mar Athanasius who was consecrated by Abdulla II, while he was here, was elected as his successor in the litigation. The suit was finally decided in favour of Mar Geevarghese Dionysius on August 13, 1928 by the Travancore High Court. His excommunication was declared invalid and he was recognised as the lawful Malankara Metropolitan. But the Patriarch (Elias III) and his partisans refused to acknowledge Mar Geevarghese Dionysius and continued to regard him and his partisans as aliens to the Church in spite of the decision of the court.

Reconciliation in the Church.

When the Malankara Metropolitan, Mar Geevarghese Dionysius, died in February 1934, five years after the Travancore High Court decision in his favour, Geevarghese Mar Gregorius was elected as the Malankara Metropolitan also, by the Malankara Syrian Christian Association on December 26, 1934. That meeting also adopted a Constitution for the Malankara Syrian Church, the first of its kind in its history. As the dissensions of the partisans of the Patriarch still existed, the Patriarch party not only did not co-operate with

the Catholicos party in the election of the Malankara Metropolitan and the formation of the above Constitution, but they in their turn convened a meeting of churches at Karingassarli on 22nd August 1935 and elected Paulose Mar Athanasius once again as the Malankara Metropolitan and filed a suit in the District Court of Kottayam on March 10, 1938 to establish that the Catholicos was not the proper Malankara Metropolitan. During the pendency of this, Paulose Mar Athanasius died and Abraham Mar Clemis, Bishop of the Kananaya Diocese, was elected in his stead. The suit lasted for twenty years and was finally decided in favour of the Catholicos on the 12th of September 1958 by the Supreme Court of India. The Supreme Court decision served to settle all the differences in the community and established beyond all possibilities of challenge the Catholicate and the constituted in the Malankara Church.

With the decision of the Supreme Court of India, the partisans of the Patriarch moved to end the schism and to make peace between the two sections of the community. At their request, the Patriarch Ignatius Jacob III ventured to accept unconditionally the Catholicate in Malankara and to bring about peace. The Catholicos welcomed the move and undertook to accept the Patriarch and his partisans in accord with the constitution passed by the Malankara Association and currently in use. Letters of mutual acceptance were exchanged and peace was established on December 16, 1958. This function took place at the Old Seminary, Kottayam, the original spot itself, at which the bitterness was started and Geevarghese Mar Dionysius was excommunicated forty-seven years ago.

ORGANISATION OF THE MALANKARA CHURCH

The temporal, ecclesiastical and spiritual management of the Malankara Syrian Church vests with the Malankara Metropolitan which he carries out with the help of the Diocesan Bishops under him. Formerly, the whole province of Malankara was one Diocese under the Malankara Metropolitan. Seven Dioceses were formed about the year 1876, when Patriarch Peter III visited the Church. They were:— (1) Cochin, (2) Ankamali, (3) Kandanad, (4) Kottayam, (5) Niranam, (6) Tumpaman and (7) Quilon. To these were added in course of time three others, viz., (1) Knanya Diocese (constituted by Patriarch Abdulla in 1911), (2) The Malabar Diocese (constituted by the Catholicos in 1953) and (3) Outside Kerala Diocese (constituted by the Catholicos in 1960). Of the above, the Kottayam Diocese has jurisdiction over the Taluks of Kottayam, Kanjirapally, Changanacherry, Peermade and Devikulam and the Kandanad Diocese over the Taluks of Vaikam and Minachil. The Knanaya Diocese whose Bishop resides at Chingavanam, Kottayam has personal jurisdiction over all members of the Knanaya community, wherever they live.

Religious Faith and Practices of the Orthodox Syrian Church.

In doctrines, religious practices, observances, etc., the Orthodox Church in Malabar (Malankara Church) at present follow almost Orthodox Church in Syria. It is consecrated by the Bishop with Holy Mooron. The Worship is conducted facing towards the east as a sign of the waiting for the second coming of the Lord. The four parts of the building represent those in the Jewish Temple of Jerusalem as given below:— (1) Mudbaha (i.e., place of sacrifice) or Holy of Holies raised up from the rest of the building, (2) Part inside the rails—Holy place, (3) Main Hall—Court of Israelites and (4) Portico—Court of the Gentiles.

The central act of worship in the church is the Eucharistic Sacrifice. The Eucharist is believed to be the source of all divine graces, because it is supposed to contain Christ the Lord himself, who is looked upon as the source of every heavenly gift and blessing. All the sacraments in their administration are closely connected with the Eucharist. Baptism, confirmation, absolution, matrimony, holy orders and festival services are all done either along with the Holy Eucharist or in close proximity to it. The liturgical language of the Church is Syriac—that division of it usually known as West Syriac. The Church in Malankara is inclined to use as much Malayalam as possible so that the congregation may intelligently take part in the worship. A good part of the services and the liturgy are rendered into Malayalam.

Next in importance to the Eucharist as a service for worship, come the daily prayers, that starts at 6 p. m. Every third hour after this is a canonical hour for prayers. In churches, the priest leads the prayers and the chorists and the servers help him in singing and the offering of incense. Lighted candles and incense are used in all the services of the church. The offering of incense upon the altar is a regular feature of the Syrian worship. The bishop and the priest alone place the incense, the seniority being to the Bishop.

The sign (*Rushma*) of the Cross is the foremost Symbol used in the Church. It is regarded as the revealed sign of God, representing his descent from heaven to the earth and his saving men who were converted from a sinful to a righteous life. The Syrian church gives the Cross the most central place on the altar of the church and fixes it on the top of the church building. It may be noted that only the plain Cross is used and not the Crucifix or Icon of the crucified Christ. The reason for this is that the Cross is far Orthodox Syrians the symbol of the resurrected Lord and not of the crucified Lord.

The Holy Bible containing the revealed, or uttered word of God is greatly venerated by the Syrians. The reading of

the Holy Bible has a very important place in the worship of the Church.

Standing is the normal posture for worship in the Syrian Church. But during the times of the reading of the Old Testament and during Sermons, the Congregation is allowed to sit. At all other times, the congregation has to stand. The Bishop alone has a seat (his throne) in the church and the Chancel. Others have to squat on the floor when they have to sit. The seats seen in some of the churches are a recent innovation. Kneeling and prostrating on the ground are regular features of the Syrian worship, done on specified occasions during canonical prayers as an act of worship and mortification. But they are forbidden on Sundays and dominical days of rejoicing.

Fire, water, oil and wax have important place in the worship of the church. Fire is looked upon as the symbol of God. Besides lighted candles placed on the altars, a lighted oil brass wick lamp will be suspended in the aisle of the Church at service times. Water which is a symbol of the Holy Ghost in the Bible is mixed with wine to prepare the chalice in the Eucharistic service and also the Eucharistic bread. Consecrated Olive Oil, which is another symbol of the grace of the Holy Ghost, is used in baptism and in the function of the sick. Unconsecrated olive oil is made use of in the preparation of the bread of the Eucharist and in the burial of the dead. Coconut oil is used for lighting the brass wick lamp in the Malankara church. Pure wax collected by the bees from the flowers is made use of in making the candles to be lighted in churches and the pure light which it generates denotes the divine effulgence of God.

OBSERVANCES OF THE ORTHODOX CHURCH

Fasts.

The main observances of the Orthodox Syrian Church are the prescribed fasts, abstinences, vigils and festivals. There are five major fasts and two one-day weekly fasts. The major fasts are:—(1) *The Great Fast or Lent*—This fast is observed for 40 days before Easter. It is a time of Penance. (2) *Fast of Advent*—This fast is for twenty-five days (December 1—25), observed before the feast of Christmas (Nativity or Advent of Our Lord). (3) *Fast of Assumption*—It is observed for fifteen days (August 1-15) before the feast of Assumption. (4) *Fast of Apostles*—It is observed for thirteen days (June 16-29) in honour of the 13 Apostles including St. Paul at the close of which is celebrated the feast of the martyrdom of Peter and Paul (June 29), the leading Apostles of the Jewish and gentile Christianity and the feast of all the apostles on June 30. (5) *Fast of Janoah (or Nineveh)*—This is for three days

beginning on Monday three weeks before Lent, to commemorate the prophet Jonjoah and the repentance of the Ninevites. Besides these five periodical fasts, Wednesdays and Fridays of all weeks are observed as fast days.

During fast days, the faithful are expected to abstain from meat, fish, egg, milk, wine and other strong drinks and all products prepared out of them.

Feasts and festivals are days of solemnity observed in commemoration of some event in the life of Jesus Christ, His mother, the Blessed Lady and other Saints of the Church or some other sacred event.

Moreover, there are Ordinary Feasts in commemoration of events like the birth, death and other incidents in the life of the Mother of God, the Apostles, the Evangelists, Martyrs, Baptist, Prophets, Confessors, Saints, Holy Fathers, Doctors of the Church etc.

Organisation of the Church of South India.

The supreme governing and legislative authority in the Church of South India is the Synod. The Chief officers of the Synod are the Moderator, the Deputy Moderator, the General Secretary and the Treasurer. All the Diocesan and Assistant Bishops as well as the officers of the Synod are *ex-officio* members of the Synod.

In every Diocese there is a Diocesan Council. It consists of the Bishop of the Diocese, the Assistant Bishop, if any, all presbyters in charge of pastorates and certain other presbyters as well, lay representatives of the churches.

In each Pastorate there is a Pastoral Committee. The Pastor-in-charge is the Chairman of this Committee. The Pastoral Committees exercises a measure of control over the finances of the Pastorates and possesses certain other powers and functions as well.

Muslims.

The Muslims form the third important religious community in Kottayam District. Islam was introduced in Kerala early in the 8th century A. D. and it might have found its way into Kottayam soon after. The Muslims live in all parts of the District, but mainly in Changanacherry, Kanjirapally, and Kottayam Taluks. They belong to the Sunni sect. Their main occupation is trade and consequently they are seen in large numbers in urban or semi-urban areas rather than in the rural areas. There are ancient mosques in such places as Changanacherry, Kottayam and Kanjirapally, Erumeli and Erattupettah. The priest of the mosque called *Musalier*

usually attends to all ceremonies connected with marriage, death etc., among Muslims. The Muslims observe the various fasts and festivals, the most important of them being the *Ramzan*, *Muharram* and *Bakrid*. Some of the local Muslim celebrations like the *Chandanakudam* in the new mosque at Changanacherry attract huge crowds. The Muslims have lived in amity with other religionists for centuries and they have also enjoyed certain privileges in connection with Hindu festivals like the *Pettah Tullal* in Erumeli and the *Makaravilakku* at Sabarimala. The Hindu pilgrims make offerings to the Vavar mosque at Erumeli and also to a Muslim representative in the neighbourhood of the Sastha shrine at Sabarimala. In Changanacherry town may be seen a mosque, a temple and a church in close proximity to one another. This is proof of the communal amity that has prevailed here throughout the centuries.

Property and Inheritance.

Till 1912 *Marumakkathayam* or matrilineal system was the dominant system of inheritance that prevailed in the Kottayam District. Under this system all descent was traced through the female line or through the sister's children, a man's own children having no legal claim to his property. The *tarward* property was the joint property of all the members and each member was entitled to maintenance from it, though he could not claim partition. Partition was possible only with the consent of all the members. A dominant feature of the *Marumakkathayam* society was that the *Karanavan* (the head of the family) was an autocrat who often came into conflict with his *anandaravans* (junior male members of the family) because of his overwhelming partiality for his own wife and children. The Nairs constituted the most important *Marumakkathayam* community in the District till a few decades ago. The Ezhavas of the District had also generally followed the system, though in the Meenachil Taluk they have been mainly *Makkathayis*. In addition to the Nairs and the Ezhavas, the Ambalavasis and the Kshatriyas were also *Marumakkathayis*. The Christians and the Muslims have followed the *Makkathayam* or patrilineal system. Some of the Hill Tribes had followed a peculiar system of inheritance which is a mixture of *Marumakkathayam* and *Makkathayam*, the assets of the deceased being divided equally between his sons and nephews, but in recent years most of them have adopted the patrilineal system.

The most far-reaching social change in modern Kerala is the disintegration of the old *Marumakkathayam* society. The autocratic powers exercised by the *Karanavan* in the joint family provoked the revolt of the younger generation against the system and led to organised agitation in Travancore for the enactment of legislative measures aimed at reforming the

law of inheritance. The movement for the abolition of the *Marumakkathayam* law of succession among the Nairs was ably led by the Nair Service Society. In 1083 K. E. (1907-1908), in response to the growing public opinion, the Travancore Government appointed a committee of officials and non-officials. A Bill was introduced by the Government in the Legislature and passed into law as Act I of 1912 A. D. Though the measure represented a great advance, it did not provide for the partition of Nair *tarwads*, the shares being calculated per capita. It sanctioned half of the self-acquired property of a male to his children and the other half of his nephews and thus tried to accommodate conflicting views on the subject. The first Nair Act therefore failed to satisfy the legitimate aspirations of the progressive sections of the Nair community. A new Bill was introduced in the Legislature by a non-official member in 1916 A. D. in order to amend the first Nair Act by making provision for *tavazhi* partition. But the motion was lost, the official members having voted en bloc against the measure. In 1921-22 another non-official bill was introduced into the Legislature and it was passed into law as Act II of 1100 (1925 A. D.). But the Legislature brushed aside such criticisms as un consequential and signified its acceptance of the social change proposed in the Bill. It may be noted that the Act of 1925 sanctioned the partition of Nair *Tarawads*, the share being calculated per capita and deprived the nephews of all claims to the properties of their uncles. The Nair Act was soon followed by the enactment of the Ezhava Act (1925) and the Nanjanad Vellala Act (1926) providing for transition from the *Marumakkathayam* to *Makkathayam* law of inheritance thus made vast sections of the Hindu community of *Makkathayis* and brought about the destruction of the old *Marumakkathayam* customs and traditions have not been affected by legislation. The divided members still retain some of their old family ties. The lingering influence of the old system may be seen in the observance of certain customary ceremonies and death and birth pollutions by the erstwhile *Marumakkathayam* communities even today.

MARRIAGE AND MORALS

Monogamy and Polygamy.

Till a few decades back polygamy was practised by the Namboothiris, the Kshatriyas, the Nairs, the Ezhavas, the Pulayas and such other castes of the Hindu community in this District. The custom, however, disappeared in recent times. One of the earliest places of legislation on the subject was the Travancore Nair Act of 1925 which made polygamy illegal among the Nairs. Similar legal prohibition on polygamous marriages was imposed in the case of the Ezhavas, the Vellalas, the Namboothiris and the

Kshatriyas as well. The legal responsibility of maintaining the wife and children imposed by law made polygamous marriages unpopular with the higher castes like the Brahmins and Kshatriyas. At the same time the dissemination of progressive ideas in the wake of the spread of English education created a feeling of revulsion against the custom in all communities. The Hindu Marriage Act of 1955 has made monogamy for all classes of Hindus all over the country and thus it has dealt a death blow to the practice of polygamy. In spite of decline of the polygamous society, it is seen that some of the Hill Tribes still practice polygamy on a small scale. As for the Christians of the District, polygamy is prohibited among them both by law and religion. The Muslim custom does not prohibit polygamy, but public opinion and economic considerations discourage the practice.

Polyandry.

Polyandry prevailed in ancient times among certain Hindu communities in this District. As in the other parts of Kerala the Nairs and Ezhavas constituted the most prominent of such communities. Polyandry is of two kinds, fraternal and non-fraternal. The Nairs and Ezhavas followed fraternal polyandry. Polyandry of the same type was observed by the Kammalas for reasons of economy. Thurston observes as follows. The custom of one woman having several husbands is sometimes practised by carpenters, stone masons and individuals of other castes. Several brothers living together are unable to support a single for each and take one, who resides with them all. The children are reckoned to belong to each brother in succession in order of seniority.¹ With the growth of education and the spread of liberal ideas, polyandry was given up as a primitive and barbarous custom. However, it is seen that some of the Hill Tribes practise polyandry even now. While the non-fraternal type of polyandry is found among the Mannans, the fraternal form prevails among the Malapandarams.

Traditional Restrictions on Marriage Alliances.

Marriage alliance among all castes and communities are subject to restrictions based on caste and the degree of relationship between the parties. The common practice has been for the member of a caste or community to marry from within the same caste or community. Nevertheless, there have been exceptions to this rule. Thus, till recently, the Namboothiris permitted only the oldest son to marry from within the caste, the younger members being encouraged to consort with women belonging to other castes, particularly the Nairs. A Nair male was allowed to cohabit with a woman inferior to him in

¹(Edgar Thurston). *The castes and tribes of southern India* Vol. III pp. 138-139.

the social scale, but his womenfolk were prohibited from exercising the same privilege. A Nair female cohabiting with a man of lower caste was guilty and was even turned out of her family. In many cases apart from Namboothiris, such high castes as Tamil Brahmins, Pottis, Kshatriyas and Ambalavasis formed alliance with Nair women. In recent years inter-caste marriages are frequently reported. The District Registrar, Kottayam gives the following figures of inter-caste marriages for the period 1962-65.

Year	No. of marriages
1962	4
1963	6
1964	8
1965	11

Among almost all castes and communities marriage between near blood relations is prohibited. Among Nairs the children of brothers and sisters enter into marital relationship. However, the children of sisters do not marry each other. Nor do the children of brothers. The Tamil Brahmins are divided into a number of endogamous sub-divisions or *gotrams* which cannot inter-marry. Marriage with a daughter of a maternal uncle or paternal aunt is prevalent among Tamil Brahmins and it is even claimed as a matter of right on either side. Marriage with a sister's daughter is also not uncommon among them. Among Christians each division is an endogamous sect with no inter-marriage between the members of one sect and another. The Catholics avoid all matrimonial relations among relatives and even cousins up to the fourth degree are prohibited from inter-marriage. No inter-marriage generally takes place between the descendants of a high caste convert and those of a low caste one. Some of the Hill tribes also observe certain marriage rules based on the degree of relationship. The marriage of cross cousins is common among them as it not only keeps families together, but also prevents disposal of property. Among several of them it is customary to marry the *murappennu* (maternal uncle's or paternal aunt's daughter).

MARRIAGE CUSTOMS AND RITUALS

Marriage customs and rituals vary from community to community. The marriage ceremonies of the Nairs and Ezhavas are more or less similar. The giving of clothes is essential and hence the ceremony is commonly called *pudava koda* (cloth giving). Among the Nairs and Ezhavas the tying of the *Tali* is as much an essential of the marriage as the presentation of cloth by the husband to the wife. Though the marriages are arranged by parents, the parties concerned often get the right of selection of bride or bridegroom, as the case may be. It is also customary to compare the horoscopes of the

parties and find out their agreement before the marriage is finally settled. The marriage ceremony generally takes place in the house of the bride. But, it is also conducted in temples as it is considered more economical and convenient to do so. If the marriage is held in the bride's house a temporary *pandal* is put up and specially decorated for the occasion. A circular design is drawn on the floor by rice-flour mixed in water. Three standing oil lamps (*Nilavilakkus*) are placed near the entrance in the eastern side of the hall. A big receptacle with paddy and coconut flourescence fixed in it is placed in the center. Two smaller receptacles with flower and parched paddy, a bell-metal mirror and a *grandha* (sacred book) are also kept in the hall. Some music usually *nagaswaram*, music, is also provided for the occasion. On arrival the bridegroom with his party is received with *Ashtamangalyam* or the eight auspicious things. Also the feet of the bridegroom are washed by the bride's brother. The bridegroom is then brought in and seated with the bride facing the east. The father of the bride joins the hands of his daughter with those of the groom. Flower garlands and gold rings are exchanged between the bride and groom. The bridegroom formally presents cloths to the bride. Then they are greeted with *korava*. The invited guests are treated to a sumptuous feast. The ceremony ends with the distribution of lemon and betel to the assembled guests.

The marriage customs among the Hill Tribes have already been dealt with.

Among Christians, marriage is arranged by the parents of the bride and bridegroom. Elaborate enquiries are made about the bride before the marriage is formally settled. The marriages are solemnised in the Church. The priest conducts the marriage ceremony and blesses the union when the bride and the bridegroom join hands as a sign of mutual consent. The bridegroom ties the *Tali* around the neck of the bride. The usual prayers are said on the occasion and the blessings of God invoked by the Parish Priest. Then the party returns home. A feast is given to the assembled guests in the house of the bride. The bridegroom may also arrange a party for his friends and relatives.

Among the Muslims, the marriage is formally fixed by the parents in the presence of relatives and guests on the day of betrothal which takes place normally in the house of the bridegroom. The marriage is conducted in the house of the bride. Till recently Muslim marriages were held in the night. But now this custom has faded out and people have begun to prefer day time. The father of the bride and the bridegroom sit facing each other, and the ceremony called *Nikah* is conducted by the *Musaliar* in the presence of relatives, friends and local people. Then the bridegroom with the *Tali* enters the apartment where the bride is seated. His sister helps him to tie the *Tali* around the neck of the bride. The assembled guests are treated to a sumptuous feast and with this the wedding ceremony is over.

Dowry System.

The dowry system has been prevalent among almost all communities and castes in this District—Hindus, Christians and Muslims. It is paid by the parents of the bride either in cash or in the form of gold or jewellery or vessels or property. The practice of parents securing husbands for their daughters by undertaking to meet their educational expenses has also been in vogue for long. In spite of the attempts of modern social reformers to do away with dowry, the evil still persists. Government have recently resorted to legislation for the abolition of dowry. The Dowry Prohibition Act came into force with effect from July 1, 1961. Under the Act, giving, taking and demanding of dowry have been declared as offences punishable under law. But it is doubtful whether legislative action would achieve any positive result. Only enlightened public opinion can bring about the complete extinction of the evil.

Civil Marriages.

Only very few marriages are reported to have been registered in the Kottayam District under the provisions of the Special Marriage Act of 1954. However, more marriages are conducted under the provisions of the Indian Registration Act. The year-wise statement of these marriages for the period 1962-65 is furnished below:

	1962	1963	1964	1965
Number of marriages solemnised under the Special Marriage Act 1954	4	5	5	2
Number of marriages executed under the Indian Registration Act.	137	136	169	165

The overwhelming majority of marriages among all communities are being solemnised according to the personal laws of each community at their homes, temples, churches or mosques. Civil marriage is resorted to only when marriage under personal laws is not possible.

Marital Age.

The following table taken from the District Census Handbook (1961) summarises the marital status of the general population in the District in 1961.

Distribution of 1,000 persons of each sex by Marital Status

Marital status	Total	Rural	Urban
I Males	1,000	1,000	1,000
(i) Never married	610	607	645
(ii) Married	364	367	332
(iii) Widowed	21	21	19
(iv) Divorced or separated	5	5	4
(v) Unspecified	N	N	..

<i>Marital status</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>
II Females	1,000	1,000	1,000
(i) Never married	541	540	553
(ii) Married	376	379	345
(iii) Widowed	69	67	88
(iv) Divorced or separated	14	14	14
(v) Unspecified	N	N	..

It will be seen that 61 per cent of the males and 54 per cent of the females were "never married". In recent years the marital age has gone up both in case of males and females. Among the males marriage below 24 years of age is almost uncommon. The modern tendency among educated young men is to postpone their marriage as long as they can. It may be safely assumed that the average age for marriage among women in the District is 20 and that for men 25.

Divorce.

The District Registrar, Kottayam furnishes the following figures of divorces registered in his office during the period 1962-65.

<i>Year</i>	<i>No. of divorces</i>
1962	39
1963	67
1964	73
1965	84

It is also seen that the proportion of widowed or divorced persons among married persons was relatively small. All this is proof of the fact that the number of cases of divorce are not alarmingly high. As marriage is considered to be something sacred by all castes and communities, divorce is not generally favoured by society. This accounts for the small percentage of divorced or widowed persons. Nevertheless, among the poorer sections of the community like the factory workers, agricultural labourers, and the Hill Tribes several cases of desertion of wives by husbands are noted, though the parties concerned have not gone through any form of legal divorce. One of the most important pieces of legislation pertaining to divorce in recent times is the Hindu Marriage Act of 1955 which permits divorce at the instance of either party on grounds of adultery, idiocy or lunacy. Women can sue for judicial separation or divorce. In spite of such legal sanction accorded to divorce, the number of divorces have not increased on this ground. This is because of the fact that the society does not look upon divorce with approval.

Marriage of Widows.

Though widow marriage is permitted by law, the custom has not been generally favoured by some of the Hindu communities, particularly the Brahmins. The Nairs and the Ezhavas have all along permitted widow marriage. The custom of marrying the deceased wife's sister (i.e., sororate) has been prevalent among them on a small scale. The custom of marrying the deceased brother's wife (i.e., levirate) has also been prevalent to some extent. The Hill Tribes have always permitted the marriage of widows. The levirate and sororate marriages are prevalent among some of them. While sororate marriages are found among the Mannans, levirate is practised by the Kurumbas. We have no precise statistical data regarding widow marriage. However, their number cannot be large because social stigma has unfortunately stood in the way of widow marriage even in spite of enabling legislation.

Economic dependence of women and their place in Society.

As in all other Districts of Kerala, women play an important part in all fields of activity in this District too. Female education has made considerable progress here and women are employed in the public services as clerks, typists, teachers etc. There are also lawyers, doctors and engineers among them. They are active in politics too. Some of the educated women even prefer to remain unmarried, earning their livelihood by their own labour while many go for work even after marriage and supplement their husbands' income with their own. It is a feature of this District that women are employed in considerable numbers in rice pounding and husking as well as in domestic service.

Prostitution, Drinking and Gambling.

Social evils like prostitution, drinking and gambling are prevalent in this District as elsewhere in the State. The Travancore-Cochin Suppression of Immoral Traffic Act (1951) and the Kerala Gambling Act (1960) are in force in this District. While the former provides for the suppression of brothels and of traffic in women, the latter makes better provision for the punishment of gambling and the keeping of common gambling houses. The table given below gives the statistical information relating to the offences that come under the category of prostitution, drinking and gambling for the period 1958-64.

<i>Year</i>	<i>Cases under Suppression of Immoral Traffic in Woman and Girls Act</i>	<i>Cases of drinking</i>	<i>Cases under Gambling Act</i>
1958	4	216	79
1959	7	193	86
1960	5	212	91
1961	6	301	102
1962	3	287	99
1963	5	219	81
1964	7	298	88

HOME LIFE

Dwellings

The highest percentage of households in all the Taluks of the District except Meenachil have single room tenements, while in the Meenachil Taluk the highest per cent of households are distributed equally between households with 1 room and 2 rooms. The smallest per cent of households in the Taluks of Devikulam, and Kanjirapally fall in the group of households having 4 rooms and in the remaining Taluks except Kottayam in the group having 5 rooms and more. In the case of Kottayam Taluk the smallest per cent have 4 and 5 rooms and more. The number of persons per room and per household in the District are 2.78 and 5.81 respectively.

Domestic Architecture.

Kerala has had its own distinctive style of domestic architecture and the pattern of dwellings in this District has generally followed this style. Almost every house is a separate dwelling located in a self-contained compound and it is provided with all domestic amenities within its boundaries. The traditional upper class houses called *nalukettus* were built for accommodating the erstwhile joint families under *Marumakkathayam*. They consisted of a rectangular structure, sometimes tiled but generally with a thatched roof, comprising a central courtyard, the structure being divided into four main rooms and four corner rooms, and the courtyard being connected to the outside by four corridors arranged in *swastika* form. Wood and laterite were the important building materials used, wood for the making of columns, eaves, the gables, the overhanging roof and the balconies and laterite for the basement and foundation of the building. Verandahs and cattle-sheds formed part of every house. The houses of the poor classes consisted generally of one or two small rooms with a kitchen at one end and a verandah either in the front or on all sides of the main building. These huts were roofed with leaves of the coconut palm, reeds, bamboo, grass or straw.

The *Nalukettu* has now gone out of fashion. The modern upper class house is constructed in the western style and it consists of a drawing room, dining hall, bed rooms with attached bath rooms, a kitchen and a store room. The number of storeys in the house depends on the financial capacity of the parties concerned. The roof is made of reinforced concrete and is decorated on the sides by concrete railings of beautiful designs. The walls are plastered with lime, or with cement and then whitewashed. The floor is done in cement, or in mosaic, if the party can afford to have it. The windows are provided with iron bars of different varieties. Decorative grills are also used in some houses, at least on the front side in order to ensure an attractive appearance. The bars which were till recently fixed vertically

on the windows are now being placed horizontally. Ventilators have become indispensable items. Either they are attached to the top of the windows or provided separately. A flower garden in front of the house has become the fashion of the day. The houses are invariably provided with electric lights and pipes, wherever possible. Those which are not roofed with concrete have wooden ceilings.

It is seen that the percentage of households using C. I. sheets or other metal sheets, cement concrete etc., as the wall material for buildings is very low. Stone is the predominant material of wall of the dwellings except in Udumbanchola Taluk where grass, reeds, leaves or bamboo are the principal material. Timber is also a favourite wall material. For example Meenachil Taluk has timber as wall material for a considerable number of households. This is due to the better availability of timber in the area. As in the case of wall material, the percentages of households using C. I. sheets zinc or other metal sheets, asbestos, cement sheet, etc. for roofing is also low. The vast majority of houses use grass, leaves, reeds, thatchwood or bamboo as the predominant roof material. A certain percentage particularly in urban area, use tiles. In Devikulam Taluk the predominant roof material is corrugated iron, the reason being climatic.

Furniture and Decorations.

The houses of the well-to-do have fairly well furnished rooms. The use of chairs, tables, settees, teapots, sofa etc., made either of wood or of rattan is quite common. The doors and windows of houses are provided with curtains. Radio sets and flower pots wherein either fresh flowers or artificial flowers made of paper or plastic are kept as decorations in every drawing room. The clock, the photos and the calendars adorn the walls. Coir mats and carpet are spread on the floor. Wooden cots are found in some houses, but people also sleep on grass mats spread on floors. When dusk falls bronze lamps are lit. The lighting of the lamps is a delightful ceremony with children squatting around the lamps chanting devotional songs. Some of the bronze lamps are ornamental and oil is generally used as an illuminant. Kerosene lamps are lit only after the ceremonial lighting of the bronze lamps is done. But now electric lights have almost replaced the kerosene lamps. It must, however, be stated that a few earthenware pots and mats form the only households possession of the poor classes.

Dress.

A distinguishing feature of the people of Kerala is the simplicity and elegance of their dress. White cloths are preferred to coloured cloths by the vast majority of people. A piece of cloth (*mundu*), two to two and a half yards long and one and a half yards broad, is worn round the loins by

men of almost all communities. A small upper garment is also worn while at home. While what is described above is the traditional form of dressing among men, irrespective of caste, there are differences in the forms of dressing prevalent among women. The women of the Nair, Kshatriya, Ambalavasi and such other communities wear an inner garment round the loins and this is covered by an outer garment which is usually two and a half yards in length and one and a half yards in breadth. Sometimes instead of two clothes one cloth sufficiently long for the purpose is worn. In the past it was customary for these women to leave the upper part of the body exposed, but this custom has now disappeared except among the very old women who are confined to their homes. The conventional dress used by Christian women is the white *mundu* or cloth, about seven yards long and one and a quarter yard broad, worn in a distinctive style with a fan-like portion on the back side. They cover the upper part of the body with a long sleeved blouse. The Muslim women have a liking for gaudy dress. They wear blouses closed at the neck with long sleeves and cover their heads with scarves.

As a common habit the people of Kerala do not wear shoes or chappals. Kottayam is also not an exception. Walking bare footed is not considered below one's dignity among the majority of people unlike some parts of Northern India. However the educated and well to do sections in the society use foot wear when they go outside the houses.

There have been significant changes in the sartorial habits of the people in recent years. The young women of today, irrespective of caste or community, have almost given up the conventional costumes in favour of white or coloured saris and blouses, brassiers, cholis etc. New forms of dress such as blouses with low-cut necks, openings at the back, close fitting sleeves up to the elbow etc., are also coming into vogue among women of the higher strata. The ward robe of well-to-do young men and urbanites consists of all the items of the western ensemble including the bush-coat, bush-shirt, slack made of the fibre of terylene, bucklin, etc., and a pair of trousers.

Almost all women take special care in the growth and preservation of the hair. They use plenty of oil to improve its growth and to keep it smooth and shiny. There are several ways of doing the hair among them. The traditional way has been to part it in the middle and tie it either tight to the ears or twist it up in front in a sort of cone or sometimes to tie it into a knot behind. The young woman's plait of hair used to reach the knee or even lower, adding greatly to her beauty. With the increasing craze for fashions in dress, fashionable forms of hair dressing have also come into vogue among young women. Artificial hair, hair nets and rings are used for putting up the hair in attractive ways. The pony tail and the pig tail are two distinctive styles eagerly

sought after by girls. Blackening of the eyes and eye-brows with antimony or the old counterpart of the modern collyrium is widely prevalent. Though cutex and face powder are used by fashionable ladies, lipstick is seldom in use. It should however be noted that these artificial aids to beauty do not always find favour with the rural womenfolk.

Modern ideas regarding dress have not come into vogue among the majority of the Hill Tribes. Most of them wear a loin cloth coming down as far as the knees. Irrespective of sex they prefer to leave the upper part of their body exposed. The Karavazhi women dress themselves in the form known as *Korathu Kettu*. They use a cloth and knot it over the right shoulder. The Malapandaram women use a long cloth similar to a sari, dressed around the hip and thrown across the chest. Many among them even use *Maraviris* (bark of tree) to cover their nakedness. The more advanced sections among all Hill Tribes are, however, now inclined to dress themselves properly.

Ornaments.

Ornaments made of gold have been popular with all classes of women in this District even from very early days. The oldest ornament of the Nair women was a necklace called *nagapatam*, or serpent's hood, so called from the shape of the pendant. The *Addiyal* was another common ornament used by them. Other ornaments used for the neck by the Nair women were the *Yanthram*, *poothali*, *avilmala* and *pulinakham*. They also wore a nose ornament called *nukkuthi* from which was suspended a gold wire called *Grattu*. Round the loins were worn gold and silver belts. While grown up women did not wear anklets, the young ones used *Kappu* and *Kolusu*. The ear ornament of the Nair women was the *Toda*, which was a double convex disc, the front surface of which was either plain or set with rubies, for the wearing of which the ear lobes were sufficiently dilated. The dilating process began at a very early age and the ear lobes became so far distended as to make it possible to wear *todas* of more than an inch in diameter. Rings of all kinds were used for fingers. The Namboothiri women used only as few ornaments as possible. They wore rings on their fingers. A peculiar kind of necklace known as *Cheruthali* was worn loose over the breast. The Tamil Brahmin were not sparing in the use of ornaments. They had ornaments for the head, nose, ears, neck, arms, fingers, waist, feet and in fact for every part of the body. The Syrian Christian women bore their ears in several parts and wore a kind of heavy gilt brass rings called *Mekka Motiram* at the top of each ear. The ear lobes were dilated by them when quite young in order to accommodate a 'U' shaped ornaments at the time of wedding. They were also accustomed to use necklaces and rings of various sorts. The Muslim women used to wear a variety of ornaments all over their

ceremony which heralds the commencement of the *utsavam* in this temple should begin only after performance of *Kuthu* for a specific number of days. The Tirunakkara *Kuthambalam* is one of most spacious of its kind in Kerala. At Vennimala, *Kuthu* is performed for 61 days a year even now. Two of the most important Chakiar families of Kerala are in Kottayam District. One of these is at Manganam, near Vennimala temple in Putupally. The famous Pothiyil Raman Chakiar belonged to this family. The other Chakiar family is at Kidangur.

Ottam Tullal is a kind of solo dance invented by Kunjan Nambiar who lived in the 18th century. In it the actor dresses in conventional fashions and recites stories composed in Malayalam in *Tullal* metres to the accompaniment of drums and symbols. Humour is a quality that stands out in the performances of this art. In *Patakam* a single actor or reciter expounds puranic stories. *Harikatha*, like *Patakam*, is also a narration of puranic stories but it has more of music in it which makes the story telling more interesting and absorbing to the audience. The traditional *Harikatha* devoted mainly to the presentation of puranic themes is now giving place to the *Kathaprusangam* in which current social themes are also presented.

In addition to the above traditional arts, there are also some others which are particularly devotional and are associated with temples. Mention may be made in this connection of *Gitam*, *Panchavadyam*, *Parishavadyam*, *Chendamelam* and *Nagaswaramelam*. *Gitam* is the practice of singing devotional songs before the deity in important temples to the accompaniment of *Edakka*, which is considered as a *Deva Vadyam*. Verses of *Ashtapadi* (Jayadeva's *Gita Govindam*) are usually sung along with compositions of Dikshitar, Swati Tirunal and others. It may be mentioned in this context that Ramapurathu Warriar who hailed from this District wrote the famous musical work *Bhashashtapadi*, a Malayalam translation of the *Gita Govindam*. In it are employed many ragas and talas different from those in the original. *Panchavadyams* or the five instruments (*Maddalam*, *Timila*, *Edakka*, *Sankhu* and *Talam*) are usually played at the time of the *Diparadhana* in temples and during processions. They are played particularly during the big *Utsavams* in order to provide entertainment to the spectators. In *Panchavadyam* there is a synchronisation of sound emanating from all the five instruments in varying pitches. One *avarthana* lasts for four hours, with climaxes and anticlimaxes. It is commonly believed that those who are present in the Vaikom temple on the night of the tenth day of the *utsavam* when *Panchavadyam* is played by experts, will be free from all sins and even the Devas from heaven descend to the earth to enjoy the Programme. *Parisha Vadyam* those intended for the *Upadevatas* such as *Dwarapalaks*, *Digpalaks* and *Bhutaganas*. *Chendamelam* is supposed to express the all powerful nature of the supreme

Lord and is usually played in connection with all temple festivals. It is significant that *Chendamelam* is resorted to by Christians also in connection with the *perunals* in their churches. *Tayambaka*, a classical piece of drum, is another temple *Vadya* that thrills audiences during festivals. As in *Panchavadyam*, in *Tayambaka* also one session lasts for hours, with several climaxes and anti-climaxes. *Nagaswaramelam*, otherwise called *Pandivadyam*, is also another set of *Vadyams* prescribed for use during the main *pujas* in the temples. It is also played in such auspicious occasions as marriages.

Among the other pastimes of the District the *Vallamkali* (boat regatta) deserves special mention. The *Chatayam Vallamkali* at Kumarakam and the *Utrattati Vallamkali* at Tazhathangadi in the month of *Chingam* (August-September) are among the most important of their kind in the District. The *Channanakudam* festival in the Putupally mosque at Changanacherry on the 23rd, 24th and 25th of December every year is an important local celebration of the Muslims of the District. The *Parisamuttukali* in the Edakattupalli situated near the Valiapalli in Kottayam town is a typical Christian festivity. Almost all temples, churches and mosques have their local festivals and celebrations which attract enormous crowds from all parts of the District. There are also some folk dance which deserves mention. The *Kaikottikali* (the dance play with hand-clapping) is a communal dance and it is performed by maidens in Hindu families during such festival seasons as *Tiruvathira*. During the Onam and other important festivals certain special varieties of dances are performed. Among them may be mentioned *Parisamuttukali*, *Koladi*, *Velakali* and *Kaduvakali*.

Pilgrim Centres.

Kottayam District has some of the most famous centres of pilgrimage in Kerala. Among the centres of Hindu pilgrimage, Sabarimala is undoubtedly the most important. Situated at the top of a hill in the Peermede Taluk, this Sastha shrine attracts lakhs of pilgrims from all parts of the country for the *Mandalapuja* and the *Makaravilakku* in *Dhanu* and *Makaram* (December and January) respectively. The Sastha temple at Erumeli where the famous *Pettatullal* of Ayyappans is held prior to the commencement of the regular pilgrimage to the Sabarimala is another hallowed place of pilgrimage. The famous Saivite shrines at Vaikam, Kaduthuruthi, Ettumanur, Kadapattur, Tirunakkara and Vazhapally attract Hindu pilgrims from all parts of Kerala and outside. The *Ashtami* festival at Vaikom in the months of *Vrischikam* (November-December) and *Kumbham* (February-March) are important celebrations. On these days lakhs of pilgrims throng to Vaikom. The Vishnu shrines at Trikkodithanam and Tiruvarppu are also important pilgrim centres. The Bhagavati shrines at Kumaranellur and Cheruvally and the Subramonia temples at Udayanapuram and

Kidangoor are also visited by large numbers of Hindu pilgrims. The Saraswati temple at Panachikad attracts Hindu devotees throughout the year, particularly during *Navaratri* season. The Adityapuram temple (near Kaduthuruthi) dedicated to the Sun God and Vedavyasagiri near Ettumanur are also centres of Hindu pilgrimage. Among the Christian centres of pilgrimage, Bharananganam where the mortal remains of Sister Alphonsa are kept is sacred to Syrian Catholics. Mannanam which is associated with Fr. Kuriakose Elias of Chavara is also an important centre of pilgrimage for Syrian Catholics. The Catholic churches at Kuravilangad, Vechur, Muttuchira, Aruvithura and Ramapuram also attract thousands of Christian pilgrims, particularly during the annual *Perunnals*. The Valiapalli in Kottayam town which belongs to the Knanaya Orthodox Syrian Christians is also an important institution. The Putupally and Manarkad churches are among the important centres of pilgrimage for the Orthodox Syrian Christians. There are important mosques at Changanacherry, Kanjirapally and Erattupettah. The *Channanakudam* festival at Changanacherry in December attracts large crowds from various parts of South India. The Vavar Mosque at Erumeli is unique in the sense that it is visited by Hindu pilgrims who visit Sabarimala and as such it stands as a symbol of Hindu Muslim amity.

Public Games and Recreation Clubs.

The District has its own traditional games like *Talapandu*, *Chadukudu*, *Kilithattu* etc. Apart from these modern public games like foot-ball, basket-ball, volleyball, badminton, hockey, cricket etc., have become immensely popular in recent times. All schools and colleges encourage such games and athletic activities. There are a number of athletic associations and sports clubs located in different parts of the District. Working in close co-operation with the Kerala Sports Council, their main concern is the promotion of games and sports. Special mention may be made in this connection of the Kottayam District Athletic Association, Changanacherry; Mannanam Young Men's Club, Kottayam; Kottayam Cricket Club, Kottayam, Manorama Sports Club, Kottayam, the Lucky Star Club, Changanacherry, V. P. M. Gymkhana, Changanacherry; V. P. M. Gymkhana, Vaikom; Kottayam Gymnastics, Kottayam; Ruby Tennis Clubs, Changanacherry; Peermede Club, Peermede etc. Cities like Kottayam and Changanacherry have well laid-out stadium for the performance of public games and sports. Apart from regular sports clubs there are also a number of recreation clubs in almost all important urban and semi-urban centres. Some of these clubs which have been formed on the initiative of young men of the localities concerned have been particularly active. The Janata Club, Kanjirapally, is one of such organisations and it conducts a regular festival during the Onam season in order to enable the local people to participate in the Onam festivities. In view of the fact that there are a number of Tea and Rubber estates

and plantations in this District there are also some exclusive clubs wherein the estate-holders and leaders of plantation industry provide exclusive facilities for their recreation. Devikulam, Munnar, Kanjirapally etc., have such clubs. Being clubs of the upper classes these members of the middle and lower classes have nothing to do with their activities. In spite of the increased popularity of modern games and recreations, it should be noted that the bulk of the rural folk have no interest in them. They find amusement in playing cards or in seeing cinemas. There are cinema theatres, 18 in number, located in the major urban and semi-urban centres of the District.

CHAPTER IV

AGRICULTURE AND IRRIGATION

Introduction.

Out of a total population of 2,085,134 in the District 619,613 persons i. e., more than 29.72% constitute the working class population. The distribution of working class population in the rural and urban areas is given in the Table 1.

TABLE I

Distribution of Workers

	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Workers	561,290	58353	619643

The agricultural population forms the bulk of the above population in the District. They are concentrated mainly in the rural areas.

Land Utilisation.

Table II gives the classification of land area in the District.

TABLE II

Classification of land area 1969-70

<i>Category</i>	<i>Area in Hectares</i>
1 Total geographical area according to village papers	626,225
2 Forests	2,964
3 Lands put to non-agricultural uses	16,332
4 Barren and uncultivable land	8,176
5 Permanent pastures and other grazing lands	3,500
6 Lands under miscellaneous tree crops not included in the net area sown	3,156
7 Cultivable waste	16,572
8 Fallow land other than current fallow	1,290
9 Current fallow	159
10 Net area sown	332,106
11 Area sown more than once	53,076
12 Total cropped area	374,152

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Kottayam District has the lowest percentage of the net area sown more than once among the Districts of the State. This is due to the predominance of plantation crops and forests. When analysed on the strength of the total cropped area, Kottayam the second biggest District of the State in point of total area, has only the 8th place among the Districts of the State.

Table III shows the Taluk-wise distribution of waste lands according to the findings of the "Cultivable Waste Land Survey" conducted by the Department of Economics and Statistics in the District in 1959-60¹.

TABLE III

Taluk-wise distribution of waste lands (Area in hectares)

	Changanacherry	Kottayam	Meenachil	Vaikom
All waste lands@	1,259.37 (4.79)	1,950.51 (3.61)	4,575.91 (6.34)	3,310.68 (9.98)
Current fallow*	347.22 (27.62)	1,033.17 (52.97)	980.1 (21.38)	456.09 (13.81)
Other fallow*	149.74 (11.92)	338.72 (17.36)	801.28 (17.48)	71.63 (2.17)
Cultivable waste*	306.75 (24.39)	448.40 (22.99)	1,827.17 (38.98)	959.12 (29.04)
Uncultivable waste	453.66 (36.07)	130.31 (6.68)	1,015.77 (22.16)	1,815.84 (54.98)

@ Figures within brackets relate to percentage of waste lands to total area of Taluk.

* Figures in brackets relate to percentage of each type of waste land to the total area under waste lands.

In the four Taluks of Changanacherry, Meenachil, Kottayam and Vaikom covered by the survey, the percentage area under waste lands was maximum in the Vaikom Taluk with 10% and minimum in Kottayam Taluk with 4%. In the Kottayam Taluk uncultivable waste lands accounted for about 7% of the area under waste lands. Current fallow accounted for 58% of the total waste lands in the Kottayam Taluk. Most of these current fallows are Kayal lands. The percentage of cultivable waste land area to total waste land area was minimum in Kottayam Taluk with 23%. Meenachil Taluk showed the maximum percentage of waste lands under cultivable waste and other fallow. The same Taluk alone accounted for about 50% the area under cultivable waste in the portion

1 The Survey was not intended to cover the jungle regions in the District, (Peermade, Devikulam, Udumbanchola and Kanjirapally Taluks) as these parts were not easily accessible for plot to plot enumeration.

surveyed in the Kottayam District. The percentage of area under other fallow was least in the Vaikom Taluk (2%) so far as Kottayam District (portion surveyed) was concerned. Plots left as current fallows were mostly small in size.

Agricultural holdings.

The size of the agricultural holdings in Kottayam District is larger than that in the other Districts of the State. Nevertheless, the Census of Land Holdings and Cultivation conducted by the Department of Economics and Statistics in the erstwhile District of Kottayam in 1956 showed that only 42 per cent of the holdings were over one acre¹ (0.40 hectares), and only 1 out of every 5 persons owned land. The comparatively small percentage of land owners was largely due to the vast extent of highlands in the District where cultivation of small holdings is practically impossible and uneconomic. The distribution of cultivators' holdings is given in Table IV.

TABLE IV

Distribution of Cultivators' Holdings according to number

Grade of holdings	No. of holdings
All	1,000
Below one acre (0.40 hectares)	523
Above one acre (")	477
Above 2.5 acres (1.01 ")	228
" 5 acres (2.02 ")	85
" 10 " (4.05 ")	22
" 20 " (8.09 ")	6
" 40 " (16.19 ")	1

A study of the distribution of holdings in the State has shown that Kottayam has greater area under holdings of larger size. The position in respect of the District in regard to the area covered by cultivators' holdings is given in Table V.

TABLE V

Area leased out from Cultivators' Holdings

	Agricultural land comprised in owners holdings	Area leased out		
		Total	On cash	On kind rent
State	3,322,925	366,342	145,917	220,425
Kottayam	1,094,841	81,826	27,993	53,833

1 It may be noted that more than 63% of the total number of holding in Kerala are less than one acre 0.40 hectares. The average size of a holding in Kerala works out to .64 hectares.

In Kottayam about 7 per cent of the agricultural land comprised in owner's holdings are given out on lease. This position as obtainable in 1956 has undergone radical change in subsequent years due to the impact of land legislation in the State. In practice nobody except Government leases out land on rent either in cash or kind. The size of the holdings varies from Taluk to Taluk and is dependent on rainfall, soil, crop pattern, pressure of population, financial position of the ryots and the extent of absentee landlordism.

IRRIGATION

From the earliest times no major effort seems to have been made in this District to supplement the supply of natural water by artificial means and processes. The reason may well be traced in the observation of T. Rama Rao, Dewan Peishkar of Kottayam in the course of the investigation of the Periyar Project. "Were it not for the super-abundance of water in this river (Periyar) paddy cultivation miles in extent will probably have to be abandoned to the great detriment of Sirkar exchequer and to the complete ruin of the whole villages". He added, "Any measure to diminish the water supply will, therefore, injuriously affect many a part of North Travancore, it may perhaps bring in a good return to the Government but it cannot satisfactorily compensate for the losses which the people and the country will suffer in consequence". These apprehensions were justified by subsequent happenings. In some measure, the Periyar Dam built for the use of the Madras Government (1882) adversely affected the interests of agriculturists in some Taluks as frequent floods caused considerable damage to crops. Subsequent to 1886-87 the first important original irrigation work completed in the District was the Kaipuzha scheme for the prevention of the access of brackish water to the very large areas of paddy lands between Kottayam and Valayanapuzha in Vaikom. This was mainly a reclamation work. It was of great benefit to the ryots as they got large tracts of land fit for cultivation. It also offered security against floods and inrush of salt water from the backwaters. With the dawn of Independence a number of medium and minor irrigation works were taken up by the Government. It may, however, be noted that even now the main sources of irrigation in the District are natural streams, channels, channel-fed and rain-fed tanks and natural water reservoirs formed by constructing embankments across the line of drainage of natural streams.

There are no major irrigation works in the District. In 1964-65 there were 15 medium irrigation schemes estimated to cost nearly Rs 17,16,614 and to benefit about 5,048.05 hectares land. These schemes were under varying stages of execution.

1 Travancore State Manual, Vol. IV, by T. K. Velu Pillai, pp. 407-408.

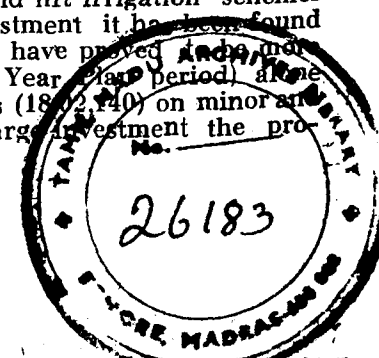
There are plots of land in several parts of the District which cannot be irrigated by gravity flow. Such lands are brought under cultivation by lifting water from the reaches of rivers or from fresh water lakes or ponds. Lift irrigation forms an essential part in the pattern of irrigation development in such areas of the District. There are 9 such Lift Irrigation Works in this District. They are expected to benefit an area of about 809.38 hectares. The estimate cost of construction is about 6 lakhs.

Minor irrigation works are more economical than major irrigation works. In Kottayam a considerable portion of the cultivated area is benefited by such works. In 1964-65 there were 19 minor irrigation works in the District benefiting an area of 1,214.07 hectares and costing Rs 1,08,124. In addition, 51 works had been taken up and were under various stages of execution.

Salinity Control Works.

One of the factors adversely affecting agriculture and public health is the intrusion of salinity in all river courses with the cessation of the monsoon rains. During the rainy season there is plenty of fresh water flowing down and the salt water is kept out of the tidal reaches of rivers and backwaters. After the rainy season the flow in the rivers dwindles and salt water slowly creeps inwards and travels 3 to 17 kms. The salinity covers low lying fields and permeates by capillary action into the adjacent highlands. The low lying areas under cultivation are mostly subject to tidal submergence. In such areas cultivation has to be carefully timed and phased sufficiently in advance of saline intrusion so that one crop can be successfully raised. This, however, is rather a precarious and often fruitless venture. The remedy lies in storing flood flows and releasing the stored waters in a steady and continuous stream. But this work falls in the category of major irrigation schemes. Where the low lying lands are enclosed within clay bunds, saline intrusion takes place by seepage and soakage or by the "Salt exclusion vented cross bars" constructed in these areas. In this District there are 7 such works. Tidal bunds are also put up yearly across the canals in Kumarakom and Vaikom for protection of the irrigation fields from salinity.

It is not possible to make any assessment of the benefits accrued out of the minor, medium and lift irrigation schemes separately. However, in terms of investment it has been found that minor and lift irrigation works have proved to be economical. During 1961-65 (III Five Year Plan period) alone the District had invested Rs 18.02 lakhs (18,02,140) on minor and medium irrigation. In spite of the large investment the progress achieved has been very negligible.



Area Under Irrigation.

Kottayam had only 20.8% of net irrigated area in the State in 1957-58 and 19.9% in 1958-59. The percentage of the net area irrigated to the net area sown in the District was 43.78% in 1957-58 and 43.52% in 1958-59. Table VI shows the sources of water supply and area irrigated (in acres) from 1957-58 to 1958-59.

TABLE VI
Sources of water supply and area irrigated

Sources	Area irrigated (In hectares)	
	1957-58	1958-59
1 Canals:		
Government	20,087	20,087
Private	6,102	6,244
2 Tanks	311	311
3 Wells	478	478
4 Others	38,619	38,761
Total	65,597	65,881

Soil Conservation.

Soil conservation in Kottayam District aims at the complete control and prevention of soil erosion in the hilly agricultural lands under cultivation. The topography of the agricultural lands in the District is highly rolling to undulating. The monsoon precipitations are intense. The occupation of several hundreds of acres of erstwhile virgin forest lands by persons, legally or otherwise and the indifferent soil management practices resorted to by them have resulted in an alarming extent of soil erosion in the District. The cultivation of tapioca along the hill slopes has accelerated the problem. The catchment area of some of the major Hydro-Electric projects in Kerala are located in Kottayam District. The soil erosion hazards have, therefore, not only reduced the productivity of the cultivation lands but have also endangered the usefulness of the reservoirs of the Projects.

The adoption of systematic soil conservation practices on scientific principles suited to the agro-economic conditions of the District is the only remedy to counteract this menace of soil erosion. During the early years of the Second Five Year Plan an ambitious scheme was launched in the Kumpampara area, on the 90th K. M. of the Alwaye-Munnar Road, to implement soil conservation measures effectively in all the forest lands, legally or otherwise occupied and cultivated by individuals. However, the collection of data regarding the persons in actual possession of lands and realisation of part of the expenditure thereon from the

beneficiaries of the scheme created a feeling of distrust among the land owners and necessitated the cessation of the programme for the area during the latter half of the year 1955.

Soil Conservation measures on complete catchment or self-defended catchments, were later proposed for areas under registered occupation by individuals. The schemes so prepared were processed in strict accordance with the provisions of the former Travancore-Cochin Land Development Act No. XXXVI of 1950. During the first 3 years of the Third Five Year Plan period the actual field execution of schemes in the District was practically at a stand-still.

During 1965-66 the following 3 schemes were taken up in Kottayam District and continued with vigour.

- 1 Scheme for 971 hectares in Karukachal Village, Changanacherry Taluk, at an estimated cost of Rs 3.48 lakhs.
- 2 Scheme for 712 hectares in Madapally Village of Changanacherry Taluk, at an estimated cost of Rs 3.7 lakhs.
- 3 Scheme for 793 hectares in the Kurisumala area of Meenachil Taluk at an estimated cost of Rs 5.4 lakhs.

The field execution of all these schemes was entrusted to the land-owners themselves with free technical assistance from the Development of Soil Conservation and with financial assistance by way of loans and grants from the Government. In addition, draft schemes for an area of nearly 690 hectares in Champakara area of Changanacherry Taluk had also been prepared during 1964-65 at an estimated cost of Rs 4.2 lakhs. Moreover, directions to prepare draft schemes under Section 5 of the Kerala Land Development Act were given in the case of nearly 3,440 hectares located at specified places in Changanacherry, Meenachil and Peermade Taluks. With the constitution of the District Land Development Committee and the appointment of District Soil Conservation Officers for the preparation, processing and field execution of soil conservation schemes as required under the provisions of the Kerala Land Development Act the soil conservation programme in the District received a further impetus in 1965-66. In 1965-66 the total area worked was 614.31 hectares and the actual expenditure incurred for the same was Rs 405,209.26.

Apart from the hilly agricultural lands vulnerable to soil erosion, there are also broad stretches of paddy fields subject to inundation of floods in this District. Schemes for the construction of permanent submersible bunds around

selected *Padasekharams* in the Kayal lands of the Kuttanad area are also under the consideration of the Government.

Water Potential and Schemes for further exploitation.

According to the data collected by the designers of the Master Plan, immense possibilities exist in the rivers of the District for the improvement of irrigation, navigation etc. The following are the schemes proposed in the different river basins of the District.

A scheme is proposed to divert the balance water of the Moovattupuzha river out of the 56,700 mcft to irrigate about 15,460 hectares in Vaikom and Cochin-Kanayannur Taluks through the existing waterways lying criss-cross over the area for which only 15,280 Mcft. of water is required. The remaining water can be conveyed for irrigation in the Kottayam Taluk. The regulators proposed for facilitating navigation by maintaining sufficient depth in the river, will also help in diverting the water to the field. In addition to the bed regulator now being constructed at Thanneermukkom (Alleppey District) the following works will also be necessary for achieving the above purpose:

- (a) Two regulators with shutter arrangements and locks (for facilitating navigation) across the two branches of the river.
- (b) Widening and improving the Vadayar thodu to divert the water from Moovattupuzha river.
- (c) Cutting open a new 9 k.m. long channel from the confluence of the above to Kudavetchoor.
- (d) Improving Puthen thodu up to Kottayam.

1 In November 1957 the Government of Kerala appointed a special staff under the Chief Engineer, General and Irrigation, to investigate the water resources of the State and to prepare a Master Plan for their utilisation. A small Advisory Committee consisting of the Chairman, Kerala State Electricity Board, Chief Engineer, Irrigation, the Superintending Engineer, Water Resources Circle and the Investigation Division Officer for the Electricity Board, was constituted to scrutinise the Plan. The Master Plan which took shape covers all possible schemes for the utilisation of the river waters of Kerala. It envisages a total outlay of Rs 500 crores split up into two phases, the first phase from 1961 to 1971 costing Rupees 210 crores and the second from 1971 to 1991 costing Rs 290 crores. The report on the Plan was published in 1958 as a book under the title "*Water Resources of Kerala An Advance Report*". The details of the scheme proposed for the Kottayam District can be had from pages 149-169 of the book.

- (e) Deepening and widening the Kallara thodu at Kulumbukad.
- (f) Cutting a new channel from Kuruppanthara to Madurveli.

These works are intended for improving the drainage facilities in the low lying areas of Vaikom and Kottayam Taluks so as to create a washing effect in the fields at times of floods for leaching off the toxicity. These channels will also serve to supply irrigation water to the fields at times of need. The cost of the scheme will come to Rs 258 lakhs.

Meenachil River Basin.

After a very careful and detailed study of the Meenachil river, it has been found that the Trikovil branch alone provides some possibility for the erection of a storage. A dam is proposed to be constructed at Teekoy. The reservoir proposed at Teekoy will supply a portion of the water required for raising a third crop, viz. 3630 Mcft. out of 16,420 Mcft. water.

Manimala River Basin.

There exists a site for a dam just upstream of Mundayam. The catchment area of the river upto this site is 106.19 sq. kilometres and based on the discharge measurements observed at Thondara, an yield of 9,610 Mcft. is expected. It has been roughly estimated that a dam of height 49 metres and length 914 metres will have a storage of 5,000 Mcft. and assuming that the reservoir will get filled up 1½ times a year, about 75,000 Mcft. of the run-off can be utilised through storage for irrigation.

SOILS

The soils of the District vary in their nature from place to place according to situation. The soil of the elevated land reposes on a bed of laterite. The more elevated parts are somewhat barren producing only coarse grass and a few meagre shrubs. But their sides and bases are very fertile and support a luxuriant vegetation. The soil of the lower parts of the valleys consists of a brownish coloured clay of depth but of great variation, at some places a vegetably loamy mixture washed from the neighbouring uplands, porous, permeable and readily yielding to the plough, at others a stiff clay requiring some exertion to turn it. The uplands during the rains display some strength of vegetation but are comparatively barren for nearly half the year. The following are the chief soil types in the District.

Alluvial Soil.

The western portions of Changanacherry and Kottayam Taluks are covered by this soil type. It is well supplied with
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organic matter nitrogen and potash but is deficient in phosphorus and lime.

Peaty or Kari soil.

The type is predominantly seen in the western portions of Vaikom Taluk and in some parts of Kottayam Taluk. It is characterised by deep black colour and consists of heavy clay soils, rich in nitrogen, fair in potash and deficient in phosphorus. An area of 4,047 hectares at Chempil and Vechur in Vaikom Taluk and Kumarakom in Kottayam Taluk is covered with this type of soil. There are swampy areas with black and very loose peaty soil. The sub-soil consists of partially decomposed organic matter. Logs of wood of different species are often seen below the sub-soil. These marshes are overgrown with weeds peculiar to the locality and the minimum depth of water in them will be about 4 centimetres to 8 centimetres in the driest part of the year. There is no good flow of water to and from this land and the water stagnates in all these blocks.

Laterite soils.

These soils are porous, well drained with poor water holding capacity. They are usually of low fertility. They contain a fair amount of organic matter and nitrogen but are deficient in phosphorus, potash and lime.

Red Soils.

They are deep red in colour due to ferric oxide content and are deficient in organic matter and major plant nutrients.

Sandy soils

Though very rare in this District, this type is found in certain parts of Vaikom Taluk. It is highly porous and deficient in plant foods and lime.

Forest and Filly Soils.

The Paarmede, Udumbanchola and Devikulam Taluks of the District are covered with this soil type. It is characterised by a surface layer of organic matter derived from the forest. It is rich in nitrogen but deficient in other plant foods.

Area under cultivation and average yield of major crops.

In 1969 Kottayam had more than 10.6% of the total area of the State under food crops. Rubber, Tea, Pepper,

Betelnut, Cardamom, Turmeric, Ginger, Tapioca, Coconut, Paddy etc. are the most important crops raised in the District. The District has the least area under pulses and cashew while it has the maximum area under Cardamom, Tea and Rubber. It stands second to Trivandrum District in having the least area under paddy in the State. It may be noted that Kottayam has the largest concentration of rubber acreage in India. The District was also outstanding with regard to the area under some cash crops like ginger, turmeric, sugarcane. The details showing the acreage under each crop and their percentage to the total cropped area are given in Table VIII.

TABLE VIII

Area under crops for the year ending 30th June 1969

Crop	Area in hectares	Crop	Area in hectares
Rice { Autumn	7,807	Cashewnut	1,516
{ Winter	24,555	Tapioca	37,838
{ Summer	17,524	Sweet Potatoes	1,077
Ragi	47	Onions	38
Other Cereals & Millets	825	Castor	46
Tur	247	Sesamum	95
Kharif	281	Coconut	78,272
Rabi	171	Others	3,578
Sugarcane	1,127	Tea	30,723
Others (Palmyrah)	507	Coffee	2,085
Pepper	14,448	Rubber	52,411
Ginger	3,447	Fodder crops	11
Turmeric	1,177	Green manure crops	4,290
Cardamom	42,666	Other non-food crops	7,694
Betelnuts	9,682		
Others	2,132		
Mangoes	7,020		
Banana	985	Total area sown under crops	3,74,152
Other Plantain	4,149	Area sown more than once	53,076
Other fruits	10,644	Net area sown	3,21,076

Table IX shows the total out-turn of principal crops in the District for the year 1969.

TABLE IX

Total out-turn of Important crops for the year ending 30th June 1969

Crop	Out-turn in Tonnes
Rice	79,064
Ragi	44
Other Cereals & Millets	380
Pulses	298
Sugarcane	8,103

Crop	Out-turn in Tonnes
Black pepper	4,361
Dry Ginger	3,157
Cured Turmeric	992
Processed Cardamom	817
Betel Nuts (Million nuts)	549
Banana	11,614
Other plantains	31,682
Cashewnuts	1,701
Tapioca	6,92,057
Sweet Potatoes	5,331
Seasamum	30
Coconut (Million nuts)	378
Tea	32,405
Coffee	963
Rubber	21,296
Lemongrass	107

MODE OF CULTIVATION OF IMPORTANT CROPS

Paddy (Nellu)—(Oryza Sativa Linn).

Kottayam has next to Trivandrum the least area under paddy among the Districts of the State. In 1969 the area under paddy was 49886 hectares. Even though the District occupies eight position in the State in acreage and production of paddy, the modes of cultivation are varied.

Viruppu.

The first crop *Viruppu* is sown under dry conditions.¹ With the pre-monsoon showers the land is prepared by ploughing and paddy seeds dibbled behind the plough or sown broadcast and covered by ploughing and planting. This is done in April-May. In the low lying *Viruppu* fields transplantation takes place in June-July. When the plants are about one month old weeding is done and sometimes a dose of nitrogenous fertiliser is applied. The practice is to apply organic manures such as cattledung or compost and phosphate manures etc. In certain cases bonemeal is broadcast by hand over the field and the land ploughed. The crop is harvested in August-October.

¹ There are certain ceremonial observances at the first sowing of paddy in the year observed by those who are agriculturists by profession. The village astrologer or *Kaniyan* is consulted to fix an auspicious day for turning of the first sod of the season. (Vide *History of Kerala*, Vol. I, K. P. Padmanabha Menon, pp. 98-99).

Mundakan.

In this system, paddy is either broadcast or transplanted during August-October months. In the heavy soils of the deltaic areas, the crop is invariably transplanted. Dry seed is sown directly under rainfed conditions, while sprouted seed is sown in the puddle when swamp conditions exist. Direct broadcasting of paddy seed under swamp conditions is adopted only when necessitated by special local conditions. The usual practice is that as soon as the first crop is harvested, the land is ploughed six to eight times and green manure ash or compost manure is applied. Sometimes bonemeal is also used as basal dressing and when transplanting is done. After the first dressing, top-dressing with urea or Ammonium sulphate is given wherever possible. In certain cases, sprouted seeds are sown in well prepared fields in which ash, cattledung, compost, green leaves etc. are ploughed along with bonemeal. Weeding is done when the plants are one month old. The crop is harvested during December-February months.

Punja.

The third crop, *Punja*, is restricted to small low-level areas (kayal lands) where water supply is abundant during the summer months between January and May. *Punja* cultivation takes place in the Changanacherry and Kottayam Taluks. The cultivation is on the same lines as in Kuttanad.

Special methods of cultivation.

Some special modes of rice cultivation are followed in the Kari lands of the District to suit local conditions.

Kari Land cultivation.

As observed earlier large areas of *Kari* or peaty marsh soils occur in parts of Vaikom and Kottayam Taluks. They are swampy areas with black and very loose peaty soil. These marshes are overgrown with weeds peculiar to the locality and the minimum depth of water in them will be about 1½ to 2½ ft. in the driest part of the year. The first step in their cultivation is to remove the weeds. The soil is then stirred by the plough or spade in three feet of water and bounds are put up intact on all sides. The water is then pumped out and the seeds are sown by the end of December or early in January. The crop is harvested in March. The period of growth ranges from 90 to 100 days. The cultivation begins after the north-east monsoon has spent itself and the harvest takes place before the south west monsoon breaks out. If the north-east monsoon ends late and the south-west monsoon ends late and the south-west monsoon starts early before the crop is harvested, the cultivators

lose heavily. As regards the growth of crops, there are some peculiarities with these lands. Paddy grows very luxuriantly for the first one month or so. If it rains at this stage, the whole crop begins to wilt. This occurs in small patches. The leaves become yellow in these patches and the plants wither and die. In the first harvest after reclamation the yield is about $\frac{1}{2}$ of a ton per acre but it decreases year by year. The land is being limed and treated with ammonium phosphate and superphosphate ($\frac{1}{2}$ cwt. each per .40 hectares) or Niciphos (1 cwt. per .40 hectares) on the advice of the Agricultural Department.

Malamkrishi

Paddy is also cultivated in the forest at the foot of the Ghats and on the slopes of hills. This is called *Malamkrishi* or hill paddy cultivation. A patch of forest is cleared by cutting and burning the trees and the land prepared for cultivation. The seed is sown in April and the crop requires little attention apart from occasional weeding. Harvesting takes place in September. The virgin soil is very fertile and the yields are high. Punam cultivation is common in the hilly Taluks of the District.

High Altitude Cultivation.

Throughout the High Ranges on terraced slopes and valleys, rice is cultivated in different seasons, the extent of area depending upon the availability of water.

Marayur Region (Devikulam Taluk).

In this region (about 500m. above M. S. L.) the growing season is from August-September to December-January. Depending upon the availability of water, sowing may extend from August to November using short term (about 100 days) and medium term varieties (125-130 days). This is the only area lying at lower elevations where only a single crop is raised. Rice being grown in a few valleys here and there, the total area itself is less than 500 hectares in this region.

Seeds are sown direct under dry condition at the high rate of 112 kg per hectare or sprouted seeds may be sown in puddle when the seed rate would be 90 to 95 kg. per hectare. 3 or 4 ploughings alone are given. Cattle manure is applied at a low rate of 500-600 kg. per hectare through a unique system of cattle-penning in the field itself. Work animals are housed in enclosures made of spilt bamboos without roof. The dung and urine are collected and heaped in a corner once in a week and the enclosure itself shifted from place to place when sufficient quantities accumulate. The high cost of transport is thus eliminated ignoring loss in manurial value by exposure of the dung so collected. One weeding is given when the crop is

appreciable extent. The yield obtained is low, about 1100 kg. per hectare, the cost of cultivation working out to about Rs 350 per hectare.

Adimali Region (Devikulam Taluk)

In this region (about 600 m above M. S. L.) rice is cultivated in about 750 hectares of which two crops are raised in about 300 hectares in a year from April-May to September-October and September-October to February-March. About a dozen varieties are used in the two seasons, the duration ranging from 110 to 150 days with one variety going up to 180 days.

In most of the areas sprouted seeds are sown direct into puddle, at about 100 kg. per hectare or seedlings raised and transplanted in which case also, the seed rate is high as 60 kg. per hectare. The main fields are ploughed 7 to 8 times and levelled. In addition to cattle manure and green leaf, a basal dressing of bonemeal at 120 kg. per hectare at the time of final ploughing is also sometimes given. An usual practice of top dressing with cowdung and wood ash at about 1000 kg. per hectare is prevalent. The crop is weeded once after about 40 days of sowing and prior to top dressing. A second weeding may also be given when found necessary. The average yield obtained is about 1600 kg. of paddy per hectare. The cost of cultivation works out to Rs 500 for a direct sown crop and Rs 550 per hectare for a transplanted crop, the figures being more or less the same for both the seasons.

Vattavada Region (Devikulam Taluk).

Here again the area under rice is not more than 70 hectares. The region however is important in that it is the highest altitude (1100 m. above M. S. L.) at which rice is grown in the State. The sowing commences in December-January and the crop is harvested in August with a duration of 8 months and as such only one crop is raised in a year.

Preparation of the land starts from the middle of September. For the first two ploughings big wooden ploughs are used. After the first deep ploughing, water is let in to allow for the stubbles to decay. The fields are again ploughed deeply a fortnight after and water allowed to stand in the field to a height of 10 cm. Subsequent two ploughings (puddlings) are given using small ploughs and the fields levelled for sowing sprouted seeds in the puddle.

The sound practice of selecting only heavy seeds for sowing is followed here. Heavy seeds are isolated by immersing the bulk-seeds in a dilute solution of cowdung and discarding the seeds that float. The heavy seeds thus isolated are soaked in water for 48 to 72 hours and drained. The seeds are then kept in baskets and covered with banana or castor leaves and straw. Under the cold weather conditions

the seeds take 4 to 7 days for supporting after which they are sown direct into the puddled field.

No basal manure is given due mainly to scarcity of cattle manure or green leaves. Weeds are removed when the crop is about 60 days old. After weeding the available cowdung is applied through irrigation water, an interesting practice evolved out of sheer necessity. The cowdung is placed in the sub channels adjoining the plots and water let in from the main channel. The quantity thus applied may not be more than 500 kg. per hectare. No other manures or fertilisers are applied to the crop.

The crop is subject to strong cyclonic winds which cause heavy lodging of the crop and production of high percentage of chaffy grain. The yield per hectare may be only about 1250 kg. and the cost of cultivation about Rs 375 per hectare.

The area under rice in the other two taluks together, namely, Peermade and Udumbanchola, is less than 200 hectares and the practice obtaining at lower altitudes as described for Marayur region is adopted.

Varieties of Paddy.

The District grows a number of varieties of paddy which are known by different local names among the agriculturists. The Department of Agriculture has however evolved a few improved varieties and some of them have proved popular. The more important local as well as improved varieties grown in the District are given below.

Local varieties of paddy				
Variety			Duration	
1. Cheera			90—100	
2. Cherady			160	
3. Thirinjavella			114	
4. Mundakan			160	
5. Kochuvithu			100	
Improved varieties of paddy				
Season	Variety	Duration Days	Average Acre yield (.40 hectares)	Percentage in crease over ryot crop
Viruppu	PTB 1 (Aryan)	145	3000	15
	PTB 2 (Ponnaryan)	135	2500	15
	PTB 9 (Thavalakannan white rice)	130	2500	13
	PTB 4 (Vellari)	140	3000	13
Mundakan	PTB 10 (Thekkan Cheerra)	90-100	2500	15
	UR 19 (Chembaru)	145	3000	30.9
	PTB 10	90-100	2500	15
	Punja	PTB 10	90-100	2500

Average yield of Rice

The average yield of rice in the District for each of the years 1957-58 to 1963-64 is given in Table IX.

TABLE IX

Average Yield of Paddy in the District

Year	Viruppu Kgm/grams per 0.40 hectare	Mundakan Kgm/grams. per acre 0.40 hectare	Punja lbs. per 0.40 hectare
1957-58	..	516.187	544.310
1958-59	512.105	522.991	650.451
1959-60	521.177	587.855	631.401
1960-61	500.765	709.872	680.842
1961-62	456.314	605.999	613.257
1962-63	516.641	593.299	..
1963-64	525.259	543.382	651.84.

Sugar crops—Sugarcane (*saccharan officinarum*—karimbu)

Among the sugar crops, sugarcane is the most important. Sugarcane cultivation extends over nearly 1127 hectares which raises the District to the status of the second largest sugarcane growing District in the State. The acreage is limited by the environmental conditions for the crop in some parts of the Taluks of Vaikom, Changanacherry and Kottayam. The sugarcane as normally cultivated is of about 10-12 months duration. Warmth and humidity during the growing stage and dry chilly weather at maturity are ideal for the crop. Sugarcane is a long duration exhaustive crop and so it thrives best in fertile soils with good drainage facilities. The crop is however, cultivated on a variety of soils, namely, clay soils, clay loams, red loams and sandy loams. Sometimes in wet lands sugarcane is rotated with rice leaving an interval of at least two years. The land is ploughed a number of times fairly deep till the required tilth is obtained. The main planting season is March-April but in some parts it commences from the middle of January. Before planting the land is levelled and laid out into ridges and furrows at distances of about 1 to 2 metres. Sugarcane is heavily manured. Unfailing water supply is essential throughout the growth period of crop. Weeding and hoeing, filling gaps, trenching and earthings up, wrapping and propping, trashing and removal of shoots are the main after cultivation operations. The period when canes attain the maximum sucrose depends on the age, time of planting and variety. In general it can be said that canes when planted in February-April attain maturity in twelve months. Harvest of canes is done with heavy knives or hatches. The canes are cut flush with the ground level or even two inches to four inches below the ground. Soon after harvest, the canes are stripped

of the trash (dry leaves). This is done with the sickle. The trash is used as fuel for furnaces in jaggery making. The average yield from sugarcane varies from 1,533 to 1,624 kgs. of gur per 0.40 hectares. The cost of cultivation varies from Rs. 800 to Rs. 900 per 0.40 hectares and the total income varies from Rs. 1,200 to Rs. 1,500 per 0.40 hectares.

Condiments and Spices.

The spices of Kerala have always attracted the attention of foreign nations and it was in fact the desire to enrich themselves by the trade in these articles that brought European powers to India. The District is famous for its spices, the important among them being pepper, cardamom, ginger, turmeric, betelnuts etc. The more important of them are briefly described below:

Pepper (Kurumulaku)—(piper nigrum Linn.)

Kerala produces 97% of the total production of black pepper in India. Kottayam has 14.3% of the total area under pepper, the District standing third both in area and production of pepper among the Districts of the State. It may be mentioned that pepper is almost indigenous to the forests of the District and has been cultivated here from time immemorial. The large scale cultivation of the crop is largely confined to the sub-mountainous tracts in and below the Ghats.

The pepper plant is grown on living trees or other supports known as 'standards'. It is a perennial shrub which lasts in the plantations for 25 or 30 years, although in some, of the well-maintained gradens, the life of the vines has been found to be over 60 years. It grows from almost sea level up to an altitude of 1067 metres above the mean sea level but the coastal sandy regions are not found very suitable for the successful cultivation of the crop. The soils found most suitable are the clay loams but it is widely grown on red loams and sandy loams overlying the lateritic hill tops of the Western Ghats. As compared to the soils of the East Indies, which consist of fertile and volcanic rock debris, the soils of the pepper tracts in Kerala are poor and depleted and yielded poorer crops. Pepper is an unirrigated crop which is raised solely with the help of the monsoon rains. Being a tropical plant, it thrives best in humid and moist climate and in regions where the average annual rainfall is well over 204 centimetres. Places having an average rainfall of less than 127 centimetres are not considered suitable for the cultivation of pepper. The crop tolerates a minimum temperature of 50° F. and a maximum of 104° F. The propagation of the crop is done vegetatively by means of cuttings.

The pepper vine is a woody climber and requires some support for growing. The supports or 'standards' used for

the purpose in Indonesia, Bornea and other countries of South-East Asia consist of dead-wood posts, but in India, invariably living trees are preferred. Any of the existing jungle trees are used for the purpose or sometimes seedlings of the local *murukku* tree (*Erythrina indica*) are specially planted at regular distance of about 10 feet and the pepper vines are planted at the base of these 'standards'. The vine grows quickly on this standards and covers it with its dark green foliage and forms into the shape of a bush around the 'standard'. Though the pepper vine grows to a height of 30 feet and more depending upon the growth of the 'standard' each bush is not allowed to grow beyond 20 feet in order to facilitate the picking of the pepper spikes when mature.

The vines begin to flower from the middle of July, and depending upon the varieties planted, the berries become ripe for harvest during the period from January to March. When ripe, they assume a beautiful orange or cherry colour. The fruits, which are small berries carried on slender spikes, begin to appear from the third year after planting. The out-turn of the crop is poor at the first harvest and goes on increasing up to the sixth year; from the seventh year onwards full yield can be expected from the plantations.

The preparation of commercial black pepper from the harvested berries is simple. The whole spikes with the berries, are spread on a mat or clean floor and rubbed between the hands or trampled under feet in order to separate the berries. These are then dried in the sun for 5 or 6 days. When fully dry the outer skin becomes black in colour and shrunken in size and assumes the characteristic wrinkled appearance of the black pepper of commerce. The Indian supply consists mostly of this quality of pepper.

Ginger (zingiber Officinale Roscoe).

Kerala is the largest producer of ginger in India. The area under the crop in this District was 3447 hectares. Kottayam occupies the second rank among the Districts of the State in regard to both the area and production of ginger. The taluks where ginger is grown extensively are Meenachil and Vaikom. The main assembling markets are Ponkunnam and Palai and the exporting centres Alleppey and Cochin.

Being a rain-fed crop, ginger is generally grown in areas of heavy rainfall. It requires a rich and well drained soil for its successful cultivation. The soils most suited for the crop are sandy or clayey loams or the typical red loams and laterites of the District. The low slopes of the Western Ghats are more suitable for better growth and yield. Being a tropical plant ginger also requires a warm and humid climate and considerable shade. It is usually cultivated as an annual crop. The crop takes 9 to 10 months for maturity

and every year a fresh crop is taken. The plant is propagated vegetatively by means of the underground stems called rhizomes. Before planting, the field is dug up or ploughed and prepared into long and narrow beds. The beds are heavily manured with cattle manure and levelled. Seed ginger consisting of small portions of the underground stems collected from the previous crop is then planted in these inches each way. Planting is done by the end of May or at the beginning of June before the commencement of heavy rains and the beds are covered with thick mulch of leaves which serves to protect the young shoots from the fury of the monsoon showers and also serves as an organic matter when decayed. In about 2 or 3 weeks' time the buds shoot up. In July-August the beds are weeded and further manuring is given to the beds. Generally two or three mulching and earthing up are given. The plant grows to a height of about 61 Cms. and develops several lateral shoots in each clump. The underground stems develop and become ready for harvest by December-January. As the crop matures, the aerial shoots begin to dry up and lodge on the ground. The harvest is done by digging the whole crop or only portions of the crop according to the needs of the producers.

Cardamom (Eleteria Cardamomum-Elakka).

Cardamom is an important spice crop of Kerala which earns considerable foreign exchange for the country on account of its valuable use in allopathic medicines and the essential oil which it contains. It is almost entirely a South Indian product and is cultivated in the hilly forest regions of Mysore, Madras and Kerala. In Kerala State Cardamom is largely used as a masticatory flavouring in cooking, confectionery and medicinal preparations. The total area under Cardamom in the State in 1969-70 was about 47026 hectares and production 1055 tonnes.

In Kottayam District alone the area under the crop comes to 42666 hectares and the production to 817 tonnes. This position has since changed as new areas have been brought under cultivation and the total production has also increased considerably. It may be mentioned that the cultivation of the crop is mainly confined to Udumbanchola, Devikulam and Peermede Taluks.

Cardamom is grown on well drained forest soils, holding a good growth ever green forest, heavy humus accumulation, and adequate moisture. It thrives on elevations ranging from 610 metres to 1,575 metres above M. S. L. and requires a well distributed annual rainfall of 60" to 150". Thus a cool and constantly moist atmosphere is favoured by this crop. The forest area selected for the plantation is prepared by clearing the undergrowth and thinning out the shade trees to give optimum shade. In areas where shade

is insufficient or sparse, shade trees with tall and spreading habit are planted to attain the optimum shade required for cardamom.

Cardamom is propagated either by planting rhizomes or by growing seeds in nurseries and transplanting the seedlings in the field. One advantage in planting rhizomes is that it comes to yield much earlier than the seedlings raised from seeds. Pits of size 2½' x 2½' x 1' are taken during March-April in the land already prepared at spacing of 8' to 10' between pits. The spacing given varies according to the intensity of shade and variety of cardamom planted. The pits are taken and covered with loose forest soil rich in fertility during May-June. Seedlings with at least 5 suckers or rhizomes with at least 3 bulbs are planted during July in each pit by forming a small depression in the filled up pits and setting the plant at an acute angle to the ground against the slope or keeping it in the erect position with supports. The base of the plant is then covered with a thin layer of soil and much of dried forest leaves. No intercultural operation other than weeding thrice is undertaken during the first year. During the 2nd year in addition to the 3 rounds of weeding, basins of 2½' radius are taken during October and November to prevent leaching of top forest soil and facilitating easy production of inflorescence. From 3rd year onwards shade regulation, weeding thrice, trashing once (removal of dried leaves and shoots) in May-June and harvesting are to be carried out. The flowering starts in April-May and continues even upto December-January. The crop will be ready for harvest in August-September. Six rounds of harvest can be undertaken with an interval of 30 days. Capsules are harvested just short of full ripeness.

The cardamom capsules are cured before they are marketed. Sun drying partially bleaches the capsules and therefore artificial drying is adopted so that the green colour is retained. Curing shed or smoke houses provided with furnace, wire net and flue pipes are used for the purpose. The matured green capsules collected are spread over the wire net and are dried by a system of pipes running underneath, through which hot air from a furnace is passed. Trimming the ends of cardamom, strong, grading etc. have to be done before it is sent for market. Cured cardamom should be stored in double gunny bags in moist proof chamber to retain its quality. It is preferable to store it in wooden cells. On an average 40 kgs of cured cardamom capsules will be obtained from an acre of land.

Turmeric.

Turmeric known as *haldi* in Hindi and *manjal* in Tamil and Malayalam, is used as an important condiment almost in every Kerala home and has been under cultivation from very

ancient times. The crop grows from sea-level to an altitude of 1,220 metres. In higher altitudes, it is met with in the wild form along the Ghats. The soils most suited for turmeric cultivation are sandy and clayey loams. The crop requires proper tillage and careful cultivation. It cannot stand water-logging or alkalinity in the soil. It is grown both under irrigation and as an unirrigated crop. In the District turmeric is cultivated solely with the help of the monsoon rains. Kottayam stood second in the State in area and production in 1969-70, with 1177 hectares out of 1374 hectares in the State the area covered from 27% of the total area in the State.

There are no sharply distinguished varieties of turmeric under cultivation but some types grown in certain localities are reputed for their colour. The Malabar variety is reputed to have better medicinal properties particularly for cold and catarrh. The crop is propagated vegetatively by means of its swollen underground stem known as *corms*. The crop requires a fine tilth and heavy application of manure. The preparatory cultivation consists of ploughing the field six times, breaking the clods and removal of stubbles, roots and weeds from the surface of the field. Cattle manure is then applied at the rate of about 40 cart-loads per acre and the field prepared into narrow beds with facilities for irrigation and drainage. During April to July turmeric corms (underground stems) are planted in these beds 15 to 23 centimetres apart in the furrows and 15 centimetres apart between the furrows. After planting seed material, the beds are levelled and a thick mulch of leaves is applied on it. Quick-growing vegetables and rootcrops like *Colocasia* and yam are also sometimes planted in between the beds. The corms send forth aerial shoots above the ground in about a month's time and make rapid growth. One or two hoeings and weedings are given and the beds are earthed up along with the close of the south-west monsoon. By November the leafy growth of the turmeric crop is fairly complete and the corms below begin to thicken and develop uniformly deep colour. About February the leaves begin to turn yellow and dry up one by one which is an indication of the maturity of the underground stems or corms. Harvesting commences in March and continues till the end of April.

Harvesting of turmeric has to be done with great care. The whole clump has to be lifted up without injuring the corms which consist of both primary and secondary branches known as 'fingers' as well as the main thickened portion known as the 'bulb'. The leaves and roots are then cut off and the bulb and fingers separated from each other. Very small quantities are marketed in this raw form but bulk of the turmeric crop in India is marketed as dry cured turmeric.

The quantity of seed turmeric used for planting purposes varies from 330 to 660 kgms. per 0.40 hectare and the average yield

of green turmeric is generally 8 to 10 fold. Much heavier yields are, however, obtained under more intensive methods of cultivation. The green turmeric has to be cured properly before the commercial product can be obtained. Curing consists mainly of boiling and drying the harvested produce and giving it a polish for improving its appearance. The process is as follows. After harvest, the raw green turmeric is heaped up and covered over with turmeric leaves and kept in this condition for some times. The entire produce is then transferred to an earthen pot or large iron pan and the vessel is filled with water, the water level standing 2-3 inches above the level of the turmeric. After covering with dry turmeric leaves, the vessel is boiled under direct fire. When the rhizomes turn soft to touch, these are removed from the pan and thinly spread out and dried in the sun. After 5-7 days of drying, the produce becomes fit enough for storage and sale. After it is quite dry, it is cleaned to remove roots and other parts and then rubbed well between hands. It is also polished by means of special appliances. The produce is then sorted out into finger, bulbs and splits and also graded into large and small sizes according to the requirements of particular markets. The recovery of cured commercial turmeric from the raw green turmeric varies from 15 to 25 per cent.

Arecanut (Areca catchu L).

Unlike other condiments and spices arecanuts occupy a special position in so far as the cultivation is essentially in the hands of poor farmers with small holdings generally not exceeding an acre in extent. It is grown in some localities as the coconut. In the alluvial tracts it is grown in coconut plantations as a minor produce while in the laterite regions extensive plots are devoted exclusively for its cultivation.

In 1969-70 the District had 5470 hectares out of the total area of 81182 hectares under arecanut in the State, the District occupying the sixth rank among the Districts of the State. The arecanut palm grows well in solid which can retain an optimum moisture and requires plenty of shade. Usually banks of rivers, valleys between hills, hill slopes and homesteads in the District are planted with arecanut. It is a perennial crop. The palm has a tall, erect, unbranched stem, very graceful often reaching a height of about 18 metres or even more. The seed may be sown either directly in the garden (in situ) or by raising seedlings and transplanting them after they have grown in the nursery for periods ranging from six months to two years. Transplanting is more popular in the District. Usually the seeds are gathered from very old trees. The planting of the seedlings is done in the rainy months from June to September. The spacing adopted varies from place to place ranging from 2 x 2 cms to 4 x 4 cms. However, 500 to 600 trees are seen planted in an acre. Arecanut requires more watering and manuring than the coconut palm. The practice of manuring is prevalent only in certain places.

Wood ash, green leaves and cattle-dung are used. The arecanuts are harvested when they are tender or fully ripe. The tender nuts are harvested for the preparation of 'kalipak'. The harvesting season starts from June and extends upto December and that for ripe nuts it commences in October and extends upto March. The cost of arecanut cultivation is not prohibitive and hence many have taken to it as a profitable undertaking.

Coconut (*Cocos nucifera* L.).

Among the oil seeds, coconut is the most important. Its cultivation extends over 78272 hectares in 1969-70 which raises the Kottayam District to the status of the fifth largest coconut growing Districts of the State. The coconut often referred to as the "Kalpavriksha" is a widespread tropical crop of great economic importance. It is unique in that it gives the grower a regular income and provides him with many of the necessities of life like materials for building houses, fibre for cardage, food, drinks, and oil. No other tree yields such an array of useful products as coconut and wherever it grows, it is intimately connected with the economic and domestic life of the people. The coconut palm requires a warm tropical climate and grows upto an elevation of 914 metres above sea level. It comes up tall in places of well distributed rainfall of 76 cms. and over. Cold frosty climates are altogether unsuitable for the crop. The soil best suited for coconut is a rich alluvium or loam having proper soil moisture and drainage facilities as found in the backwater areas and the deltaic tracts of rivers. However, coconut can also be grown in other types of soils like white sand, laterite, kari and clayey soils. The loose loamy soil on the banks of canals and rivers, as also on the bunds of paddy fields can support very rich growth of coconut.

Both the dwarf and the tall varieties of coconut are found in the District. The dwarf palms have the advantage that they are early bearing, but they are found to be short lived and easily susceptible to the attack of pests and diseases. Even though they yield greater number of nuts, the copra is inferior with low oil content. The dwarf palms are not therefore recommended for cultivation on a plantation scale. The tall palms commonly grown in the District last longer though they begin flowering only a little later. Experience has shown that it is always more economical to grow the tall palms rather than the dwarf palms. The exotic tall varieties like Philippines, Cochin-Chaina, Fiji, S. S. Green and Laccadive have also been found to grow well. Hybrid varieties combining the desirable qualities of the tall and the dwarf T x D are now becoming more and more popular.

The selection of seed material is of great importance in a perennial crop like coconut, which lasts for 80 years or more. Seednuts are collected only from mother palms

which are intrinsically high yielding and regular bearing. "Forty fronds and twelve bunches on the crown"—these are the hall marks of a good parent palm. Seednuts selected during summer months are generally found to give the maximum percentage of germination and produce more healthy and vigorous seedlings. For raising seedlings, fully matured, medium sized round nuts with thin husk and thick kernel should be selected for sowing. Sowing is done after the monsoon and when properly looked after, seedlings are ready for planting after about nine months. Seedlings which look unhealthy on account of poor and stunted growth, and those that are thin and lanky with leggy leaves are avoided. "As you sow, so shall you reap" is very much true in the case of coconut crop.

No special preparation is needed in the case of land already under coconut cultivation. On the other hand when coconut is going to be introduced for the first time in a site, the initial preparation of the land requires proper attention. Contour bunding and terracing are resorted to in sloping lands. In the case of virgin land, the jungle growth is cleared and the ground properly levelled and ploughed before planting seedlings. Arrangements for proper drainage and for preventing soil erosion are made wherever necessary. Planting pits of suitable size and depth normally 91 cms. x 91 cms. at successive distance of 8 to 9 metres either way in rows arranged in a square or triangular fashion are dug two or three months before planting. Planting is generally done at the commencement of the rainy season. May-June and October-November are the usual planting seasons. But in low lying areas subject to inundation, the planting is done sufficiently in advance of the monsoon or when it is over. The pit must be filled with a mixture of surface soil, coarse sand and ash before seedling is planted. The seedling should be regularly watered in the absence of rains and shaded when the sun is very hot. Cattle trespass should be warded off by fencing. The seedling should be regularly examined for pests and disease and remedial measures adopted in time. Adequate manure in split doses must be applied so as to give a good start to the seedling.

The young palms receiving proper care and attention will commence bearing in about 6 to 7 years after planting and continue to yield up to the age of 50 to 80 years. Regular inter-cultivation and proper manuring are the two main farm operations in a plantation of bearing trees. Digging the soil with a spade or *mammatti*, ploughing preferably with iron plough, forming shallow basins round the trees in June-July and filling them out in September-October, piling of conical mounds at the end of the south-west monsoon and levelling them up in December-January are the common methods of inter cultivation in a coconut garden. Locally available materials of manurial value such as cattle manure,

ash, compost, oil cake, prawn dust etc. are usually applied instead of chemical fertilisers. For sandy soils organic manures are more suitable than inorganic manures.

The yield from a plantation depends on the number of bearing trees, and the yield capacity of individual trees. In an acre of land with about 80 trees, the annual yield ranges from 3,000 to 5,000 nuts although in very fertile soils the yield goes up to 7,000 or even more. There is no hard and fast rule regarding the number of harvests to be made in a year or the age of the nut at the time of plucking. However monthly plucking is the practice in all large scale plantations to ensure the cutting of uniformly mature nuts. It is also better to harvest the nuts when they are eleven months old as this prevents the shedding of dead ripe nuts. The husk of eleven month old nuts are also more suitable for retting and extraction of fibre.

Fruits and Vegetables.

The District is an important horticultural area of the State. The entire countryside is dotted with groves of mango, jack, banana and pine apple. Almost every house has a few mango or jack trees and every village grows plantains. Besides, cumcumber, pumpkin, bitter gourd, snake gourd, brinjal, water lemon, chillies and other vegetables are grown in abundance in almost all parts of the District.

Mangoes.

Kottayam is the second largest mango growing District in the State. With 7020 hectares in 1969-70 it accounted for more than 11 per cent of the area under mango in the State. Mango is the fruit par excellence of India. The English word is derived through the Portuguese who called it by the Malayalam word "Manga". Owing to its high adaptability to different types of soils, the cheapness of its cultivation its high yields and extremely delicious table qualities, it has been cultivated extensively from time immemorial. Mango is found to grow even at elevations of 1,220 metres above sea level. The mango is a perennial crop which takes eight to ten years for bearing. The tree is an evergreen one blossoming from February to April according to situation, the fruit ripening from May to July. In general, dry weather and cloudless sky at flowering and fruit ripening periods help crop size. No other cultivated fruit possesses such an extensive range of varieties and in no other fruit has the naming of varieties been considered a field open to all from the skilled pomologist to the uneducated layman. Like other Districts, Kottayam is also the home of several varieties of mango. Among the varieties the most important are Alphonso, Mulgoa, Neelam, Kilichundan, Muvandan, etc. Some of them are good for curries and pickle while others are excellent as fruits. The mango tree is best propagated by grafting, though it

readily grows from seeds. The wood of the Mango trees is used for building houses and furniture and also as fuel.

Banana.

Cultivation of bananas is quite popular in the District, especially on the banks of rivers and near other sources of water. The Kottayam District is the fifth largest banana growing area in the State. With 1594 hectares and 11614 tonnes of output in 1969-70 the District accounted for about 16 per cent of the area and about 16 per cent of the banana production in the State. Besides the perennial varieties like *Palayankodan*, *Kannan*, *Poovan*, *Chingan*, *Kadali* etc., which are grown in the compounds attached to the houses and farmsteads, the *nendran* is grown on a large scale in wet land areas. Areas around Changancherry are famous for *nendran* cultivation. Banana is not merely an article of food. It forms also an article of great and diverse utility. The plants with or without bunches cut at the bases are extensively used for decorative purposes. There is hardly any marriage or other glad some occasion in which banana plant in bunches does not grace the festive *pandal*. Ripe banana bunches are used in decoration in Hindu temples during festivals. Ripe bananas are also considered auspicious and they are served to guests at marriages and other ceremonies. The plant is also used as a design in the paper currency of India which evidently goes to testify its decorative value. Banana thrives best in uplands with heavy rainfall of even distribution under partial shade. The planting of the sucker is usually done by the end of October. It requires a good deep soil and a sheltered position. The manures commonly used are compost, leaf mould, decomposed parts of plants etc. The plant takes about eight months to flower and three months or more for the fruits to mature. The number of fruits in a bunch varies according to variety. In the case of bigger fruits fifty is the average, while the number ranges from 200 to 300 and more in the case of *Palayankodan*. The plant is cut down after the fruits are gathered. The leaves are used as plates for rice and other food to be served upon. The white core inside is also used as a vegetable. New shoots spring up from the old stems and thus the cultivation is carried on.

Many varieties of fruits and vegetables are cultivated on a small scale. Most of them are grown in courtyards and kitchen gardens. Cucumber, ladies finger, potatoe, tapioca water melon, etc., are some of the vegetables that are grown commonly in the houseyards. Pineapple, jack fruit, tomatoe, sapota, different kinds of lemon are a few other items that belong to the family of fruits cultivated in this part of the State. But they are not grown on a big and commercial scale. In short fruits and vegetable common to Kerala are produced in this District also.

PLANTATION CROPS

Rubber, tea, and coffee are the main plantation crops of this District. The techniques of cultivation as well as the economies of commercial plantation crops differ widely from those of the field crops. Whereas the field crops are generally characteristic of the subsistence economy, the plantation cash crops are largely market-oriented. Moreover, unlike field crops the plantation crops are perennial and do not require annual repetition of preliminary agricultural operations like ploughing, sowing, etc. The returns too vary widely.

Rubber (Hevea brasiliensis).

Hevea brasiliensis is commercially the most important source of natural rubber. It was brought from Brazil (in the Amazon valley) and introduced into tropical Asia in 1876, through Kew, with the seeds brought from Brazil by Sir Henry Wickham. From the original plantings in Ceylon, the cultivation of rubber spread in later years to Kerala. Until the end of the 19th century rubber cultivation in the State had been little more than experimental. It was not till 1902 that the Periyar Estate at Thattakkad was opened and within the next fifteen years a considerable portion of the present rubber yielding area in the District was planted.

While Kerala holds almost complete monopoly in the sphere of rubber production in India, the Kottayam District has the largest concentration of rubber acreage of India. The main rubber producing areas of the District are the Taluks of Meenachil, Kanjirapally, Kottayam and Changanacherry. Soil, climate and other natural conditions in Kottayam are well suited to the growth of rubber plants. During the last decade or two there has been a sharp increase in the area under rubber. This is a proof of the growing popularity of rubber cultivation in the District. Increase has also been registered in the tapped area. During 1969-70 Kottayam had 52411 hectares out of the total area of 168534 hectares, the District contributing more than 31% of the total area under rubber in the State. The production also keeps pace with the area, the District contributing 21296 tonnes out of the total of 66,473 tonnes in the whole of the State.

Rubber is a sturdy, quick-growing, tall tree, thriving with a wide tolerance in any moderately good, deep, loamy soil. It is generally cultivated at elevations about 300 metres. A warm humid equable climate (21° to 35° C) and a fairly distributed annual rainfall of not less than 200 cm. are necessary. Rubber tree is propagated from the seed as well as vegetatively. In Kerala seed of *Hevea* (Rubber tree) normally ripens in July-September and for raising seedlings, they are gathered during these months. Plants raised from seeds are called seedlings. Seeds collected from unselected seedling trees are called ordinary seeds and the seedlings

raised from them are called ordinary or unselected seedlings. Earlier plantations in the Far East were raised from unselected seeds. Hence the yield was low in many of the plantations. In the mean time selection work on *Hevea* with a view to improving the quality of planting materials led to the discovery of numerous valuable clones and seedling families. A seed when collected from a clone (budgrafted tree) is called clonal seed. A clonal seed of known parents (where both male and female parents are known as in the case of hand pollinated seedlings) is called a legitimate seed. It has been proved beyond doubt that good clonal seedlings are far superior as a planting material than ordinary seedlings. But all clones are not recognised as good seed parents. The seed of TJIR I has proved a reliable seedling family in trials and good seedling families have been obtained in Malaya and Java when TJIR I is crossed with the majority of high-yielding clones. Rubber seeds retain viability only for a short period. Hence they should be sown immediately after receipt to get the maximum germination percentage. The sooner the seeds are planted, the better will be the germination. The germinated seeds must be carefully handled during planting. They should be removed for planting out at an early stage, before the roots are more than one inch long.

Germination beds should be prepared sometime in advance of the date when seeds are expected so that the seeds may be planted in a suitable germination medium immediately after their arrival. Germination beds should be situated on a level site and may be divided off into units of convenient size and shape. The best germination medium is pure, fine grained river sand. The beds may be raised 12-15 cms. above the general soil surface so that surplus water may drain freely. It is necessary to provide an artificial shade, supported above the germination beds, so that at no time the beds are exposed to strong direct sunlight. The seeds should be planted horizontally in a single layer. They may be set touching one another and should be firmly pressed into the bed with the flat grooved side downwards. The upper surface of the seed must just be visible above the surface of the germination medium. The germination medium should be kept in a moist but not wet state by sprinkling evenly with water in the early morning and later evening. Too dry conditions or too wet conditions are equally undesirable. Seeds start germinating within 6 to 7 days of their being planted in the germination beds. Each day seeds showing growth of the young root should be removed for planting. Chances of establishment are enhanced by planting out the seed before the young root is one inch long and before the young shoot starts to develop. At this stage the seed has sufficient moisture and food reserve for the root to penetrate deeply and secure moisture. Delay in transplanting also increases the chances of damage to root and shoot which may result in forking of the root system and growth of double shoots.

The operation of budgrafting consists in inserting a strip of bark containing a bud under the bark of a young seedling tree. When the tissues of the budpatch and the seedling have become firmly united—3 to 4 weeks after budgrafting—the seedling stem is sawn off above the grafted bud and this bud then grows out to form the new tree which produces the properties of the budgrafted tree from which it was taken. In Kerala budding is best done during the months of April-May, but it can be successfully carried out during other months also if the weather is not too dry or too wet. Budgrafting on seedling stocks is done usually when the stock is one year old or even two years old. The new technique under development is to bud seedlings of two to eight months old using buds stripped from green terminal shoots. These green buddings are raised in polythene bags in nurseries and transplanted with shoot and root system undisturbed. The advantage claimed of it is that the maturity period can be reduced.

Most of the rubber plantations are situated on low hills or hillocks of varying sizes and heights. Flat lands lend themselves easy for working but the extent of such areas suitable for growing good rubber provided adequate measures are taken to conserve the soil and the altitude does not exceed about 300 metres. The operations for new rubber planting consist of felling and clearing, contour terracing on slopes, laying of roads and pathways, provisions of drainage facilities, etc.

The planting distances are generally selected in such a way as to provide more or less 180 pits per acre in the case of buddings and 200 or more pits in the case of clonal seedlings. Some of the common distances adopted to give such a stand per acre are:

(a) for buddings in hilly areas	6.70 x 3.35 metres.
in flat areas square	4.87 x 4.87 "
(b) for seedlings in hilly areas	6 x 3 "
	9 x .9 "
in flat areas	4.27 x 4.27 "
	4.57 x 4.57 "

Spading of more than 9 metres between rows and less than 2.44 ms. between plants in the row are not generally favoured. When the rows are widely apart it is termed as hedge planting.

Planting holes provide the young plants with good soil conditions for establishment and quick growth. It is particularly important that the shape and size of the pits should be made in such a way as to satisfy the primary needs of the young plant for establishment at the initial stage. Pits are usually dug to the size of 91 cms x 91 cms. But 76 cms x 76 cms x 76 cms may be sufficient. Alterations from this standard size may be made depending on the type of planting materials used and the nature of soil available. For example, a stumped budding would need a larger and deeper hole while germinated seeds or basket plants need comparatively smaller holes. Similarly when the soil is hard the pit has to be widened. For purpose of economy, in the better types of soil, pits are sometimes

dug wider at the top and tapering to the bottom or the depth reduced to about 61 cms with central "alavango" hole 15 cms or more inches in depth for the tap root. Holing can commence as soon as the work of clearing is sufficiently advanced and it is important that filling should be completed sometime before planting to give the soil sufficient time to settle. When digging the hole, the top soil should be placed on one side and remainder of the soil on the other side. Filling should be done with good top soil as far as possible. Sufficient surface soil has to be collected away from the hole for this purpose, all stones and roots removed and this soil should be used for filling the pits. When manure is to be applied it should be thoroughly mixed in the top eight inches of the soil in the hole. The hole should be filled to about two inches above ground level.

The soils in rubber growing areas are mainly laterite. They are poor in available phosphoric acid, potash and other bases and acidic in reaction. The myth of very fertile virgin soils has been denounced by modern science. Therefore, it is essential that rubber should be regularly manured from the time of planting to the age of economic production. Manuring increases the yield of latex substantially and keeps the tree in vigour. Fertiliser application to the young rubber, during the pre-tapping stage, is for accelerating the growth. Regular application of 8:12:12 NPK fertiliser mixture is recommended detailed in the schedule given below. The dose of 910 gm. per planting point twice in a year may be continued till the area is put under tapping. The operations commencing with tapping are dealt with in detail in the Chapter on Industries.

Fertilizer Schedule, 8:12:12 NPK Mixture

Months after transplanting into the field	Time of application	Dose/plant with 160 Mixture plant points per 0.40 hectares (gm)	Rounded of quantity per acre		
			N	P2O5	K2O
		(Kg)	(Kg)		
3 months	Sept./October	225	40	3.2	4.8
9 months	March/April	225	40	3.2	4.8
15 months	Sept./October	450	80	6.4	9.6
21 months	March/April	450	80	6.4	9.6
27 months	Sept./October	450	80	6.4	9.6
33 months	March/April	550	100	8.0	12.0
39 months	Sept./October	550	100	8.0	12.0
45 months	March/April	680	120	9.6	14.4
51 months	Sept./October	680	120	9.6	14.4
57 months	March/April	910	160	12.8	19.2
63 months	Sept./October	910	160	12.8	19.2
69 months	March/April	910	160	12.8	19.2
75 months	Sept./October	910	160	12.8	19.2
Up to 75 months from Transplanting into the field		7,900	1,400	112.0	168.0

Tea.

Tea is the foremost among the exports of Kerala and the second important cash crop of the State in terms of net value contributed. It also employs the largest number of persons among the plantation crops. In 1969-70 out of the total area of 41158 hectares of tea in the State 30723 hectares was in the Kottayam District. The percentage come to more than 74% of the total area under tea in the State. The production was 32,405 tonnes out of 44,781 tonnes of tea in the State. The main tea producing areas are the High Ranges in the Devikulam and Peermade Taluks.¹

Tea is usually cultivated at altitudes ranging from 914 metres to 1525 metres above mean sea level. It thrives well in light friable soil of good depth through which water percolates freely. After removing the forest growth planting is done. The actual spacing of the plants will depend on the lay-out of the land. They are usually planted in square, rectangular, or triangular pattern. Usually 3,000 plants are planted in an acre. "Hedge Planting" (planting in rows 152 cms. apart with a spacing of 61 cms. between the bushes in a row) is also done in new estates. Planting will begin in June or July. When the plants are about two years old and five to six feet high they are pruned to stimulate lateral growth and to develop them into a bush. Plucking is usually done by women and children. The young and freshly sprouted leaves with "two leaves and a bud" are plucked. Plucking is done throughout the year in various rounds. The average yield of a good estate is about 453.592 kgs. of prepared tea per 0.40 hectare.

A host of operation have to be performed to produce the conditions in which plucking of tea can be efficiently and profitably carried out. Among these are weeding, pruning, replacement of unproductive bushes, application of artificial manure, upkeep of shade and shelter trees, treatment and eradication of plant diseases, control of pests and blights, provision and maintenance of drains and boundaries, spraying and dusting. To produce the maximum crop, all these operations have to be carried out correctly and at the right time. As in all forms of agriculture, there are no easy formulas, and each problem has to be solved by the technical knowledge and understanding of the tea bush that comes from years of experience. Also like all forms of agriculture, tea planting is at all times a gamble with the weather. A prolonged drought at the beginning of the year, delay or paucity of March rains, a south-west monsoon that is longer or shorter than usual, temperatures very much below average, an unusual number of cloudy days—any of these is sufficient to spoil either of the rushes, as the two main cropping periods in April-May and September-October are known, and thus affect the whole year's crop.

¹ For details about Tea Estates see Chapter V, on Industries.

In spite of the basic similarities with other forms of agriculture, the tea estates are set apart by their unique form of organisation. By organisation into estates, the economies of optimum size, the advantages of progressional management and supervision, and the benefits of centralised research, technical, medical, legal, financial and other services are obtained. All these result in greater production and productivity than would otherwise be obtainable, which in turn lead to higher foreign exchange earnings, greater employment and higher revenues for the State—all undoubted advantages to the national economy.

Coffee.

In 1969-70 the District stood third in the State in point of acreage and production in the State. The area came to 2085 hectares and production to 963 tonnes. Coffee is generally cultivated in high altitudes ranging from 457 metres to 1828 metres above mean sea level. The most suitable altitude is between 762.5 metres and 1371 metres. The plant needs a well distributed rainfall of about 150 cms. to 200 cms. inches per annum and a distinct rainy and dry season with a minimum average temperature of 70°F. Coffee requires sandy soils or clay loam with a good sub-soil drainage system. It is usually grown from seed. It is also propagated from cuttings from nature trees or shoots. Propagation from seeds is usually done in January or February in well prepared nursery beds. When the plants are twenty inches in height they are finally transplanted. The spacing between each plot is ordinarily eight to nine feet. The plots are manured well and watered frequently. In the second method of propagation, lower branches of the trees are bent down under the earth for at least four months so as to enable new roots to sprout up from these branches. Shade trees are provided in coffee plantations for protection of the trees from the full blast of the sun and for soil conservation. Usually the coffee plants are pruned at a height of 15' to enable easy plucking of the berries. Coffee plants beginning to bear fruit within 5 to 7 years of planting. The colour of the berries is green at last. It slowly changes to golden and then to bright red. These red cherries are plucked up by hand. Several pluckings are necessary before a crop is completely harvested. Under good climatic conditions a coffee plant yields $\frac{1}{2}$ to 2 lbs. of green coffee in a season. Good yields may be obtained from a plant for a period of 20 to 30 years. Excessive rains or want of rains in the blossoming season will adversely affect the yield. Foreign buyers of coffee are mainly European countries of which Germany and Italy are important. The Soviet Union is a new entrant in the field.

Crop Calendar.

The calendar of agriculture operations for important crops in the District is given in Table X.

TABLE X
Calendar of Agricultural Operations

Crop	Sowing	Harvesting	Peak Marketing
Rice			
Autumn	April-June	August-October	September-October
Winter	August-October	December-February	January-February
Summer	November-December	February-March	March-April
Other pulses	May-June	August-September	August-September
Sugarcane			
1st crop	November-February	October-December	November-December
2nd Crop	January-March	December-February	February
Ginger (raw)	April-May	November-January	December-January
Pepper	..	November-January	December-January
Turmeric	April-May	December-January	January-February
Lemon-grass	..	June-September	September
Tapioca			
1st crop	October-November	August-September	August-September
2nd crop	March-May	November-January	December-January
3rd crop	July-September	May-July	June-July

Agricultural Implements.

A large number of agricultural implements are in use in the District. They are mostly made of indigenous materials with local labour. Their shape and form were originally dictated by the necessities of the time when they were first invented, but age-long practice has helped the modern agriculturists also to use them in the same manner as their forefathers did. Table XI gives the list of main agricultural implements in use in the District together with the approximate cost of each.

TABLE XI
Particulars of Agricultural Implements

Name of Implement	Approximate Cost Rs.
1 Mammatties	5.00
2 Digging fork	15.00
3 Pick-axe	9.00
4 Spade	3.00
5 Country plough	20.00
6 Mould board plough	25.00
7 Japanese hoe	25.00
8 Sickle	3.00
9 Thresher	150.00
10 Duster	Rs. 25 to 100
11 Sprayer	Rs. 75 to 150
12 Seed drums	Rs. 10 to 25

Each implement is used for some agricultural operation or other. Digging (*Kilakal*) and ploughing (*Uzhavu*) are the primary agricultural operations. Digging is commonly done by using implements like *mammatties*, pick-axes and digging forks while ploughing is invariably done by using ploughs either country or mould board. Bunding which is locally called "*Varambukuthal*" is a common agricultural operation for crops like paddy, sugarcane etc., which is performed by using implements like *mammatties*, spades and bund former. Draining (*Neervarcha*) is another agricultural operation by which the excess water from the soil is drained away or extracted out. This is done usually by digging drainage channels with *mammatties*, spades etc., in and around the field. Sowing or planting (*Nadeel*) and weeding (*Kalaparickal*) are usually done by hand. In paddy fields planted in line, Japanese hoe is also sometimes used for weeding. Reaping, locally called "*Koythu*," is done with sickles. Threshing or "*Methiyal*" is usually done by men or cattle, but Paddy Thresher, a mechanical device, is also used. Winnowing or "*Pattal*" is done either by using a winnower or by the help of wind.

Mechanical implements are not very common in the District. But tractors are used in certain estates. It may be noted that 93 out of 276 tractors in use in the State at the time of the 1961 Livestock Census were in this District. Aerial spraying with aeroplanes is also being done in certain rubber estates and in paddy fields on a Co-operative basis.

Table XII gives the number of agricultural implements and machinery in use in the District as per the Livestock Census of 1961.

TABLE XII

Number of Agricultural Implements & Machinery in the District

	No.
I. Plough	
(a) Wooden	33,804
(b) Iron	23
II. Carts	1,67
III. Sugarcane Crushers	
(a) Power	16
(b) Bullocks	223
IV. Oil Engines	213
V. Electric Pumps	294
VI. Tractors	93
VII. Ghani	
(a) More than 5 seers	136
(b) Less than 5 seers	141

Agricultural Pests and Diseases.

The agricultural crops of the District are affected by pests and diseases. The most important pests and diseases affecting the main crops of the District, viz., Paddy, Coconut, Pepper, Cashewnut, Mango, Rubber etc., the nature of the damage caused by them and the remedial measures adopted are described in the Table at Appendix I.

Activities of the Agricultural Department.

Agricultural activities in the District have for their aim the raising of the yield rate and output of crops with special emphasis on increase in food production. Alternatively, the policy of the Agriculture Department is also directed towards bringing about a modification in the existing cropping pattern by giving greater weightage to the commercial crops and thus ensuring better returns from the land.

Improved Seeds.

Under the scheme for paddy seed multiplication and distribution, an attempt is being made to popularise the growing of improved varieties of paddy. There are three Paddy Seed Farms in this District. They are located at Kozha, Kumarakom and Valachira. The area cultivated in each farm and the quantity of seeds produced there in 1962-63 and 1963-64 are given in Table XIII.

TABLE XIII

Area cultivated and the quantity of seeds produced in the Seed Farms

Name of Seed Farm	Area in hectares		Quantity of seed produced	
	1962-63 Hectares	1963-64 Hectares	1962-63 Kgm.	1963-64 Kgm.
Kozha	11.82	11.82	31,891	24,051
Valachira	11.956	11.956		
Kumarakom	21.494	21.494		
Total	45.27	45.27	31,891	24,051

In addition, there are two special types of farms in this District viz., a Potatoe Farm at Vattavada, Munnar and a Groundnut Farm at Changanacherry. The Potatoe Development Farm started functioning on 4th December 1963 and covers an area of about 16 hectares. The trial cultivation is cultivated with varieties of potatoe got from Simla and Jullunder city. The Groundnut Farm opened in 1964 had an area of 10 acres. It has been shifted to the defunct tapioca Research Station, Mangadi, Thiruvalla from 28-2-1966. During 1964-65, 4,080 Kilogram of groundnut seeds were produced in the Farm.

Manures.

The use of farmyard manures is as old as agriculture. The different kinds of manures available and used in the District may be classified under the following three heads: (a) bulky organic manures, (b) concentrated organic manures and (c) artificial or chemical manures. The common bulky organic manures are cattle dung, farmyard manure, compost and green manure. Oil cakes, bone meal and by-products of marine fishing, wood ash etc., form the chief source of concentrated organic manures. Oil cakes are rich in nitrogen and phosphoric acid. Their application is usually to commercial or money crops like plantation but now their use is being extended to paddy crop as well. Fish manures consist of dried fish unfit for human consumption, fish guanos, the cake left after pressing the fish oil, pitted fish and offal, and other refuse from fish curing yards. Among the other natural sources of manure the most important is wood ash, the product of burning fuel in the millions of hearths in peasant's homes distributed all over the District. It is very difficult to frame an estimate of the quantity of wood ash available in this way. However, the agriculturists take special care to see that proper preservation of wood ash is made in their houses. This actually forms the main source of manure in the District.

The Chemical fertilisers are now used extensively in this District, thanks to the wide network of depots set up by the Fertilisers and Chemicals Ltd., (FACT) and other manure making concerns. The Chemical fertilisers are usually supplemented by the organic manures and compost. Taking the case of a sample year, it is seen that in 1963-64 itself 14,302 compost pits were newly dug, 7,693 old pits were renovated and about 32,491 tons of rural compost were produced. Nearly 18 lakhs of Glyricidia cuttings were planted in the District during this period.

Plant Protection

The Department also pays its attention for the control of pests and diseases. The incidence of severe attack of pests and diseases on crops in the District is very common. There is a plant protection staff in the District to take prompt and quick measures to eradicate pests and diseases on crops and also to take prophylactic measures to prevent the attack. The Plant Protection Scheme in the District consists of stocking sufficient number of dusters and sprayers to be given to cultivators to combat pest attacks as also stocking and distributing adequate quantities of insecticides and fungicides from suitable centres to cultivators. These equipments and chemicals are stocked at different centres in the District namely in the offices of the Agricultural Assistant, Agricultural Extension Officer and Gramsevak. Plant Protection equipments are distributed to bonafide cultivation at subsi-

dised rates. The following statement shows the details of the spraying work done in the District during 1962-63 and 63-64.

Number of Sprayings		
Year	Target (in lakhs)	Achievement
1962-63	35	26,15,693
1963-64	35	24,87,090

Improved Agricultural Practices

The problem of optimising agricultural production is one of the quantitative improvement of crops and quantitative increase of yield per acre. With this end in view the Japanese Method of cultivation is given prime importance in the activities of the Department. The advantages of this method of cultivation are driven home to the agriculturists by conducting group discussions arranging distribution of leaflets etc. Demonstration plots are established in all parts of the District. The total area brought under the Japanese method of cultivation upto 1963-64 was about 4,437 hectares.

Co-operative Farming

For stepping up agricultural production and for ensuring economic cultivation co-operative farming has been introduced in the District. Co-operative farming necessarily implies pooling of land and joint management. Without undermining the sense of proprietorship and the incentive to industry that it gives, co-operative farms can produce all the advantages that a larger unit possesses. With this end in view Co-operative Farming Societies were organised in 1962-63 two at Pallom and one each at Vaikom, Kaduthuruthy and Devikulam. In 1963-64 a Pilot Project area covering 3 Blocks, viz., the Block of Vaikom, Kaduthuruthy and Uzhavoor was selected for the organisation and working of farming societies. Eight societies were organised and registered during the year of which five were in the Pilot Project area and 3 in the non-Pilot area. Efforts in this direction were continued in subsequent years and by the end of 1965 there were 21 societies in the District. Efforts to organise more societies were pursued in 1964-65 also. Four societies were organised and registered during 1964-65 in the Pilot area.

All the Co-operative Farming Societies working in this District are Joint Farming Societies in which the members pool their lands for joint cultivation without losing their right over the lands pooled. Membership of the societies is confined mainly to those who are prepared to work on the farm or in its subsidiary activities. The total area of the land pooled by the 21 societies till the end of 1965 came to 244 hectares. The land is pooled for a minimum period of five years. A suitable return is ensured to the members for the lands pooled by them. In addition to land, the members

also pool other resources such as cattle, implements etc., to the extent those are required for the operations in the farm.

Organised to work under the Third Five Year Plan Schemes all the farming societies working in the District were given share capital contribution from the Government. The maximum share capital contribution to which a Society is eligible is Rs. 2,000. The total amount of share capital contribution given by Government to all the farming societies in the District till 1963-64 came to Rs. 22,700. In addition to share capital contribution, each of the societies was also given development loans at the rate of Rs. 4,000. Thus, a sum of Rs. 52,000 was issued to them by the Government upto the end of 1963-64. The societies are also eligible for managerial subsidy to the extent of Rs. 1,200 each. Moreover, they are also getting guidance and help in farm operations from the Gram Sevaks, Agricultural Extension Officers and other staff of the N. E. S. Block as well as from the Village Level Workers.

Research Stations, Nurseries etc.

The Agriculture Department bestows special attention in the field of research with a view to increasing agricultural production and improving the quality of agricultural products. The following are the important agricultural research stations in the District.

1 Cardamom Research Station, Pampadumpara

With the financial assistance of the Indian Council of Agricultural Research, a scheme for research on Cardamom was started at Pampadumpara (Udumbanchola Taluk) about 148 Kms. away from the District Headquarters in the Kumily-Munnar Cardamom Hill road. The station commenced functioning on 14th December 1956 is an area of about 47 hectares. An area of 23 hectares has been planted with cardamom for undertaking the various field experiments. The object of the scheme is to carry out investigations on the botanical and agronomic aspects of cardamom with a view to effecting improvement of the crop. Another scheme for the eradication of Kattee disease (Virus) of Cardamom is also being operated at this station from 1958 onwards. Under this scheme the cardamom estates located in the State were surveyed for assessing the degree of incidence of the Kattee disease and suggesting control measures for the spread of the disease. A scheme for research on cardamom is also being operated to provide additional facilities at the existing Research Station for intensifying the research activities of the centre and to help the two sub-stations at Ambalavayal and Nelhiampathy to take up trial cultivation. In addition, proposals are under way for establishing a Mycological and Entomological wing at this station for undertaking research on the mycological and entomological aspects of the cardamom crop.

2. Agricultural Research Station, Kozha

This Research Station was started in the year 1958 with 37.03 hectares of land at Kozha. The area extends over either side of the M. C. Road 24 Kms. north of Kottayam town on the Kottayam-Moovattupuzha road. The entire area is divided into 19 convenient blocks depending on the type of soil and topography of the land for convenience in allocating specific crops. The aim of starting the station was to conduct research on crops other than paddy. Accordingly a cropping scheme for planting of perennial crop such as mango, sapota, guava, jack, pomagranate, lemon, pine apple, coconut, nutmeg, cinnamon, clove, cocoa and mangosteen was implemented. In addition to the farm works and research work, the following development schemes are also undertaken in this station:—

(1) Coconut Development Scheme, (2) Arecanut Development Scheme, (3) Spices Development Scheme, (4) Horticulture Development Scheme, (5) Subsidiary Food Crops Scheme and (6) Oil Palm Regional Trial Cultivation.

3 Regional Coconut Research Station, Kumarakom

The Regional Coconut Research Station, Kumarakom was started in 1947. Located on the eastern bank of Vembanad Lake it has an area of 23.62 hectares. The station conducts different agronomic and manurial trials on coconut cultivated under conditions prevalent in backwater areas.

4 Parasite Breeding Station, Kottayam

This station is located at Kottayam and is attached to the District Agricultural Office. Its function is the rearing, multiplication and distribution of parasites for controlling the chief coconut pest, *Nephantia Serinopa*.

5 The Tea Research Station, Vandiperiyar

The Tea Research Station, Vandiperiyar, is run by the United Planter's Association of South India (UPASI). The scientific Department of the UPSAI which was constituted to carry out research on various aspects of tea cultivation has been functioning at Coonoor and Devarshola for quite some years. The climatic, soil and ecological conditions in the High Ranges of Kottayam being very different and the main Research Station mentioned above being too far away, the local Planting interests pressed the UPSAI to open a Sub-station in Central Travancore to deal with problems of special interest to the local planters. The Vandiperiyar Station was formally opened in February 1964 in response to this demand. It is located about 3 Kms. away from Vandiperiyar town, on the Kumily-Kottayam road (93 Kms.) and is situated between Kumily and Vandiperiyar. The Station covers an area of about 5.26 hectares and has a small laboratory and residential quarters

for the staff. As pests are a major problem in this area, an Entomologist has been put as the Officer-in-Charge of the Station. Broadly, the following are the functions of the Tea Research Station, Vandiperiyar:—(1) To study the various pests of tea in the area and to screen Insecticides and evolve proper control measures. (2) To visit estates as and when required and to advise them on specific problems such as pests and their control, diseases and their control, pruning, manuring, shade etc. and (3) to maintain a collection of proven clones and to multiply them and test them for quality etc., with a view to distributing them to planting interests for the purpose vegetative propagation.

State Assistance to Agriculture

Till recently the bulk of the agricultural credit was supplied by rural money lenders and co-operative societies. In view of the high rates of interest charged by them; the Government came to the rescue of the agriculturists by issuing Land Improvement and Agricultural loans from the beginning of 1934-35 at reduced rates of interest. During the period following Independence Government stopped the financial assistance given to agriculturists. Some of the measures taken in this direction are described below. A sum of Rs 25 per acre is given as loan to paddy cultivators for purchase of seeds. The amount is repayable after the harvest of the crop. For the purchase of fertilisers an amount of Rs 75 per 0.40 hectares is given as loan in addition to 25 per cent subsidy for phosphatic fertilisers. With a view to encouraging the use of lime on paddy fields the Department of Agriculture arranges the distribution of lime at 50 per cent subsidised rates. Plant protection equipments are supplied at 50% subsidy. At the same time 25% subsidy is allowed for pesticides and fungicides. Moreover 33½% subsidy is allowed to cultivators for the purchase of improved agricultural implements. Loans ranging between Rs 300 to 1,000 are given for the purchase of agricultural machinery and work animals. Further, fertiliser loans at the rate of Re. 1 per tree are given for two consecutive years for fertilising coconut gardens. Concessions are also allowed for spraying coconut trees providing irrigation facilities and distribution of quality seedlings. A sum of Rs 3,000 per acre is given as loan for reclamation of Kayal land for coconut cultivation. Fertiliser loans at the rate of Rs 100 per acre for two consecutive years are given to arecanut growers in addition to other concessions for plant protection, seedlings distribution etc. Pepper cultivators get loans upto Rs. 500 per .40 hectares in addition to Rs 150 per .40 hectares for improvement of the existing gardens. Sugarcane cultivators are allowed subsidy at the rate of 37 Rupees per maund for planting improved varieties. Again loans at the rate of Rs 250 per .40 hectares for fruit gardens Rs 500 per .40 hectares for bananas Rs 800 per .40 hectares for pine apple, Rs 100 per .40 hectares

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for cashew, Rs 150 per .40 hectares for ginger, Rs 400 per .40 hectares for cardamom, Rs 300 per .40 hectares for vegetable etc., are also given to agriculturists. Loans are also given to encourage local bodies and farmers' associations to produce manures at village level. Table XIV gives the loans sanctioned by the Agricultural Department for the cultivation of various crops.

TABLE XIV

Loans sanctioned for the cultivation of crops

Year	Amount of loan sanctioned Rs.
1961-62	64,681
1962-63	1,21,232
1963-64	2,65,829
1964-65	6,55,297
1965-66	11,62,758

The amount of loans sanctioned by the Revenue Department under the Land Improvement Loans Act during each of the years from 1960-61 to 1963-64 is given below:—

Year	Amount Rs.
1960-61	94,900
1961-62	1,96,250
1962-63	1,52,533
1963-64	1,87,225

Assistance to Rubber Cultivation

As Kottayam is the premier rubber planting District in India, it may be relevant in this connection to deal with the development schemes chalked out by the Rubber Board, Kottayam for the cultivation of rubber. The most important of the schemes are described below:—

Replanting Subsidy Scheme

In order to increase rubber production, the old low-yielding unselected seedling trees now existing in rubber holdings have to be cut down and replanted with selected high-yielding planting material. To induce the growers to take up this work in earnest, a subsidy of Rs 1,000 per .40 hectares is being paid (in seven annual instalments, the first being at Rs 400 per .40 hectares after planting and the remaining six at Rs 100 per .40 hectares per year) from 1960 onwards.

New Planting Loan Scheme

This scheme was introduced in 1962 to help small rubber growers to raise their existing small holdings to 2.02 hectares

and above and upto 6.07 hectares. It provides for grant of interest-free loan of Rs 750 per .40 hectares payable in six annual instalments, the first and second being Rs 300 and Rs 150 per .40 hectares respectively and the subsequent instalments Rs 75 each.

Loan for upkeep of Immature Rubber Areas.

The Upkeep Loan Scheme introduced in 1963 and financed from the Pool Fund of the Board envisages grant of interest-free loans to small growers having one acre (.40 hectares) to 13 acres (6.07 hectares) of registered rubber estates for upkeep of their immature areas planted with high yielding approved planting materials. According to the scheme loan of Rs 475, Rs 400, Rs 325, Rs 250, Rs 175 and Rs 100 is payable per .40 hectares for 1, 2, 3, 4, 5 and 6 year old immature rubber respectively. The first instalment is Rs 100 in all cases and subsequent instalments Rs 75 each.

Long Term Loans for Rubber Planting.

The Agricultural Refinance Corporation, Bombay, has approved a Scheme drawn up by the Rubber Board to extend long-term loan facilities to rubber planters who cultivate rubber in an area of 15 acres (6.07 hectares) or above. The loan scheme is intended to finance the first year cost of planting and also its upkeep and maintenance for the succeeding six years. The cost of planting rubber has been worked out to be Rs 1,600 per 0.40 hectare individuals and Rs 2,100 for companies.

Grant for Construction of Smoke-Houses.

The scheme aims at assisting the small growers of rubber in producing quality rubber sheets. The rubber produced by a small grower may not be sufficient for the economic operation of a smoke-house of his own. Hence the Board has started a programme to help small growers through co-operative societies in the construction of ideal smoke-houses. This will help the small-grower to improve the quality of his rubber sheets and thus to obtain better prices. The scheme envisages a subsidy upto 50 percent of the actual cost of construction and equipment of smoke-houses, subject to a maximum of Rs 5,000. The Board, in addition to the financial assistance, offers technical advice at all stages of construction of the smoke-house.

The Board has also a scheme for financing co-operative rubber marketing societies for the benefit of small growers. According to the scheme co-operatives undertaking marketing in rubber will be given a loan limited to five times the share capital upto a maximum of Rs 30,000.

ANIMAL HUSBANDRY

Animal Husbandry is poorly developed in the District. The daily per capita availability of milk in 1964 was 2.43 oz. This compares favourably with the State average of 1.83 oz. but not with the all-India average of 4.80 oz. Due to the low milk yield and the traditional bias against slaughter of cattle, income from animal husbandry is relatively poor and this has an adverse effect on the rural economy of the District. The cattle-man ratio is also considerably low in the District as elsewhere in the State. According to the 1961 Livestock Census Kerala has the lowest cattle-man ratio among the Indian States. Raising of this ratio is also not feasible in view of the paucity of fodder resources and the increasing pressure of human population on land. Under these circumstances all that can be done is to raise the productivity of milch animals to the maximum possible level.

Livestock population and prices.

The Block-wise figures of the livestock population as per the Census of 1966 in the District are given below:—

Livestock Population 1966 (Census)-Kottayam District

Name of Block	Livestock				Poultry (Fowls)		Duck	
	Cattle	Buffaloes	Sheep	Goat	Pigs	N.D. Improved		
Vazhoor	24719	225	..	12024	1102	62284	6188	5
Madappally	31383	934	..	12241	68	106429	7481	951
Devikulam	38022	4967	544	9753	3996	114420	8078	676
Kanjirappally	21712	768	12	10131	2917	73017	7333	950
Pampadi	22074	565	20	10099	4405	64155	3417	174
Ettumanoor	23249	749	..	10851	2710	98872	3709	13722
Pallam	33436	1447	118	13252	777	121344	9228	6001
Lalam	19890	348	..	9244	8999	63750	3529	189
Uzhavoor	34212	575	..	13420	11765	82898	2383	270
Erattupettah	15589	154	..	10576	11861	68471	2531	177
Azhudai	53661	5549	76	19020	7757	169025	10520	1394
Vaikom	12425	249	..	6033	27	51455	2575	7588
Kaduthuruthy	34440	927	..	13927	5775	86183	3944	15446
	354812	17437	770	150571	62159	1163103	70916	56158

The above figures may at first appear impressive. But the productive value is not commensurate with the numbers because of the poor quality of the livestock. The distribution of the different species of domestic animals is not localised. They are more or less uniformly scattered throughout the District. The size of cows and bullocks is small

due to climatic and environmental influences. The local non-descript animals are able to meet only the partial requirements of the population. For milk and meat purposes large numbers of livestock are brought into the District from the neighbouring Districts of Madras State. They are brought to the various places mainly through the two border towns of Kumily and Maralloor. A few cross breed animals are also imported by commercial dairy owners by train or lorry from Coimbatore. Munnar is a region where many exotic cattle breeds are thriving. The performance of some of the breeds of Jersey and Holstein maintained by a few Tea Companies is said to be of a high order and compares favourable with that of similar breed maintained in the countries from which these cattle were imported.

Price of Livestock.

The morning milk yield is the most important factor which decide the prices of a milch cow but as several factors like order of lactation, stage in lactation and good looks of the animal influence the price. The price of draught bullock shows the maximum variation between centres and even between periods in the same centre as the body conformation, the size and shape of the horns and other factors including purely subjective ones influence the prices greatly. The prices of different species of livestock in the District for the year 1965 are given in Table XVI.

TABLE XVI

Price of Livestock

Dairy cows (per litre of milk morning yield)	Rs. 84 to Rs. 89
Buffaloes	Rs. 120 to Rs. 160
Goats	Rs. 80 to Rs. 85
Draught bullocks (breed non descript) each	Rs. 150 to Rs. 300
Cattle for slaughter (non descript) each	Rs. 75 to Rs. 80
Young stock (Age 1-2 years) each	Rs. 65 to Rs. 95
Draught buffaloes (non descript) each	Rs. 125 to Rs. 225
Buffaloes slaughter (non descript)	Rs. 65 to Rs. 85
Young stock buffaloes (non descript)	Rs. 55 to Rs. 85
Goats for slaughter each	Rs. 30 to Rs. 40

Area under fodder crops.

Compared to the other Districts of Kerala, Kottayam has a unique place as regards fodder resources. Since a major portion of the District is under forests the High Ranges do not experience any difficulty either for grazing or for fodder. But as regards the plains neither sufficient fodder nor grazing facilities are available. There are also no large scale commercial dairy farms worth the name in any of the big towns in this District. Since livestock are fed on by the products of agriculture (stalk, straw, husk, bran, etc.) the availability of basic

feeds could be increased only through agricultural development. The increased production of cereals, pluses and oil seeds could alone solve the problems of concentrates. According to the findings of the Techno-Economic Survey Committee the situation with regard to concentrates would of course change if oil cake, the by-product of the oil-crushing industry, is not allowed to move out of the State. There is no sheep breeding centre in the District.

Improvement of cattle.

In view of the highly unproductive quality of the livestock special attention is to be paid to the development of cattle in the District. The activities of Government consist, among other things, mainly of scientific breeding and prevention and control of diseases. Two schemes sponsored by the Indian Council of Agricultural Research are working in the District to improve the milk yield of the local cows. They are (1) the Key Village Scheme and (2) the Hill Cattle Development Scheme.

There are 3 Key Village Blocks at Kottayam, Palai and Vaikom. Grading up of cattle is carried out by artificial insemination using semen of Sindhi bulls. The Hill Cattle Development Scheme was started at Kanjirappally in 1964 with the idea of grading up the local hill cattle using exotic semen from breeds like Jersey by artificial insemination. It is a scheme sponsored by the I.C.A.R. The Hill Cattle Development Scheme at Kanjirappally has 5 sub centres in Vazhoor, Kanjirappully, Mundakayam, Vagamon and Kumily in the District. Two Jersey bulls are stationed at Kanjirappally for the collection of semen. Semen is also collected from two Jersey bulls belonging to the Kurusumala Ashramam Dairy at Vagamon. The Livestock Improvement Act has been enforced in areas covered by the Key Village Blocks and the Hill Cattle Development Scheme for carrying out compulsory castration of scrub bulls.

There are 8 Veterinary Hospitals at Kottayam, Meenachil, Thalayolaparambu, Changanacherry, Vandiperiyar, Nedumkandam, Azhudai and Adimali besides 23 Veterinary Dispensaries in various places in 1966-67. These institutions besides carrying out routine treatment of animals also conduct prophylactic vaccination against contagious diseases of cattle like Rinderpest, Blackquarter, Anthrax, Haemorrhagic Septicemia and Poultry diseases like Rankhet Disease and Fowl pox.

Poultry.

Though poor in her cattle wealth, the District is rich in poultry.¹ The livestock Census of 1966 places the poultry population at 12,34,019. The people have begun to understand the value of poultry as a source of subsidiary income and therefore there has been of late a substantial increase in the number of

1. The number of poultry in the State per 1,000 of population was 538 according to the 1961 Census.

poultry keepers. There is a Poultry Farm at Mannarkad. The strength of the flock in this farm came to 2,577 on March 3, 1965. The number of eggs sold during 1964-65 was 48,167.

Pigs.

Pig-rearing is more popular in the District than elsewhere in the State. It has 45.3% of the total pig population in the State, the Taluk of Meenachil alone contributing 32.5%. The climate and rainfall are favourable to pig-rearing. Piggery development did not receive attention at the Government level during the First and Second Five Year Plans. However, with a view to promoting piggery development in the District the Government have started a Piggery Unit at Thalayolaparambu (Vaikom Taluk).

Dairy Farming and Milk Supply Schemes.

Dairy development on scientific lines is a pressing need in the District as elsewhere in the State. This was almost a neglected field till recent times. The Third Five Year Plan provided for a scheme for the establishment of a milk pasteurisation and bottling plant at Kottayam to distribute wholesome milk in the towns of Kottayam, Ettumanoor and Changanacherry. It is expected that with the implementation of this scheme, the milk producers within a radius of 35 km. from Kottayam town would get a remunerative market for their produce and the consumers in the towns of Kottayam, Ettumanoor and Changanacherry would be assured of a constant supply of pure wholesome milk in sealed containers at reasonable price. The Dairy Plant would have an initial capacity to pasteurise and bottle 6,000 litres of milk daily in the initial stage. A suitable site at Kottayam on the K. K. Road has already been acquired for the establishment of the Milk Plant. Necessary steps are being taken for the construction of buildings, purchase of machinery and equipment, etc. It is expected that the scheme can be put into operation in 1966-67. The total expenditure incurred for the scheme till the end of 1965-66 was Rs. 9,32,197-18.

It is also proposed to organise Dairy Extension Service Units in connection with the Kottayam Milk Scheme. This would ensure the development of economic milk production by providing financial assistance and technical guidance to the milk producers for the better feeding, breeding and management of cattle and hygienic milk production. It may also be mentioned here that there are no large scale commercial dairy farms worth the name in the District. There were 17 Co-operative Milk Supply Societies functioning in the different parts of the District in 1963-64. The total capital invested came to Rs. 98,912, the number of members being 2,395. These societies owned about 250 milch animals and collected 10,03,247 litres of milk in 1963-64.

Indo-Swiss Project.

The Indo-Swiss Project for cattle breeding and dairy development is located in this District at Madupetty near Munnar.

The objective of the Project is to establish an agricultural centre at Munnar at a height of 1500 M. above sea level on Government land of about 202 hectares, where methods of fodder production, together with the improvement of the soil, of cattle breeding and of dairy economy can be developed. It has also been decided that the experience gained here shall be applied later on in a larger settlement scheme in Peermade where at a height of about 1,000 M. above sea level, on about 4452 hectares of Governmental land, self sufficient Cattle Breeding Co-operatives are planned. The Project has thus two phases, viz., an experimental phase (Pilot Plant) at Madupetty near Munnar in two successive stages and the second, an enlargement phase in Peermade.

An agreement was concluded on July 12, 1963 between the Government of India and the Government of Switzerland regarding the first phase of the Project. Under this agreement the State Government would provide facilities and services such as local administrative and technical personnel; necessary land with buildings, installation of water supply system, electricity, telephone connections, free medical attendance to the Swiss experts etc. The expenditure towards the salaries of Swiss experts purchase and transportation of equipment or supplies which are not obtainable in India but are essential for the implementation of the Project etc., would be met by the Swiss Government. The approximate commitment of the State Government for the Project during the Third Plan period was estimated at Rs. 8.65 lakhs while that of the Swiss Government at Rs. 13.52 lakhs. 50% of the State Government's expenditure would be shared by the Government of India. The Project is working at Madupetty (Munnar), where the first phase has been under implementation from September 1963. An area of over 500 acres has been made available to the Project by the Government of Kerala for the purpose. The following works have been taken up during the first phase:—

- (1) Preparatory work—Procurement of building equipment and material.
- (2) Land reclamation and improvement,
- (3) Construction of Fodder Station at a reduced scale to determine the most suitable kinds of grass, production of grass seed as well as methods of Soil Cultivation.
- (4) Construction of two Cattle Breeding Farms each for 50 cattle. Purchase of local cattle and starting cross-breeding experiments with improved sperm from Switzerland,
- (5) Construction of Sperm Station and a Veterinary Station at a reduced scale.
- (6) Construction of half of the living quarters required for the Project.

The construction of buildings, the laying of roads, etc., are proceeding at a rapid pace. The construction of workshop, Bull Station, Veterinary Station, Cattle Shed, etc., is also making good progress. One hundred and twenty-six local cattle have been purchased. These animals will form the foundation stock for research in breeding operation with Swiss-brown sperm. Swiss-brown sperm has started arriving and the local cattle art being inseminated. Moreover about 121.41 hectares have been cleared and made fit for fodder production. A fodder research station with about 4.05 hectares of representative area has also been established. An Analysis of the soil in the area has also been conducted. The Fodder Research Station will conduct trial cultivation of Swiss grasses like clover, rye, etc., for cattle grazing. The results of the research work so far done have been encouraging.

The Project is managed in a spirit of joint venture by the Government of India, the Government of Switzerland and the State Government. The over-all control of the project vests with a Board of Control consisting of a representative of the Government of India as its Chairman, a representative of the Swiss Government and a representative of the State Government as members. The day to day management is entrusted jointly to an Indian and a Swiss Director. Besides the Swiss Director three more Swiss experts are working in the Project, each in charge of a particular branch of development, with their Indian counterparts.

FISHERIES

Introduction

Kottayam is the only District of Kerala which has no sea coast or maritime population. The only source of fish in this District is the backwaters (Vembanad Lake) and the Moovattupuzha and Meenachil rivers. The catches from the waters amounting to about 2,000 metric tonnes a year are not at all sufficient to meet the requirements of the people of this District. It has been estimated that more than 90% of the population eat fish. Therefore the cured marine fish, both salted and iced from the other Districts of the State find a ready market in Kottayam District. The important fish markets are Kottayam, iced, from the other Districts of the State find a ready market Changanacherry, Kanjirappally, Athirampuzha, Vaikom Chempu Thalayolaparambu, Kuruppanthara, Kumarakom, Ettumanoor (Neendoor) and Erattupetta. As there is scarcity of fish in the District, the cost of fish sometimes goes up to Rs. 5 per kg. It may be noted that tapioca and fish form part of the staple food of the poorer section of the population and there is consequently less of rice consumption. They use cured oil-sardine and dried prawn generally.

Fishing Centres and Species of fish.

The important fishing centres of the District are the following:—(1) Chempu, (2) Neerakadavu, (3) Vaikom town, (4) T. V.

Puram, (5) Kothavara, (6) Vechur, (7) Kumarakom, (8) Neendoor, (9) Kottayam, (10) Athirampuzha and (11) Brahmamangalam.

The professional fishermen land about 2,000 M. tonnes of fish annually. The approximate weight and value realised are given in Table XVII.

TABLE XVII
Species of Fish and Annual Production
(1964-65)

Name of Fish	Weight Kg.	Value Rs.
1. Etroplus	64,175	1,00,540.00
2. Chanos	56,290	75,520.00
3. Cat fish	3,63,900	2,31,750.00
4. Barbus (carps)	1,16,696	56,000.00
5. Murrels	70,359	1,04,005.00
6. Prawns	5,67,650	3,54,300.00
7. Miscellaneous	7,35,200	4,47,225.00
Total	19,74,270	12,69,340.00

Fishing equipments

Dug-out canoes are the fishing boats predominantly used by the local fishermen. Plank built boats are also used. The wood used for the fishing boats is generally Anjily or Mango. The size of the boats for Pattukannivala and such other nets which require a minimum of 4 crew is about 8 metres long and 75 cms. to 91 cms. wide at the centre. Boats for smaller nets which require a crew of 2 or 3 persons are smaller in size according to the requirements. Boats, 3 metres long and 45 cms. wide, are used for fishing with hooks and lines and rod and lines. The bigger boats may cost Rs 800 to 1,200 if built in Anjily wood and about Rs. 250 to 500 if built in Mango wood. The small boats used for hooks and lines will cost about Rs 30-50 and they are generally made of mango wood. The cost of the annual maintenance of these boats is negligible as they require only some fish oil or some other crude oil. The total number of boats of all sizes, big, medium and small in this District is 1800 as per statistics available with the Fisheries Department. The cost of medium boat the size of which is 549 cms. to 610 cms. long and 45 cms. to 61 cms. wide is Rs 600 to 900 if made of Anjily wood.

Different kinds of fishing nets are used in this District. A statement of the different kinds of nets and the approximate number of each is given in Table XVIII.

TABLE XVIII
Fishing Nets in use

Name of Net	Numbers
1. Pattukannivala	200
2. Vitavala	500
3. Koorivala	600
4. Ootuvala	400
5. Vattavala	200
6. Koruvala	500
7. Karimannivala	200
8. Stake nets	835
9. China nets	80
10. Kuruvavala	100
11. Cast net	800
12. Hooks and Lines	200

The above are only approximate figures based on the statistics available with the Fisheries Department. Nylon drift nets have now become very common although there was very little response to the advice of the Department in this regard when it was first introduced. It soon became popular as those who went out for fishing with Nylon nets returned with good catches. The cost of a Nylon drift net varies from Rs. 1,200 to 2,000 according to its size. Cotton nets are also still used by the majority of fishermen who can not afford to fetch a costly Nylon net.

Economic condition of the Fishermen.

Almost all the backward communities of the District resort to fishing at least with a view to procuring fish for their domestic consumption. The converts to Christianity at Kaduthuruthy, Kumarakom and Kottayam fish with nets known as Vattavala. The Pulayas (Harijans) take their catches directly to the markets and sell them for the purchase of their daily requirements of tapioca and rice. A good number of Ezhavas of Kumarakom are professional fishermen who use cast nets, drift nets, wall nets etc. But the actual professional fishermen of this District are known as Valas. They live all along the shores of the backwaters and also on the banks of the two rivers, viz., Moovattupuzha and Meenachil. The number of Vala fishermen who are permanently employed in the fishing trade in the District would come to about 3,000 to 4,000. These men are socially and economically backward. Only a few have their own houses and the remaining live in the thatched huts on lands belonging to others. The male members go out to the backwaters of rivers for fishing while the female go from house to house as well as from market to market for selling the fresh and cured fish. The deplorable living conditions of

the fishermen community attracted the notice of the Government long ago and therefore several welfare schemes were included in the Five Year Plans of the State for the uplift of this community. The details of some of the schemes are given below:—

Fishermen's Co-operative Societies.

The fishermen of Kerala are generally indebted to capitalists who lend them money on condition that the entire catches are surrendered to them at a specified rate. This system causes untold hardships to fishermen as they seldom get a fair and reasonable price for their catches. The fishermen of Kottayam District are not free from the aforesaid hardship. About 90% of the vala fishermen have no fishing boats or nets of their own. They work only as labourers on share basis. After deducting shares for boats and nets a fishermen usually gets about 1.50 to 2.50 per day. With this small amount he has to maintain a family of about 5 members on an average. If boats and nets are provided and a reasonable price assured for the catch, it is certain that each fisherman may get about Rs 3.50 to 4.50 as his share every day and this may be somewhat sufficient for him to meet his daily requirements.

With a view to helping these fishermen the Department of Fisheries has organised about 23 Fishermen Co-operative Societies in this District. The societies are given grants and long-term loans to purchase boats and nets for the use of their members. The members are to repay the cost of the accessories on easy instalments. On full payment of the cost, the fishing boats and nets would become the property of the members. The co-operative societies are also allowed to enjoy 25% of the total cost of boats etc., as subsidy by the Department of Fisheries. Nylon yarn at subsidised rate is also being supplied by the Fisheries Department to the societies for manufacturing nets. About 2,000 fishermen are members of the Fishermen Co-operative Societies in this District. The progress of the societies has, however, been very slow due to the illiteracy and ignorance of the majority of their members.

Colonisation Schemes.

The Fisheries Department has constructed 59 houses for fishermen at Thirumanivenkatapuram near Vaikom at a cost about Rs 70,000. There are proposals for providing colonies at Chempu, Bramamangalam and Vaikom. Moreover, 16 houses were constructed by the Revenue Department in Vaikom town for the use of the fishermen under the settlement scheme. In addition, the Fisheries Department has built a market shed in Vaikom town, a well each at Chempu and Vaikom colonies and a landing centre and approach road at Chempu. There is also a proposal to construct a landing centre at Thirumanivenkatapuram. An ice and cold storage plant was commissioned in 1967-68 at the Kottayam fish market and another is proposed to be put up at Kanjirapally.

Rural Fishery Development Schemes.

The Department of Fisheries is implementing several schemes with a view to improving the inland fishery wealth of the District. Stocking of fish seeds of fast growing varieties in the upper reaches of the rivers is being made to augment inland fishery. Fish seeds of cattle, labco etc., are being brought down from Malampuzha in Palghat District. Fish seeds are also being supplied free of charge to private parties for stocking in the tanks and ponds by them. It is also expected to improve the indigenous fishing craft and tackles and increase catches by granting subsidies and loans. The local backwater fishermen are also being selected to undergo training in mechanised fishing at the Fishermen Training Centres run by the Department in centres outside the District.

The fishing industry in the Kottayam District is not, on the whole, well developed. Nevertheless, the number of actual fishermen is increasing every year in proportion to the increase in population. At the same time the area of fishable waters is decreasing year after year due to reclamation of fishing waters into coconut gardens or their conversion into paddy fields. All the available area in the District is now being fully exploited for purpose of fishing and it is very difficult to increase fish production any more unless something tangible is done to improve the fishery in the backwaters as well as the rivers. A peculiarity of the fishing industry in the District which is worth mentioning is that the paddy fields adjacent to the backwaters of Vaikom Taluk are used for prawn-filtration during the off season for paddy cultivation. The owners of these fields fetch much better yield from this than from paddy cultivation. However, a considerable quantity of prawns is removed by the field owners and this affects the fishery in the backwaters. The acreage under prawn infiltration from paddy fields in 1964-65 was 118.11 and the amount of license fee collected Rs 360.13.

The inland fisheries of the District were till recently leased out in public auction. This practice was stopped a few years back and the fishermen are now free to conduct fishing anywhere in the District, provided a licence is taken from the local fishery office on payment of a nominal fee. This concession was granted by the Government in order to prevent the possibility of conflict between fishermen and contractors, though the Government suffer a heavy loss income every year due to the new arrangement.

FORESTS

Introduction.

The Kottayam District is favoured by nature with wide differences of elevation, temperature and rainfall which contribute to the natural regeneration of plant life. There is a very large variety of trees, shrubs, vines and roots of economic value

and a diversity of animals. The forests give considerable employment opportunities to the common people, though their employment potential is relatively meagre when compared with the area they occupy. The agricultural population living in and around the Forest Divisions earn their livelihood through one or the other of the various industries connected with forests. A large number of men are employed in forests as wood and firewood cutters, mahouts, head load coolies, road workers and as contractors' employees. Similarly a good number of persons live by wages earned by collection of minor forest produce, bamboos, rattan and reeds. The forest based industries afford reasonable means of living to many. Besides, a large number of persons cultivate taungya coupes and thus earn their livelihood. In addition, there are people who live by engaging themselves in small cottage industries which use bamboos, reeds rattans, etc., of the forests. Above all forests have a moderating effect on the climate and act as a vegetal cover protecting the soil from erosion. The forests are also a source of considerable revenue to the Government. The net revenue realised annually from them is about a crore of Rupees.

GENERAL HISTORY OF FORESTS

Early History.

Till the end of 18th century the forests of this District as elsewhere in Travancore were not subjected to any systematic management. The first reliable information as to the working of the forests comes from Messrs. Ward & Coner, who were engaged in the survey of the country from 1817 to 1820. Prior to the period of their survey it had been the practice to rent each river for its timber, apparently for teak and this had almost depleted the forests and it was difficult to obtain large sized teak except from far interior. At the time of their visit to Travancore, Government had introduced a new system by which timber was worked down by the State. These operations were entrusted to Captain Robert Gordon of the Bombay Engineers who held the post of Commercial Agent at Alleppey. Besides attending to his duties at Alleppey, Captain Gordon was Conservator of Forests and had additional charge of the collection of cardamom from the gardens on the hills as well as the arrangements connected with their sale and that of timber collected. At that time teak was the only timber monopoly held by the State.

Shortly after this Mr. V. V. Munro was appointed as the first independent Conservator of Forests in Travancore. Besides the charge of the forests, he had also the duty of collecting the cardamom from the hills, and delivering them at Alleppey. Forest Department at that time confined its attention to working down teak on the Periyar and Achencoil rivers the total number of logs delivered averaging 15,000 a year between 1833 and 1842. In addition to teak "Black-wood

and Anjili, etc." are mentioned as being monopolies in 1844. But whether these woods were worked down by Government agency or were merely subject to seigniorage is not clear. Wax, as well as cardamom seems also to have been regarded as Government monopolies and the collection of wax regulated by law. The duty on timber was adjusted in June 1865 and rules for the sale of waste lands both in the hills and low country were published in the same month. These rulers declared Ebony and Sandalwood to be monopolies along with teak and rose-wood. In the following month the *Kudivilla* or amount paid to the cardamom ryots for the collection of the spice was adjusted. At the time of Lieut. Ward's visit (1817-20) the cardamom grown in the gardens on the hills was regarded as a monopoly. The owners of the gardens were obliged to deliver the produce to the Government at a fixed rate, but wild cardamom was allowed to be removed on payment of light transit duties, amounting to about 2½ rupees per *thulam* of 20 lbs. By the proclamation of July 1865, one third of the selling price of cardamom was ordered to be paid to the ryots. During the same month the felling of teak and rose-wood and all jungle-wood trees over 12¼" quarter girth was prohibited. In the following month the method of charging duty on forest timber was slightly modified. Till then it had been customary for the duty to be charged on the cubical contents of the logs, but by modification, the duty was to be levied per log. Several noticeable changes and improvements came into effect in the administration of Forests in the year 1041 M. E. (1865-66). An important proclamation was issued on 30th January 1866, prohibiting the felling of teak, black-wood, ebony or any trees planted on the banks of rivers for their support or any avenue trees. In the month of *Dhanu* 1044 (1868-69) the charge of the cardamom gardens on the Peermade Hills was taken from the Conservator and placed under a separate Officer. Two important proclamation were issued in 1870. The first one dated 18th October 1869/3rd *Thulam* 1045, prohibited the shooting of elephants and the other dated 15th April 1870/25th *Meenam* 1045 laid down rules for hill cultivation. The latter also allowed people to cultivate without permission grasslands, reed areas and marshy places belonging to the Government. In the meanwhile, they were prohibited from clearing forests on the high ridges or low lying forests having teak, blackwood and other Government monopolised trees. Despite these restrictions on hill cultivation the denudation of the forest land continued.

In the year 1059 M. E. (1883-84) a special commission was appointed to discuss the managements of the forests and to draw up suggestions for their better administration. The commission among other things, recommended the abolition of the seigniorage system and the introduction of depot system instead, for the sale of timber other than royalties. At the beginning of 1060, i.e., August 26, 1884 the depot system was

introduced and a reward of one-third the value of any timber other than teak and blackwood, which might be confiscated for smuggling was promised to the informer. The depot system was abolished in 1063 and the old seigniorage system was reintroduced. The forest commission prepared the draft of an Act more or less on the lines of the Madras Forest Act of 1882. The first real Forest Act was passed in 1063 M. E. (1887-88) as regulation IV of 1063. In the year 1060 (1884-85) a proclamation was issued increasing the share given to cardamom ryots from one-third to two-fifths the selling price.

In the year 1061 (1885-86) Mr. T. F. Bourdillon was deputed on special duty to make an exploration of the forests of Travancore State and prepare a report on their resources, especially noting the condition and extent of the forests of teak and to bring to the notice of Government any point worthy of attention. In the course of his travels, Mr. Bourdillon covered a distance of about 7,000 miles, some of it by boat, some on horse back but the greater part on foot. Mr. T. F. Bourdillon in his "Report on the Forest Trees of Travancore" has described the forest area river by river showing the character of the forests and the population resident in each. He also made valuable suggestions for the future working of the Department.

The Forest Department in Travancore was completely re-organised in the year 1896-97 on the lines of British Forest Administration. The whole forest tract of the State was divided into four administrative divisions, the Divisions into Ranges and the Ranges into Beats and the staff was given better emoluments and assured better prospects.

The systematic planting in Kottayam Division was commenced only in 1103. Peruthode, Pulikkunnu, Kalaketty, Urumbikara and Kallar were the plantations opened from 1103 (1927-28). In addition a Cinchona Plantation was opened in the Valanjakanam Reserve in 1119 (1943-44) and it is 113 acres in extent. Red-gun Plantation in Vandanmet, Cashew Plantation in the Vedagiri Reserve and Jungle-wood plantation at Upputhara, are the plantations opened since then.

The Forests of the Kottayam Revenue District are at present under the administrative control of (1) Divisional Forest Officer, Kottayam (2) Divisional Forest Officer, Munnar (3) Divisional Forest Officer, Grassland Division, Peermade and (4) Wild Life Preservation Officer, Thekkady. Brief accounts of the forests of each of the Division are given separately.

Kottayam Forest Division.

The Kottayam Forest Division comprises about 342 miles 550.40 kilometres of forest spreading over the Kanjirappalli, peermade and Udumbanchola Taluks and the Thodupuzha Taluk of Ernakulam District. For administrative purposes the forests in this Division are divided to four territorial Ranges, viz., Erumeli.

Ayyappancoil, Vandanmetu and Nagarampara. Each of these Ranges has been divided into Sections and Beats under the charge of Foresters and Guards respectively. The Forests in this Division include Reserve Forests, Reserve lands and proposed fuel and fodder Reserves as follows:—

	Km.	Hectares
Reserve Forest	8.79	83.90
Reserve lands	5	82.3
Proposed fuel and fodder reserve	1	16.5

The natural forests of this Division comprise of a mixed irregular type, arising out of the very wide range of altitude and consequent variations of temperature, rainfall aspect etc. They stretch over a territory rising from 176.200 metres to an elevation of 1828 metres above mean sea level, with an average annual rainfall varying from 125 cms. to 425 cms. These variations combined with the different soil types have resulted in a variety of vegetation. The following vegetational types are observed in the tract dealt with:—(1) Tropical Evergreens, (2) Monsoon Evergreens (3) Moist Deciduous (4) Dry Deciduous (5) Grasslands and (6) Plantations.

Tropical Evergreens.

The tropical evergreens are characterised by the great luxuriance of their vegetation which consists of several tiers, the highest containing lofty trees often with huge buttresses at the base and the lowest containing dense overgreen shrubby undergrowth. There will be heavy rainfall, high atmospheric humidity and comparatively short dry season.

The top storey consists of species such as *Dipterocarpus indicus*, *Hopea parviflora*, *Cullenia excelsa*, *Anacolosia densiflora*, *Hardwickia pinta*, *Vateria Indica*, *Poeiloneruron indicum*, *Machilus macrantha*, *Mesua ferrea*, *Calophyllum tomentosum*, *Canarium strictum*, *Artocarpus hirsuta*, *Dysoxylum malabaricum*, *Polyalthia fragrans*, *Gluta travancoria*, *Ilydnocarpus wightiana*.

The main species in the middle storey are *Grecinia species*, *Eleocarpus seratus*, *Eugenia species*, *Kanthophyllum Flavescens*, *Canthium Didymum*, *Cinnamomum species*, etc.

The lower storey is composed of shrubby growth of *Eugenia species*, *Leea species*, *Clerodendron infortunatum*, *strobilanthus species*, *Glerodendron infortunatum*, *Strobilanthus species* and *Groton Aromaticum*.

Tropical evergreen forests occur in the Periyar Lake Reserves and portions of Ranni Reserve on the left bank of River Azhutha, included in the Game Sanctuary and its annexe.

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The species commonly occupying the top canopy in the evergreens are: *Hopea parviflora*, *Artocarpus Hirsuta*, *Lophopetalum wightianum*, *Terminalia travancorensis*, *Bombax malabaricum*, *Tetrameles nudiflora*, *Cedrela toona*, *Anacolosia densiflora*, *Mesua ferrea*, *Vateria indica*, *Machilus Macarantha* etc.

Those species in the second storey are *Vitex Altissima*, *Canarium strictum*, *Hydnocarpus wightiana*, *Evodia roxburghiana*, *Myristica species*, *Garcinia species*, *Holigarna arnotiana*, *Polbal this fragrans*, *Nephelium longana*, *Webera corymbosa*, *Antidesma species*, *Olea species*, *Mallottus species*, *Aporosa species*, etc.

Natural regenerations of Elavu, Kulamavu, Vellapyne, etc., are, *Tectona grandis*, *Dalbergia latifolia*, *Terminalia tomentosa*. Where there is cardamom cultivation as in the Nagarampara and C. H. reserves natural regeneration of the principal species is sparse.

The undergrowth in the evergreens is very varied. In areas where the felling in the past has been very heavy *calanus*, screw pines, *Acacia species*, *Caesalpineia bounducella*, *Strobilanthes species*, etc. occur. In other localities *Curcuma*, *Piper nigrum*, *Rawolfia serpentina*, etc. are found.

Deciduous Forests.

The species commonly occurring in the deciduous forests are, *Tectona grandis*, *Dalbergia latifolia*, *Terminalia tomentosa*, *Terminalia paniculata*, *Lagerstroemia lanceolata*, *Pterocarpus Marsupium*, *Grewia tilliaefolia*, *Angeissus latifolia*, *Adina cordifolia*, *Albessia species*, *Odina wodier*, *Mythragyna parviflora*, *Terminalia belerica*, *Bombax malabaricum*, *Olea dioica*, *Steriospermum Chelonoides*, *Phyllanthus emblica*, *Xylia xylocarpa*, *Alstonia scholaris*, *Wrightia tinctoria*, *Bridelia rtusa*, *Strychnos nux-vomica*, *Semecarpus anacardium*, *Scheeichera trijuga* and *Dilennia pentagyna*.

Grasslands.

Extensive areas of pure grasslands are seen occurring in C. H. Reserve (Vandanmet Village) and also in the Nagarampara Reserve. Patches of stunted tree growth are observed along the water courses down to the lower slopes of the valleys. The formation of grasslands seems to be due to the combined effects of shallow soil, annual fires, excessive grazing and practice of shifting cultivation in the past. The determination of the ecological status of the grasslands on the Peermade Plateau calls for thorough investigation and research.

Plantations.

Artificial stocking of clear-felled areas has been confined to limited localities in this Division. Teak is the principal

species planted. From 1103 (1928) to 1107 (1932) teak was planted in the Ranni Reserve (Peruthode Plantations). There was no planting scheme between the years 1107-1117 M. E. (1932-42) and again planting was resumed in 1118 (1943) at Kalaketty. From 1118 (1943) onwards teak and junglewoods were regularly raised in the Ranni Reserve. Another series of plantations was started in Nagarampara Reserve from 118 onwards. This is definitely a series of very poor plantations.

Urumbikara Plantations.

Artificial regeneration of teak was started in the Urumbikara Reserve from 1118 (1943) onwards. Kallarkutty Teak Plantations is the fifth one.

Other Plantations.

Among other plantations are the Cashewnut plantations in Vedagiri Reserves (21.04 hectares) Red gun plantations in Vandanmet Range (35.21 hectares) and *Cinchona* plantations in the Valanjakanam Reserve (33.59 hectares).

The forests of the District produce timber, bamboos, reeds, firewood, charcoal *Inchia (Acacia intsia)*, cheevakka (*Pods of Acacia concinae*) honey and manure leaves which are among the most important requirements of the people of the neighbouring villages.

Timber.

Tectona grandis is the principal constructional timber used by the people. Other species in common demand are *Pterocarpus marsupium*, *Terminalia tomentosa*, *Artocarpus hirsuta*, *Xyliya xylocarpa*, *Lagerstroemia lanceolata*, *Grewia tilliaefolia*, *Dalbergia latifolia*, *Terminalia paniculata*. Teak saplings obtained from thinnings are also in demand. The Public Works Department of the State also purchases for large quantities of timber.

The three plywood manufacturing factories of Kottayam town, viz., the South Indian, Phoenix and Swaraj Plywoods get their requirements from the forests of this Division for the last few years. The species in demand are *Vateria Indica*, *Cedrela toona*, *Machilus macarantha* etc.

There exists a good demand for softwoods for the manufacture of packing cases from several firms in the State. Messers Harrison's and Crossfield Ltd., Quilon and Tata Oil Mills, Ernakulam are the principal buyers of this quality of timber. *Bombax malabaricum*, *Tetrameles nudiflora*, *Lophopetalum wightianum* and *Machilus macarantha* are the principal species generally accepted by these firms. *Melia dubia* and *Alstonia scholaris* are also found to be fit for the above purpose.

Several small match wood factories are working successfully in different parts of the State. *Ailanthus malabaricum*,

Evodia roxburgiana, *Bombax Malabaricum* and *Gmelina arborea* are the species largely in demand.

The out-turn of timber from 1958-59 to 1964-65 is given below:—

Quantity and value of timber extracted and sold from
1958-59 to 1964-65

Year	Timber out- turn cft.	Out-turn value	Quantity sold cft.	Value realised
1958-59	333,146.0	2,032,584.00	221,421.0	264,263.00
1959-60	586,456.0	3,698,905.24	502,043.0	412,676.00
1960-61	600,748.0	3,382,809.10	546,210.0	3,487,311.00
1961-62	876,268.0	3,255,029.00	825,658.0	3,550,387.00
1962-63	698,028.00	3,090,140.00	563,298.00	2,816,140.00
	Cu. m.		Cu. m.	
1963-64	31,734.100	5,899,929.00	30,484.810	5,600,396.00
1964-65	24,529.556	5,083,588.54	23,375.099	4,793,028.57

Forest Roads.

Within the forests, there is no good system of roads. The present roads which are fair weather ones are not properly maintained by the Forest Department. The following are the forest roads which call for special mention and proper maintenance.

1. Peruthodu-Sabarimala Road (via Kalaketty)
2. Ayyappancoil-Pulyanmala Road (via Kattappana)
3. Ayyappancoil-Seethakayam Road (through C. H. Reserve).
4. Upputhara-Kallarkutty Road (through Mallar Plantations).
5. Upputhara-Seethakayam Road (through Nagarampara Reserve).
6. Kattappana-Thovalakuzhi Road.
7. Vandanmet-Cumbummet Road.
8. Kunkilipetti-Chellarcoil Metu Road.
9. Nedunkandam-Pachadi Road.

MUNNAR FOREST DIVISION

The Munnar Forest Division formed in April 1963 comprises of the entire Devikulam Taluk and portions of Udumbanchola Taluk. It has an area of 1072.26 square kms. of which 502.46 sq. kms constitute reserve forests. The area under reserve forests falls entirely in Devikulam Taluk to which has a total forest area of 786.35 sq. kms. There are no reserve forests in Udumbanchola Taluk. About 93.14 sq. kms. in Devikulam Taluk and 385.91 sq. kms. of Cardamom Hill Reserve in Udumbanchola Taluk have been given over to the

Revenue Department for administration. An area of 77.42 hectares in Devikulam Taluk is under fuel and fodder Reserve. The area of forests falling within K. D. H. P. concession area comes to about 90.65 sq. kms. though the total area of K. D. H. P. concern is about 556.85 sq. kms.

There are great variations in Elevation rainfall distribution, temperature and other factors within the Munnar Forest Division. The following types of Forests are met with here:—

1. Tropical Evergreen Forests & Semi Evergreen Forests.
2. Moist deciduous forests.
3. Dry Deciduous Forests (mixed with sandalwood).
4. Sub-Tropical forests.
5. Temperate (montane) shola forests interspersed with grass lands.)

Tropical Evergreen Forests, Semi Evergreen Forests and Moist deciduous Forests are met with in areas having heavy rainfall, on the wind ward side of the Western Ghats. The dry deciduous forests occur in the rain shadow region. The Anchanad Valley on the eastern side of the Western Ghats is interesting as far as its vegetation is concerned. This is the only area in Kerala where Sandalwood comes up naturally in profusion. Rainfall here is very low and vegetation is typical of the dry deciduous nature. Sub-tropical and temperate forests are met with in high elevation areas. The temperate forests occur above 1677 metres and in this type of shola forests large patches of grass lands are found, and the tree-growth is confined to moist pockets or valleys. A short description of the different types of forests is given below:—

Tropical Evergreen Forests.

They are found in areas ranging from 1,500' to 3,500' in elevation on the western side of Western Ghat. The evergreen forests are characterised by a bewildering multiplicity of vegetational forests. Trees are lofty in size with a dense canopy. Undergrowth is also dense, often a tangle of canes. The evergreen forests are highly suitable for cardamom cultivation.

Semi-evergreen Forests.

Semi-evergreen forests are found wherever there has been biological influence or interference and in areas adjoining the Evergreen Forests. In this type of forests there are less of evergreen tree species and more of deciduous trees.

Moist deciduous forests.

This is a closed high forest, commonly of good height, 100' to 120' or more; the dominant species being mostly deciduous. Bamboos are seen mixed with this type of forests. Teak is the most important timber found in this type of

forests. This type of forests occur in well-drained fertile soils, in areas having a rainfall of about 80" to 100" and are met with in low-level areas upto 457 metres to 610 metres and sometimes even upto 914 metres. From the economic point of view this is the most important type and it carries valuable timber species like Teak and Rosewood.

Dry Deciduous Forests.

This type is formed by a mixture of trees practically all of which are deciduous during the dry season, usually for several months. Many of the species have strong adaptations for *xerophytic* life and in drier areas thorny species occur in large proportion. This type of forests are met with in the Anchanad Valley. It has a good proportion of sandalwood. The height growth is generally poor—only about 15 metres.

Sub-tropical Forests.

Sub-tropical Forest is of a transitional nature i.e., from the tropical type to the temperate type forests. There are no clear sub-tropical zones with characteristics differing from tropical and temperate zones. The subtropical zones have been considerably interfered with and are now mostly under Tea gardens.

Temperate (Montane) shola Forests.

It is a closed evergreen forest, the trees being mostly short boled and branching, though often attaining a considerable girth. The height of the forest canopy is relatively low rarely exceeding 15 metres to 18 metres. This type of forest is found in patches in the protected pockets or declivities in rolling grass lands.

Forest Produce.

Valuable timbers like Rosewood, teak, White cedar, Maruthy, Unnam, Vengai, Aini, Elavu, Ventak Vellapine etc. are obtained from the Forests of this Division. The forests also provide other important forest produces like bamboos, reeds, canes, etc. Sandalwood is extracted from the Forests of Anchanad Valley. The annual revenue from the forests of Munnar Division varies between 30 to 35 lakhs.

The area under different kinds of plantations in this Division in 1964-65 is given below:—

Eucalyptus grandis (Rose gum)	341.96 hectares
Teak	94.70 "
Softwood	16.59 "
Wattle	232.69 "
Miscellaneous	144.88 "
Sandalwood	161.87 "

As in the Kottayam Forest Division the forests in Munnar Division also provide the raw materials for some of the major industries e. g.,

Paper pulp:—Bamboos, Reeds, Eucalyptus species etc.

Veneer:—Teak, Rosewood, Mahogany, White Cedar etc.,

Match Industry:—Elavu, Evodia, Vellapine.

Railway sleepers:—Thambagam, Nangu etc.

Tanning:—Wattle.

Sandalwood is used in Medicine, Perfumery etc.

There are no forest roads or Forest Rest Houses well in the jurisdiction of the Munnar Division. The rapid increase in population has resulted in large scale encroachments and forest boundaries had often to be redemarcated in record years. With the implementation of new hydro-electric schemes large acres are being submerged. The area under Forests has been dwindling year by year.

GRASSLAND AFFORESTATION DIVISION, PEERMADE

The Grassland Afforestation Division, Peermade, was formed in the year 1961 with the intention of afforesting grassy lands in the High Ranges with fast growing species. This is an overlapping Division covering the Forest Divisions of Kottayam and Ranni and parts of the Periyar Game Sanctuary area and a small area of revenue land falling in the Kottayam Revenue District.

The grass land of Peermade which is the result of successive annual fires is planted with by isolated fire resisting species such as *Phyllanthus* and *Pterocarpus* with rampant growth of elephant grass. Owing to the continued forest fires the elimination of surface soil especially from hill slopes is very conspicuous by poor growth of elephant grass on such slopes and luxurious growth in the lower alluvial flats.

The senior Forest Officers conducted a series of tests to cloth the hill slopes with Eucalyptus. The experiments conducted during 1956 at Vallakadavu near Periyar Game Sanctuary proved a success, in spite of the damage caused by fire during 1958. Although there was marked damage by fire, certain plants (*Eucalyptus Grandis*) survived by sending vigorous coppice shoots which have eventually come in equal height with those that were not affected by fire being in the road fringe. The growth of the plants on hill slopes does not compete with those on the alluvial flat in diameter height growth.

In view of the successful growth of the 1956 observation plot, it was proposed by the Chief Conservator of Forests to try *Eucalyptus* Plantation on a large scale in the High Ranges of this State. In 1959 and 1960 about 200 acres of experimental plots of *Eucalyptus Grandis* species were taken in the

High Ranges (Peermade) and they proved to be a success. In the light of this success it was resolved to commence large scale *Eucalyptus* plantations on the grassy areas of hill slopes of Peermade which were considered as unproductive, in the past.

Table XIX gives details of the area planted and the expenditure incurred on raising *Eucalyptus Grandis* Plantations in the 7 Ranges of this Division during each of the years from 1959-60 to 1965-66.

TABLE XIX

Year of Plantation	Extent of plantation hectares	Expenditure Rs.
1959-60	74.46	
1961-62	422.90	5,38,61
1962-63	890.32	9,20,054
1963-64	1429.30	12,62,954
1964-65	1491.22	13,67,992
1965-66	1646.4	..

THE PERIYAR WILD LIFE SANCTUARY DIVISION

The Periyar Wild Life Sanctuary which is a separate Forest Division by itself has an extent of 764.05 sq. kms. and is thickly forested. Out of this an area of 717.00 sq. km. is reserve forests coming under the Periyar Lake reserve forest (588 sq. km.) and the Ranni Reserve forest (120) sq. k. m.). There are no other categories of forests under this Division. The entire area of the Periyar Wild Life Sanctuary falls in the Peermade Taluk.

The forests are entirely tropical in character and include the wet-evergreen forests, the shola forests, the moist deciduous forests and the grass land. Along the valleys where there is deep soil and good moisture the wet evergreen forests are met with generally. Hill slopes with a western aspect have often such type of forests.

Hill tops are often covered with tall elephant grass with a deciduous species of trees dotted here and there. In between the above two types of vegetation the open moist deciduous forests with its undergrowth of grass are met with.

The shola forests are seen in valleys and hill slopes with deep soil and westerly aspects well above 1218.47 mts. Here the trees are stunted and their trunks are almost always covered with moss and lichen.

In the evergreen forests, both moist and shola type of soft-wooded trees predominate while in the moist deciduous hard-woods predominate.

The chief minor forests collected (only departmentally) in this Sanctuary are:—(a) ivory, (b) horns of animals, (c) honey, (d) Bee's wax, (e) Black dammar and (f) cheeyakai. The chief trees met with are:

<i>Tectona grandia</i>	Teak
<i>Dalbergia talifolia</i>	Blackwood or Rosewood
...	
<i>Terminalia paniculata</i>	Maruthy
<i>Terminalia tomentosa</i>	Thembavu
<i>Artocarpus hergula</i>	Anjili
<i>Pterocarpus marsupius</i>	Vengai
<i>Dysozylum malabaricum</i>	White cedar
<i>Cedrela toona</i>	Red Cedar
<i>Hopea parviflora</i>	Kambagom
<i>Mesua ferrea</i>	Iron wood

The forests in this Sanctuary are administered under the provisions of the Forest Act and rules including the Game rules under it.

Wild Life Guards and Foresters are deployed in different strategic points from where they could proceed on patrol and prevent and control offences against the wild life and forests. In addition to this two sections of the Armed Police are permanently stationed at Cheriakanom near the State border in the Sanctuary to prevent and/or apprehend smugglers from Madura side across the border. The particulars of forest offences in the District for the year 1960-61 to 1964-65 are given below

Year	No. of forest offences
	21
1960-61	17
1961-62	22
1962-63	16
1963-64	22
1964-65	

The main means of communication in the sanctuary is by water in boats.

There are three Rest Houses and one Tourist Cottage in this Sanctuary located at the following places.

Thannikudy Rest House	38.64 kms. from Thekkady at the farthest point of the lake.
Mullakudy Rest House	At Mullakudy—29.77 kms.
Manakavala Tourist Cottage	Manakavala—9.66 kms.
Edapalayam Rest House	Edapalayam—4.83 kms.

The policy of constituting this sanctuary in the catchment of River Periyar and Pamba has enabled the Nation to conserve one of the finest wild life sanctuaries in the world and to keep the entire flora and fauna in its natural abundance and vigour.

Famine, Floods.

Kottayam District has been generally free from natural calamities of any great magnitude. Nevertheless, famines and floods are not unknown to this area.

The year 1036 K. E. (1861) was one of exceptional scarcity. The District suffered a lot along with the other areas of the then Travancore State. The *Administration Report of Travancore* for the year observes as follows about this scarcity. "There was much distress in consequence of the failure of crops. The price of food rose higher than ever known before and thousands of men, women and children had no resource but charity to look to for bare existence. The Sirkar was not wanting in exertions to mitigate this distress as far as it lay in its power. Food was given gratuitously to the poor in several localities as also cloths, small sums of money and other similar aids. Such as were able contributed largely to the relief. The British Government kindly granted the request of the Sirkar to suspend the duty on the exports of grain and rice to Travancore from British territory and this concession in conjunction with a similar removal of import duty on the part of the Sirkar contributed to the influx into the country of a large quantity of food. Paddy to the cost of Rs. 50,000 was gratuitously given to the poor. About Rs. 12,000 worth of rice was purchased by the Sirkar at Mangalore and brought down here and resold to the poor at rates advantageous to them. Grain and rice to the value of Rs. 12,00,000 was imported into Travancore from abroad."

The Year 1110 (1825) was also another year of severe drought for the District along with other parts of the then Travancore State. Both the monsoons were indifferent. The north-east monsoon practically stopped by the end of October and was followed by a period of seven months with no rain. The south-west monsoon was also not strong. The result was that crop failed in all the seasons. With a view to mitigate the hardships of the ryots and the consequent economic depression, remission to the extent of 18½ per cent of the land tax on portsettlement Kayal reclamations in the Taluks of Changanacherry and Kottayam was granted. A remission of 12½ per cent of land tax was allowed on all other lands including lands cultivated with rubber.

As for floods, those of 1057 K. E. (1881-82), 1099 K. E. (1923-24) and 1137 (1961) were of exceptional severity. About the first the following is the observations made in the

Travancore State Administration Report of 1057 K. E. (1881-82) "The unprecedentedly heavy rains in the north resulted in destructive floods which caused much damage to property and some loss to life. This necessity caused great distress among the poorer classes of the population." For several years after 1057 there had been no serious devastation by floods. But the floods of 1099 (1924), proved to be highly disastrous. Of that it is recorded that the unprecedentedly heavy rain that fell towards the close of the south west monsoon resulted in unusual floods in all the rivers of North Travancore. There were heavy slips and land slides in Kottayam District. Habitations, public buildings, communications and crops alike suffered. The Kanni (Viruppu) crop was practically lost and the seedlings of the Kumbom (Mundakan) crop damaged in most cases. There was considerable loss of cattle and human lives. The floods of 1961 were unprecedented in their impact. There was a continuous spell of rains in July of that year. The rivers of the District were in spate. The Periyar and Pamba had reached unusually high levels. Heavy rains accompanied by gusty winds had caused a number of landslips on the Ghat sections of the Kottayam-Kumili and Kottayam-Devikulam roads leading to the plantation areas of the High Ranges, bringing traffic to a stand-still. The low lying areas in the Kottayam town and suburbs were under water. Parts of the M. C. road near Changanacherry and Kottayam were inundated by the flood waters of the Pamba and its tributaries affecting bus services to the surrounding areas. Four persons were killed in a landslip near Udumbanchola following the torrential rains which fell in the High Ranges. Landslides occurred in Peermade, Udumbanchola, Ayyappankoil, Vandiperiyar, Kochuthovala, Puliyanmala, Adimali, Munnar etc. The traffic between Vandiperiyar and Kumili and from Kumili to Devikulam and from Munnar to Coimbatore was completely disrupted. There were six deaths at Kochuthovala and three at Puliyanmala due to landslides. At Adimali one person died when a tree which was uprooted fell on him and another due to electric shock. Six deaths occurred near Munnar due to landslide. This plantation hill town was shrouded in darkness for days together as electric supply had failed. The 140 feet wide Periyar was a swirling mass of angry waters, flooding vast areas and washing sway countless number of small huts. Only the coconut leaf thatches floating by spoke of their destruction and misery caused to their inhabitants.

The State Government and public bodies of the District had taken timely measures for relieving the distress of the people and restore normal conditions in the District.

A district Relief Committee was set up under the chairmanship of the District Collector to co-ordinate the activities

¹ *Travancore State Manual* Vol. III, T. K. Velu Pillai, p. 86.

of the official and non-official agencies working in the District. Many temporary rescue shelters were opened in the different parts of the District. The Municipal Council spent an amount of Rs 2,000 for relief work. An amount of Rs 13,000 was distributed by Government among the victims of the flood for the purchase of rice, restriction of damaged houses, etc.

Since 1961 the District had not experienced any floods of a severe nature.

APPENDIX-I

(1) Important Crop Pests and their Control

<i>Pest</i>	<i>Nature of Damage</i>	<i>Control Measures</i>
1. Paddy may work or the swarming caterpillar (Spodoptera maritima - bolts).	PADDY This is a sporadic pest. Attacks mostly Viruppu (Autumn) crop of paddy throughout the District.	1. Apply 10 per cent B.H.C. dust at 15 to 20 lb. per acre. 2. Spray DDT suspension prepared at the rate of 1 lb. of 50 per cent wettable powder in 25 gallons of water (3 to 35 gallons required for an acre). 3. Apply DDT, 50 per cent dust at 15 lb per acre. In hardly affected fields give a top dressing of Ammonium Sulphate at 28 lbs. per acre to promote rapid recuperation.
2. Paddy Stem borer (Scheenimus incortellus W.).	This pest is usually found in Mundakan (Winter) crop and often causes heavy damage. This also is commonly seen in the District.	1. Spray Folidol 605 thrice as follows: First spraying in the nursery when the plants are about 15 days old, second spraying about three weeks after transplanting and third spraying at the short blade stage. The rate is 2.55 per gallon of water (1 oz. in 14 gallons of water) 30 to 35 gallons are required per acre. The sprayings are to be done when a good number of months or eggs are found in the field. 2. Spray D. D. T. at the rate of 1 lb. of 50 percent wettable powder in 25 gallons of water as follows. One spraying in the nursery, did the seedlings in the suspension of the same strength, one spraying 2 to 3 weeks after transblade stage (in the short blade stage 40 to 45 gallons of the spray liquid are required per acre in both cases)

3. Rice bug (Lip to coriis actu: T)
This is found throughout the District.
4. Paddy Cockchaferbuttle (Phyllo-gathus dronysins F)
Found everywhere in Kottayam District
5. The paddy jassid. (The green jassid *Nephotettix* sp. and *Tettigoniella spectra* Dt.)
Found everywhere in Kottayam District
1. In the early stage of attack collect the bugs by a hand net
2. Apply B. B. C. 10 percent dust at the rate of 20 to 25 lb. per acre.
1. Prior to sowing plough into the soil 28 lb. of 5 per cent Aldrin dust of 56 lb of 10 per cent B. H. C. dust per acre
1. Collect the bugs by a hand net on the early stage of attack.
2. Spray D. D. T. at the rate of 1 lb. of 50 per cent wettable powder in 25 gallons of water. 30 to 35 gallons of suspension required per acre.
3. Dust D. D. T. 5 per cent at the rate of 15 to 20 lb. per acre.

KOTTAYAM

SUGARCANE

1. Steam Borers (Pyralidae)
Argyria sticticarpa. *Diatroca Venosata*
Both the young and grown up plants are attacked by these pests. In young plants the damage is serious, causing dead hearts
2. White borer (pyralidas)
Sirpophaga nivella.
The caterpillar attacks both grown up and young plants producing dead hearts and bunched shoots
1. Release *Trichogramma evanescens minutum*, the egg parasite.
2. Spray D. D. T. 0.32% at fortnightly intervals starting from the fourth week after planting.
- Spray D. D. T. 0.25% or B. H. C. 0.4-0.5%

3. Cane leaf hopper (Fulgoridae)

The adult is a small, active, straw coloured bug. The nymphs are pale brown with two long waxy anal process. They suck plant juice

4. Termites
Odontotermes obesus *Eutermes hamii*.
5. Mealy wing
Triangymus secalari
6. White fly
Acalarabus barodensis

Attack planted cane sets and prevent sprouting. Also eat up growing seedlings.

Found in colonies in lower nodes of plants and cause damage by desapping.

Cluster on leaves and suck up plant juice

Spray D. D. T. or B. H. C. 0.23% Dust B. H. C. 10%

Spray the soil and seedlings with B. H. C. 0.1% or D. D. T. 0.16%.

Spray Folidol 0.05% or B. H. C. 1%

Spray B. H. C. 1% or Folidol 0.05%

TEA

1. Tea mosquito (Capsid)
Belopeltis antoni.

The bugs puncture and suck up from the tender shoots and leaves and cause them to curl up, fade and dry-up. It is the most serious pest of tea.

2. Leaf caterpillars (About 7 species of caterpillars attack tea of which the slug caterpillar—*Heterasia vitetens*—is the most important)

1. Coffee white borer (Cerambycidae)
Xylotrechus quadripes

Eggs are laid in cracks and crevices on Coffee stem. The grubs tunnel within bark and stem. Larval period is about 9 months. The branches and stems bored by the grubs die.

2. Green and Red bugs (Coecidae)
Lecanium viridae.
Saissetia hemisphaerica

Spray Parathion 0.05%

Spray B. H. C. 0.25% or Endrin 0.025% at the time of egg laying.

AGRICULTURE AND IRRIGATION

GINGER		
1. Shoot borer (<i>Dichocrois punctiferalis</i>)	Attacks the growing shoot and kills it.	Spray B. H. C. 0.05% a few rounds.
2. Fly maggots (<i>Formosus flavipes</i> <i>Chalcydomya atricornis</i>)	The maggots attack the growing shoots and underground stems of ginger.	Dust B. H. C. 10% or Aldrin 1% at the base of the plant.
PEPPER		
1. Pepper Pollu beetle <i>Longitarsus nigripennis</i>	The beetle grubs bore into the tender berry and feed on the internal contents making it hollow. The full fed grub drops into the soil and turns into pups within an earthen chamber.	Spray regularly with 0.125% D. D. T.
1. Top shoot borer <i>Lacpasia hemifloxa</i> .	The caterpillar bores into the tender shoots.	Spray DDT 0.25%.
2. Leaf folding thrips <i>Gynaikothrips</i> Sp. Scale insects:	Suck and fold the margins of leaves and malform them.	Spray DDT 0.25%.
Pepper scale— <i>Lophosaphes piperis</i> Sott scale— <i>Lecanium maraphiale</i> Mealy bug: <i>Pseudococcus virgaule</i>	These insects suck the juice from the shoots and are found in thousands of vines.	Spray Parathion 0.25%.
TURMERIC		
1. Shoot borer <i>Dichocrois punctiferalis</i>	Attacks the growing shoot and kills it.	Spray BHC 0.05%.
2. Udaspes folus	Folds leaves and feeds from within.	Dust BHC 10% for DDT 5%

CARDAMOM

Thousands of this minute dark insects, both nymphs and adults infest spikes, flowers, pods, tender leaves, leaf sheaths, and pseudosteme. Life cycle of this insect is completed on the plant itself. The insects lacerate the tissues and suck the exuding sap. Attack by this most important pest of cardamom causes the following damages: (1) The pods develop scabby formations on them which reduce both their quality and quantity, (2) Pod formation is reduced, (3) Flower bud falls off and (4) The inflorescence gets malformed, wrinkled and stunted in growth.

They appear in large numbers, feed voraciously on leaves of cardamom and destroy whole plantations in a short time. The caterpillars first feed on the leaves of shade trees and with the appearance of sunny weather these caterpillars drop down on to the cardamom plants, and start defoliation.

The pest appears after pre-monsoon showers. Eggs are laid on rhizomes and grubs tunnel into it. A secondary fungus infection sets in the tunneled rhizomes. Attacked plants often wither and dry.

Caterpillar bores into the shoots of psuedostem. It is some times serious in the nurseries.

1. Cardamom thrips
Taeniothrips Cardamomi. R.

2. Cardamom Hairy caterpillars
Euplerpie Cardamomi. R.
Euplerpie Canarica

3. Cardamom rhizome Weevil
Prodictes haematous

4. Shoot borer
Dichroctes punctiferalis

1. Rhinoceros beetle *Oryctes rhinoceros*

COCONUT

It bores into the unopened leaves of the tree, cutting and chewing the tender foliage. The leaf surface is thereby reduced, retards the growth of the palm and reduces the yield of

1. Keep the plantations free of dead and decaying coconut and other trees.
2. Spray manure heaps with BHC 0.2% to prevent breeding of beetles.

Pes	Nature of Damage	Control Measures
12. Black headed caterpillar (Xyloryctide) (<i>Nephantis serripa</i>)	nuts. Quite often the spaths is also attacked and the inflorescence is destroyed thus directly preventing the production of nuts. Sometimes the beetle may cause death of the palm by attacking and destroying the growing point. Palm attacked by the rhinoceros beetle is also open to infestation by red palm weevil and bacterial and fungal pathogenic	3. Use breeding traps to attract and kill beetles and grubs. Keep crowding and decomposing organic matter of convenient sizes at various places in the coconut garden. Spray these heaps once in three months with BHC 0.2%. 4. Extract beetle from the crown with the beetle hook. Fill holes with mixture of 10% BHC and sand. 5. Fill the inner leaf axils with mixture of BHC 10%. Chlordane 5% and clay.
3. Red Palm Weevil (Curculionidae) <i>Rhynchophorus ferrugineus</i>	The caterpillar causes extensive damage to the leaves of coconut palms, especially along the coastal and backwater areas. Due to the attack, the vitality of infested tree is lost, resulting in low yields. On the west coast the insect is prevalent throughout the year Damage is caused by both adults and grubs. The early indication of attack may be a few, small, holes in the stem from which the pieces of chewed fibres protrude and a thick brown liquid oozes out. In advanced stages the central shoot starts drying and finally falls down, by the action of wind. In advanced stages of attack the interior of the stem becomes a seething mass of larvae, cocoons and adult weevils	1. Spray DDT 0.2%. 2. Liberate the pupal parasite <i>Trichophtus pupivora</i> and the larval parasite <i>Perisierolo nephantidis</i> , in infested plantations. 1. Remove dead and decaying trees. 2. Cut and burn all badly infested trees. 3. Inject 1% Pyrocone E into infested trees (close all the holes on the stem excepting the topmost. Insert a bent funnel into this hole and pour 1,000-1,500 cc. of the emulsion. Leave the funnel on the tree till the emulsion has dripped down the stem).

ARECANUT

4. Scale insects and mealy bugs. <i>Pinnaspis aspidiotrae</i> , <i>Chionaspis dilatata</i> , <i>Pseudococcus</i> Sp.	Young plants are attacked by these insects. The mealy bugs infest base of the stem and leaf sheaths in young plants.	Spray parathion 0.05%.
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2. Arecanut beetle <i>Areanus fuscicollatus</i>	Beetles and grubs bore into the nuts	Destroy badly infested nuts. Spray:—1. Parathion 0.024%, 2. Endrine 0.05%, 3. Ekatin 0.01%.
3. Thrips <i>Rhipiphorothrips cruentatus</i>	Such plant juice from leaves	
4. Mite <i>Ranilla indica</i>	Colonies of these red mite are found on under side of leaves of young plant. Suck plant juice and the leaves get dried up	1. Spray wettable sulphur 1 oz in 2-3 gallons of water. 2. Dust Sulphur. 3. Spray Parathion 0.014%
1. The Tapioca scale (Coccinidae) <i>Aspidiotus albus</i>	TAPIOCA This flat scale is found in large numbers on stems, sucking sap out of it. Attacked plants become stunted and the yield is decreased	Spray Parathion 0.05% or DDT-Kerosene emulsion 0.1%.
2. Mealy bug <i>Pseudococcus</i> sp.	Infests the whole plant and consequently the plant loses vigour	Spray Parathion 0.05%
3. Tapioca mite <i>Tetranychus</i> sp.	Red mite often found on underside of leaves sucks plant juice and leaves fade.	do.
4. Termites	Attack the setts, growing stem and tubers	Dip the setts in BBC 0.5% suspension or spray with BHG 0.25%.
1. Banana stem borer Weevil <i>Cosmopolites ordinus</i>	FRUITS PLANTS—BANANA The grubs tunnel within the stem feeding on the internal contents. The attacked plants get stunted and the plants die	1. Use pest free suckers. 2. Spray BHG 0.08%.
2. Banana Aphid <i>Pentalonia nigronervosa</i>	Attacks directly and indirectly by transmitting the Pathogenic virus resulting in the dreadful bunchy top	Spray Parathion 0.05%.

MANGO

1. Mango hopper
Indircerus nivosus.

Suck up juice from shoots and flower stalks. The drainage of sap causes the flower and buds to dry up and wither. The hopper excrete a sweet fluid which encourages the growth of sooty mould.

Spray DDT 0.16%.

2. Mango stem borer beetle
Bateora rubus

The grub bores into the stem and branches

1. Kill the beetles found in the garden.
2. Syringe petrol into the larval burrow and close it with clay or mud.

CASHIEW

1. Cashew stem borer
Plocaderus ferrugineus

Grubs bore into the stem. Attacked plants eventually die

Spraying 0.01% BHC suspension into bore holes.

2. Thrips
Setothrips rubroactius

They cover the foliage and shoots, suck juice and blighten the surface
(ii) Diseases of cultivated plants and their Control

Spray BHC 0.05%.

Disease and Casual Organism

Symptomatology

Control Measures

PADDY

1. Blast
Pyricularia oryzae

Spindle shaped spots with grayish centres are produced on leaves (Attacks the crop in all stages of growth). As a result of infection the culm and nodes are blackened and often break at joints. When neck of the panicle is attacked the grains are unfilled and become chaffy and ear tends to break at the neck

1. Cultivate resistant varieties.
2. Spray 1 % Bordeaux Mixture or any other Copper fungicides.
3. Dust with a mixture of lime and concassa.
4. Balanced manuring (avoid excess nitrogenous manures.
5. Treat seeds with organomercurials.

2. Blight or Brown leaf spot
Cochliobolus miyabeanus.

Dark brown spots appear on the coleoptile, the primary shoots, leaves, leaf sheaths, nodes glumes and the seeds. The spot on leaves are dark brown, retangular or oval

1. Use resistant varieties.
2. Treat seeds with organomercurial fungicides, like Agrosan GN or Cerasan.

3. Stem rot or Sclerotial disease
Sclerotium oryzae

The base of the stem rots and leaves turn yellow. The culm collapses causing the plant to lodge. Ear fails to emerge

Drain water from infected fields.

SUGARCANE

1. Red rot
Phaeospora tucumanensis
(*Colletotrichum falcatum*)

Along the leaves yellowing, shrivelling, and drying up are noticed. It produces long lesions on the midribs of leaves which are red or dark brown in colour. The internal tissues also can be seen as red with white transverse patches

1. Use healthy and Resistant sets for planting
2. Rogue and destroy infected canes.
3. Avoid ratooning in an infected crop.
4. Treat the sets with hot water for 22 minutes at 51.5° C-52.5° C.

2. Smut.
Ustilago Scitamineae.

1. Remove the whip as it appears. Take steps to prevent spread of spores
2. Do not ratoon an infected crop.
3. Cultivate resistant varieties (CO-467)

MANGO

1. Powder mildew
Oidium mangiferae

The leaves and flowers are attacked with white powdery growth of the fungus. The inflorescence wither and fall

Dust with fine sulphur.

2. Dieback or Pink disease
Corticium salmonicolor

The affected twigs and small branches wither and dry up from the tip downwards

1. Cut and remove the affected twigs.
2. Spray 1% B. M. and manure the trees.

BANANA

1. Bunchytop. Caused by a Virus transmitted by the Banana aphid *Pentalonia nigronarosa*.

The leaves of the severely infected plants are bunched together at the top of the Pseudostem assuming a rosette shape. The plants become stunted with narrow and short brittle leaves which stand more erect than normal. The leaf stalks do not elongate and the crowded at apex.

1. Eradicate infected plants.
2. Exclusion of diseased suckers and enforce domestic quarantine
3. Dust or spray the healthy plants with insecticides to get rid of the aphids.

Disease and Casual Organism	Symptomatology	Control Measures
CASHEW		
1. Decline <i>Pythium spissuum</i>	Gets defoliated during summer and twigs dry up. The tree dies in 2-3 years.	1. Treat the soil at the base of the trees with cheshunt compound solution. 2. Manure properly.
2. Powdery mildew <i>Oidium</i> sp.	Shedding of flowers and drying up of inflorescence	Dust with fine Sulphur.
3. Pink Disease or Die Back. <i>Pellicularia salmonicolor</i> .	The disease affects the twigs and branches and they gradually dry up	1. Cut and remove the affected branches 2. Apply Bordeaux Paste at cut end 3. Spray B.M. 1%
1. Leaf spot (<i>Cercospora hemmingii</i>)	Symptoms appear as reddish brown spots on the leaves	Spray 1% B. M.
1. Abnormal or secondary leaf fall. <i>Phytophthora palmivora</i>	Defoliation of affected trees during monsoons. Severe during June, July and August. Young leaves and buds are affected and decayed.	Spray with 1% B.M. during April-May.
2. Powdery Mildew <i>Oidium heveae</i>	Symptoms are white powder patches on leaf surface, infection severe in young and tender leaves. Flowers are sometimes attacked. Leaves shed.	Dust with fine sulphur several times at weekly intervals.
3. Pink disease <i>Cartiocrum salmonicolor</i>	Two year and above old plants are attacked. Latex oozes out. Bark dries up. Pink coloured encrustation noted on branches. Distal portions dry up. Numerous new shoots arise from below the affected portion of main stem.	Cut and remove infected twigs. Spray or paint the infected bark with 5:5:50 B. M. Remove fallen branches from the ground.

KOTTAYAM

TAPIOCA

RUBBER

AGRICULTURE AND IRRIGATION

COFFEE

Spray 0.5% B. M. once in April and next in September. Cultivate resistant varieties.

TEA

Spray copper fungicide at weekly intervals. Regulate shade.

COCONUT

Spray 1% B. M. or any copper fungicide. Cultural and manual operations to be done carefully. Liberal doses of potash should be applied.

Attend to proper cultural and manual practices. Spray the trees with copper fungicides.

Collect and burn all infected nuts. Spray twice with 1% B. M.

Cut out all infected tissues and apply Bordeaux paste or coal tar. Resort to proper cultural and manual operations.

Disease appears on the lower surfaces of the leaves as orange yellow circular spots which later turn brown. The leaves of the affected plants are shed prematurely. Yield is reduced

Small pale or pink raised spots on the leaves. The spots become depressed into a shallow cavity forming blister-like swellings. Later the spots turn dark brown and shrink

Blackening and shrivelling up of leaf tips. On maturing this breaks off. Young leaves also get infected. The tree gradually weakens and the yield is reduced

The outer whorl of leaves become yellowish green and drop. Gradually the tree weakens and the leaves get reduced in size. Immature nuts are shed. The roots of affected trees are discoloured and rotten

Dark brown water soaked rotting spots appear on the nuts at the region of attachment of the stalk. The affected nuts drop off prematurely

The stem is generally affected and a reddish brown liquid flows out through the longitudinal cracks in the stem. The affected region gets rotted and infection spreads to surrounding tissues.

1. Leaf Disease
Hamilia natatix

1. Blister Blight
Exobasidium vexans.

1. Leaf rot
Helminthosporium halodes
Gleosporium Sp.
Gleocladium Sp.

2. Root or yellow leaf disease (Cause not fully known, but suspected to be a virus)

3. Mahali
Phytophthora palmivora

4. Stem Bleeding
Thielaviopsis paradoxa

Disease and Casual Organism	Symptomatology	Control Measures
ARECANUT		
1. Leaf Rot (<i>Fungal origin</i>)	Resembles leaf rot of coconut	Spray 1% B. M. or any other copper fungicide. Resort to proper cultural and manufal practices.
2. Yellow leaf Disease (It may be due to virus or rotting of roots)	Resembles yellow leaf disease coconut	Keep up health of trees by manuring and proper cultivation.
3. Mahali or nut fall <i>Phytophthora palmivora</i> .	Rotting and premature shedding of green nuts during June-August	Spray bunches with 5:5:50 B. M. before the monsoon and again in July.
PEPER		
1. Wilt <i>Phytophthora Sp.</i>	The leaves of the affected vines turn yellow, whether the drop off. The infection starts on the stem at the soil level and roots get rotted gradually the vines wilt	Use resistant varieties. Isolate infected vines by digging trenches. Drench the soil around the infected vines with Cheshunt compound or 0.05% wettable Ceresan solution.
2. Pollu <i>Colletotrichum necator</i>	The disease appears as circular or irregular gray spots on leaves. The infection spreads to the stem and spikes too. As a result the trees shrink and dry up and become hollow and light	Spray B. M.
CARDAMOM		
1. Mosaic or 'Katie' disease caused by a virus. (Transmitted by Banana Aphid) <i>Pentalonia nigroneryosa</i> .	General chlorosis and mottling of leaves with thin broken stripes of deep green tissues over the surface. Size of leaves is reduced. The disease appears in all stages of growth	Eradicate all diseased plants. Replant with healthy seedlings. Destroy alternate hosts of the disease and Aphid vecto
2. Gum Rot or Rhizome Rot. <i>Fyhtium sp.</i>	Causes rotting of rhizomes and the roots, by which the shoots wilt. Leaves of affected plants become yellow and droop.	Remove affected shoots. Apply Super-phosphate and Ammonium phosphate at the rate of 2 oz. per clump.

9. Damping off	Seedling wilts and dies	Drench soil with 1% B. M. or Cheshunt compound. Reduce excessive soil moisture and humidity. Avoid over-crowding or seedlings in nursery.
GINGER		
1. Soft rot of Ginger <i>Fyhtium sp.</i>	Yellowing of leaves which gradually wither and droop. Later whole shoot is affected and dry up. The rot beginning at the base of the shoot and extends to rhizome which becomes watery and soft in character.	Eradicate infected plants. Spray and drench the soil with Cheshunt compound or any other copper fungicide, select healthy rhizomes Seed treatment with 0.1% Mercuric chloride solution or Ceresan wet before storage.
11. Leaf Spot <i>Colletotrichum Capsiiri</i>	Symptoms appear on leaves as elliptic or oblong spots which coalesce to form irregular patches which gradually dries up. In several cases most of the leaves dry up presenting a scorched appearance.	Spray with B. M. or any other copper ungicide.

CHAPTER V

INDUSTRIES

Old Time Industries.

The Kottayam District with its highly organised plantation industries occupies an important place in the industrial map of Kerala. The plantation industries based on cash crops like Rubber, Tea and Cardamom are, however, only of comparatively recent origin. Among the old time industries of the District may be mentioned the extraction of oil by indigenous process, spinning of coir yarn, bell-metal work and pottery. Oil crushing has been going on in almost all the coastal and midland Taluks. Places alongside the Vembanad Lake have all along been favourable for retting coconut husks. The preparation of husks, beating out the fibre and spinning it into coir yarn have been done in almost every poor house along the shores of the lake. The Vaikom or fine weaving yarn produced mainly in Vaikom Taluk is a soft hand-spun yarn which has been very much in demand. Vazhapalli in Changanacherry Taluk has been the traditional centre of the bell-metal industry in the District. In localities where good clay is available the traditional village potters have been making a number of articles for domestic use. The collection of lime shells has also been the main occupation of a number of men in Kottayam and Vaikom Taluks. All these old time industries continue to exist even today. In more recent times such industries as tile, plywood, match, cement, rubber and tea factories have been set up by enterprising industrialists and Kottayam District has entered a new phase of industrialisation.

POWER

Kottayam is the most important District of Kerala in point of hydro-electric resources. The major Hydro-Electric Projects of the State are located on the Periyar basin in this District. The Periyar is a wonderful river because of its immense potentiality for hydro-electric power to the extent of more than a million kilowatts within a short run of 16 kms. of the river. The river was first harnessed in its high reaches by the Government of Madras as early as in 1896 under the Royal Lease for irrigation in the Vaiga Basin. The run-off of 603 sq. kms. in the upper reaches was diverted across

the Western Ghats to the plains of the East for generation of power and for irrigation.

The Kannan Devan Hills Produce Co., a British firm owning extensive Tea Estates in the High Ranges of the District was the first in the field of power generation in Kerala State. In 1906 they installed a plant of 200 K. W. capacity for the supply of power to their factories and for running a ropeway for the transport of goods over mountainous country. It was only in 1933 that the Pallivasal Hydro-Electric Scheme was taken up by the erstwhile Travancore Government. It was commissioned in 1940 with an effective plant capacity of 900 K. W. A Thermal Station was also in existence at Kottayam, under licensee ownership from 1931, but with the supply of electricity from the Pallivasal hydro-electric system for distribution at Kottayam, this was closed down.

The demand for electric power was so great that the question of exploiting further resources was taken up. Though there are numerous possibilities of hydro-electric development in the Periyar river and its tributaries, the main development so far had been only in the Mudirapuzha basin. Investigation has been conducted to utilise the entire water from 4,000 to 165 (M. S. L.) by constructing a series of dams and power stations in the basin. Apart from the Pallivasal scheme to which additions were made, three other schemes viz., Sengulam, Neri Mangalam and Panniar were completed. In addition to the four Power Schemes already completed with a total installed capacity of 160,500 K. W. some other schemes are possible in the Periyar basin. The main schemes taken up for investigation and study are (1) Perinjankutty Hydro-Electric Project, (2) Pooyankutty Hydro-Electric Project, (3) Idamalayar Hydro-Electric Project and (4) Lekshmi Hydro Electric Project. It may also be mentioned that the Idikki Hydro-Electric Project, the details of which are given in the Ernakulam District Gazetteer, lies partly in this District, and it is hoped that it may be commissioned soon. Brief accounts of the Hydro-Electric Schemes, completed and under investigation, are given below.

Pallivasal Project

The Pallivasal Hydro-Electric System commissioned in 1940 was the first scheme developed in the State. The dams have been built across the Mudirapuzha river at its upper reaches - one at Kundala with storage capacity of 270 M. Cft. and another at Mattupatty with a storage capacity of 1950 M. Cft. A barrage built across the river at Munnar diverts the water through a tunnel 3118 Metres long and then through 4 pipe lines to a Power House situated on the right bank of the river at Pallivasal. A continuous power draft of 240 cusecs and about 510 Metres drop is utilised for power generation. The Power House has an installed capacity of 37,500 K.W.

Sengulam Project

The Sengulam Hydro-Electric Project commissioned in 1954 utilises the tail water of the Pallivasal Power House over a fall of nearly 366 Metres in the Mudirapuzha river between Pallivasal and Sengulam Power House sites. The water discharged from Pallivasal Power Station and that coming down the river is pumped through a tunnel 1,755 Metres long into a balancing reservoir and then conveyed through another tunnel 1,877 Metres long and two pipe lines each 957 Metres long to Sengulam Power House located on the right bank of Mudirapuzha river about 9.8 Kms. downstream of Pallivasal Power Station. A firm power draft of 260 cusecs is utilised in the Scheme. The power station has an installed capacity of 48,000 K. W.

Nerimangalam Project

This is the third project completed in the Mudirapuzha and utilises the last drop of about 198 metres in the river before it reaches the river Periyar. The tail water of the Sengulam Power Station together with the run off of the river flow of about 495 Sq. Kms. of the uncontrolled catchment of the Mudirapuzha below Munnar are being utilised in the scheme. In addition, about 28.5 sq. kms. of the catchment of upper Kallar (a stream flowing outside Mudirapuzha catchment) are also diverted into the Nerimangalam scheme catchment. The water is diverted by means of a dam across the river at Kallurkutty and led through a tunnel about 3,385 Metres long and three pipe lines each about 468 Metres long to a power house situated on the right bank of Periyar just below the confluence of Mudirapuzha and Periyar. The installed capacity of the station is 45,000 K. W.¹ The Project was commissioned in 1961.

Panniar Project

The Project commissioned in 1964 utilises the water available from 267 sq. Kms. of the Panniar, a tributary of Mudirapuzha regulated by means of the two dams one at Anayirankal with storage capacity of 1,800 Million Cft. and the other at Ponnudi with a storage capacity of 1,820 Million Cft. The water is led through a tunnel about 3,066 Metres long taking off from the Ponnudi reservoir and two pipe lines each about 766 Metres long to a Power Station on the left bank of Mudirapuzha river opposite to the Sengulam Power Station. A gross head of about 233 Metres and 300 cusecs continuous power draft will generate 15,300 K. W. of firm power. The installed capacity of the station is 30,000 K. W.

Perinjankutty Hydro-Electric Project.

Perinjankutty is a tributary of the Periyar and forms the main river 2.5 Kms. upstream of Kallarkutty. The Scheme

1. Economic Review, Kerala 1969, p. 39.

envisaged the construction of a dam to form a storage of 5,600 M. Cft. with a 76 Metres high dam and to convey water to the power house to be located on the left bank of Mudirapuzha through a 3 Kilometres tunnel and 732 Metres of penstock to produce 65,000 K. W. of power.

Pooyankutty Hydro-Electric Project.

The Project envisages the construction of a main dam across Pooyankutty, a tributary of Periyar, upstream of Peendimedu falls with diversion weirs across Thottiar, Pit-Chiar and Upper Edamalayar to divert neighbouring catchments to the main storage. A tunnel about 3,047 Metres long will convey the water to the Power House to be located on the left of Pooyanthodu to produce 65,000 K. W. of firm power.

Edamalayar Hydro-Electric Project.

A firm power of 24,000 K. W. is expected to be produced utilising a catchment of about 477 sq. kms. and about 61 Metres drop.

Lakshmi Scheme.

The scheme aims at full utilisation of the waters of Mudirapuzha sub Basin above Munnar Head Works and of the contiguous Rajamalai and Nadakallar catchments. It envisages the creation of Periaurrai Reservoir of gross capacity 3,160 M. Cft. by constructing a 38.4 Metres high dam across the Periaurrai stream and inter-connecting it through a tunnel with existing Mattupatty reservoir to regulate the waters of its own catchment and that of neighbouring catchments proposed to be diverted. The waters thus impounded will be drawn through a power house located not far from the dam site. The Lakshmi scheme in its ultimate stage will cost Rs 18.25 crores. Under the 4th Plan only the diversion and Periaurrai dam are proposed. This part when completed at a cost of Rs 9.00 crores will generate 44 M. W. of power over the existing Sengulam and Neriamangalam Power Stations.

Power Distribution.

The Kerala State Electricity Board is in charge of the distribution of electric power and the execution of the Hydro-Electric Projects in the District. The main Transmitting Station in the District in the 110 K. V. Sub-Station at Sengulam and the Receiving Stations are the 110 K. V. Sub-station at Pallom and the 66 K. V. Sub-stations at Ettumanoor and Peermede.

Modern Industries

The District Census Handbook, (Kottayam 1961) shows that there were 3,597 factories and workshops in the District out of 58,365 industrial establishments in Kerala. They provided employment to 21,453 workers. The following statement gives the Taluk-wise industrial establishments of the District.

Distribution of Industrial Establishments

Taluk	Number of Industrial establishments			Percentage distribution		
	Total	Rural	Urban	Total	Rural	Urban
Total	3,597	2,339	1,258	100.00	100.00	100.00
Changanacherry	592	245	347	16.46	10.48	27.58
Devikulam	124	124	..	3.45	5.30	..
Kanjirapally	310	224	86	8.62	9.58	6.84
Kottayam	1,122	550	572	31.19	23.51	45.47
Meenachil	555	440	115	15.43	18.81	9.14
Peermede	194	194	..	5.39	8.29	..
Udumbanchola	157	157	..	4.36	6.71	..
Vaikom	543	405	138	15.10	17.32	10.97

A general idea of the industrial development of the District can be had from the following table which gives the statistics of the registered factories in the District for the year 1968.

Distribution of Factories and Workers by selected industries—1968

Industry	A.	B.
Edible oil	11	15
Tea	82	3729
Cashew	..	..
Beedi and Cigar	..	..
Cotton Textiles	2	30
Coir	19	165
Saw Mills	4	399
Plywood	6	299
Splints and Veneers	9	121
Other Wood Industries	34	763
Printing and Publishing	26	1079
Rubber	5	1198
Chemicals	..	..
Matches	..	..
Soaps	3	71
Tiles	10	300
General and Jobbing Engineering	18	1453
Automobile repairing	38	751
Other Industries	..	..
Total	267	8409

The more important of the industries of the District are dealt with in detail in the following sections:

Tea Industry.

The Tea factories are located in the Devikulam and Peermede Taluks, where there are extensive Tea Estates. The tea factory with necessary machinery is usually erected in a central position in each estate and the tea of commerce is manufactured here out of the green leaves plucked from the bushes. Out of about 90 tea factories in the District 49 are in Peermede Taluk and 35 in the Devikulam Taluk. The remaining are in the Kanjirapally and Udumbanchola Taluks. A detailed account of the industry in the Kannan Devan Hills is given below:

The plantation areas in the Devikulam Taluk are usually known as the Kannan Devan Hills or as the High Ranges. Kannan Thevar was the 19th century headman of the villages of Anchanad, north of the High Ranges. It is said that travellers from Madurai to the West coast passed through his villages and named these hills after him. The estates are situated mostly on the inner slopes of an elevated basin-like plateau. Elevation of these estates varies from 1118 to over 1828 Metres. Some of the tea fields, at an elevation of over 2,132 Metres are among the highest in the world.

The origin of the industry is as follows. In 1877, the Punjar Raja sold to J. D. Munro, a tract of land in the Kannan Devan Hills, 540.5 sq. kms. in extent. The tract was completely undeveloped, largely unexplored, and covered with thick forests. There were no means of communications. In 1878, the Maharaja of Travancore confirmed the sale. J. D. Munro formed the North Travancore Land Planting and Agricultural Society. Members of the Society developed their own estates in various parts of the High Range. The first cultivation was undertaken by A. W. Turner at Devikulam lake in 1877. The pioneers tried many crops, such as coffee, cinchona, sisel and cardamom, before discovering tea, that best suited to the area. The first tea was planted by A. H. Sharp at Parvathi which is now in Sevenmally Estate.

In 1895, the High Range was bought by Finlay Muir and Co., now known as James Finlay and Co. Ltd. Two companies associated with Finlays, the Kannan Devan Hills Produce Co., Ltd., and the Anglo-American Direct Tea Trading Co., Ltd., own 28 estates in the High Range. The remaining 7 estates are owned by other British and Indian companies not belonging to this group e.g., the Malayalam Plantation. With the entry of large business houses possessing capital and technical skill, the pace of development increased greatly. Experienced tea planters were brought from Ceylon, and forest areas were cleared and planted. Roads were opened, transport organised, houses and factories built, and production rose rapidly in the following years.

The tea area in the High Range was 2,370.27 hectares in 1894. By 1908 this had increased to 5,665.66 hectares in the Finlay Estates alone. The tea area of these estates is now over 11,736 hectares. The bare figures give no idea of the magnitude of this achievement. Apart from the preliminary amount expended for clearing, and planting, building factories, houses and roads, recurring investment is necessary even after production. Old and diseased bushes have to be replaced, factories renovated and kept up-to-date, housing for the workers renewed and improved, research in cultivation and manufacture carried on, transport systems developed and improved and the ravages of flood and land slides borne and repaired. The life-work of thousand of men and women lies hidden behind the bare figures.

In the early years after planting an increase in yield per hectare of tea is to be expected because of the development of the tea bushes. Thereafter, yields can only be increased by the improvement of agricultural techniques. Yield of tea per 40 hectare in the High Range have increased from 231.332 Kgs in 1940 to 288.031 Kgs in 1950, and to 395.986 Kgs in 1960. After so many years the tea was planted, this sustained and accelerating increase in yield is evidence of a fruitful, long-term advance in technological efficiency.

High Range teas have a reputation for quality among buyers in all major tea consuming countries of the world. They form an integral part of the blends that go into the many popular packets of tea sold over the grocer's counter. Out of an annual production of over 12 million kgs of tea, the High Range exports about 75%. This compares well with the all-India average of 61% in 1960. Most of them are exported to the U. K. but High Range teas are sold also in the U. S. A., Canada, Australia, New Zealand, Russia and many other countries. Well over Rs. 5 crores of foreign exchange is earned for the country every year by the High Range, about one fifth of this being in hard currencies.

The tea industry, being labour-intensive, is one of the largest organised employers of labour in India, directly employing one million and supporting between two and three million people. In the High Ranges, over 60,000 people are supported by the estates; 30,000 are permanently registered workers. The entire population of the High Range is dependent in one way or other on the tea industry. The overwhelming majority of workers on High Range estates are Tamilians. Most of them came from the drought areas of Madras State and their condition is therefore one of relative prosperity.

Plucking is the most important work of a tea estate. It is done by carefully snapping off the bud and two tender leaves by the thumb and first finger. The leaves that are left behind on the bush determine the rate and nature of future growth. The timing of the plucking operation has

therefore to be geared to the rate of growth of the new shoots. The plucking of tea is an apparently simple job, but it requires a certain degree of skill and close attention. The quickness of hand and eye exhibited by experienced pluckers is noteworthy. The manual dexterity of these women workers is one of the fundamental skills on which the tea industry is based.

Green leaf is turned into black tea in the estate factories. The essence of the process is the expressing of the cell contents of the leaf on its surface, and oxidising them. The leaf is first withered by spreading it on racks under controlled temperature and humidity for anything upto 24 hours. The withered leaf is then fed into rolling machines that twist the leaf and express the sap. The rolled leaf is spread in thin layers under humid conditions until the process of oxidation reaches precisely the desired stage. Oxidation is stopped by firing the leaf in a tea dryer, which operates by slowly moving the tea in trays through an oven.

Finally the tea is sorted into the various commercial grades by a series of sieving, breaking, cutting and winnowing machines.

The main grades are:

- Orange Pekoe*—Long thin, wiry leaves with tip. Liquors light in colour.
- Broken Orange Pekoe*—Much smaller leaves with tip. Liquors have good colour and strength.
- Broken Pekoe*—Slightly larger than Broken Orange Pekoe, with much less coloury liquor.
- BOPF and fannings*—Much smaller than Broken Orange Pekoe. Quick brewing, produce good colour in the cup. Much sought after and fetch high prices.
- Dust*—Smallest grade produced. Useful for quick brewing, strong cup. Used generally for catering purposes.

The graded tea is packed in tea chests and sent to various markets in India and abroad. A complex and quick moving marketing organisation ensures that each chest is sold in that market which offers the best advantage.

For the building, maintenance and constant modernisation of 25 tea factories; the maintenance and extension of the electricity distribution system of about 55 Kms. of 11 K. V., about 100 Kms. of 2.2 K. V. and about 133.5 Kms. of low tension lines with their ancillary transformers and switchgear; the maintenance of the telephone system with 355.810 Kms. of lines and 150 telephones; and the maintenance of estate lorries, tractors and other means of transport the Finlay group

maintains a general purpose workshop with a large staff of trained technicians. The annual expenditure on the engineering services is over Rs 20 lakhs. Over Rs 10 lakhs worth of stores are carried and monthly issues total well over Rs 1 lakh. This gives some idea of the scale of operations.

A list of Tea factories/estates owned by the Kannan Devan Hill Produce Company Ltd., together with such particulars as the year in which the estate/factory was started, the number of employees, the total capital invested is given in Appendix 1 to this Chapter.

Apart from the Kannan Devan Hill Produce Company Ltd., there are several other companies in the field. The most important of them are the M/s. Malayalam Plantations Ltd., M/s. Highland Produce Company Ltd., M/s. Southern India Tea Estates Company Ltd., M/s. A. V. George and Company Ltd., M/s. Peermede Tea Company Ltd. These companies have their estates and factories mainly in the Peermede Taluk. There is a concentration of tea factories in the Peermede-Vandiperiyar area.

Rubber.

Kottayam is the most important rubber producing District in the country. The agricultural operations connected with rubber are described in Chapter IV. Rubber passes from its agricultural stage to the industrial stage from its sixth year when latex is obtained from the bark of the rubber tree by tapping. Tapping is described as 'controlled wounding.' It consists of removing at regular intervals shavings of bark from the lower surface of the groove already made. The cut should penetrate to within 1 mm of the cambium. An expert tapper will tap to an even depth of about 1 to 1½ mm from the wood. It is necessary for tappers to go out early in the morning as late tapping will lessen the exudation of latex. The "Michie Golledge" knife used by tappers is well adapted for a high standard of tapping with a minimum consumption of bark.

The yield of latex varies with the clone, age of the tree, climate, fertility of soil and the skill of the tapper. Rubber yields at its maximum about the 14th year onwards. When a tree is newly tapped the dry rubber content (d. r. c.) will be very high and the total quantity of latex obtained low, but subsequent tapping will bring down the d. r. c. and the quantity of latex brought in will be on the increase.

Fresh latex is an exceedingly complex system and contains a variety of non-rubber constituents. They are organic substances and mineral elements as well. The different constituents present in the field latex vary with the botanical origin of the tree and other related factors. On an average, it is

possible to express the quantities of the constituents as per the following table:

Rubber	30—40%	Resins	1—1.6%
Proteins	2—2.5%	Sugars	1—1.5%
Ash	0.2—0.7%	Water	55—65%

The presence of non-rubber constituents in such plentitude renders rubber latex prone to the attack of bacteria. In recent years, a systematic survey to identify the bacteria responsible for the putrefactive changes in fresh latex, has resulted in the isolation of nearly hundred different species of bacteria.

As soon as the latex is received in the factory, it is sieved through different sieves having a mesh size of 40 to 80. Then by the use of metrolac a rough dry rubber content (DRC) of the field latex is determined. The metrolac is a special type of hydrometer which can denote the dry rubber content (DRC) to a fairly approximate value. They are liable to errors; hence, for accurate determination of DRC, it is considered preferable to take a known quantity of the latex and determine its DRC by acid coagulation, drying and weighing.

After the determination of DRC the latex is diluted to a standard consistency of 12-15% DRC in a bulking tank and allowed to remain in the bulking tank for a fixed period of time for the sedimentation of sand and other heavy dirt particles which have passed through the sieves due to their small size. Then the latex is tapped out from the bulking tank without distributing the sedentary layer of sand and dirt particles, into standard aluminium pans or tanks. In some estates there is also a practice of using a small quantity of sodium hydrosulphite in the bulking tanks. This will eliminate the black colour that invariably comes up on the top layer of the coagulated rubber; in the coagulating dishes.

The standard coagulants for rubber are acetic acid and formic acid. Due to the high cost of acetic acid, only formic acid is usually employed for coagulation. The required amount of formic acid 28 ml. for 8.165 kgs of rubber is diluted to a considerable extent so that for every pan having 4 liters of diluted latex nearly 300 c.c. of diluted acid is poured and thoroughly mixed.

After the slow coagulation the coagulum is removed the next day from the pan or tank and washed thoroughly with running water and then sheeted out with the help of a sheeting battery or smooth rollers and corrugated rollers. During sheeting also, the sheets should be washed thoroughly with an adequate supply of water. These sheets after the passage through the corrugated or marking rollers are dipped in a solution of santobrite or paranitrophenol to avoid mould growth on the dried smoked sheets.

The wet sheets are allowed to drip on reapers kept in the dripping shed where sunlight should be avoided. The dripping shed should be exposed on all sides so that a good

supply of fresh air always flows over the sheets and hastens the dripping of water. It should never be exposed to a sunlight since good dripping may not take place and tackiness will develop in the final product.

After two to three hours of dripping, the sheets are transferred to a smoke-house where they are hung up on clean reapers. Inside the smoke-house the temperature should be maintained between 110° to 140°F for efficient smoking and drying of rubber. The smoke offers a slight preservative action on the sheeted rubber by incorporating some creosotic particles in the sheeted rubber and the slow heating removes all the occluded gases from rubber slowly without causing any blisters. Normally the smoke-house should have the heating oven at one side of the building just underneath the foundation and a good supply of smoke and air should be allowed to flow through a flue inside the smoke-house. It is essential that no burning cinder or flame particle should get into the smoke-house. To prevent these a steel plate having small holes is kept over the flue. This not only serves to prevent the burning cinder and flame but it will also regulate the smoke throughout the smoke-house. The fuel that is used for smoking should not be completely dry.

Generally the sheets are turned on the reapers every day to smoke the sheets uniformly. It has been observed under normal conditions that four days' smoking is quite sufficient. But to be on the safer side sheets may be smoked in the smoke-house for five to six days under ambient conditions. The smoked sheets are removed from the smoke-houses and taken to the packing shed where they are carefully inspected for defects and blemishes (grading). Normally this is accomplished by holding the rubber against light when the most obvious defects will become apparent. Invariably, the obvious parts and pieces of dirt are removed by cutting.

The sheets after grading are packed in lots of known weight, the packing material being either the same grade sheet or higher grade sheets. The bales are marked depending upon their grading and marketed.

The methods for preparation of pale latex crepe and estate brown crepe differ from those used for the manufacture of smoked sheet in sheeting and smoking. In these cases the sheets are very thin and they are air-dried, and never smoked. In the case of pale latex crepe, the normal latex is subjected to fractional coagulation when the yellow colouring matter is removed first with the initial coagulum. Then it is subjected to complete coagulation and the coagulated mass is sheeted out in a very thin form and subjected to air drying. These air dried sheets are pressed to get the sole crepe which is supposed to be a manufacturing product. If the colour is not absolutely white, then they are graded under the classification of the pale latex crepe.

In the manufacture of estate brown crepe, all the scrap rubbers (excepting the earth/scrap) are mixed and immersed in water for twenty-four hours and washed in powermills and sheeted, air-dried and graded. In the case of flat bark, even the earth scrap is mixed and subjected to the above manufacturing processes and marketed.

Natural rubber produced in the plantations is marketed in the sheet form under twenty-two grades, whereas in the International Standards there are thirty-one grades. By a visual comparison of the international grades with Indian grades in the case of smoked sheets, shows that the rubber produced in most of the larger estates in India compares favourably the International Standard Grades. Only in the case of Estate Brown Crepe the International Standard Grades are far superior to the Indian counterpart. This is due to the non-utilisation of efficient scrap-washers for the manufacture of these grades of rubber. It is highly essential that proper techniques should be adopted to improve the quality of these grades of rubber.

Several grades of Rubber have been defined by the Rubber Manufacturers' Association of America according to which natural rubber is bought and sold in the markets of the world. The grading depends entirely on visual appearance and not on physical or mechanical tests. The grades are:—

Ribbed smoked sheet RMA IX Superior quality.

- No. 1 Standard quality
- 2 Good fair average quality
- 3 Fair average quality
- 4 Lower fair average quality
- 5 Inferior fair average quality

Thick latex crepe—IX Superior quality

- No. 1 Standard quality
- 2 Fair average quality

Thin latex crepe—IX Superior quality

- No. 1 Standard quality
- 2 Fair average quality

This system of classification is based on its plasticity and speed of vulcanisation. Altogether 9 classes are adopted from which the manufacturer can choose. This is more scientific and is adopted by certain producers and manufacturers.

There are about 37 registered Rubber and Tyre factories in this District, with a maximum daily employment of about 2,000. The most important of the factories are the National Tyre and Rubber Co., Ltd., Kottayam and the Ruby Rubber Works, Ltd., Changanacherry. The former specialises in foam rubber cushions and mattresses, ribbed rubber sheeting and other rubber products. It provides employment for a maximum

of 500 persons. The Ruby Rubber Works Ltd., Changanacherry, produces bicycle tyres and tubes, tyre retreading materials, rubber sheeting and similar compounds. A detailed account of the industry is given separately. The Allied Rubber Works, Karapuzha with a maximum employment potential of 100 manufacturer of rubber tread compound and other moulded goods. There is a Rubber Industrial Co-operative Society at Kanjirappally. Established in 1960, it manufactures gloves, rubber bands and rubber threads. There is considerable scope for the development of rubber-based industries like chlorinated rubber paints, rubberised fibre and also for expansion of production in standard products like tyres and tubes.

Ruby Rubber Works, Ltd., Changanacherry.

This factory commenced production in 1949. It is a public limited company with the Ruby Industries (Private) Limited as the Managing Agents. The Board of Directors consists of 9 members. The authorised share-capital of the company is Rs. 25,00,000. In 1964 the subscribed and paid-up share capital came to Rs. 13,88,980. The factory employees more than 300 workers and pays about 2½ lakhs annually as wages, etc.

Raw rubber, the main raw material, is obtained locally and also imported. Likewise, Carbon Black is obtained from Phillips Carbon Black Limited, Durgapur, and also imported. A few essential chemicals are imported while the rest are purchased from Imperial Chemical Industries (India) Private Ltd. Copper coated steel wires for making cycle bead wire rings are imported. They are made into rings locally. Bicycle tube valves are purchased indigenously. G. P. Sheets for making tread are purchased indigenously. The value of raw rubber, materials and chemicals consumed by the factory during the year ended June 30, 1965 was roughly Rs. 60 lakhs.

The volume and value of the products manufactured in 1964 are given below:

	Quality	Value (Rs.)
1 Cycle tyres	779,259 Nos.	31,17,036.00
2 Cycle tubes	229,057 "	4,58,114.00
3 Retreading materials	530,664 Kgs.	26,53,320.00
4 House pipes	20,557 Metres	51,392.00
5 Moulded goods	1,067 Kgs.	5,335.00

The goods of the Ruby Industries are marketed throughout India and certain products are also exported abroad. The company has its own sales offices in all principal trade centres in India.

Industrial Estate, Veroor, Changanacherry.

Reference may also be made in this connection to the fact that a functional Industrial Estate for accommodation of rubber-based industries has been set up at Veroor, about 5 Km. from Changanacherry town. The site covers an area of about 5.46 hectares. The financial outlay proposed is Rs 16 lakhs. About 32 schemes for the manufacture of rubber and plastic items have been approved. The total number of sheds in the Estate would come to 32. The Kerala State Small Industries Corporation is in charge of the construction of sheds, building, etc.

Rubber Board.

The Board was set up with headquarters at Kottayam under the provisions of the Rubber (Production and Marketing) Act, 1947 which came into force on April 19, 1947. The functions of the Board as defined under the Act are:—

1. To promote by such measures as it thinks fit the development of the rubber industry so far as the production and market of rubber are concerned.
2. Without prejudice to the generality of the foregoing provision the measures referred to therein may provide for:—
 - (a) undertaking, assisting or encouraging scientific, technological or economic research;
 - (b) training students in improved methods of planting, cultivation, manuring and spraying;
 - (c) the supply of technical advice to rubber growers;
 - (d) improving the marketing of rubber;
 - (e) the collection of statistics from owners of estates, dealers and manufactures;
 - (f) securing better working conditions and the provision and improvement of amenities and incentives for workers; and
 - (g) carrying out any other duties which may be vested in the Board under rules made under this Act.
3. It shall also be the duty of the Board:—
 - (a) to advise the Central Government on all matters relating to the development of the rubber industry including the import and export of rubber;
 - (b) to advise the Central Government with regard to participation in any International Conference or Scheme relating to rubber;
 - (c) to submit to the Central Government and such other authorities as may be prescribed, half-yearly reports on its activities and the working of this Act; and

- (d) to prepare and furnish such other reports relating to the rubber industry as may be required by the Central Government from time to time.

The Rubber Board is attached to the Ministry of Commerce of the Central Government. The Board has a full-time Chairman, appointed by the Central Government. He is the principal Executive Officer of the Board. There are 21 other members of the Board representing various Governmental and rubber producing interests.

One of the members is elected as Vice-chairman. The Board meets periodically there at its headquarters at Kottayam or in any other centre for transacting business, presided over by the Chairman. Sub-Committees are formed to scrutinise various matters and make recommendations to the general body of the Board. Five such committees, namely Executive Committee, Planting Committee, Small Holdings Development Committee, Import-Export Committee and Labour Welfare Committee, have been constituted.

The headquarters of the Board is located at Kothapara near Puthupally about Eight Kilometres east to Kottayam town. The administrative officers and the research laboratories stand in the experiment Station of about 33.18 hectares. The headquarters of the Extension Service of the Board is located in the municipal town of Kottayam. The Board has opened sub-offices at select centres like Trivandrum, Pathanamthitta, Kottayam, Palai, Moovattupuzha and Calicut, to facilitate the implementation of the development schemes. In addition, Rubber Instructors' offices are also functioning in all important growing centres.

Coir Industry.

Next to plantation, the Coir Industry provides work to the largest section of the working class in Kottayam District and as such, it plays a significant role in the economy of the District. The Vaikom Taluk is the main centre of this industry. There are sufficient saline water sources here to soak the green coconut husks in all seasons. Groups of women and children may be seen engaged in beating retted husks to get the golden fibre all along the banks of the Vembanad lake. It is this fibre that is spun into yarn. The golden coloured yarn produced in the Vaikom area is known as the 'Vaikom Yarn' and it is much in demand in the Coir Market throughout the world. It is roughly estimated that about 30,000 people are engaged in various stages of the Coir Industry in this area. Most of the poor women living in coastal areas of Vaikom Taluk have taken to it as a full time occupation while the people of Kumarakam resort to it as a part-time occupation.

The Coir industry was till recently the monopoly of capitalists and middlemen and the working class had neither

the resources nor the organisational strength to take concerted action in order to improve their condition. The fluctuations in the market, the fall in prices, the corrupt practices prevalent in the industry resulting in the lowering of standards and a series of similar factors brought about conditions under which the actual workers were denied regular work and a living wage. It was with a view to remedying this situation that the Coir Development Scheme was sponsored by the Government in 1950. Immediately on the introduction of the Coir Development Scheme, a Coir Co-operative Society was organised at Chempu (Vaikom Taluk) where the Coir Industry is mainly concentrated in this District. This society has expanded its activities in recent years and it stands first among various Coir Co-operative Societies in the District.

In 1965 there were 28 Coir Societies of different types in Kottayam District. The total membership in these societies as on June 31, 1964 came to 7,365 and total share contribution to Rs 85,277. The societies are financed by Government by Societies in this District came to Rs. 6,12,428 and the free grants etc. Up to 1965 the total amount of loans issued to the Coir Societies in this District came to Rs. 6,12,428 and the free grants issued amounted to Rs. 43,000. Some of the societies supply *ratts* (the equipment used for spinning coir yarn) to their members on loan basis. The Coir Board constituted by the Government of India has also a scheme for distributing *ratts* to individual workers through the Coir Societies.

The Coir Societies get green husks soaked in bulk so as to meet the requirements of their members throughout the year. The members are also supplied with retted husks regularly at a rate slightly lower than the market rate. The coir yarn produced by them is purchased by the societies and generally sold through the Marketing Society at Alleppey and at times to the private dealers.

The wages received by the Coir Workers depend on the quantum of work executed by them since payment is done on the piece rate system. On an average, this works out to Rs. 1.50 per day for men, Rs. 1.25 for women and Paise 75 for children.

Handloom Industry.

The Handloom Industry has its own place in the economy of the Kottayam District. Nearly 2,000 families depend on this industry for their livelihood. The industry was being run till recently on a cottage industry basis by persons whose main occupation was agriculture. However, in recent years when the handloom weavers felt that they should get more facilities in the matter of production, wages, marketing etc., they organised themselves on co-operative lines. The important centres of the industry are as follows:

Taluk	Centres
1. Minachil Taluk	Kanakkary, Kidangur, Kurumallur, Kothanallur, etc.
2. Kottayam Taluk	Athirampuzha and Ettumanur etc.
3. Changanacherry Taluk	Chanaganacherry, Thuruthy, Trikodithanam, Kangazha, etc.
4. Vaikom Taluk	Kaduthuruthy, Kulasekharamangalam, etc.

Ten out of the 20 units were Co-operative Societies. Of the 10 Co-operative Societies Kottayam and Minachil Taluks have three each and Vaikom and Changanacherry Taluks two. The total membership of the societies came to 1,160. They had a total paid-up share capital of Rs 74,790 and a total working capital of Rs. 2,75,000. The handloom industry has benefited much from the co-operatives in respect of marketing, production and wages.

The yarn for handloom weaving is obtained from various yarn dealers at Atirampuzha, Kulasekharamangalam (Kottayam District), Muvattupuzha (Ernakulam District) and Quilon. The main products of the industry are *Dhoti*, *Lungi* and *Thorthu*. Besides, some private units produce laced sarees, bed sheets, etc. The major portion of the products are sold within the District itself to individual consumers and to textile shops. In the co-operative fold, marketing is effected through sales agents, depots and the Kerala State Handloom Weavers Co-operative Society (Apex Society).

The average wages given to the persons engaged in the handloom industry in this District are as follows:

Men	Rs. 2.50
Women	Rs. 1.50
Children	Rs. $\frac{1}{2}$ to 1

Government have adopted the following measures to help the handloom industry.

1. Issue of share capital loan.
2. Working Capital loan through Reserve Bank of India (each credit).
3. Issue of grant for purchase of improved appliances.
4. Issue of grant for expansion of dye-houses.
5. Issue of grant for working of marketing depots.
6. Issue of grant on Rebate sale etc.

Apart from the above measures Government have introduced a two phased Programme for the Power Looms in the Handloom Section. During the Second Five Year Plan 10 Power looms were installed in this District for which Government have issued various types of long term loans and grants. Accordingly 20 power looms more were allotted

for which also Government granted various types of loans and grants. Three handloom societies have been selected from this District for the introduction of Power Loom Scheme and each society owns 10 power looms.

Lime Shell Industry.

An industry peculiar to the District is the lime shell industry. Lime shell is the chief source of calcium carbonate in Kerala State whereas in other parts of India lime stone is used in its stead. Shell-lime is used mostly in the construction of buildings as soil conditioners, for the manufacture of Cement, glass and bricks and also as an important chemical in the manufacture of paper, rayon, sugar, etc.

The chief lime shell resources in Kottayam District are Subfossil Deposits or white shells and Black Shells (shell of shell fish) found extensively in the Vembanad lake. The Government of India listed lime shell as a Minor Mineral in 1951. The collection of lime shells and shell-fish in Kerala is at present regulated under the provisions of the Travancore-Cochin Fisheries Act (Act XXXIV of 1950). The State Government recognised the importance of this commodity and declared in 1952 that Lime Shell is a State property and is an article of great public utility. It was also decided that for the conservation of such an article of great public utility the Government should impose necessary restrictions on collection.

The lime shell industry in the District and elsewhere is now organised on co-operative lines. Two Lime Shell Co-operative Societies composed of Lime Shell collectors were organised one at Kumarakom and the other at Kainakary in the years 1928 and 1937 respectively. But these Societies had to wage a long struggle with other individual licence-holders in the field in selling shells in the open market. Owing to this and several other handicaps and also mismanagement the Societies worked at a loss continuously for several years and were on the verge of liquidation, when steps were taken by the Government in 1943 to mend matters. Accordingly Government ordered that licences for the collection of Lime Shells should thereafter be issued only in favour of well organised Co-operative Societies composed exclusively of divers and workers connected with the Lime Shell Industry. In pursuance of this order the Societies at Kumarakom and Kainakary were brought under the management of a Special Co-operative Inspector and the work started afresh in October 1943. Licences for the collection of white lime shells from the Vembanad Lake were issued in favour of these two Societies alone. A Special Inspector was appointed to take cognizance of illicit collection of lime shells. Soon illicit collection and sale of lime shells became rampant in all the important collection centres. To aggravate the situation free collection of shells from Punja lands and other assigned areas in Kuttanad regions mounted

up. The infant co-operative societies could not compete with these people in the open market so much so the shells collected in the Co-operative Societies were left unsold and stock accumulated. In spite of such handicaps the Lime Shell Co-operative Societies at Kumarakom and elsewhere did useful work.

The Travancore Electro-Chemical Industries Ltd., Kottayam

This factory located at Chingavanam was first started in 1952. It is a Public Limited Company with the Indian Industries (Private) Ltd., as Managing Agents. The factory has recently been expanded with aid from the Kerala State Industrial Development Corporation at a cost of Rs 62.5 lakhs. The company manufactures calcium carbide and drums. The easy availability of calcium carbonate out of the lime shells in nearby Vembanad lake, plentiful supply of coconut shell charcoal and prospects of bulk electric supply have induced the location of the industry at Chingavanam. This is the only plant of its kind in Kerala State.

The chief raw-materials used in the industry and the source of supplies are given below:-

<i>Raw material</i>	<i>Source of supply</i>
Lime shell	From the Vembanad lake by operating dredger
Pearl/Hard coke	Durgapur Coke Oven Plant.
Charcoal	Local
Petroleum Coke	Indian Oil Company
Electrode Paste	Indian Aluminium Company
Tapping Electrodes	To be imported
B. P. Sheets for Electrode casing for packing drums	Government Quota

The lime-shells and coke are screened to remove unusually small particles and conveyed mechanically to overhead bin which feed mechanical proportional balances. These balances issue quantities by weight of various materials for charging the Calcium Carbide furnace. Electrode Paste obtained from Indian Aluminium Company, Alwaye are fed continuously in three Soderberg type electrodes which with 6,000 KVA power, create temperature of about 3,000°C in submerged arcs to react Calcium and Carbon and form molten Calcium Carbide in the furnace. The molten product is tapped periodically into fared ladles which are reweighed and then allowed to cool, so that the product becomes a solid ingot of about 700 kgs. after further cooling these ingots are crushed and the lumps classified by different marketable sizes in a rotary screen. The product lumps thus obtained are then packed in steeldrums.

The factory gives employment to 205 persons. The installed capacity of the plant is 10,160 tonnes 480 kgs. of calcium carbide per year valued Rs 1,000 per one tonne and 16 kgs. There is high demand for calcium carbide in India as well as abroad. The product is sold mainly to the Indian Oxygen Ltd., Asiatic Oxygen Ltd. In addition, the factory also produces 24,000 Nos. of drums per day.

Travancore Cements Ltd., Kottayam

This factory, located at Nattakom, in the suburbs of Kottayam, started production on August 1, 1949. It is a Public Limited Company with the Essel Private Ltd., Kottayam as Managing Agents. The authorised capital of the Company is Rs 1 crore and the paid-up capital Rs 50 lakhs. The main raw materials and the sources of supply are given below:—

<i>Raw Material</i>	<i>Sources of supply</i>
Limeshells	From Vembanad lake
Clay ordinary	Nearby lake
River sand	Near by places
White clay	Chathannur
White sand	Shertallai
Gypsum	Udumalpet and Nagercoil

Lime-shell which is the main raw-material is collected from the Vembanad lake-bed. The shells are extracted by means of a suction dredger and transported to the factory in self-propelled barges owned by the Company. Lime shells contain about 98.5% of calcium carbonate. The manufacturing process in this industry is as follows:— Raw meal slurry is prepared by grinding the lime-shells in grinding mills with water and adding clay. The raw slurry is burnt into clinker in the Kiln. Furnace oil or coal is used as fuel for burning the slurry. The clinker is then powdered in the cement mill adding 4 to 5% gypsum to produce cement. The cement is pumped to cement silos where it is packed in bags. The final products are grey cement and white cement. One of the interesting features of this factory is that its rotary Kiln can also be fired with oil. This is useful for making high grade white cement. The techno-economic survey of Kerala (1962) has the following pertinent remarks: "As the lime shells provide a new material of very high purity, the cement Company should switch over to the production of white cement in entirety. This will not require an extra investment but would bring a high return to the firm and ensure better utilisation

tion of the raw material"¹. The volume and value of production in 1963 were as follows:

Grey cement produced	53,150 tonnes value Rs. 57,37,000
White cement produced	63,000 tonnes value Rs. 18,38,000

The grey cement is sold in Kerala while white cement is sold all over India through accredited distributors.

Timber Industry

The timber industry is also an important one in the District. It had its beginnings in the early decades of this century when the first World War created a large demand for the soft woods of the Kerala forests and led to the erection of Saw Mills. The Second World War gave a further fillip to the industry. Between 1939 and 1945 there was demand for enormous quantities of timber for war purposes. Naturally the existing mills expanded their output and a large number of new mills came to be started in various parts of the country. In post-war days the demand for timber was sustained as a result of programmes for rapid industrialisation of the country as envisaged in the Five Year Plans. It may be noted that the Plywood industry also sprang up as an offshoot of timber industry as shippers of large quantities of goods like tea wanted packing cases or chests of lighter weight but of sufficient strength for packing purpose.

There are 6 registered Saw Mills in the Kottayam District for sawing timber and they provide employment to about 200 persons. In addition there are four factories for manufacture of plywood, two for the manufacture of wooden articles, two for manufacture of soft wood packing cases, two for manufacture of furniture and toys. Almost all these factories are located in Kottayam town and suburbs and provide employment to about 1,000 persons.

Match Industry.

The match industry is also a corollary of the timber industry. It comprises of two distinct groups of enterprise, (1) the splints and veneers factories which turn out the basic ingredients of the match-the stick and the box components (2) the Dipping factories which treat these ingredients, chemically assemble them and finish the product. The main function of the splints and veneers factory is the conversion of raw timber into match sticks and veneers of appropriate size. A typical splints and veneers factory is a small unit employing between 40 and 50 workers. There are 4 registered match factories in this District manufacturing splints and veneers. They are located at Atirampuzha, Perunna, Palai and Ettumanur and provide employment to a maximum of about 300 workers. The match industry is a recent enterprise in Kerala. The growth of this infant industry was stunted in the thirties, but it

¹ Techno-Economic Survey, P. 194-95.

shared in the general boom that followed the Second World War.

Printing

According to the Report of the Minimum Wages Committee for Printing Presses (1960) there are 109 Printing Presses in Kottayam District. A considerable volume of the work of the industry is provided by newspaper and periodical publications. The major concern is the Malayala Manorama Company Ltd., Kottayam, providing employment to about 250 persons. There are a few Presses employing from 50 to 100 persons, e.g., the Kerala Bhushanam Press, the India Press, the Swaraj Printing Works, the Victory Press, etc. There are quite a few presses employing 20 workers, but the overwhelming large number of presses are units employing less than 10 workers. The units are smaller in mofussil areas and work in some of them is carried on as a cottage industry. In the smaller presses, the workers are often all-rounders doing printing, composing and binding jobs as occasion demands. The machinery and equipment except in rare cases, are very old and consist mostly of one or two platens and occasionally a stop-cylinder.

Stanes and Co., Ltd., Ettumanoor

It is one of the seven factories of the Stanes and Co., Ltd., Coimbatore. This was set up in February, 1964. It is engaged in the work of production and distribution of well-balanced Manure Mixtures for all plantation crops like tea, coffee, rubber and cardamom and for all plain crops like paddy, ragi, and sugarcane. The average annual out-turn is 5,080,2405 to 6,096,288 tonnes. The manure mixture are scientifically blended according to the needs of each crop under varied conditions. The manures are distributed by the Company from about 150 distribution points. The technically qualified-Assistants and Sales staff carry out farm visits extensively with a view to rendering technical assistance in Farm Planning and achieving maximum production as part of their free sales service. Quality control is strictly ensured in all the Mixing Factories of the Stanes and Co., Ltd., with the aid of company's well-equipped laboratory. The factory also undertakes the distribution of cattle and poultry feeds manufactured by the Head Office at Coimbatore.

Industrial Estate, Ettumanoor

The Industrial Estate, Ettumanoor is situated just behind the Railway Station at Ettumanoor. The Main Central Road runs more than a Kilometer away from the Estate. A good number of good motorable roads connect this Estate to the Main Central Road. The proximity to the Railway Station is a distinct advantage to the Estate.

The following are the particulars relating to the industrial units functioning in the Estate.

Name of Unit	Items manufactured	No. of employees	Capital investment
			(Approximate figures) Rs.
M/s. Bipha Drug Laboratories	Pharmaceutical products	7	1,00,000
M/s. Kerala Chemical Industries	Caffeine	10	2,00,000
M/s. Phair Laboratories	Pharmaceutical products	10	75,000
M/s. Manlot Industries	Steel furniture	11	15,000
M/s. Rani Canned products	Fruit canning	6	20,000
M/s. Pioneer Rubbers	Rubber goods	47	5,00,000
M/s. Super rubbers	"	29	3,00,000
M/s. West Coast Industries	Precision Pressed & Turned machine parts	45	3,00,000
M/s. Gibbs Industries	G. I. Buckets & dry measurements	12	33,000
M/s. Periyar metal products	Aluminium Utensils	7	75,000
M/s. Bharat Radio Manufacturing Co-operative Society	Radio assembling	7	1,16,000
M/s. Petson Industries	Sewing machines	8	1,50,000
M/s. Bharath Metal Industries	Sanitary fittings	4	50,000
M/s. Foam Field Rubbers	Rubber goods	4	15,000
M/s. Kwaliti Products (Not started)	Rubber goods	7	10,000
M/s. Aluminium Foundry	(Not started)		
M/s. Kondoor Industries	Heaters and Heating equipments	7	50,000

There is the Quality Marketing Depot run by the Industries Department in the Estate, for testing the quality of the Aluminium vessels. The I. T. I. is running their workshop in 2 C type sheds.

The total area of the Estate is about 16 hectares. An amount of Rs. 1,01,000 had been spent for acquisition of land. There are 47 No of sheds including 3 A type, 12 B type and 32 C type sheds. All the sheds except 2 C type ones had been occupied in August 1965.

The facilities like water supply, sanitary arrangements, Electricity, etc., are provided for the occupants. There is the permanent water supply system. Water is being pumped from

the Estate well to the 13,638 litres capacity overhead tank and distribution lines are also provided for all the sheds. There are internal roads provided within the Estate. There is a canteen in the Estate.

A Government of India Production Centre, manufacturing small machine tools and hand tools is located in the Estate. The assistance obtained from the above is one of the major advantages that the industrialists have in this Estate. The details of the Centre are given below.

Government of India Production Centre, Ettumanoor

This centre which is located in the Industrial Estate, Ettumanoor, was set up in 1957 under the auspices of the Ministry of Industry and Supply, (Department of Industry), Government of India. It is managed by the Central Small Industries Organisation as a departmental unit. The fixed capital of the unit is approximately Rs 10,00,000 and working capital Rs 10,00,000. The unit provides employment to 194 persons and a sum of Rs 3,10,000 is spent annually as wages. The main items of raw materials used are pig iron and steel of various kinds and they are procured from openmarket, the controlled items being procured through permit system. The principal products that are manufactured at the centre together with their quantity and value for the year 1963 are given below.

Sl. No.	Description	Qty.	Value (Rs)
1	Oil Fired Tilting Furnace 90 Kg.	25 Nos.	95,625.00
2	Precision high speed Bench Drilling machine 13 cm.	49 „	75,460.00
3	Motorised Coir Spinning machine	6 „	7,200.00
4	Power Hammer 65 Kg.	31 „	1,55,000.00
5	Machine vice (Plain & Swivel) 6" Jaw	46 „	15,830.00
6	Angle Plate 150 x 150 x 200 mm.	121 „	11,253.00
7	Cubes 150 x 150 x 150	75 „	9,000.00
8	Surface Plates 450 x 450 mm.	10 „	4,200.00
9	Improved Blacksmithy Tools (set of 36 items)	120 sets	43,302.00
10	Swage Block	66 Nos.	10,500.00
11	Ball Pane Hammer 1 lb.	800 „	1,752.00
			4,29,122.00

The products of the Government of India Production Centre, Ettumanoor, are sold throughout India. The centre has appointed the National Small Industries Corporation as its sole selling Agents for the sale of its products.

Industrial Estate, Palai.

There is an industrial estate in the private sector in this District. Established in 1964, it is being run by the Diocese of Palai. At this centre, iron and sheet metal works are undertaken by the central unit. The unit started with the manufacturing of articles such as rubber rollers, iron gates, shelves, furniture, hospital equipments, etc. New units of production are being established.

Khadi and Village Industries.

The Khadi and Village Industries came to be organised in a systematic manner in this District from 1956-57 onwards. The Kerala Khadi and Village Industries Board is in charge of the promotion of these industries.

The Khadi industry has been organised on a co-operative basis. In 1964-65 there were 20 such societies in the District. A Taluk-wise list of centres where these societies were functioning is given below.

Taluk	Centre
Kottayam	Nattakam
	Panachikad
	Kumarakam
	Nettassery
	Kottakkapuram
Changanacherry	Changanacherry
	Thuruthy
	Madappally
	Vakathanam
Vaikom	Karukachal
	Madhuravely
	Mulakulam
	Vaikom
Minachil	Kidangur
	Kuravilangad
	Vayala
	Palai
Kanjirapally	Chenappaddy
	Alpara

It may be noted that the Khadi Industry is confined to the coastal and midland Taluks. Steps have since been taken to set up institutions in the highland Taluks of Udumbanchola, Devikulam and Peermade.

The statement given below shows the other major Village Industries of the District and the employment data under each industry for the year 1964-65.

1	Khadi	586
2	Handpounding of Paddy	140
3	Village Oil	24
4	Handmade Papper	18
5	Blacksmithy & Carpentry	11
6	Non-Edible Oil soap	19
7	Gurkhandasari	36
8	Village Leather	8
9	Pottery	46
10	Lime	8
11	Fibre	22

A Taluk-wise statement of the number of units in each important village industry is given below.

Statement of Units in Village Industries
(Taluk-wise)

	Hand pounding of paddy	Oil	Non- Edible oil soap	Gurkhandasari	Lime	Fibre	Leather	Hand made paper
Kottayam	12	6	2	3	2	..	..	1
Changanacherry	9	2	1	..	..	1	1	..
Minachil	6	3	..	1	..	2	2	1
Vaikom	6	1	3	..	2	1	..	..
Kanjirapally	1	1	1	..	..	..	..	..
Peermede	3	..	..	3	..	..	..	..
Udumbanchola	1	..	..	..	..	..	..	..
Devikulam	..	..	..	..	..	..	..	..

These units are run mainly by co-operative societies and institutions while in rare cases individuals are also encouraged to set up units as Cottage industry. In industries where machinery is used suitable workshops are also set up.

The raw materials required for most of the industries are locally available and purchases are made from the open market. For procuring adequate stock during seasons the institutions are given loans by the Khadi and Village Industries Board.

Cotton for the purpose of Khadi weaving is purchased from Madras and Uttarpradesh by the Board.

Simple and cheap tools are used in almost all the industries with a view to utilising the man power and material resources locally available. In handmade paper industry power driven machinery is used in pulp making. The later processes are done by hand tools.

The main products in the Khadi and Village Industries sector are textile goods in Khadi, edible oils, washing and toilet soaps, cane, handpounded rice, agricultural tools and implements, paper, honey, bone meal, glue, leather goods and fibre articles. The goods are produced mostly to meet local demands. Nevertheless, paper, soap, cane, gur and fibre articles are in demand even in outside the state. Sales depots and agencies are organised by the institutions concerned as well as by the Board and Government in order to provide facilities for marketing the goods.

A wage schedule in each industry followed by the institutions is given below:

		WAGE SCHEDULE	
Khadi	Spinning	Ambar	18 p. per hand of yarn—average earnings about 1.80 per day.
		Kisan	About one rupee per day.
	Weaving	piece wages	Average about Rs. 5 per day and Rs. 2 and 1 per day for part time and casuals.
Village Oil	Bleaching, Dyeing, etc.		Rs. 3 per day on an average
			Rs. 4 per day for skilled full time and Rs. 2 and 1 per day for others.
	Handpounding of paddy		Piece wages—Average earnings Rs. 1.50 per day for women.
	Soap making		Soap makers and helpers earn at the rate of Rs. 5 and Rs. 8 respectively.
	Smithy & Carpentry		Skilled workers earn at the rate of Rs. 7 to 8 per day.
	Leather, Pottery, Lime manufacture		Skilled workers earn at the rate of Rs. 7 to 9 per day.
	Handmade paper		Master artisans at the rate of Rs. 7 per day. Pulp makers, lifters and other labours at Rs. 4 per day.
			Casual labourers at the rate of Rs. 1.50 per day.

The Co-operative movement has made considerable progress in the field of Khadi and Village Industries. The artisans

have been largely brought into co-operative fold and new possibilities for the revival of these arts and crafts have thus been opened. Since the financing agencies have made it a policy to give financial assistance only to co-operatives in the field, an increasing number of artisans are coming forward to organise themselves into co-operatives. The Government have also taken suitable measures to protect the Khadi and Village industries. Financial aid by way of grants, loans and subsidies is given for the development of these industries through the Khadi and Village Industries Board. The products of certain industries are also given exemptions from levies and taxes.

Handicrafts

The District has its own characteristic handicrafts each of which is associated with some centre or centres. Ivory carving and wood carving are carried on in such places as Kottayam and Kuravilangad. Of these, wood carving is an ancient art, as is testified to by the temples of the District which are rich in sculptures and wood carvings representing scenes and figures from the *Puranas* and the *Epics*. A more modern handicraft is Lace and Embroidery work. It is centred mainly in the Convents of the District, though it is now being popularised by the *Mahila Samajams* also. A particular branch of this industry, producing beautiful embroidery church vestments in the usual traditional designs, is located at Changana-cherry. Unlike the other forms of embroidery industry this work is done wholly by menfolk. Best silk is used and threads of all colours are employed to make handsome vestments. Church embroidery was started in Kerala, only in the beginning of this century. The salient fact about this craft is its dependent nature. It survives only because of the patronage of the Churches and priests. The bronze or metal casting is another industrial art of this District. It consists of making metal images for temples and religious purposes. Large *Varpus*, lamps, and household utensils etc., are also made. The artistic perfection that characterises the large *Varpus* and multi-storeyed lamps kept in temples like Vaikom are the clear specimens of the ingenuity and skill of the artisans. The main centres of this art are Vaikom, Ettumanur and Changana-cherry. The Vattipullu (Kora Grass) industry run on co-operative basis at Kumarakom deserves mention. Production of lacquered umbrella handles is an important work at Ulassa in Kottayam. Bamboo reed weaving is a popular handicraft that flourishes at Ponkunnam, Palai and Mundakayam. Decorative modelling is carried on at such places as Kidangur and Changana-cherry.

The Department of Industries, Kerala State, conducted a Handicraft Survey and collected detailed information about the main handicrafts of each District. The handicrafts industry in Kottayam, as elsewhere in the State, is mostly run on the

lines of a cottage industry. Artisans work in their homes assisted by their family. Only in a few cases they are employed by dealers, co-operatives and workshop owners. Here they are provided with tools, workshops and other amenities. Production centres engaging hired labour were considered for the purpose of the survey as workshop establishments, whereas those engaging only family members, as cottage establishments. Such details of the important handicrafts, the number of establishments and employees in each category and the total value of the annual output revealed by the survey in Kottayam District are given below.

Name of craft	No. of units	No. of persons employed	Value of annual output (Rs.)
Cane and Rattan	33	137	52,403
Lace and Embroidery	45	385	1,08,171
Bell-metal	35	124	1,25,835
Kora Grass	1	7	1,366
Musical instruments	4	9	7,501
Hand Printing	1	16	36,000
Decorative Modelling	9	24	13,300
Bamboo	5	34	4,550
Ivory, Horn, Wood carving	10	19	36,750
Cranite carving	1	3	NA
Lacquer ware	2	12	25,500

A list of handicraft centres with the details of the products turned out is given at Appendix II.

Industrial Potential and Future Plans.

There is considerable scope for the industrial development of Kottayam District on the basis of available resources. The tea industry can be developed by the improved techniques of cultivation and increased application of fertilizers. Further, replanting of tea has to be taken up systematically. Unfortunately, this aspect had been neglected so far, owing to the lack of financial resources. The Techno-Economic Survey of Kerala conducted in 1960-61 by the National Council of Applied Economic Research has urged Government aid in the form of long-term loans for plantations as the only solution for the future improvement of the tea industry. It has also urged the Government to accept the recommendation of the Plantation Enquiry Committee for the creation of a fund for a programme of replantation to be carried out as a compensation for the past neglect. In addition to the tea industry the rubber industry also offers scope for further development. Rubber production may be raised by increasing the yields as well as by extending the area under the crop. More rubber-based industries can be started with a view to utilising the

raw materials locally available. An automobile tyre factory may be set up at Kottayam. Side by side with the improvement in the cultivation of tea and rubber, there is also scope for extending the area under cardamom, since some parts of the unoccupied area in tea and rubber plantations are suitable for the cultivation of this crop. There are also some lands suitable for the cultivation of cardamom under the jurisdiction of the Forest Department in the Silent Valley. The Techno-Economic Survey has urged the State Government to start Cardamom Plantations in such lands during the Fourth Plan Period. In addition, it has also recommended the establishment of a unit for the manufacture of refractories and stone-ware in the private sector in Kottayam. Moreover, in view of the rich forest resources of the District there is scope for the establishment of wood seasoning and wood joinery plants at Kottayam. Similarly a Chip Board Factory utilising the waste of the Saw Mills and Plywood factories can also be set up. Among the plans for future development may be mentioned also the spinning mill to be set up at Vedagiri near Ettumannur the first of its kind in the Kottayam District. The cost of the scheme is estimated at Rs. 54 lakhs and the employment potential at 350.

Labour and Employers Organizations.

The industrial labourers in Kottayam District are organised in trade unions. According to the information furnished by the Registrar of Trade Unions, the earliest trade union established in the District was the Travancore High Range Estate Labourers' Union, Mundakayam. It was registered on *Chingam* 2, 1114 (August 18, 1938), but is not in the register now. The trade union movement in this District is strong particularly among the plantation workers. About 80% of the plantation workers are members of different trade unions. Some of the most important of the unions of plantation workers are the South Indian Plantation Workers Union, Munnar, the Peermade Taluk Estate Labour Union, Vandiperiyar, the South Indian Plantation Workers Union, Munnar, the Devikulam Estate Workers Union, Munnar, the Peermade Thottam Thozhilali Union, Vandiperiyar, the Malanad Thottam Thozhilali Union, Munnar, the Kerala Plantation Mazdur Sabha, Elappara, the High Range Workers Union, Munnar, etc.

The information collected by the Labour Department shows that the trade unions began to function vigorously in this area only from 1949. The tendency of the working class to organise themselves on trade union lines to safeguard their interests and to secure better conditions of employment by collective bargaining continued to be on the increase year after year. Moving with the trend of the times progressive industrialists also began to look upon trade union activity as a matter of course and they welcomed all opportunities of direct negotiations for settlement of industrial disputes. But

the formation of rival unions with political leanings in the same industry has, however, been an obstacle to the healthy growth of trade unionism. A Statement showing the industry-wise break-up of trade unions and their total membership in 1964 is given below.

Industry-wise statement of Trade Unions in Kottayam District (1964)

	No. of Unions	Membership
Total	118	67,535
1. Agriculture	2	..
2. Beedi	4	392
3. Brivorage (toddy)	7	1,949
4. Cements	3	574
5. Coir	1	204
6. Fertilizers & Chemicals	1	20
7. Head load	7	159
8. Hair dressing	1	72
9. Lime Shell	2	78
10. Medicine & Public Health	2	41
11. Motor & Mechanical	9	1,190
12. Miscellaneous	10	1,048
13. Municipal	9	453
14. Plantation	29	59,551
15. Plywood & Wood Works	6	388
16. Printing	5	132
17. Public Works (Electrical & P.W.D.)	10	356
18. Rubber Works	6	449
19. Shops & Establishments	6	416
20. Tile	1	50
21. Picture House	1	13

It may be seen from the above table that there were 118 unions in the District with the total membership of 67,535 in 1964.

The important employers' organisation in the District are (1) The Association of Planters of Kerala, Kottayam (2) the Central Travancore Planters' Association, Peermade, (3) the Mundakayam Planters' Association, Mundakayam, (4) the Merchants Association, Kottayam, (5) the Rubber Dealers' Association, Kottayam, (6) the Abkari Contractors' Association, Kottayam, (7) the Kerala Abkari Contractors' Association, Kottayam, (8) the Private Motor Owners' Association, Kottayam.

Industrial Relations.

The following labour laws are administered in this State for regulating industrial relations and providing amenities to labourers:—

1. The Industrial Disputes Act, 1947.
2. The Indian Trade Unions Act, 1926
3. The Factories Act, 1948
4. The Payment of Wages Act, 1936
5. The Employment of Children Act, 1938
6. The Industrial Employment (Standing Orders) Act, 1946
7. The Minimum Wages Act, 1948
8. The Indian Boilers Act, 1923
9. The Workmen's Compensation Act, 1923.
10. The Working Journals Act, 1955
11. The Plantation Labour Act, 1951
12. The United State of Travancore-Cochin Shops and Establishments Act, 1125
13. The Travancore-Cochin Maternity Benefit Act, 1952
14. The Industrial Establishments (National & Festival Holidays) Act, 1958

Where an industrial dispute exists or is apprehended, the Conciliation Officer, i. e., the District Labour Officer, Kottayam, the Deputy Labour Officer, Peermede or the Deputy Labour Officer, Munnar may initiate conciliation proceedings in the prescribed manner for the purpose of bringing about a settlement of the dispute. He would do all that is necessary for the purpose of inducing the parties to come to a fair and amicable settlement of the dispute. If no such settlement is arrived at the conciliation, the Conciliation Officer would send to the Government a full report relating to the dispute and on consideration of the above report, the Government may refer the dispute to a Board, Labour Court, Tribunal or National Tribunal for adjudication. Where the Government does not make such a reference, it would record and communicate to the parties concerned its reasons, therefor.

The industrial disputes in the District mainly relate to discharge and dismissal of workmen, enhancement of wages, non-payment of wages, bonus and other amenities, deduction from wages, alleged victimisation of workers, denial of employment, etc. In the majority of the cases the efforts made to settle them through conciliation and arbitration prove successful.¹

1. Statistics regarding disputes is given in the section on Labour Welfare in Chapter-XVII.

Labour Welfare.

The Government have initiated several measures to safeguard the welfare of labourers. The Maternity Benefit Act, the Workmen's Compensation Act, the Employees Provident Fund Act and the Employees State Insurance Act ensure some amount of social security to the working class. Besides, certain provisions in the Factories Act, the Shops and Establishments Act, the Minimum Wages Act, the Plantation Labour Act, and Industrial Disputes Act also provide for some kind of labour welfare or other. Further, one of the main items of work with which Labour Department is concerned is the organisation of labour welfare. Most of the major industrial concerns including plantations in this District have established industrial canteens, creches, reading rooms and libraries. The principle of giving free medical aid to the employees and their dependents has also been accepted by the employers. In all the factories first aid boxes are provided. In many of the major industrial concerns including plantations there are dispensaries and group hospitals. Educational facilities for workers' children are essential in estates, where schools are few and far between. Therefore Primary Schools exist in a large number of estates throughout this District. There are efficiently conducted High Schools in Munnar, Peermede and Murrakkady. All residential labourers are provided with housing facilities in the estates. There are three Welfare Officers in the Plantations and factories in this area, one in the K. D. H. P. Co., Ltd., Munnar, one in Karimkulam Estate and the other in Travancore Cements Ltd., Kottayam.

APPENDIX I

List of Tea Factories/Estates owned by the Kannan Devan Hill Produce Company Ltd.,
Year of starting, number of employees etc.

Name of Estate/ Factory	When started.	Number of persons employed Labour Estate	Factory	Staff	Capital investments Rs.
Kannan Devan					
1 Ariyikad	1924	1027	70	20	47,50,000
2 Chittavurrai	1900	976	55	23	56,25,000
3 Chokanad	1900	1110	104	26	64,55,000
4 Chundavurrai	1912	944	90	24	55,15,000
5 Grahamstand	1912	951	42	21	40,40,000
6 Guderale	1900	850	70	20	44,60,000
7 Gundumallay	1900	1189	108	23	48,00,000
8 Kadalaar	1900	682	59	17	39,20,000
9 Kallar	1900	883	55	19	48,25,000
10 Kanniamallay	1900	844	87	19	44,90,000
11 Kundaly	1926	743	..	14	41,45,000
12 Letchmi	1900	1000	79	22	61,45,000
13 Lo. Vagavurrai	1900	1192	80	34	73,65,000
14 Madupatty	1900	1013	73	22	50,35,000
15 Munnar	1900	685	..	19	32,35,000
16 Nettigudi	1900	859	74	19	43,65,000
17 Nulatanni	1900	840	93	28	69,80,000
18 Nyamakad	1900	705	..	12	37,70,000
19 Perivurrai	1900	1318	83	31	87,40,000

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20 Rajamallay	1923	817	60	23	81,90,000
21 Sevenmally	1900	1090	64	29	68,50,000
22 Silent Valley	1912	623	60	17	34,25,000
23 Sothuparai	1900	680	..	10	33,30,000
24 Thenmally	1900	1072	70	22	55,85,000
25 Yellapatty	1900	867	32	22	58,25,000
Anglo-American					
1 Devikulam	1904	825	71	20	41,65,000
2 Periatanal	1911	791	67	21	40,95,000
3 Pullivasal	1911	1268	90	26	60,00,000

INDUSTRIES

APPENDIX II

List of Handicraft Centres

Sl.No.	Name of Centre	Name of craft	Materials used	Particulars of products.
1	Changanacherry	Metal ware, embroidery	Copper and tin, cotton and thread	Varpu, uruli, cooking utensils, tumblers, lamps, iron boxes, etc. Embroidary articles for church worship.
2	Chingavanam	Handpounding	Woven clothes, dyes, etc.	Block printed and screen printed articles like pillow cases, table clothes, bed spreads cushion-covers etc.
3	Olassa	Lacquer work	Softwood and coloured lac	Umbrella handles
4	Ponkunnam	Cane and rattan work, bamboo and reed work	Cane, rattan, bamboo and reed	Pillow case, cushions, table cloths, etc. Mats and baskets.
5	Mundakayam	Cane and rattan work, bamboo and reed work	Cane and rattan, bamboo and reed.	Chairs, baskets, mats etc.
6	Kottayam	Wood carving, lac & embroidery, bell metal, cane and rattan work	Rosewood, clothes and thread, copper and tin cane and rattan	Race boat models, church articles of wood, embroidered articles, lamps, varpu uruli, pots, etc. Tables, Chairs, teapots, baskets etc.
7	Channanikad	Cane and rattan work	Cane and rattan	Chairs baskets
8	Vaikom	Bell-metal work	Copper & tin or bell metal	Cooking and other household utensils etc.
9	Kuruvilangad	Wood carving	Wood	Wooden models of various articles
10	Kaduthuruthy	Wood carving	Wood	
11	Ettumanur	Bell metal work	Bell metal	

CHAPTER VI

BANKING, TRADE AND COMMERCE

History of Indigenous Banking in the District.

The indigenous bank was the earliest medium of credit in this District as elsewhere in the State. The term indigenous bank includes any individual or private firm, whether receiving deposits or not and dealing in *hundis* or lending money. There are two classes of indigenous bankers, viz., money lenders and *hundi* merchants. The former confine their activity to money lending and do not ordinarily take in deposits while the latter, besides lending money, take in deposits and do business in money changing.

The origin of indigenous banking in erstwhile Travancore may be traced back to the beginning of the 19th century. The Brahmins, who came from the Madurai-Tirunelveli region of Madras State, settled in important urban centres of Travancore and conducted *hundi* business. The bulk of the business was conducted as family concerns, the eldest male member being in management. The financing of practically the whole internal trade was in the hands of these *hundi* merchants. The smaller industrial concerns also received occasional accommodation from them. The *hundi* merchants received deposits on a system called *Pattuvaravu* which may be described as current accounts. The interest was calculated on the daily balance. They issued letters of credit or *melezhuthu* and dealt in *hundi* which may be described as an inland bill of exchange or sight draft. The depositors were given a pass book in which receipts and withdrawals were noted. They also advanced loans on promote on single or joint signatures. The interest varied from 12 to 24%. Their accounts were written in Tamil. The advent of the Joint Stock Bank Limited the scope of their business and led to the virtual extinction of the class of *hundi* merchants. The indigenous money lenders have also been prominent in the field of credit. They lent not only money but also paddy. The rate of interest varied from 6 to 12% on money and 10 to 20% on paddy. The bulk of the loans was unsecured. The loan was generally for a single year. With the growth of Joint Stock and Co-operative Banks the influence of this class of money lenders also declined substantially.

Indebtedness.

Indebtedness has been a serious economic problem in the State for decades. Writing about the condition of the Travancore ryot early in this century, V. Nagam Ayya observes as follows. "The comparative immunity from famines does not however mean that the Travancore ryot is in a state of affluence. On the contrary, every ryot, 9 out of 10 of them, has always some debt standing against him owing to a variety of causes."¹ These remarks of Nagam Ayya which apply to the position of the ryot in the whole of Travancore State in the early years of this century have validity for the Kottayam District as well.

Agricultural indebtedness has been steadily on the increase since the early decades of this century. Though district-wise figures of indebtedness are not available, it may be noted that the extent of indebtedness in Travancore in 1903-04 was estimated at 2.40 crores by the then Settlement Dewan Peishkar. The Travancore Banking Enquiry Committee 1930 conducted an elaborate investigation including an intensive survey of 13 villages in Travancore and placed the total agricultural indebtedness of this State at Rs. 25 crores. At the same time according to the Economic Census of 1931 the total debt came to Rs. 20 crores and the average per capita debt to about Rs. 40. Of these debts about 69.5% was secured on land, 26.6% being mortgages with position. The average debt was found to be the higher among the Brahmins and the least among the backward communities. Considered Taluk-wise it was seen that the average debt per earner was the highest in Minachil Taluk, viz., Rs. 283.

Kuruvilangad in this Taluk was one of the 13 villages selected for intensive survey by the Banking Enquiry Committee. Both agriculturists and non-agriculturists had contracted debts. The following is a statement of loans, classified according to source among agriculturists and non-agriculturists in this village.

Source	Nature of Security	Amount Rs.
Government		Nil
Banks	{ Pro-notes	9,741
	{ Jewels	128
Co-operative Society	Pro-notes	2,543
	{ Mortgage	1,56,263
	{ Pro-notes	15,541
Others	{ Jewels	225
	{ Unsecured	30,768
Do.	Grain loans	2,271
	Total	2,15,480

1. Travancore State Manual Vol. III. V. Nagam Ayya, pp. 133-34.

Debt per head was Rs. 69 and per family Rs. 409. The total of land tax and *Michavaram* worked up to Rs. 2,036. It is interesting to note the amount of mortgage debt per acre of the area under cultivation. For every acre of land under cultivation, there was a mortgage debt of Rs. 120. Of the total indebtedness, mortgage debt worked up to 72 per cent.

Unsecured loans played the most important part for expenses on cultivation and improvement of land, and they worked upto 14 per cent of the total indebtedness. Debt on the security of jewels was absolutely negligible. In this *kara* no one had received the Government agricultural loan. The co-operative societies had contributed 1.2 per cent and joint stock banks 4.2 per cent of the total amount of loans.

Indebtedness of the agriculturists and non-agriculturists according to purpose was as follows:—

Purpose	Agriculturists Rs.	Non-agriculturists. Rs.
Prior debts	1,31,640	15,192
Dowry	20,000	3,000
Marriage and other social events	2,440	816
Scarcity	2,674	1,046
<i>Pattam</i> (rent)	650	568
Seeds and manure	790	213
Purchase of land	20,000	1,000
Land improvement	7,799	622
Buildings	9,755	635
Education	3,325	585
Litigation	5,340	580
Food and other necessities of life	5,411	1,900
Other purposes	5,756	7,180
Total	2,15,480	33,337

Prior debts amounted to 59 per cent of the total indebtedness and debts incurred for the payment of dowry worked upto 10 per cent. Among the poor agriculturists, dowry was not given in cash at the time of marriage. The amount fixed was paid by instalments in the course of 5 to 6 years. Though the *kara* was mainly agricultural, no amounts had been spent for the purchase of improved agricultural implements and other inputs.

During the great Economic Depression of the thirties, the problem of rural indebtedness assumed serious dimensions in this District as elsewhere in the country. Agriculturists were

hit hard by the steep fall in the prices of agricultural products, and many fell into the clutches of money lenders. The Government of Travancore took steps to reduce the rate of interest on loans as well as to relieve agricultural distress in general. In 1935 the agricultural Debt Redemption Committee was appointed to consider ways and means to tackling the problems of agricultural indebtedness and the Agricultural Debt Relief Act was passed in 1937 to implement its recommendations. Conciliation boards were set up under the Act in different parts of the State. Moreover, the Travancore Credit Bank was established in 1938 to help agriculturists and industrialists with loans for the development of agriculture and industry. The relief measures thus provided however proved inadequate to meet the actual requirements of the situation. Hence in 1939 the Travancore Government appointed the Agriculture Debt Relief Enquiry Committee to go into the question of indebtedness in all its aspects. This was followed by the enactment of the Travancore Debt Relief Act of 1940 which provided for a scaling down of debts incurred before January 1937. The Act applied to all debtors, agriculturists or others. Under the Act about 69,000 petitions were received until 1944-45. The total number of rural families in Travancore was about 10 lakhs, but only a small proportion of the indebted families took advantage of the Act. The average size of debt per petition in the case of 34,119 petitions disposed of was Rs. 579.

During the period immediately following Independence no systematic enquiry into the extent of rural indebtedness was conducted in the Kottayam District. However, the Reserve Bank of India conducted a survey into the extent of rural indebtedness in the neighbouring Quilon District in 1951-52. The relevant findings of the survey have been summarised in the District Gazetteers of Quilon and Alleppey. The conditions in Kottayam District being not very different from those of the Districts mentioned above, the findings of the survey may be taken as being applicable to this District as well. It may be noted that out of the 1951 cultivating families covered by the Rural Credit Survey in Quilon District 478 families or about 25 per cent did not report any debt. About 29 per cent of the cultivating families reported that their debt was less than Rs. 100 while 22 per cent reported it to be between Rs. 100 and Rs. 300. The remaining 24 per cent reported their debt to be more than Rs. 300.

The findings of the village survey conducted in Kurichi (Changanacherry Taluk) during the Census of 1961 also help us to get an insight into the magnitude of the problem. The total extent of the surveyed area was 38.45 hectares occupied by a total population of 587 persons comprised in 112 households. Of those the vast majority had deficit budgets. A statement of the households with surplus, balanced and deficit budgets is given in the following table,

Surplus, Balanced and Deficit Budgets (Kurichi 1961)

Occupation	Income groups	Surplus	Balanced	Deficit
Agricultural labour	All groups	18	3	68
	Less than Rs. 25	..	1	4
	Rs. 25—50	6	2	10
	Rs. 51—75	6	..	35
	Rs. 76—100	3	..	12
	Above Rs. 100	3	..	7
Miscellaneous	All groups	10	2	10
	Less than Rs. 25	..	..	1
	Rs. 25—50	..	1	1
	Rs. 51—75	2	1	2
	Rs. 76—100	4	..	24
	Above Rs. 100	4	..	2

The survey revealed that in all except the lowest income group of both the categories of occupations there were indebted households. The percentage of total indebted households in income groups of Rs. 25-50, Rs. 51-75, Rs. 76-100 and above Rs. 100 were 15.00, 28.26, 26.09 and 56.25 respectively. The average amount of debt varied from Rs. 85.38 in the income group of Rs. 51.75 to Rs. 339.44 in the highest income group. Taking indebtedness by causes, it was found that 18 households had borrowed money to satisfy ordinary wants, 4 households each for the celebration of marriages and treatment of diseases, 2 for payment of dowry, 6 households for construction or repairs of houses and one household for starting business. The amounts borrowed for these purposes accounted for 27.61 per cent, 14.86 per cent, 5.02 per cent, 5.78 per cent, 36.75 per cent and 9.91 per cent of the total debt amount of Rs. 6,055. The tables given below shows indebtedness by income groups and by causes.

Indebtedness by income groups (Kurichi, 1961)

Income group	Total No. of households	No. of households in debt.	Percentage of column 3 to column 2	Average indebtedness for household in debt.
(1)	(2)	(3)	(4)	(5)
				Rs.
Less than Rs. 25	6	..	..	..
Rs. 25—50	20	3	15.00	116.66
Rs. 51—75	46	13	28.26	85.38
Rs. 76—100	23	6	26.09	256.66
Above Rs. 100	16	9	56.25	339.44

Indebtedness by causes (Kurichi, 1961)

Causes	Amount of debt	No. of households in debt	Average for households in debt	Percentage debts due to causes to the total debt
(1)	(2)	(3)	(4)	(5)
			Rs.	
(a) Purchase of land	..	..	..	..
(b) House construction or repairs to existing	2,225.00	6	370.83	36.75
(c) Marriages	900.00	4	225.00	14.86
(d) Funerals	..	..	..	..
(e) To give dowry	350.00	2	175.00	5.78
(f) To clear old outstanding debts	..	..	..	..
(g) Sickness	304.00	4	76.00	5.02
(h) Ordinary wants	1,676.00	18	93.11	27.68
(i) Households cultivation	..	..	..	..
(j) Industry run by the household	..	..	..	..
(k) Business run by the household	600.00	1	600.00	9.91

Agencies of Credit.

The All India Rural Credit Survey (1951-52) conducted by the Reserve Bank has classified the agencies of credit into 9 categories, viz., Government, Co-operatives, Relatives, Landlords, Agriculturist money lenders, Professional money lenders, Traders and Commission agents, Commercial banks and others. All the agencies referred to above have a place in the rural credit structure of this District.

Joint Stock Banks.

Joint Stock Banks, as we know them today, made their appearance in this District only in the early part of this century. Nevertheless, even in the 19th century certain pseudo-banking institutions called *Ela Nidhis* were working in erstwhile Travancore after the Companies Regulation of 1888 came into force. These were engaged in all kinds of fanciful enterprises and did not serve much useful purpose. Most of them gradually disappeared, though some assumed the form of banking companies after the passing of the Companies Regulation in 1917 by the erstwhile Travancore State. When this new Regulation came into force four banking institutions registered in Travancore were doing business. One of these was the Changanacherry Banking Company Limited. The growth of Joint Stock Banks had been since then phenomenal. In 1916-17 there were only six banking institutions in Travancore but in 1926-27 their number had gone up to 57 and by 1934-35 there were 252 banking institutions. Out of these only seven had a paid-up share capital exceeding Rs one lakh. The Palai Central

Bank registered in this District held the fourth rank among these banks in regard to paid-up share capital.

The business conducted by banks was not limited to the twin function of acceptance of deposits and dispensing credit. On the other hand, the conduct of *Chitties* formed a substantial portion of their total business. The favourable impact of boom conditions prevailing in the State and the increased export demand for goods like pepper and plantation products produced in this District on an extensive scale gave a spurt to banking activity. Most of the banks went through a period of prosperity with abundant supply of deposits and large profits which enabled them to distribute high dividends. The prosperity of the existing banking institutions provided the incentive to new people to start fresh banks. The absence of any regulating law in respect of banks, however, made the starting of a bank an easy proposition for those who had some savings at their disposal. The need for some special banking law was felt for long and was brought out by the Travancore Banking Enquiry Committee of 1930. However, this Act did not materialise till 1938 when the Travancore Banking Regulation was enacted. It is also worth noting that during the period of world depression which started in 1930 the number of banks in Travancore showed an increase and reached the peak in 1933. The passing of the Travancore Companies Act 1938 led to the disappearance of a large number of banks after 1939, but at the same time there was considerable branch expansion on the part of the surviving banks.

A noteworthy feature of the banking development in this District as elsewhere in the State was that banks sprang up not only in cities and larger towns but were generally spread out into the rural areas as well. The proportion of offices functioning in rural areas was actually very high when compared to some other parts of India. Most of the banks were initially started in more hamlets which were not even municipal towns at the time. But later they opened branches in larger towns. The main business of these banks was to finance rural people engaged in small business—crop raising projects, processing, transporting, vending, etc. Since many of the crops were cash crops their operations involved considerable amount of money and credit which, to some extent, was provided by these commercial banks.

A turning point in the history of the banking industry in Kerala was the liquidation of the Palai Central Bank in August 1960. This led to the disappearance of a large number of small banks in Kerala, either by their voluntary merger or amalgamation with other banks. The Reserve Bank of India encouraged this trend. In 1962-63 there were five banks registered in this District. They were the Commercial Bank, Kottayam, the Kerala National Bank, Kottayam, the Bank of Travancore, Munnar, the Oriental Union Bank, Kaduthuruthi and St. Mary's Model Bank, Changanacherry. By 1964 they had been refused

licence by the Reserve Bank of India or they had merged with bigger banks. The branches of several others registered outside the District were however, functioning in several important centres. A complete list of such banks is given at Appendix I to this Chapter. It is, however, worth noting that the largest concentration of banks is in Kottayam town. There were 12 banks functioning here. The Taluk-headquarters of Changanacherry, Vaikom, Kanjirappally and Palai have also several banks functioning within their limits.

Credit Societies and Banks.

The co-operative movement in erstwhile Travancore was initiated under the auspices of the Government. The first important piece of legislation concerning co-operative societies was the Co-operative Societies Regulation passed in 1089 K. E. (1913-14). Its object was to facilitate the formation of societies for the promotion of thrift and self-help among agriculturists, artisans and persons of limited means. The financing of the societies was left to the Central Co-operative Bank with its headquarters at Trivandrum.

The first Co-operative Society to be organised in the Kottayam District under the above Regulation was the Kumarakom Co-operative Society No. 15, which started functioning in 1916. The Kottayam Government Servant's Co-operative Society Ltd., No. 47 is, however, the oldest Society on the rolls at present. It was registered in 1918 and is now working for the benefit of the low-paid Government Employees of Kottayam Taluk. The Society has achieved satisfactory progress in all spheres of its activities. The oldest agricultural credit society in the District, working at present is the Puzhavathukara Co-operative Society No. 62 in Puzhavathukara of Changanacherry village, Changanacherry Taluk.

In 1967-68 there were 236 Agricultural Credit Societies in the District.

A detailed statement of Agricultural Credit Societies with such particulars as the number of Societies, membership, total paid-up share capital, etc. during each of the years from 1961-62 and 1967-68 is given below.

	1961-62	1967-68
No. of Societies	289	236
Membership	82,206	1,52,696
Paid-up share capital		
Government	Rs. 1,70,000	Rs. 6,92,500
Members	29,82,504	64,24,584
Loans issued	Rs. 78,96,584	2,08,57,854
Borrowings	Rs. 68,14,596	1,03,31,445
Working capital	Rs. 1,05,80,755	1,12,30,897

There were 24 Non-Agricultural Credit Societies in the District in 1967-68. The particulars of such societies from 1961 and 1968 are given below.

Non-Agricultural Credit Societies

	1961-62	1967-68
No. of Societies	31	24
No. of members	10,626	15,219
Share Capital	6,58,516	11,39,303..
Reserve and other Funds	3,04,286	..
Loans issued	14,43,877	31,65,883
Loans outstanding	16,46,606	31,05,960
Borrowings	18,03,446	..
Working capital	28,86,248	...

At the District level the Kottayam District Co-operative Banks, one at Palai and one at Kottayam, cater to the long term and medium term loans and two Primary Land Development Banks, one at Palai and one at Kottayam, cater to the long term credit requirements. The particulars of the District Co-operative Bank and Land Development Bank for the years 1961-62 and 1967-68 are given below.

District Co-operative Bank

	1961-62	1967-68
No. of Members	328	336
Paid Share Capital		
Government	5,00,000	11,50,000
Members	5,51,600	29,57,600
Loans issued	29,47,197	2,33,50,014
Reserve and other Funds	13,714	9,27,257
Loans outstanding	37,83,464	1,28,23,985
Borrowings	33,18,997	27,10,216
Deposits	10,63,137	1,06,95,402

Land Development Banks

	1961-62	1967-68
No. of Banks	1	2
No. of members	1,324	4,949
Paid-up share capital	35,828	3,84,021
Loans outstanding	2,45,183	60,26,227
Borrowings	2,53,961	59,91,562

CHITTIES

The chitti is an institution indigenous to Kerala. It is an institution for providing credit facilities as well as for investment of savings.¹ Chitties are organised by foremen. The

¹ For a detailed account of the origin and working of Chit funds see *All India Rural Credit Survey—District Monograph, Quilon*, pp. 118-35.

essence of chitti business is the trust reposed in the foremen by the subscribers. The conditions under which chitties are conducted are laid down in the form of an agreement known as the *variola* and they are filed in the office of the Chitti Registrars, while registering the chitties. It may be noted that the Sub-Registrars are *ex-officio* Chitti Registrars empowered by the Government to register *chitties* and issue licenses under the Travancore Chitties Act of 1120 (Act XXVI of 1120) (1944-45) and the rules and orders issued thereunder. Each *chitti* has got a fixed capital with a fixed number of tickets. *Chitties* are conducted periodically on the dates specified in the *variola*. The subscribers send in their subscriptions periodically and the amounts thus collected are paid to the prize winners. The winner is determined either by drawing lots or by auction among the subscribers. The former is known as *narukku chitti* and the latter *lela chitti*. In the majority of cases the prize winner is determined by auction. *Chitties* whose capital is Rs 100 and above have to be registered furnishing cash securities equal to the capital of the *Chitti* or immovable properties valued at double the amount of the capital as security. *Chitties* whose capital is below Rs 100 may be conducted after obtaining licences. The filing of reports described under the Chitties Act and Rules has to be watched by the Chitti Registrars.

Both licenced and registered chitties are being conducted in Kottayam District in accordance with the Travancore Chitties Act (Act XXVI of 1120 (1944-45)). All the chitties are money chitties and are conducted as half yearly, quarterly and monthly chitties. The total number of chitties registered in Kottayam District during the period of ten years from 1952-53 to 1962-63 was 1954. The value of business turn-over of the *chitti* funds during the same period came to Rs 5,77,99,512.50.

LIFE INSURANCE

The Life Insurance Corporation of India has a Branch Office each at Kottayam and Changanacherry and three Sub-Offices located at Palai, Vaikom and Mundakayam. The main function of the Branch Office is to receive proposals for insurance and forward them to the Divisional Office of the Corporation at Trivandrum. The Kottayam Branch was opened on 1st September 1956, the day on which the Corporation started functioning. It controls the business of the major portion of the Kottayam Taluk. The Changanacherry Branch opened in September 1960 controls the business of the entire taluk of Changanacherry. The Palai Sub-office established in June 1961 is concerned with insurance transactions of part of the Meenachil Taluk. The Vaikom Branch started in November 1962 controls the business of the entire Vaikom Taluk and portions of the Meenachil and Kottayam Taluks. The Mundakayam Sub-Office, opened in February 1965 has jurisdiction

over the entire taluks of Udumbanchola, Peermade and Kanjirapally. The Devikulam Taluk is attached to the Muvattupuzha Sub-office of the Corporation in the Ernakulam District.

There were 1,101 insurance agents working under the Life Insurance Corporation in this District on 31st March 1965. The total number of policies issued and the total sum assured for each of the years from 1958 to 1964 are given below:—

Year	No. of Policies	Sum assured Rs.
1958	3,072	81,45,100
1959	4,020	1,34,18,600
1960	5,078	2,73,63,850
1961	6,470	2,35,07,150
1962	8,645	2,95,99,350
1963-64 (From 1st January 1963 to 31st March 1964)	9,890	3,56,42,500

Small Savings Scheme.

As in other Districts of the State, the Small Savings Scheme has made progress in Kottayam also. A statement showing the details of collections under various heads for the period 1958-59 to 1963-64 is given at Appendix II.

AID TO INDUSTRIAL DEVELOPMENT

Kerala Financial Corporation.

The Kerala Financial Corporation which was established in 1953 under the State Financial Corporation Act, 1951 functions with headquarters at Trivandrum. Upto 31st March 1965, it had granted loans totalling Rs 73,45,985.00 and benefitting a variety of industries in Kottayam District. Apart from the Corporation's loans, there are also the Agency Loans granted to Small Industrialists under an agreement between the Corporation and the Government of Kerala. The loans granted by the Corporation are ordinarily repayable in 20 half yearly equated instalments. The rate of interest charged is 7% per annum with a rebate of $\frac{1}{2}$ % for prompt repayment of all the instalments on the due dates, the rebate being generally against the last instalment or at the time of closing of the loan account, or earlier. A detailed statement of both types of loans granted to industries in the Kottayam District upto March 31, 1965 is given in Appendix III and Appendix IV.

Kerala State Industrial Development Corporation.

The Corporation has given financial assistance to two concerns in this District. It has agreed to underwrite shares to the value of Rs 9 lakhs and has given a Deferred Payment

Guarantee to the extent of Rs. 6.6 lakhs to the Kottayam Textiles Ltd., Ettumanur. At the same time, it has taken shares to the value of Rs. 4 lakhs in the Travancore Electro-Chemical Industries and has also granted a loan of Rs. 30 lakhs to manufacture 10,000 ton of calcium carbide per annum and 2,400 Nos. of drums per day.

Assistance to Small Scale Industries.

The State Government issues loans to industries under the State Aid to Industries Act, 1952 and the Small Scale Industries Aid Scheme. Loans under the State Aid to industries Act bear simple interest at 5½% and are repayable in yearly or half-yearly instalments within a period of 20 years. The loans under Small Scale Industries Aid Scheme bear simple interest at 3½% and are repayable in yearly or half-yearly instalments within 11 years. Loans under both schemes are granted for construction of factory buildings, purchase of machinery, towards working capital, etc. The loans granted in this District upto 31st March 1965 amounted to Rs. 15,54,725.

The industry-wise statement of loans are given in Appendix V.

Currency and Coinage.

The erstwhile Travancore State had a separate coinage of its own, the denominations being known as Sirkar rupee, Chakram and Cash. These coins were in circulation in the Kottayam District also. After the integration of princely States of Travancore and Cochin in July 1949 they were gradually withdrawn from circulation. The most important currency reform introduced in the District in recent times is the decimal system of coinage which came into force in April 1957. The reform has evoked favourable response from all sections of the public both in urban and rural areas.

TRADE AND COMMERCE

Exports and Imports.

The Kottayam District has an important place in the trade and commerce of the State. Some of the major commercial crops which fetch considerable foreign exchange for the country are produced in this District. The main items are pepper, ginger, cardamom and tea and they are exported to foreign countries. In addition, Kottayam is the major Rubber producing District of the Indian Union and large quantities of rubber are exported from here to other parts of the country and also to foreign countries like the United Kingdom. The High Ranges of Kottayam District alone export about 75% of the Tea produced in the State. The bulk of it is exported to the United Kingdom but it is also sold in the U. S. A., Canada, Australia, New Zealand, Russia and many other countries. An

amount exceeding Rs. 5 crores of foreign exchange is earned every year by the High Range from its tea export, about 1/5th of this being in hard currencies. The main imports into the District are, as in other Districts of the State, foodgrains like rice and wheat, salt, pulses, textile goods, provisions, oils, metals, etc. No detailed information is available about the actual volume and value of the exports and imports of the District.

The export and import trade of Kottayam is carried on mainly through waterways, railways, and roads. The main commodities carried along the waterways from the principal landing places of Vaikom, Atirampuzha, Kottayam and Changanacherry are coconut and its products coir and its products tapioca, vegetables, rubber, ginger, pepper, turmeric, tea, provisions, cement, timber and firewood, jaggery and molasses, fertiliser, etc. A detailed statement of the traffic carried by the waterways from each of the principal landing places mentioned is given at Appendix VI.

The Railways also play a part in the import and export trade of the District. A statement of the Goods Traffic (Outwards and Inwards) handled at the six Railway Stations of this District is given below:—

Goods Traffic in Principal Commodities carried during the year ending 31st March 1963

Stations	Outwards		Inwards	
	(Local & Foreign) Volume Quintals	Revenue Rs.	(Local & Foreign) Volume Quintals	Revenue Rs.
Changanacherry	7,903	21,903	124,501	2,86,076
Chingavanam	104	288	124	740
Kottayam	1,66,027	4,82,222	6,07,192	12,53,342
Ettumanur	5,664	33,356	8,582	21,736
Kurappunthara	30	107	21	53
Vaikom road	14	19	77	398

It may be noted that the total volume of inward goods Traffic exceeds that of the outward traffic. In view of the mountainous terrain and the production of such commercial crops as tea, cardamom, rubber, etc., in the interior parts of the District which have not been connected by Railways a large volume of trade is carried on through roads. For example the tea manufactured in the Tea Factories is transported by lorries to the Cochin Port. No detailed statistical information is available in regard to the actual volume of the trade carried on by roads. However, the *Traffic Survey Report on Inland Navigation in Kerala* (1960) gives an analysis of the overall

traffic carried by waterways, railways and road from the principal landing places. The statement containing the above analysis is given in the following Table

Statement of Important Urban Markets

Name of market	Periodicity	Public or private	Controlling authority	Type of market	Annual users	Commodities for which it is important	Total turn-over Rs.
1. Kottayam Vegetable market	Daily	Public	Kottayam Municipality	Secondary & terminal	..	All vegetables coconut & pulses	1,47,69,000
2. Changanacherry market	Wednesday & Saturday	do.	Changanacherry Municipality	Primary & secondary	100000	Banana, Tapioca, rice, eggs & palm sugar	94,420
3. Changanacherry town market	do.	do.	do.	do.	40000	Fish	4,80,000
4. Palai Public market	Tuesday & Friday	do.	Palai Municipality	Terminal	23000	Fish, meat & vegetables	71,32,280
5. Vaikom Public market	Monday & Friday	do.	Vaikom Municipality	do.	45000	Meat & Vegetables	23,125

Wholesale Trade Centres.

The District has its important wholesale trade centres located in such urban areas as Kottayam, Changanacherry, Palai, Vaikom, Kanjirapalli, Mundakayam, Ponkunnam, Munnar, etc. The main commodities handled at these urban marketing centres are agricultural products such as rice, rubber, pepper, arecanut, ginger, coconut, pulses, banana, tapioca, eggs, palm gur, fish, meat and vegetables. A statement of some of the important urban marketing centres in the District with such particulars as the annual number of users, commodities handled, total turn-over etc., is given in Appendix VII.

The Agricultural Department of Kerala State conducted a Market Survey in this District in 1959-60. Sixty-three markets were covered by the survey and information on such particulars as the periodicity of the market, the approximate quantity and value of the commodities transacted, type of centre, nature of the controlling authority, etc., were collected. A statement

of the general classification of the markets surveyed in this District according to the total turn-over in each Taluk is given below:—

Name of Taluk	General Classification of Markets													Above 1000000	Total markets
	Below 1000	1000 5000	5000 10000	10000 15000	15000 20000	20000 25000	25000 30000	30000 40000	40000 50000	50000 100000	100000 1000000	1000000 10000000	10000000 100000000		
Peermade	..	..	..	..	..	..	..	..	..	..	3	..	..	3	
Devikulam	..	..	..	..	..	..	..	..	..	..	1	..	..	1	
Changanacherry	..	..	..	..	..	..	..	2	1	3	3	5	12		
Meenachil	3	1	1	..	..	..	..	3	1	4	3	..	16		
Vaikom	..	..	..	..	..	1	..	..	..	..	4	..	5		
Kottayam	..	3	3	2	2	..	..	2	1	2	5	4	21		
Kanjirapally	..	..	..	..	..	..	..	..	..	..	4	1	5		

Complete Taluk-wise list of markets having annual turn-over exceeding Rs 1,00,000 is given at Appendix VIII to this chapter.

Of the wholesale trade centres of the District the Changanacherry market deserves special mention. It is a primary market for almost all commodities and secondary for rice. Major primary transactions take place only on Wednesdays and Saturdays. This market is located within the Changanacherry Municipal area. Major agricultural commodities transacted here are rice, copra, tapioca, banana and pepper. These items are assembled in this market from the neighbouring producing centres and are distributed to consumers as well as to wholesale dealers. Important parcel agencies like the T. V. Sundaram Parcel Service and the State Transport Parcel Service function at this centre. This market has water transport facilities too and it is also connected by rail. In fact, water transport is very common and is the cheapest. The prices of agricultural commodities are controlled by the prices that prevail in outside centres like Alleppey, Cochin and Palghat.

It may be mentioned in this context that the Kerala State Warehousing Corporation provides warehouses, with facilities for scientific storage, at select centres. The details of the warehouses as on September 30, 1967 in this District are given below:—

Centre	Capacity	
	Constructed	hired
Kottayam	1800	430 M. Tonnes
Ponkunnam	1000	
Changanacherry	..	214 "
Vandanmedu (Seasonal for storage of cardamom)	500	

Retail Trade.

The major portion of the trade of the District is carried on through retail shops which lay scattered all over. No

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KOTTAYAM

igid distinction can, however, be made between wholesale and retail merchants as some of the former also engage themselves in retail trade. According to the information furnished by the Sales Tax Department, there were 6,314 registered dealers in this District in 1964-65. A statement of the number of dealers in each category is given below:—

Sl. No.	Category	No.
1	Foodstuffs and hotels	444
2	Clothing and other consumer goods	216
3	Building materials	91
4	Transport and Vehicle goods	42
5	Machinery and capital goods	56
6	Fuel and power	71
7	Industrial commodities	1,088
8	Miscellaneous	4,306
		6,314

Co-operation in Trade.

Co-operation plays an important part in fields other than the supply of credit. Brief account of one of the important non-credit co-operative societies functioning in the District viz., the Kumarakom Lime Shell Co-operative Society is given below:

Kumarakom Lime Shell Co-operative Society Ltd., No. 1782.

The Kumarakom Lime Shell Co-operative Society Ltd., No. 1782, which is the first of its kind in the State, was registered on August 23, 1928 and it started functioning on September 4, 1928. It owed its existence to the initiative of T. K. Madhavan, the reputed social worker. The area of operation of the Society is confined to the villages of Kumarakom and Vechoor. The authorised share capital is Rs. one lakh, the value of one share being Rs. 5. The main objects of the society are the following: (1) To manufacture and market lime and lime shell products, (2) provide better facilities to the members to carry on the industry, (3) to promote subsidiary industries such as poultry making etc., among its members, (4) to conduct consumer stores for the benefit of members, (5) to give loans and advances to members and (6) to work for the improvement of the social and cultural status of the lime shell workers. The society has achieved considerable progress during the last 3 decades in developing the lime shell industry in the State on healthy lines.

The Society is engaged in the collection and processing of white shells. There are 125 members who have been given the producers licence for the collection of white shells. The society stocks the shells collected by its members and markets the same as raw shells or as lime. During 1963-64 it had collected 9,07,500 tons of white shells. The society is running Sales Depots at Trivandrum and Eloor. The Collection Depot of the society is at Kumarakom. In addition, the society has got marketing

agencies at Kottayam and Changanacherry. The processing of lime shells for the manufacture of lime is carried on at Trivandrum, Attingal and Eloor. The Eloor Depot is solely for the supply of lime to Travancore-Cochin Chemicals Ltd., Eloor (Alwaye). In order to ameliorate the social and economic conditions of the members, the society has started a colonisation scheme and ten houses have been constructed and given to the poor members. The Housing Colony is called T. K. Madhavanpuram Colony. The Society is also giving financial aid for the education of the children of its members. It is also meeting the medical expenses of the working members. The Society is also running a Ration Shop and a Library for the use of the members and the public. On June 30, 1964 the total number of members in the society was 140. The paid-up share capital stood at Rs. 22,480, the reserve fund at Rs. 31,271, deposits at Rs. 40,274 and working capital at Rs. 2,20,360. The total assets of the society stood at Rs. 3,69,783 as against the liabilities of Rs. 3,45,763. The profit earned during the year 1963-64 was Rs. 23,015. The progress achieved by this society inspired the limeshell workers in many other centres in the State to organise similar co-operatives. The Lime-shell Co-operative Societies of Vechoor, Vaikom, Kainakary, Muhamma, etc., deserve mention in this connection.

The progress achieved in the sphere of Co-operation by Milk Supplies Co-operatives, Housing and other Non-credit Co-operatives from 1961-62 and 1967-68 is also given in the following tables.

Non-Credit Co-operative Societies (1961 and 1968)

	1961-62	1967-68	1963-64
Milk Supplies Co-operatives			
No. of Societies & Unions	25	37	28
No. of members	3,527	..	4,198
Share capital (Rs.)	32,393	..	51,114
Value of milk purchased	5,45,776	..	8,76,920
Value of Milk sold	6,17,209	..	10,54,913
Housing Societies			
No. of Societies	10	10	..
(Urban & Rural)	..	..	..
No. of members	424	501	..
Share capital (Rs.)	42,605	94,555	..
Borrowing from Government	1,55,200	3,60,822	..
Loans outstanding from members	1,93,360	4,47,321	..
No. of houses constructed	35	11	..
Value of houses constructed	1,75,470	93,224	..
Agricultural Non-credit Societies			
No. of Societies	26	27	..
No. of members	1,715	5,729	..
Share capital	31,277	1,73,567	..
Non-Agricultural Non-credit Societies			
No. of Societies	166	139	..
No. of members	31,703	1,06,194	..
Paid-up share capital	6,24,740	12,40,293	..

Fair Price Shops

The distribution of rice, wheat and other food grains is done through a network of fair price shops. The sanctioned strength of the wholesale and retail shops in the District is shown below:

Taluk	Wholesale	Retail
Changanacherry	7	169
Kottayam	11	345
Vaikom	14	190
Meenachil	10	270
Kanjirapally	4	106
Peermade	5	125
Devikulam	4	103
Udumbanchola	5	112
Total	60	1420

Of the above, 4 wholesale and 519 retail Fair Price Shops are run by Co-operative Societies. The Kottayam Wholesale Consumers' Co-operative Society, Kottayam is playing a very important role in this field.

Under the system of rationing, the monthly allotments of rice, wheat, wheat products, sugar, etc., are being distributed among the wholesalers. Rice, wheat and wheat products etc., are being given from the Central Storage Godown of the Food Corporation of India at Cochin to the dealers on authorities issued by the concerned Taluk Supply Officers.

Timely lifting of stocks and proper distribution of food-grains by the dealers to the Card-holders is arranged by the Taluk Supply Officers under the close supervision and control of the District Collector and District Supply Officer.

As regards the distribution of Sugar, all the Fair Price Retailers are also Retail Sugar Distributors, whereas a few dealers in each Taluk who have been granted wholesale licence in sugar dealing are authorised to lift sugar from the Factories and distribute it to the retailers on the strength of the authority issued by the Taluk Supply Officers.

For the lifting and wholesale distribution of wheat products, particular dealers are selected in each Taluk and distribution made through Fair Price Shops.

Merchants and Trade Associations

The following are the important Merchants' and Trade Associations functioning in the District.

- 1 High Range Merchants' Association, Munnar
- 2 Devikulam Taluk Chamber of Commerce, Munnar
- 3 Merchants' Association, Changanacherry
- 4 Merchants' Association, Vandiperiyar

- 5 Central Travancore Planters' Association, Vandiperiyar
- 6 Chamber of Commerce, Kottayam
- 7 Hotel & Tea Shop Owners' Association, Kottayam
- 8 Oil & Rice Mill Owners' Association, Kottayam
- 9 Kottayam Merchants' Association, Kottayam
- 10 Cement Dealers' Association, Kottayam
- 11 Association of Planters of Kerala, Kottayam
- 12 Kerala Abkari Contractors' Association, Kottayam
- 13 Rubber Dealers' Association, Kottayam
- 14 Bakery Owners' Association, Kottayam
- 15 Kottayam District Private Motor Operators' Association, Kottayam.

Weights and Measures

The new metric units of weights and measures were introduced in Kottayam District according to the following time schedule.

Date of compulsory introduction of Weights & Measures	October 1, 1961
Date of compulsory introduction of Length Measures	October 1, 1962
Date of compulsory introduction of capacity measures	April 1, 1963

Before the system became compulsory a transition period ranging from 6 months to 1 year was given. The new system is now in force throughout the District. No one is seen using the old system of weights and measures either in the urban or the rural areas except in timber trade. Besides the British and Indian units of weights, the people in the District used till recently the following units of weights also

6 Palams	—	1 Rathal
7 Rathals	—	1 Veesam
18 Rathals	—	1 Thulam
32 Rathals	—	1 Mannu
20 Mannu	—	1 Kandi

These units were used in the transaction of Hill produce and similar other articles. In Bullion trade Panamida equivalent to the weight of 12 paddy seeds (12 Nellida) was used. One sovereign (Pavan) had a weight equal to 1 Panamidas.

12 Nellida	—	1 Panamida
21 Panamida	—	1 Sovereign (Pavan)

There was also another unit of mass called Kazhanchi which was used in the Ayurvedic system of medical practice.

The relative old units of Mass in terms of the new metric units are mentioned below.

1 Rathal	..	489.8796 grams.
1 Gram	..	0.0352740 ounce—0.085735 Tola
1 Kg.	..	2.20462 Pounds—1.07169 Seers
1 Metric ton	..	0.98420 ton—26.7923 maunds
1 Ounce	..	18.3495 grams
1 Pound	..	0.4535924 Kilogram
1 Ton	..	1.01605 metric tons
1 Tola	..	11.6638 Grams
1 Seer	..	0.93310 Kilogram
1 Mannu	..	0.373242 Quintal
1 Sovereign	..	7.988062 Grams
1 Panamida	..	0.38384 Grams
1 Kazhanchu	..	5.705 Grams

Measures.

The following units were in use:

Liquid Capacity Measure

4 Thudams	..	1 Nazi
4 Nazhis	..	1 Edangazhi (80 cubic inches)

Dry Capacity:

4 Nazhis	..	1 Edangazhi (80 cubic inches)
12 Edangazhi	..	1 Pakka
10 Edangazhi	..	1 Para

The metric capacity measures, both liquid and dry, are now in use. The conversion factors are given below:

1 Para	..	13,110 litres (10 Edangazhis)
1 Edangazhi	..	1.310 (4 Nazhis)
1 Nazi	..	330 milliliters (4 Thudams)

Length Measures.

Besides the British system of length measures the following units were also prevalent.

Textile Industry.

18 inches	..	1 Muzham
2 Muzhams	..	1 Yard—3 feet

Timber Industry.

1 Angulam	..	1½ inches
24 Angulam	..	1 Kole
24 Thuvada	..	1 Kandi

Kandi was the unit of volume. This is the volume of a piece of timber having sides 1 kole in length 1 kole in breadth and 1 kole in height. One kandi is equal to 16 c. ft.

The volume of 1 piece of wood having length equal to 1 kole (24 Ang.), breadth 1 Ang. and height 1 Ang. is 1 Perukkam. 24 such perukkams make 1 Thuvada and 24 Thuvadas 1 Kandi

Relative Unit.

1 cubic metre 31.315 c. ft.

Conversion tables of weight, length and capacity measures are being distributed among the trading public by the Department of Weights and Measures. Old weights, measures etc., are being seized by a monthly programme. Posters showing the importance of the switch-over to the new system were distributed in camps of verification and reverification and also when the seizure campaign was conducted. Cinema slides were also shown in important centres. Thus all possible steps are being taken to popularise this system among the public.

APPENDIX I

Banks and their Branches, Sub-Offices and
Pay Offices

1	Athirampuzha	State Bank of Travancore (B)
2	Changanacherry	Canara Bank (B) State Bank of Travancore (B) Syndicate Bank (B)
3	Elappara	State Bank of Travancore (B)
4	Erattupetta	State Bank of Travancore (B)
5	Erumely	State Bank of Travancore (B)
6	Ettumanoor	State Bank of Travancore (B)
7	Kaduthuruthy	Syndicate Bank (B)
8	Kanjirapally	State Bank of Travancore (B)
9	Kottayam	Canara Bank (B) Central Bank of India (S.B.) Indian Bank (B) Indian Overseas Bank (B) Kottayam Co-operative Bank (H.O.) Kottayam District Co-operative Bank (H.O.) South Indian Bank (B) State Bank of Travancore (2B) Syndicate Bank (B) Marthandom Commercial Bank (B)
10	Kozhuvanal	South Indian Bank (B)
11	Mundakayam	State Bank of Travancore (B)
12	Munnar	Bank of Cochin (B) Federal Bank (B) State Bank of Travancore (B)
13	Palai	Central Bank of India (P.O.) Kottayam District Co-operative Bank (B) Meenachil Urban Co-operative Bank (HO) South Indian Bank (B) State Bank of Travancore (B)
14	Peermade	State Bank of Travancore (B)
15	Ponkunnam	State Bank of Travancore (B) Syndicate Bank (B)
16	Poovarani	State Bank of Travancore (B)
17	Vaikom	South Indian Bank (B) State Bank of Travancore (B) Vaikom Urban Co-operative Bank (H.O.)
18	Vandiperiyar	State Bank of Travancore (B)

APPENDIX II

Small Savings Collections (Figures in thousands of Rs.)

Name of Security	1959-59		1959-60		1960-61		1961-62		1962-63		1963-64	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
1 N.P.S.C/N.D.Cs.	12,23	NA	18,73	1,00	485	1,66	2,08	39	2,85	(-)	5,86	3,39
2 T.S.D.Cs./D.D.Cs.	81	NA	32	32	59	59	10	10	1	1	4	4
3 Annuity Certificates	13	NA	7	NA	40	39	7	(-)	..	(-)	3	3
4 P.O.S.B.	NA	NA	18,73	1,00	55,07	26,65	50,51	6,40	37,60	(-)	49,37	5,38
5 C.T.D.	1	1	50	50	1,32	1,29	1,62	1,50	2,71	2,51	4,81	4,21
6 Prize Bonds/P.P.Bs.	..	..	..	..	3,56	3,56	57	57	64	64	84	84

C.T.D. was inaugurated on 1st January 1959 only.
Prize Bonds were introduced on 1st April 1960 only.

APPENDIX III

Industry-wise Statement of Loans granted by the Kerala Financial Corporation till 31st March 1965

Type of Industry	No.	Abolished Amount	No.	Sanctioned Amount	No.	Disbursed Amount
1 Manufacturing of Bakery product.	1	30,000	..	..	..	..
2 Manufacturing of Edible oils	1	1,65,000	..	..	..	..
3 Tea Manufacturing	17	49,80,000	13	38,25,000	13	34,99,960
4 Saw Milling	1	50,000	1	35,000	1	35,000
5 Plywood	3	5,40,000	3	4,66,000	3	3,83,500
6 Tyres & Tubes	1	3,00,000	1	2,00,000	1	2,00,000
7 Rubber Footwear	2	2,00,000	2	2,00,000	2	2,00,000
8 Others Rubber Products	10	21,95,000	10	17,85,000	10	17,84,400
9 Fertilizers.						
(i) Inorganic	1	1,75,000	1	1,25,000	1	1,25,000
(ii) Mixed	1	75,000	1	40,000	1	40,000
10 Soaps & Glycerine	1	30,000	..	..	..	..
11 Tiles	1	1,55,000	..	..	..	..
12 Sand Lime Bricks	2	4,00,000	2	3,50,000	2	3,50,000
13 Jewellery	1	50,000	1	40,000	1	40,000
Total	43	93,45,000	35	70,66,000	35	66,57,860

APPENDIX IV

Industry-wise Statement of Agency Loans granted by the Kerala Financial Corporation as on 31st March 1965.

Nature of Industry	No. of appli- cation	Amount of application Rs.	Amount sanctioned Rs.	Amount disbursed Rs.		
Agricultural implements making	2	1,25,000	2	77,000	2	77,000
Bicycle & Cycle parts manufacturing	1	20,000	1	12,825	1	12,825
Chemicals manufacturing	1	99,500	1	76,000	1	76,000
Engineering manufacturing Industry	2	51,500	1	15,000	1	15,000
Electro Plating	1	30,000	1	18,000	1	10,000
Foundaries	3	2,23,300	3	1,73,300	2	93,300
Lime manufacturing	1	15,000	..	..	..	..
Manufacture of wire nails						
Parliamentary hinges & Screw & Screw rings	2	60,000	2	50,000	2	50,000
Plastic Industry	1	75,000	1	75,000	1	75,000
Rubber retreading dipped goods & Moulded goods	3	2,13,500	2	1,69,000	2	1,69,000
Umbrella Manufacturing & Fittings	1	47,500	1	20,000	..	..
Tile manufacturing Industry	2	1,20,000	2	1,10,000	2	1,10,000
Industries not included in the revised list	1	20,000	..	..	..	..
Total	21	11,00,300	17	7,96,125	15	6,88,125

APPENDIX V

Industry-wise statement of loans granted under State Aid to Industries Act.

Sl.No.	Name of Industry	Loans granted Rs.
1	Agricultural implements manufacturing	7,300
2	Aerated waters	3,300
3	Automobile Engineering	19,000
4	Ayurvedic Medicine manufacturing	3,900
5	Block making	5,250
6	Candle sticks manufacturing	2,500
7	Confectionery	10,000
8	Dyeing & Printing	50,000
9	Electro Plating	4,700
10	Leather Tanning	43,100
11	Lemon Grass Distilling	3,000
12	Metal works	18,000
13	Oil Mill	49,400
14	Printing	59,100
15	Rubber crepe manufacturing	78,700
16	Soap Industry	20,800
17	Starch Industry	48,000
18	Religious articles manufacturing	4,000
		4,30,050

Loans under Small Scale Industries Aid Scheme on Property Security

1	Automobile Industry	4,000
2	Ayurvedic Medicine	7,500
3	Aluminium Utensils	10,000
4	Bricks manufacturing	4,500
5	Cycle parts assembling	1,40,000
6	Banana & Tapioca processing	10,000
7	Engineering Workshop	4,300
8	Leather industry	81,700
9	Manufacture of glazed potteries	1,00,000
10	Metal industry	5,000
11	Manufacture of iron materials	10,000
12	Match industries	15,000
13	Oil Mill	5,800
14	Pharmaceuticals	19,000
15	Printing	22,000
16	Radio manufacturing	1,00,000
17	Rubber goods	2,23,500
18	Saw Mill	1,06,000
19	Steel processing	24,500
20	Soap industry	17,500
21	Wire nail	3,600
22	Wood works	15,000
		9,38,900

APPENDIX V

Loan issued by the District Industries Officer/Regional Joint Director of Industries and Commerce

1	Ice factory	2,300
2	Bakery	4,575
3	Ayurvedic Pharmacy	13,725
4	Copper vessel	11,725
5	Book binding	2,500
6	Mechanical Workshop	4,500
7	Printing press	2,500
8	Furniture	7,500
9	Agricultural implements	2,500
10	Preservation of fruit products	2,500
11	Manufacture of Lime	1,500
12	Soap	3,000
13	Manufacture of sprays	4,500
14	Ready-made Garment making	4,000
15	Rubber industry	7,000
16	Tea Chest Manufacturing	7,500
17	Hosiery	7,000
18	Manufacture of wooden and tin frames	2,500
		91,325

Loan issued under S.S.I. Aid Scheme on Personal Security till 31st March 1965

1	Aerated waters	3,900
2	Bakery	16,000
3	Leather	7,700
4	Ayurvedic Pharmacy	3,500
5	Ready-made garment making	2,000
6	Automobile battery	2,000
7	Sports goods	2,000
8	Electrical goods	2,000
9	Fruit Preservation Unit	2,000
10	Umbrella Assembling	2,000
11	Ink manufacturing	1,000
12	Book binding	3,750
13	Furniture	14,500
14	Plastic Industry	2,000
15	Trophy making	2,000
16	Silver ornaments	1,000
17	Block making	6,600
18	Saw Mill & Furniture	8,500
19	Printing press	5,000
20	Rubber products	3,500
21	Agricultural implements	4,000
		94,450

APPENDIX VI

Traffic carried by the Waterways from each of the Principal Landing Places

Centre	Commodity	Tonnes	Kilogram
Vaikom	North Bound		
	Cochin		
	Coconut and its products	12700	600
	Coir and products	1270	60
	Others	508	24
	Total	14478	684
South Bound			
	Shertallai		
	Coir and its products	1524	72
	Others (Stones)	23043	968
Alleppey			
	Coconut & its products	254	11
	Coir & its products	1524	72
	Others (Stones)	21082	995
	Total	47428	208
North Bound			
	Shertallai		
	Tapioca	1585	35
	Coconut and its products	3622	371
Cochin			
	Vegetables	3556	168
	Others	1585	35
	Tapioca	528	345
	Rubber	456	921
	Ginger	904	168
	Pepper	980	485
	Turmeric	101	650
	Tea	690	912
	Others	2032	96
	Total	16043	186

Centre	Commodity	Tonnes	Kilogram
South Bound			
	North Bound		
	Vaikom		
	Nil	Nil	60
Ernakulam			
	Tapioca	1270	257
	Coconuts and its products	1219	227
	Provisions	584	11
Cochin			
	Cement	254	203
	Tea	76	412
	Fertilizer	279	640
Trichur			
	Timber and Firewood	863	60
	Vegetables	1270	321
	Jaggery	20	35
	Others	762	616
	Tapioca	355	462
	Coconut and its products	472	179
	Cement	3780	622
	Vegetables	482	209
	Jaggery and Molasses	203	831
	Others	685	318
	Tapioca	1656	107
	Coconut and its products	2286	718
	Cement	7549	382
	Coffee	467	310
	Rubber	8250	323
	Ginger	2616	845
	Pepper	4358	379
	Turmeric	777	881
	Tea	144	467
	Areca nut	1422	377
	Timber and Firewood	3759	622
	Vegetables	482	931
	Jaggery and Molasses	248	371
	Others	3622	131
	Cement	2794	
	Total	67521	407

APPENDIX VI

South Bound Changanacherry	Cement	1524	72
Alleppey	Fertilizer	203	209
	Tapioca	2540	780
	Coconut and its products	1270	60
	Cement	3657	773
	Tea	508	24
Quilon	Fertilizer	355	616
	Timber and Firewood	4267	401
	Vegetables	4043	871
	Others	6788	805
	Cement	5588	264
	Cashewnuts	762	35
	Tea	152	407
	Fertilizer	152	407
	Timber and Firewood	7620	360
	Vegetables	254	11
	Others	1270	60
Kundara Trivandrum	Tapioca	1585	35
	Cement	6705	916
	Total	49250	206
Changanacherry	Tapioca	1828	886
	Coconut and its products	254	11
	Vegetables	975	405
	Jaggery and Molasses	467	382
	Others	391	178

Cochin	Tapioca	3189	749
	Coconut and its products	2987	180
	Rubber	660	430
	Ginger	381	17
	Pepper	772	196
	Turneric	731	820
	Vegetables	980	645
	Others	382	831
	Total	13998	730
South Bound Alleppey	Tapioca	2296	268
	Coconut & its products	5181	845
	Arecanut	50	802
	Timber & Firewood	1010	68
	Vegetables	3281	834
	Jaggery & Molasses	548	666
	Others	3474	884
Quilon	Tapioca	477	542
	Cashewnut	177	708
	Others	1270	60
Kundara	Tapioca	2032	96
	Total	19731	773

APPENDIX VII

Analysis of over all Traffic by Waterways, Road and Rail from the principal landing places

KOTTAYAM											
Name of the landing place	Taluk	Commodity	Total production Tonnes	Kgs.	Local consumption Tonnes	Kgs.	Surplus available Tonnes	Kgs.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)			
Vaikom	Vaikom	Tapioca Coconut Vegetables Stones	18028 34990 6604 16256	75 983 312 768	18028 14633 2032 ..	75 123 96 ..	41158 4572 16256 ..	820 216 768 ..			
			96601	779	34693	975	61907	803			
Athiram-puzha	Kottayam. Also goods from taluks of Meenachil, Kanjirapilly, Permede, Udumpanchola & Thodu-	Coconut Tapioca Pepper	105404 68288 9088 16713	819 585 598 980	46982 41585 ..	59 560 ..	58422 26788 9088 16713	730 25 598 989			

KOTTAYAM

Athirampuzha				Coconut Tapioca Pepper Tea Rubber Timber & Firewood Cement	105404 68288 9088 16713 7561 15708 50802	819 585 598 989 2 102 400	46982 41585 5082 ..	59 560 400 ..	58422 26788 9088 16713 7561 15708 45720	730 25 598 989 2 102 000
Changanacherry	Changanacherry			Coconut Pepper Tapioca Vegetables	273694 45425 4248 52560 35002	448 473 97 162 853	9235 35264 .. 29191 15707	896 993 .. 58 941	180099 10160 4248 23379 19310	587 480 97 4 220
					137294	907	80153	991	57106	785

Name of the landing place

Taluk

Commodity

Transported by waterways

Transported by road

Transported by rail

Total of cols. 14 to 19

BANKING, TRADE AND COMMERCE																	
	(1)	(2)	(3)	S. B.		N. B.		Total									
				Tonnes Kgs.	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
Vaikom	Vaikom		Tapioca Coconut Vegetables Stones	47428	120	14478	63	61907	803	..	..	..	..	..	61907	803	
Athirampuzha	Kottayam. Also goods from taluks of Meenachil, Kanjirappilly, Peermede, Udumpanchola & Thodupuzha are taken to these points by lorries to be sent through I.W.T.		Coconut Tapioca Pepper Tea Rubber Timber & Firewood Cement	49288	468	67277	618	16007	115	..	..	..	..	..	..	..	
Changanacherry	Changanacherry		Coconut Pepper Tapioca Vegetables	19810	783	13981	335	33792	771	23313	58	..	..	..	57106	785	

BANKING, TRADE AND COMMERCE

APPENDIX VIII
List of markets having annual turn-over
above Rs. 1,00,000

Name of Taluk	Name of market	Public or Private	Importance	Periodicity	Approximate annual users	Approximate annual turn-over
Peermede	Periyar Private market	Private	Coconut	Sunday	16,000 to 18,000	2,06,757
	Elappara Market	Public	Fish & mutton	do.	15,000 to 18,000	3,00,165
Devikulam	Pambanar market	do.	do.	do.	do.	3,56,850
	Munnar private market	Private	Banana Coconut & Vegetables	do.	25,000 to 30,000	6,18,260
Changanacherry	Changanacherry Town market	Public	Rice	Wednesday & Saturday	1,00,000	1,54,94,420
	Kanichikulam cattle market	Private	Cattle	Second & 3rd of every Malayalam month.	10,000 to 12,000	4,76,000
	Nedumkulam market	Public	Pepper	Thursday & Friday.	7,000 to 8,000	11,77,555
	Chettipuzha cattle market	Private	Cattle	7th & 18th of every Malayalam month.	10,000 to 12,000	5,20,000
	Kungezha cattle market	Private	Cattle	7th, 10th & 11th of Malayalam month.	8,000 to 10,000	5,03,500
Vaikom	Changanacherry Town Fish market	do.	Fish	Wednesday & Saturday.	30,000 to 40,000	4,18,000
	Thalayolaparambu market	Public	Banana & Vegetables.	Tuesday & Saturday.	35,000 to 40,000	4,54,440

Meenachil	Mulakulam Cattle market	Private	Cattle	Once in a year 1st 2nd & 3rd Medam	30,00 to 40,00	13,20,00
	Kuruppanthara Market	Public	Banana	Tuesday & Friday	4,00,00 to 4,50,00	58,91,70
	Kaduthuruthy Cattle Market	Private	Cattle	6th of every Malayalam month.	1,00,00 to 1,20,00	78,00,00
	Erattupetta Market	Public	Fish	Wednesday & Saturday.	1,20,00 to 1,40,00	17,23,10
	Palai Vegetable Market	do.	Vegetable	Tuesday & Friday	2,00,00 to 2,20,00	73,22,80
	Monipally Market	do.	Ginger	Tuesday & Saturday	1,00,00 to 1,20,00	25,75,70
Kanjirapally	Kanjirapally Public market	do.	Fish & Mutton	Monday & Thursday	80,00 to 90,00	41,03,20
	Ponkunnam Public market	do.	do.	do.	1,40,00 to 1,60,00	11,99,10
	Erumeli Public market	do.	Fish	Wednesday & Saturday	90,00 to 1,00,00	24,12,55
	Ponthenpuzha Cattle market	do.	Cattle & goats	15th, 28th & 29th of every Malayalam month	50,00 to 70,00	1,67,25,00
	Manimala Public market	do.	Fish	Monday & Thursday	50,00 to 70,00	19,51,70
Kottayam	Athirampuzha Vegetable market	do.	Raw arcanuts	Monday & Thursday	3,00,00 to 4,00,00	62,40,50
	Athirampuzha Fish market	do.	Fish	do.	1,40,00 to 1,60,00	1,19,91,00
	Kaipuzha Cattle market	Private	Cattle	3rd & 21st of every Malayalam month.	60,00 to 70,00	94,50,00

APPENDIX VIII

Kaipuzha Fish Market	Private	Fish	Daily	do.	15,00,00
Kottayam Vegetable Market	Public	Vegetable	Daily	1,00,00 to 1,40,00	14,76,90,00
Chingavanam Lakshmiapuram Market	Private	Banana	Monday & Thursday	1,00,00 to 1,40,00	10,70,00
Puthupally Public Market	do.	Fish & Mutton	do.	4,00,00 to 5,00,00	1,26,25,00
Puthupally Public Market	Public	Banana	do.	1,40,00 to 1,60,00	11,79,05
Kottayam Municipal Meat Market	do.	Fish & Mutton	do.	4,00,00 to 5,00,00	1,26,25,00
Pampady Cattle Market	Private	Cattle	15th, 16th & 17th of every Malayalam month	2,00,00 to 2,50,00	1,05,75,00

CHAPTER VII

COMMUNICATIONS

Old time Routes and Highways.

In this area transport by water was in vogue from very early days. The District had a long line of natural communication in its extensive river and backwater systems. Nevertheless, road transport was not unknown in early days. The Malayalam poem, *Unnunzeeli Sandesam*, believed to have been composed by an anonymous author of the 14th century, throws light on an old time route running from Trivandrum in the South of the State to Kaduthuruthi in the District via Quilon. This passed through such places as Kayamkulam, Kandiyur, Chennithala, Tiruvalla, etc., in Alleppey District and led to Kaduthuruthi touching Trikkodithanam, Tiruvanchipuzha, Ettumanur, Kothanallur etc. in the Kottayam District. It was only during the reign of Marthanda Varma (1729-58) that roads in the modern sense were opened in Travancore. Though intended mainly to facilitate the quick movement of troops, they also served the interests of the people at large. It should be remembered that the roads of these days were not "fit for cart traffic and were merely open tracks intended for foot travellers, the more well-to-do travelling on horse-back or palanquins."

Lts. Ward and Corner in their *Memoirs of the Survey of Travancore and Cochin* describe the following routes which traversed the District in the beginning of the 19th century

1 Road from Quilon to Erattupetta--length 111 Kms.

"This is not much frequented it is circuitous and confined, but admits of laden cattle; confined to a path to Rannee where it crosses the Pumbay, thence through a hilly and wild tract, the Munnymulla river is ferried over in small canoes, again through forest to Kanjirapally; from thence to Erattupetta the road good being lately enlarged."

2 Road from Changanacherry to Peruvanthanam via Kanjirapally.

"The first part of the road level are good and will admit of wheel carriages to Tonga nalla, and with a few exceptions to Neduncoor, from which to Valur it runs over low woody hills with a few steep ascents and descents;

Kanjirapally from thence to Peermundandum through forest on slopes to the Kunnymulea, on passing it a short way commences the ascent of the pass, rather easy and winding a ridge to the latter place; this road is much frequented admitting the passage of laden cattle to Cummam in Dindigal."

During the Dewanship of Sir T. Madhava Rao (1858-72) an organised effort was made to open new roads and improve the existing road communications. With the establishment of the Public Works Department in 1860 good progress was made in road construction. By 1049 K. E. (1874) much progress was made in the way of opening up the country in all directions. The earliest road to be taken up by Sir T. Madhava Rao was the one from Kottayam to Gudalur via Peermede which passed right across the High Ranges. It took 23 years to build and cost the State Exchequer 4 lakhs of rupees. The first section of this road from Kottayam to Peermede was finished in 1047 K. E. (1872) and the second section from Peermede to Gudalur in 1060 K. E. (1885). Moreover, the beginning was made during this period for a new road from Trivandrum to Kottayam via Quilon with a view to facilitating communication between inland towns and extending it to the northern frontier of Travancore. The road from Peermede to Gudalur which had already been opened for cart traffic, proved specially useful during the famine of 1876, when the products of the District found a ready outlet to the Madurai District.

The main road from Kottayam to the Cochin frontier the first section of which had already been commenced in 1051 K. E. (1875-76) was taken up the next year in its entire length and completed in 1053 K. E. (1877-78). This completed the main line of communication from Trivandrum to Ankamali in the northern frontier of erstwhile Travancore. This road that came to be called the Main Central Road has a total length of 249.45 Kms. Simultaneously with the construction of his road, a new road from Kanjirappally to the river bank at Koonumbhagam was taken up. Though only seven miles in length, it formed a link between the erstwhile Quilon and Kottayam Divisions and shortened the distance between the Tea estates and water communication by 24 Kms. By the end of 1055 K. E. (1879-80) the District which up to a few years previously had no cart track except the line from Kottayam to Mundakayam via Kanjirapally had been opened by a wide net-work of roads for cart traffic.

Apart from the M. C. road and Kottayam-Peermede Road, the Ettumanur-Lalam road (16.9 Kms.) and Changanacherry-Vazhoor Road (30.57 Kms.) were among the subsidiary roads in this District early in this century. Besides, there were the High Range bridle path from Kothamangalam to Munnar (94.17 Kms.), the Northern Outlet road from Munnar to Chinnar (64.4 Kms.), and the road from Munnar to Bodimettu

(bridge path 33.81 Kms), Kottayam town had at the beginning of the century 17.5 Kms. of town roads.

Improvement of Communication in the High Ranges.

Special mention may be made in this connection, of the attempts at improvement of communication in the High Ranges. In 1840 Ward and Corner undertook a survey of the region and made the outside world aware of the possibilities of its development. A feature of the communication system then prevailing in the High Ranges was the large net-work of elephant tracks. It may be noted that elephants are reckoned among the finest road makers in the world and the labryathine ways laid out by these intelligent beasts from time immemorial have helped the early English pioneers a great deal in planning successfully the modern system of road communication in the High Ranges. General Hamilton of the Madras army followed the course of such tracks and ascended the Anamudi peak in May 1862. The present Northern Outlet Road from Munnar to Udumalpet and several others were traced by a pioneer by name Col. Valentine by following the course of elephant tracks.

The K. D. H. P. Company started in 1897 played a leading part in improving the system of transport and communication in the High Ranges. In 1899 L. Davidson, General Manager of the K. D. H. P. Co., set about the construction of the Kundalay Valley road from Munnar to Top Station. It extended over a distance of 4 Kms. from Bottom Station to Top Station. Moreover, in 1900 the first ropeway planned by Davidson and constructed by Gideon and William Kemlo was opened. In the meantime the Kotagudi-Bodi road was laid and tea was transported in bullock carts to Kodaikanal Road Station and from there by rail to Tuticorin. A mono-rail train line from Munnar to Top Station was also erected and later it was replaced by a light railway running on a 61 centimetres line (35.42 Kms.). This took place in the first decade of this century. It may be noted that the rail line has since become defunct, the floods of 1924 having caused untold damage to it. In the wake of the damage to the rail line the Kundalay valley Ropeway from Munnar to Top Station was opened in December 1962. It was 23.33 Kms. long. In 1930 a new ropeway from Top Station to Bodinayakannur was surveyed but this project was abandoned. A new rope-way from Top Station to Kotagudi was however constructed.

In the meantime the erstwhile Travancore Government took keen interest in road building in the High Ranges. A road from Neriampalam to Munnar was cut along Valentine's trace and opened in 1931 by Maharani Setu Parvati Bai. The road from Munnar to Vandiperiyar via Kumili designed by Sir C. P. Ramaswami Iyer was inaugurated in February 1952, opening up the vast area of Bison valley and the Kannan

Devans. The Bodimettu Road opened in 1963 is another important link in the communication system of the High Ranges.

Modern Highways and Roads.

The kottayam District is now served by a wide net-work of main roads and village roads. In 1964-65 there were 23 State Highways, 125 District Roads and 249 Village Roads and a few Town Roads with a total distance of about 2512 Kms. and 824 metres. The following Table gives the particulars of the total mileage under each category of roads in 1964-65.

Sl. No.	Roads	Kms.	Metres
	Total	2,512	824
1	National Highways		266
2	State Highways	504	..
3	District Roads	897	481
4	Village Roads	1,024	681
5	Town Roads	39	625

Based on the nature of the Surface, the roads may be classified as Concrete, Black-topped or Tarred, Metalled and Non-metalled. The total mileage under each category is given below:

Sl. No.	Type of Roads	Kilometres
	Total	2,512.824
1	Concrete	35.822
2	Black Topped	541.899
3	Metalled	1,023.905
4	Un-metalled	912.195

There was transfer of roads to Panchayats and Municipalities in 1966-67. The length of roads maintained by the Public Works Department in 1966-67 was as follows:—

	Kms.
Concrete or Cement	18.26
Bituminous & tarred	528.14
Water bound Maccadom	687.84
Lower type	294.57
Total	1,528.81

The length of roads maintained by Panchayats, Community Development Blocks in 1966-67 in Kottayam is given below:—

	Kms
Concrete or Cement	0.25
Bituminous or tarred	105.22
Water bound Maccadom	57.04
Lower Type	235.15
Total	397.69

The grand total of the above two categories came to 1,926.50 Kilometres.

The classified list of Highways, District Roads is given at Appendix I at the end of this chapter with details of their mileage.

The most important roads in this District are the Main Central Road, Kottayam-Kumili Road and Ettumanur-Vaikom Road. Brief descriptions of these roads are given below.

Main Central Road.

Au. c. length of 56 Kms. and 15 metres of the Main Central Road (M. C. Road) falls within the Kottayam District. A portion of the road is having concrete surface and the rest is black-topped having an average width of 3.35 metres.

The main roads branching of from this State Highway are.

- 1 Changancherry-Vazhur road
- 2 Kottayam-Kumili Road
- 3 Atirampuzha-Lalam Road (cutting M. C. Road)

The important towns along the road are the following:—

- | | Name |
|---|----------------------------|
| 1 | Changanacherry-Vazhur road |
| 2 | Kurichi |
| 3 | Pallam |
| 4 | Kottayam |
| 5 | Ettumanur |
| 6 | Kuravilangad |
| 7 | Chingavanam |

Kottayam-Kumili Road (K. K. Road).

This road 110 Kilometres 677 metres in length, completely falls within the jurisdiction of this District. It connects Kottayam and Kumili and helps in the transportation of such cash crops as Cardamom, Tea, Rubber, etc., from High Ranges to the plains. Kumili which has great tourist attraction lies on this road. Formerly this was the main route used by the pilgrims to Sabarimala. This road is tarred to the full length and is declared as Ghat Section from the 56.350 Kilometres onwards. The main roads branching of from this road with the mileage from which the branch roads start is given below:—

- 1 Kottayam - Karukachal and then to Mallapalli
- 2 Changancherry-Vazhur road
- 3 Ponkunnam-Palai road and then to Muvattupuzha
- 4 Ponkunnam - Manimala road then to Pathanapuram

- 5 Kanjirapally-Erattupetta road
- 6 Mundakayam - Erumeli road
- 7 Peermede-Elappara road
- 8 Kumili-Devikulam road

The following are the important towns along the road.

- 1 Manarkad
- 2 Pampady
- 3 Vazhur
- 4 Ponkunnam
- 5 Kanjirapally
- 6 Mundakayam
- 7 Kutticanam
- 8 Peermede
- 9 Vandiperiyar
- 10 Kumili

Ettumanur-Vaikom Road.

This connects Ettumanur with Vaikom and then proceeds to Ernakulam. This is also a road where traffic is heavy especially after the construction of bridges at Murinjapuzha and Poothotta in the Vaikom-Ernakulam road. The road leaves the Main Central Road at Ettumanur and extends upto the Vaikom Taluk. The following roads either take off or cross this road.

- 1 Kothanallur-Onomthuruthu road
- 2 Kuravilangad-Kuruppanthara road
- 3 Muttuchira road 2nd section
- 4 7/2 Ettumanur road to Ayamkudy
- 5 Minachil - Kaduthuruthy road
- 6 Piravam-Kaduthuruthy road
- 7 Appanchira road to Vaikom road Station (R. S.)
- 8 Thalayolaparambu Market road
- 9 Thalayolaparambu- Koothattukulam road
- 10 Muvattupuzha river deviation canal
- 11 Thalayolaparambu Market road Junction (Post Office Junction)
- 12 Kariyar Branch Canal
- 13 Vadayar- Chandapalam- Mulakulam road
- 14 Vadayar to Palamcadavu ferry
- 15 Cherinchuvadu road and thence to Vetchur
- 16 Vaikom Town Road to Temple
- 17 Vaikom Town Road to Rest House
- 18 Chempu-Palamcadavu Road

There are three other important roads also viz.,
(1) Kottayam-Karukachal Road, (2) Ponkunnam-Palai Road and (a) Atirampuzha-Palai Road.

Vehicles and Conveyances.

The total number of Motor Vehicles of different kinds registered in the Kottayam District as on March 31, 1971 is furnished below:

TOTAL:	10,950
Goods vehicles	1,728
Stage carriages	971
Taxi cab	1,045
Cars	4,134
Jeep	1,095
Motor cycles	1,464
Autorickshaws	93
Tractor-Trailers	250
Others	170

The following table shows the total number of non-motor vehicles and conveyances including Vallams (country boats) licensed by the Panchayats in this District.

Type of Vehicles	No
1 Bicycles	7,540
2 Hand Carts/Push Carts	651
3 Rickshaws	17
4 Judkas	Nil
5 Bullock Carts	1,795
6 Valloms	2,010
7 Other Non-Motor Vehicles	17

The total number of non-Motor vehicles and conveyances including Vallams registered in the municipal areas of Kottayam, Vaikom, Changanacherry and Palai by the respective Municipalities is also given below:—

Non-Motor Vehicles registered in the Municipalities of Kottayam

	District			
Type of Vehicles	Kottayam	Changanacherry	Vaikom	Palai
1 No. of Bicycles	1,622	509	314	323
2 No. of handcarts/push carts	504	112	59	42
3 No. of Rickshaws	Nil.	Nil.	8	Nil.
4 No. of Judkas	Nil.	Nil.	Nil.	Nil.
5 No. of Bullock carts	5	19	Nil.	Nil.
6 No. of Valloms	182	58	7	Nil.

Many modern towns in Kerala discourage the conveyance of goods through beasts of burden. Their place has been occupied by the modern mechanised vehicles. However bullocks, cows and buffaloes are used at random for carrying goods from one place to another. It is interesting to witness the elephants drawing and lifting heavy logs from forest areas and timber yards. The system of animals being used for carrying goods is not encouraged now-a-days.

PUBLIC TRANSPORTS

State Transport Service.

The history of State Transport Services in the Kottayam District goes back to the year 1939. Lorry services between Munnar and Willingdon Island was undertaken by the State Transport Department, with effect from Edavam 15, 1114 (May 29, 1939) with a view to transporting the goods of the Kannan Devan Hill Produce Co. Ltd., Munnar. This was done in accordance with a contract entered into between Kannan Devan Hill Produce Company and the Government. The Trivandrum-Kottayam route via Kottarakara was nationalised on Meenam 17, 1115 (March 1940). The Trivandrum-Kottayam Express Service commenced on Chingam 1, 1117 (August 1941). From Makaram 1119 (January 1944) the Department undertook to transport all materials required for the Pallivasal Hydro-Electric Project in this District. The Kottayam-Parur route was nationalised on Chingam 10, 1125 (August 1949) and Kottayam-Ernakulam route on Chingam 10, 1125 (August 1949).

The activities of the Kerala State Road Transport Corporation (the former State Transport Department) in his District are under the charge of the District Transport Officer, who has his headquarters in Kottayam town. He is responsible for the operation of the services according to schedule. The allocation of schedules as on April 1965 shows that there were 25 Fast Passenger and 33 Ordinary services in operation in this District. A statement showing the routes on which services were operated by the State Transport Department with such details as their starting point from within the District and the route distance is given in the table given below:

Sl. No.	Name of route	Route distance in Kilometres
1	Kottayam-Thekkadv	115
2	" Devikulam	154
3	" Trivandrum	152
4	" Pathanamthitta	62
5	" Quilon	103
6	" Erankulam	100

Sl. No.	Name of route	Route distance in Kilometres
7	Kottayam - Kakki	145
8	" Alwaye	91
9	" Kottarakara	80
10	" Chengannur	35
11	" Tiruvalla	26
12	" Changanacherry	18
13	" Chingavanam	9
14	" Kidangara	25
15	" Kuttapuzha	29
16	" Muvattupuzha	56
17	" Veliannur	35
18	" Kuravilangad	22
19	" Kaipuzha	19
20	" Kollad	7
21	" Neendoor	14
22	Muvattupuzha- Koothattukulam	18
23	Changanacherry - Kidangara	7
24	Tiruvalla- Changanacherry	8
25	Chengannur- Changanacherry	18
26	Chingavanam- Changanacherry	9
27	Tiruvalla- Chengannur	9
28	Chengannur- Kuttapuzha	13
29	Kidangara - Chingavanam	16
30	Kuttappuzha- Tiruvalla	3
31	Devalokam- Illikkal	10
32	Tiruvalla - Tiruvanvandur - Chengannur	14
33	Kaipuzha- Ettumanur	8

There was phenomenal increase in the activities of the Kerala State Road Transport Corporation in the District. The following table will show the effects of activities of the Corporation.

No. of routes as on 1970-71	Routes K. M. as on 1970-71	Gross distance operated during 1970-71 (Lakhs)	No. of passengers carried during 1970-71 (Lakhs)
155	8,429	171.06	456.26

Private Motor Transport.

Private Motor Transport also plays a very important part in the transport system of the Kottayam District. There is a Regional Transport Officer at Kottayam having jurisdiction

over the whole District. He is the licensing and registering authority under the Travancore-Cochin Motor Vehicles Act, 1950. Under him is a Motor Vehicle Inspector who also function as additional registry authority and licensing authority. In addition there are six Assistant Motor Vehicle Inspectors who are authorised to perform the duties of the Motor Vehicle Inspector such as inspection and checking of motor vehicles, service verification of vehicles, etc. There is also a Regional Transport Authority for the District consisting of 5 members— 3 officials and two non-officials. The official members are the District Collector, (Chairman), the District Superintendent of Police and the Executive Engineer, Building and Roads. The Non-official members are nominated by Government. The Regional Transport Officer is the Secretary and Executive Officer of the Regional Transport Authority. There were 150 bus routes within the District as on March 31, 1966 under the management of private transport agencies. An analysis of permit holders for passenger service operations according to the size of the fleet in Kottayam District as on March 31, 1966 is given below:

<i>No. of Buses</i>	<i>No. of permit holders</i>
One bus	36
Two buses	13
Three buses	12
Four buses	7
Five buses	3
Above 5 and below 10	5
Above 10 and below 15	3
Above 15 and below 20	2
Above 20 and below 25	..
Above 25 and below 50	3
Above 75 and below 100	1

Kottayam District is noted for some of the most important private operators in the field of motor transport in Kerala. The basic information relating to some of the major private operators is given below:

<i>Sl. No.</i>	<i>Name of the Permit holder</i>	<i>No. of buses</i>	<i>No. of goods Vehicles owned</i>	<i>Total</i>
1	Kalapurachal Motor Service, Piaka, Poovarany	23	..	23
2	M/S. Ettumanur Motors (P) Ltd., Ettumanur	43	..	43
3	K.E.M.S. (Motors) (P) Ltd., Kottayam	16	..	16
4	Des banahdur Transports, Kottayam	26	..	26
5	P.N.N. Motors, Kottayam	12	..	12
6	M/s. Swaraj Motors (P) Ltd., Kottayam	90	..	90
7	General Manager, K.D.H.P. Co., Mannar	..	70	70
8	M/s. D.C. Johar & Sons, Kottayam	..	10	10
9	M/s. M.T. Co., Kottayam	..	17	17

Railways

Reference has already been made in an earlier section to the establishment of a light railway from Munnar to Top Station by the K. D. H. P. Co., in the beginning of this century. This line which was primarily intended for transport of tea become defunct after 1924. The history of the modern railways in this District begins only in the post-Independence period when the 96.55 mile long Quilon-Ernakulam line which passes through this District was opened to traffic. This metre gauge link connecting Ernakulam and Cochin Harbour with Quilon and Trivandrum was inaugurated by Prime Minister Nehru on December 25, 1952 and completed in 1958. The section between Ernakulam to Kottayam was opened on October 17, 1956 and that from Kottayam to Quilon on January 6, 1958.¹ The railway enters this District between Vaikom road and Piravam road. There are six stations in all viz., Changanacherry, Chingavanam, Kottayam, Ettumanur, Kuruppumthara and Vaikom Road. A statement of the stations in the District with details of the distance between them and the number of passengers booked at each station for the year ending March 31, 1960 is given below:—

<i>Name of Stations</i>	<i>Distance between Stations (Km.)</i>	<i>Number of passengers booked</i>
Changanacherry	10	89,035
Chingavanam	8	18,446
Kottayam	10	2,43,751
Ettumanur	8	59,895
Karuppumthura	7	40,687
Vaikom Road	..	39,355

The main stations in this District are Changanacherry and Kottayam. Upper class waiting rooms are provided at Kottayam, Changanacherry and Ettumanur. While third class waiting halls are available in all the stations. The Kottayam station has a retiring room and a refreshment room.

WATER TRANSPORT

In spite of the development of railways and roads the canal system is even today an important means of transport. The existing navigable canals may be classified into two broad divisions, viz., the West Coast Canal system together with the navigable rivers which feed this system and the inland canals. Details of these are given below:—

The Cochin-Alleppey section of the West Coast Canal system consisting of the Vembanad Lake and extending from Cochin to Alleppey lies partly along the Vaikom and Kottayam

¹ The dates given in the Quilon District Gazetteer viz., June 1, 1958 for Quilon-Kottayam and October 7, 1956 for Kottayam-Ernakulam have to be corrected as above.

Taluks of this District. It also serves the Taluks of Minachil and Changanacherry. The Muvattupuzha, Minachil and Manimala rivers drain into this lake.

The Muvattupuzha river (length 120.70 Km. - 75 miles) is navigable for 25.75 Km. (16 miles) upto Piravam (Ernakulam District) where there is a boat basin. Boats can go a few miles beyond Piravam only in August-February when there is sufficient water and the current is not strong. In the delta region of Vaikom this is connected to Minachil river and the Vembanad lake by a net work of canals.

The Minachil river, 67.59 Km. in length is navigable up to Palai for about 41.84 Km. when there is sufficient flow of water and drains into the Vembanad lake south of the Tan-neermukkom barrier.

The Manimala river 91.73 Km. in length is navigable up to Vallamkulam throughout the year and navigation is possible up to Manimala during the monsoon season. It flows through Mundakayam a rich rubber producing area.

The inland canals which inter-connect the rivers on which places of commercial and industrial importance are situated and also give connection to the West Coast Canal system are the following:—

(1) Kottayam - Vaikom Canal — 25.7 Km. length. This takes off from the Vembanad lake, passes through Kari Ar, and Kaipuzha river and joins Minachil river, a furlong down of Kottayam Seminary Landing (Chungam). This provides a connection from Kottayam and the hinterland to Alleppey and Cochin. There are many canals branching from this the most important among them being (1) Canal which ends near the Vaikom Road Railway Station, (2) Kaduthuruthi Canal, (3) Kuruppanthara canal, (4) Neendoor Canal and (5) Atirampuzha canal or Pennar thodu. All these canals are of commercial importance.

(2) Aruthody canal - 4.0 Km. length. This extends from Puthenthodu near Kottayam Division Cutcherry landing to Minachil river. This canal is very shallow and is therefore navigable only in the rainy season.

(3) Alleppey -Kottayam -20.3 Km. length. This joins the Vembanad lake with Cutcherry Kadavu in Kottayam and gives direct connection to Alleppey for boat services also.

(4) Kottayam—Changanacherry canal—19.3 Km. This starts from Kottayam Cutcherry landing, passes through the Kodoor Ar, Pallam and Kurichu and ends at Changanacherry Market Landing.

(5) Alleppey—Changanacherry Road - cum - Canal. This is an artificial canal recently cut by the side of the Alleppey-Changanacherry road, which links the Main Central Road

with the Quilon-Alleppey road. It is 54.9 m. wide. Its depth is 18.3 m. It crosses the Pamba river at Kidangara while stretching from the boat basin at Perunna up to Monkombu; thence it is connected to Alleppey through rivers and backwaters.

The principal landing places in the District are Vaikom, Atirampuzha, Kottayam and Changanacherry. A statement of principal landing places is given below:

Section of the Canal in which the landing place is located	Name of landing place	Principal places served by the landing place
West Coast Canal	Vaikom boat jetty	Vaikom Municipal town
In the K. V. Canal mouth	K. V. Canal Market landing	do.
Muvattupuzha river	Palamkadavu	Thalayolaparambu market
Kottayam- Alleppey Puthenthodu	Katcherikadavu	Kottayam Town
Koodoor river	Kodimatha landing	do.
Do.	Kottayam market landing	Kottayam market
Meenachil river	Chungam landing	do.
Pennar Thody	Atirampuzha market landing	Atirampuzha market

There are regular passenger boat services between important centres within the District and also outside. A detailed statement of the particulars of passenger boats operating on the different routes is given at Appendix II.

Ferries.

There are 76 ferries in this District—53 under the control of the Building and Roads Division, Kottayam and 23 under the control of the Building and Roads Division, Muvattupuzha.

The following table gives the total number of motor boats etc. licenced to ply in the waters of the District by the Panchayat.

1. No. of barges or other vessels attached to steam or motor tugs	6
2. No. of other motor boats or steam launches	20
3. No. of cabin boats	5

Both country boats and motor boats are commonly used. Catamaram of different types and sizes are seen plying in the waters.

Bridges.

The construction of bridges has added greatly to the facilities of communication in recent years. Among the most important of the early bridges the following deserve special mention.

Bridge	Location
1. Kannanparur	M. C. Road
2. Kodimatha	sdo.
3. Nagambadam	do.
4. Neelimangalam	do.
5. Vandiperiyar (Periyar)	Kottayam-Kumili Road
6. Chinnar	Northern Outlet Road

Among the bridges mentioned above the Periyar bridge is the first bridge of magnitude which was constructed of reinforced concrete. It is situated at sinclair Periyar on the Western Ghats, a few kilometres below the big Periyar dam. The reinforced concrete work was confined to the arches and the slab floor over the haunches. It was made of a mixture of cement and sand with two grills, an upper and a lower, both alike, longitudinal bars 9.5250 millimetre round rods spaced 5 to the foot and tranverse bars 6.3500 millimetre spaced 4 to the foot. The arches have a circular curve.

A number of new bridges have been opened in this District during the post-Independence period. Of these the most important are those at Poothotta, Murinjapuzha, Kidangoor, Mutholy, Chungom etc.

Poothotta Bridge.

The bridge is across a branch of the Muvattupuzha river on the Ernakulam-Kottayam road via Vaikom. The river is 83.82 metres wide at this crossing. The bridge has got six spans, each span being simply supported one. The deck is of beam and slab type. The bridge is founded on Reinforced Cement Concrete friction piles. The clear road way is 5.70 metres and is designed to take Indian Road Congress class "A" loading. The bridge was opened on August 14, 1961. The cost of construction of the bridge was Rs. 4.79 lakhs.

Murinjapuzha Bridge.

This bridge is also across a branch of the Muvattupuzha river on the Ernakulam-Kottayam Road. It is 167.63 metres long and has got 11 spans. Each span is simply supported one. The superstructure is simply supported Reinforced Cement Concrete beam and slab. The foundation consists of Reinforced Cement Concrete friction piles. The bridge has got a roadway of 9.14 metres and is designed to take Indian Road Congress class "A" loading. The cost of construction of the bridge is Rs. 10 lakhs. It was opened to traffic on February 3, 1962.

Kodimatha Bridge.

The bridge is across the Kodur river in km. 152/45 M. C. road which is at the southern boundary of Kottayam Municipal town. The length of the bridge is 60.96 metres. The clear width of roadway including two side walls is 9.59 metres. It

consists of 3 spans with a central span 22.56 metres and one span of 15.84 metres each on either side and two cantilvers of 40.7 centimetres each on either side. The central span includes a suspended span of 10.97 metres.

The bridge deck is balanced cantiliver type designed for 2 lanes of Indian Road Congress class, "A" loading. The bridge was completed and opened for traffic during 1960. The total cost of construction came to Rs. 7,53,540.

Manimala Bridge.

The bridge is over the Manimala river on the Manimala-Ranni road. The length of the bridge proper is 111.56 metres. The Kottayam-Manimala road and the Changanacherry-Manimala road meet the Manimala-Ranni road at the western side of this bridge. The bridge consists of 5 intermediate spans of 17.07 metres each and two end spans of 13.71 metres each. The central span of 17.07 metres includes a suspended span of 8.53 metres. The clear width of road way is 9.14 metres. The deck is continuous "T" girder and slab type designed for two lane traffic Indian Road Congress class "A" loading. The Reinforced Cement Concrete piers are founded on masonry wells. The masonry wells are founded on rock. The bridge was completed during 1960. The total cost of construction is Rs. 4,54,325.

Kidangoor Bridge.

The bridge is across the Minachil river in Kidangoor-Manarkad road, which takes off from Atirampuzha-Ialam road and joins K. K. road. The length of the bridge is 89.31 metres. The bridge has five spans with cantilvers 4.27 metres long at either end. The three intermediate spans are 17.37 metres each and two end spans are 13.71 metres. The bridge deck is continuous "T" beam and slab type with clear road way of 9.14 metres, designed for two lanes of Indian Road Congress class A Loading. The Reinforced Cement Concrete piers are rested on masonry wells sunk to rocky foundation. The bridge was completed during 1951. The total cost on account of the bridge comes to Rs. 4,63,766.

Mutholy Bridge.

This bridge is across Meenachil river in Puliannur-Vazhur road at Mutholy crossing. The length of the bridge is 8.08 metres having a central span of 27.43 metres and two spans of 21.33 metres one on either side and two end cantilvers of 5.49 each. The clear width of road way is 6.70 metres. The deck and piers are of Reinforced Cement Concrete founded on masonry wells. The bridge is balanced cantiliver type designed for two lanes of Indian Road Congress class A loading. The bridge was completed during 1962. The total cost is Rs. 4,46,864.

Reconstructing a bridge—K. K. Road.

The bridge is across Manimala river in K. K. Road (Mundakayam). The length of the bridge is 102.10 metres. It has two land spans of 16.76 metres each and 3 main spans of 22.86 metres each. The central span of 22.86 metres includes a suspended span of 12.18 metres. The clear width of road way 6.70 metres. The decking and piers are of Reinforced Cement Concrete founded on rock by open excavation. The deck is continuous T beam and slab type designed for 2 lanes of Indian Road Congress class A loading. It was completed during 1962. An amount of Rs. 3,80,536 was incurred for the construction.

Chungom Bridge

The bridge is across Meenachil river at Kottayam-Parippu road. The length of the bridge is 85.34 metres. It has two end cantilvers of 6.10 metres each and 3 main span of 24.39 metres each. The central span of 24.39 metres includes a suspended span of 12.18 metres. The width of road way including 2 side walks is 9.75 metres. Decking and piers are of Reinforced Cement Concrete founded on Reinforced Cement Concrete piles. The bridge is balanced cantiliver type designed for 2 lanes of Indian Road Congress class A loading. The bridge was completed during 1963. The total cost of construction amounted to Rs. 4,72,127.

Moolaplakal Bridge.

The bridge is across Moolaplakal thodu in Kanjirapally-Kunnumbhagom road. The length of the bridge is 51.82 metres. The bridge consists of 2 main spans of about 13.52 metres and 16.07 metres each with 2 end spans of about 11.20 metres each. The clear road way of the bridge is 6.10 metres. The deck is T beam and slab type. The total cost of construction incurred was Rs. 1,25,900.

Koratty Bridge.

The bridge is across the Manimala river in the Kanjirapally-Erumeli Road. The length of the bridge is 89.92 metres. The bridge including piers is of reinforced concrete and is of the continuous T girder type with a road way of 6.70 metres wide designed for 2 lanes of Indian Road Congress class B loading. The bridge consists of 5 spans, viz., 3 central spans of 17.37 metres each and two end spans of 14.32 metres each one on either side and a cantiliver of 4.57 metres at both ends. The soffits of all the girders are of parabolic shape. The construction was started in January 1956 and completed in 1957. The total cost of the bridge proper is Rs. 1.9 lakhs.

Airways.

There are no airways in this District. The nearest Aerodromes are at Cochin, Madurai and Trivandrum.

Ropeways.

A reference may be made in this connection to some of the special transport arrangements that have existed in the High Ranges, particularly in the Kannan Devan Hills. Transport has always been a problem in this area. Most of it is now done by tractors and lorries. Among the many methods used in the past were headloads, pack ponies, bullock carts (for which the Tea manufacturing Companies maintained 500 bullocks) mono-rail carriages pulled by bullocks, and a light railway from Munnar to Top Station. The Finlay Organisation (James Finlay and Co., Ltd.) had built a number of ropeways of which two survived in use till 1967. One covered 16.9 kms. from Munnar to Kundlay and the other in a distance of 4.427 kms. rises 865.68 metres in elevation from the plains in the east to Top Station. The Ropeway as a means of transport became uneconomical because of its slowness and high cost of maintenance. It took about 4½ hours for a load to reach Top Station from Munnar. The power charges replacements and huge staff made the continued upkeep of this system of transport expensive and its operation was suspended in 1967. Moreover, in addition to minor roads leading to every tea field, there are 714.840 kms. of motorable roads in the High Ranges. Most High Range Roads follow old elephant tracks whose alignments the engineers could not improve.

Travel and Tourist Facilities

Old Time Rest Houses and Dharmasalas.

Kottayam is one of the Districts of Kerala which holds out great attraction to tourists. In the past there were, in addition to the old style *Ottupuras* and *Kanji* houses, inns or *Satrams* built for the convenience of travellers had functioned at important centres upon the main line of communication. In this District there were such inns at places like Vaikom, Pampadi, Kanjirapally, Mundakayam and Peermede.

Tourist Bungalows

There are at present 20 Rest Houses, Travellers Bungalows, Camp Sheds, etc., maintained by the Public Works Department in this District. They are located at Kuttikanam (2) Arudai, Kumili, Palai, Kanjirapally, Changanacherry, Nattakam Kottayam (3) Munnar (2) Devikulam, Vaikom (2) Talayar, Chinnar, Kallar and Santhanpara. Moreover, the Rest House in Kottayam Municipality runs in Kottayam town has 6 double rooms and 28 single rooms for the accommodation of visitors. A complete list of Rest Houses, Travellers Bungalows etc., with details of their location, amenities provided etc., is given at Appendix III to this Chapter.

In addition, the Tourist Department of the State is also maintaining Tourist Bungalows in important tourist centres of this District. There are Tourist Houses at Kottayam, Munnar

and Peermede to provide boarding and lodging facilities to upper class tourists. A modern Hotel with all facilities viz., the Aranyanivas is owned by the Tourist Department at Thekkadi. It is situated in picturesque surroundings close to the Periyar Lake and offers excellent accommodation to high class tourists. The Hotel also makes available motor vessels and row boats for cruises. In addition to Aranyanivas Hotel there is the Edapalayam Tourist Bungalow which is also managed by the State Tourist Department. It is situated in the middle of the Periyar wild life sanctuary and can be reached by boat from the Aranyanivas Hotel. Apart from the above Tourist Houses intended for upper class tourists a Class II Tourist Bungalow was opened at Thekkadi by the Government of Kerala in 1963. Unlike Aranyanivas Hotel it offers economy rate accommodation and cuisine to visitors to the Sanctuary especially picnic parties and student groups. In the Tourists Houses maintained by the State Tourist Department steam launches and cars and guide services are made available to tourists on payment basis. The Periyar Wild Life Sanctuary is one of the best national parks in India today and the Thekkadi area has developed into a thriving tourist spot in recent years. Tourists using public conveyances can reach Thekkadi by the daily Express Service run by the State Transport Department between Kottayam and Thekkadi. Private lines also ply on this route. Motor transport to Aranyanivas from Cochin and Trivandrum is also arranged by State Tourist Department, if sufficient notice is given. Apart from the Tourist Bungalows and Tourist centres mentioned above a proposal for the development of Kumarakom on the banks of the Vembanad lake as a centre of tourism is under active consideration of Government.

Post and Telegraph Department.

The indigenous postal system known as Anchal was prevalent in Travancore since the days of Marthanda Varma (1729-58). The British Indian Postal System was introduced in 1857 but the exact year in which the Kottayam Post Office was opened is not known. The Anchal and the postal systems functioned side by side. Early in this century there were Post Offices in this District at Changanacherry, Kottayam, and Peermede. It is on record that the Kottayam Telegraph Office was opened in 1889 and the Peermede Telegraph Office in 1894. The Anchal Department was merged in the Indian Postal and Telegraph Department in April 1951.

The Post and Telegraph Department in this District is under the Superintendent of Post Offices, Postal Division, Kottayam while the Devikulam Taluk is under the Jurisdiction of the Superintendent of Post Offices, Ernakulam. There are two Head Post Offices in this District viz., at Kottayam and Changanacherry. A Taluk-wise statement of the number of Head Offices, Sub-Offices, Branch Offices and Public Call Offices in this District as on September 1, 1964 is given below.

Taluk	Head Offices	Sub Offices	Branch Offices	Public Call Offices
Changanacherry	1	14	30	12
Kottayam	1	24	49	28
Vaikom	..	3	30	6
Meenachil	..	13	68	12
Kanjirapally	..	6	34	6
Peermede	..	5	27	8
Udumbanchola	..	7	13	..
Devikulam	..	..	17	6

122 out of 268 Branch Offices have savings bank powers. Out of the 74 Sub-Offices 49 are combined Post and Telegraph Offices.

TELEPHONES

The Automatic Exchange at Kottayam was put into operation on December 31, 1950 with an equipped capacity of 500 lines. The demand for telephone connections steadily increased, and the equipped capacity was expanded to 600 lines in June 1956, 800 lines in November 1957, 1,200 lines in December 1958 and 1,600 lines in July 1963. The work of installing additional 400 lines was in progress with a view to increasing the capacity to 2,000 lines.

A Trunk Exchange at Kottayam with 3 position and 10 trunks was installed along with the Automatic Exchange in 1950. The number of trunk lines that terminated at this exchange progressively increased and 52 trunks were working in 1964. There were 20 Telephone Exchanges in this District during the year. The list of these Exchange is given below:—

Name of Exchange	Type
1. Kottayam	Automatic
2. Changanacherry	Central Battery Multiple
3. Chingavanam	SAX
4. Ettumanur	CB
5. Erumeli	SAX
6. Kanjirapally	CB
7. Koothattukulam	PAX
8. Munnar	CB
9. Mundakayam	CB
10. Palai	CB
11. Poonjar	Magneto
12. Poovarany	PAX
13. Ponkunnam	PAX
14. Peermede	Magneto
15. Ramapuram	SAX
16. Vandiperiyar	PAX

17. Vaikom	PAX
18. Elappara	SAX
19. Kuruppanthara	SAX
20. Vakathanam	SAX

It may be noted that Kottayam is functioning as a multi-link operated dialling centre, which enables stations which are not directly connected to one another to dial numbers direct. Stations like Quilon, Palai, Kanjirapally, Alleppey, Ernakulam and Trivandrum avail themselves of this facility.

In December 1964 there were on the whole 3,216 connections in the Exchanges of this District. The total number of extensions came to 255. There were 80 Public Call Offices. A statement of the average annual number of trunk calls recorded in a few select Exchanges is given below:—

Exchange	No. of Trunk Calls
Kottayam	5,65,059
Changanacherry	14,180
Ettumanur	40,631
Kanjirapally	80,409
Muvattupuzha	98,695
Mundakayam	11,203
Palai	1,01,900
Poonjar	20,886
Peermede	27,232

The Post and Telegraph Department has its own plans for expansion of telephone facilities in this District. In addition to the 20 Exchanges mentioned earlier Exchanges of the SAX type have been sanctioned for installation at Kumili, Manimala, Chitrapuram, Monipally, Kuravilangad, Pampadi, Karukachal, Kozhuvanal and Vazhur.

The Telephone system in this District is under the control of the Divisional Engineer (Telegraphs) who has his headquarters at Kottayam.

Radio.

According to the information furnished by the Director of Posts and Telegraphs, Kerala Circle, the total number of Radio Licenses issued by the Post Offices in the Kottayam District for the 6 years from 1961 to 1967 is as follows:—

Year	No. of Licenses issued
1961-62	5,998
1962-63	6,647
1963-64	9,735
1964-65	10,493
1965-66	12,410
1966-67	12,530

Organisations of Employees in the field of Transport and Communications

The most important labour unions of the Kerala State Transport Employees are (1) The Kerala State Transport Employees Union, (2) Ferry and Transport Workers Union, (3) Mechanical Workers Union, (4) Kerala State Transport Workers Union, (5) Kerala State Transport Staff Union, and (6) Kerala Transport Watch and Ward Association. The State Transport Employees in this District are active members of the organisations mentioned above.

In the field of private Motor Transport the notable employees organisations are the following:—(1) Kottayam Motor Workers Congress, Kottayam (2) Kottayam Motor and Mechanical Workers Union, (3) Vaikom Taluk Motor and Mechanical Workers Union, Vaikom, (4) Kerala Private Bus Stand Workers Union, Vaikom, (5) Peermede Motor Workers Union, Vandiperiyar, (6) Kottayam Motor Drivers Union, Palace Road, Kottayam, (7) Ponkunnam Private Motor and Mechanical Union, Ponkunnam (8) The Motor Drivers Union, Changanacherry, (9) Municipal Town Bus Stand and Stand Porters Union, Vaikom and (10) The Private Motor and Mechanical Workers Union, Changanacherry.

There are also 8 Unions of Post and Telegraphs Employees in this District affiliated to the National Federation of Post and Telegraph Employees. They are (1) All India Postal Employees Union, Class III, (2) All India Postal Employees Union, Postmen and Class IV, (3) All India Telegraph Engineering Employees Union Class III, (4) All India Telegraph Engineering Employees Union, Line Staff and Class IV, (5) All India R. M. S. Employees Union Class III, (6) All India R. M. S. Employees Union Mail-guards and Class III, (7) All India Telegraph Traffic Employees Union Class III, and (8) All India Telegraph Traffic Employees Union Class IV.

APPENDIX I

Classified list of Roads in Kottayam District

KOTTAYAM DIVISION

I. NATIONAL HIGHWAYS—Nil.

II. PROVINCIAL HIGHWAYS

	Length			
	Mile	Fg.	Ft.	Kms.
1 M. C. Road 83/2/220 to 117/2 + 117/2 to 123/1	34	7	440	51.275
2 Ranni Manimala Road 0/0 to 4/6	4	6	0	7.647
3 Kanjirapally Kunnumbhagam road 7/4 to 4/3	3	1	0	5.031
4 Ponkunnam to Chirakadavu	5	6	0	9.707
5 Atirampuzha Lalam road 12/2 to 12/5	0	3	0	0.604
6 Ponkunnam to Lalam	13	0	0	21.730
7 Lalam Thodupuzha 10/4 mile	10	4	0	16.895
8 Kottayam to Karukachal	10	0	0	16.90
9 Karukachal to 3/0 of road from 6/8 C. W. Road to Mallappally	3	0	0	4.830
10 Kottayam Kumili Road	69	0	0	111.080
11 103/8 M. C. Road to Kaduthuruthi road 0/0 to 2/3	2	3	0	3.824
12 Kumili Devikulam road upto 14/0	14	0	0	22.530
13 Road in Industrial Estate, Ettumanur	..	6	0	1.207
14 Road in S. M. T. Factory, Ettumanur	0	4	0	0.805
Total	172	0	440	274.065

III. DISTRICT ROADS

1 Changanacherry Vazhur road (0 to 16)	16	0	0	25.750
2 Atirampuzha Lalam road	13	0	0	20.920
3 Lalam Poonjar road	7	3	0	11.874
4 do.	2	6	0	4.427
5 Karukachal Kunnumbhagam road	9	6	0	15.687
6 Kanjirapally Erattupetta road	10	3	0	16.694
7 Kanjirapally Erumeli road	7	5	0	12.276
8 Kootticakal Yendayar road	5	3	0	8.654
9 P. D. Road 3rd and 4th sections	7	4	0	12.75
10 Rustic Hotel road	2	0	0	3.220
11 Glenmary road	5	4	0	8.855
12 Church Hill road	5	0	0	8.50
13 Changanacherry Kaviyur road upto 4/0	4	0	0	6.440
14 Kunnamthanam road	2	3	0	3.624
15 Road from 82nd mile M.C. road to 5th mile C.W. Road	5	0	0	8.50
16 Baston road	9	4	0	15.285
17 Erumeli Mummada road	5	0	0	8.50
18 Valakayam Chenappadi road	4	0	0	6.440
19 Pallom Loop road	3	1	0	5.31
20 Pallom Thottakad road	4	0	0	6.440

	Length			Kms.
	Mile	Fg.	Ft.	
21 Road from Kurichi to Pathamuttam road	2	0	0	3.220
22 89th mile M. C. Road to Palliadikadavu	2	0	0	3.220
23 Kanjirapally Kunnumbhagam road 0/0 to 4/2 and 7/5 to 8/0	4	7	0	7.848
24 Cheruvally road	1	3	0	2.214
25 Thambalakad road	7	0	0	11.270
26 Edamattam to 8th mile Erattupetta road	4	1	0	6.641
27 8th Mile Ponkunnam Lalam road to 6th mile Erattupetta road	5	0	0	8.50
28 Kumili to Vandanmettu road	15	4	0	24.945
29 Mararcad Thenganal road	9	3	0	15.84
30 Pampadi Lakattoor	2	4	0	4.25
31 Vennimala road and its extension	3	5	0	5.836
32 Kottayam Kumarakam road	5	0	0	8.50
33 Road from 6th mile Kottayam-Kumili road to Kidangoor	7	6	0	12.47
34 Kallumada Kallumkathar road	2	0	0	3.220
35 Mannanam road	4	0	0	6.440
36 Road from 95th mile M. C. Road to Punnackal Chungam	2	2	0	3.622
37 Kottayam Parippu road	4	2	0	6.842
38 Pallom Puthupally road	4	4	0	6.440
39 Thiruvanchiyur road	7	0	0	11.270
40 Areeparambu Akalakunnam road	11	0	0	1.610
41 Kudamaloar road	1	6	0	2.817
42 Road from junction to Mararcadu Kidangoor road to Poovathilappu	3	0	0	4.830
43 Road from Thiruvatta to 1/2 Kudamaloar road	1	4	0	2.415
44 Kuruppanthara road upto 2/2	2	2	0	3.220
45 Neendoor road	4	0	0	6.440
46 Kudamalloor road	3	0	0	4.830
47 Mattakara road	5	0	0	8.50
48 Meenachil Kaduthuruthi road upto 9/4	9	4	0	15.687
49 Cherupunkal Marangattupally road	4	6	0	7.647
50 Puliyannoor Vazhur road	11	7	0	19.108
51 Road from 5/8 of do. Kanjiramattam and thence to Elamkulam	4	6	0	10.465
52 Lalam Ramapuram road	7	1	0	11.471
53 Ramapuram Pizhaku road	2	4	0	4.25
54 Anthinadu Melukavu road	6	0	0	9.660
55 Ambara Mankombu road	7	0	0	11.270
56 Teekoy road	3	5	0	5.836
57 Vazhamattam Bharananganam road	4	2	0	6.842
58 Karikamattam Nedumkunnam road	4	5	0	1.446
59 Kanjirampara 14/6 C. W. Road to 5th mile Karukachal Kunnumbhagam road	2	4	0	4.25

3/3718/MC.

		Length			
		Mile	Fg.	Ft.	Kms.
60	Nedunkunnam to Anikad and thence to Murani	4	0	0	6.440
61	Road from 5th mile Karukachal to Kunnumbhagom road to Kulathur	4	0	406	6.653
62	Marangattupally Uzhavur road	3	0	0	4.830
63	Mundakayam Erumeli Road	4	0	0	6.440
64	Road from 34th mile K. K. Road to Vellanady Estate	5	0	0	8.50
65	Meenadam road	4	6	0	7.647
66	Kodungoor Manimala road	6	0	0	9.660
67	Kidangoor road	2	6	0	4.427
68	3/8 Mattakara road to 7/8 A. L. road (Mattakara-Kummannoor road)	5	0	0	8.50
69	Road from 7th mile Changanacherry Vazhur road to 3/1 Mallapally road	4	7	0	7.848
70	M. C. road (Deviation at Ettumanoor)	1	4	0	2.415
71	Kuttiikkanam to old Palace	0	6	0	1.207
72	Road from 112th Mile M. C. Road to 1st mile K. R. Road 0/0 to 6/6	6	6	0	10.867
73	Road from Elanji to Uzhavur via Alapuram	6	0	0	9.660
74	Koothattukulam Ramapuram road 2/2 to 7/0	4	6	0	7.647
75	Thalayolaparambu Koothattukulam road	1	0	0	1.610
76	Road from 114th mile M. C. Road to Mootholapuram	1	5	0	2.616
77	Thazhathuvadakara Kulathoormoozhy road	4	0	380	6.556
78	Kottayam Kumarakam road portion from Konathu river to market canal	0	6	0	1.207
79	Road from 13/4 K. D. road to Nedumkunnam and thence to Kambammettu	3	5	0	5.836
80	Approach road to Changanacherry Rest House	0	3	0	0.604
81	Road from 13/2 K. D. road to Nedumkunnam and thence to Kambammettu	5	0	0	8.50
82	Thekkadi Vellikulam road	4	0	0	6.440
83	Vazhamattam Pinnakkunadu road	4	4	0	7.245
84	Elikulam Kappad road	4	4	0	7.245
85	Kurichi Karunattuvala road	1	3	0	2.214
86	Road from 2nd mile C. W. road to Pallom Thottakad road 1st section 0/0 to 4/2	4	2	0	6.842
87	Road from Thannimmoodu to Upputhara	1	3	0	2.214
88	Approach road to Sathrom at Kumali	0	2	0	0.402
89	Approach road from 13/6 K. D. road to Vandanmettu	0	4	0	0.805
90	Road from Vandanmettu to Kattappana	1	4	0	2.415
91	Aruvikuzhi road	1	6	0	2.817
Total		426	2	126	686.301

MUVATTUPUZHA DIVISIONS

		Length			
		Mile	Fg.	Ft.	Kms.
PROVINCIAL HIGHWAYS					
1	Northern Outlet Road 1 to 36/2	36	2	0	58.362
2	Sethuparvathipuram Kantalloor road	9	2	400	15.002
3	Munnar Kumili road mile 1 to 21	21	0	0	33.810
4	Alwaye Munnar road 34/2 to 70-5-280	36	4	280	58.880
5	Loop Road connecting 4/6 to 5/1 Munnar Kumili Road	1	1	540	1.976
6	Munnar Kumili road 22 to 33	32	0	0	51.520
7	Santhampara Bodimettu road	7	0	400	11.392
8	Kallar Ramakkalmettu Road	8	0	0	12.870
9	Ettumanur Ernakulam road 2/4 to 23/1	20	6	0	33.407
DISTRICT ROADS					
1	Vaipilpady Thirumonivenkitapuram road	4	6	0	7.257
2	Vaikom Vechoor road	7	0	0	11.270
3	Puthenthodu Moothedathukavu road	3	0	0	4.830
4	Kalakadal Lane	0	1	20	0.207
5	Piravam Kaduthuruthi road	7	2	0	11.672
6	Kuruppanthara Kuravilangad road	2	3	0	3.624
7	Meenachil Kaduthuruthi road 2nd section	2	4	0	4.025
8	Keezhur Neezhoor road	1	4	0	2.415
9	Road from 8/7 Thalayolaparambu Koothattukulam road to Neezhoor market	3	4	0	5.635
10	Thalayolaparambu Koothattukulam road	7	0	0	11.270
11	4th mile Vaikom Udayanapuram road to Palamkadavu	3	2	0	5.235
12	Vadayar Chandapalam to Mulakulam	7	0	0	11.270
13	Kanjiramattam Neerpara road	4	4	0	7.245
14	Keezhur Neezhur road	2	0	0	3.220
15	Chittuvai Vattavada road—Portion from Chittuvai to Ottamarom	3	0	310	4.925
16	Devicolam Periakanal road	2	2	0	3.220
17	Road from 56th mile Alwaye Munnar road to Manakadavu	3	0	0	4.830
18	Munnar Bodimettu road	19	0	0	30.570
19	Kodaikanal road—Portion within the Kerala State	5	2	560	8.629
20	Road from Kanthalloor to Marayoor	9	0	0	14.480
21	Road from Power House Junction to Kunjithanny	2	4	0	4.25
22	Road from Kunjithanny to Yellackal bridge site	1	5	250	2.692
23	Road from 58th mile Alwaye Munnar road to Anchal				
24	Road from Ramaswamy Iyer Barrage to Bison Valley	3	3	220	5.501

APPENDIX II
Particulars of Passenger Boat Services

Route	Distance miles	No. of boats operating	No. of trips	Duration of trans- port Hrs. Mts.	Fare charged Rs.	No. of passengers carried per day
1 Vaikom—Shertallai (Vembanad lake, Chengandacanal)	7	4	12	1.30	0.25	1,000
2 Vaikom—Neendur (K. V. canal)	12	2	2	2.15	0.37	120
3 Kottayam—Vaikom (K.V. Canal)	16	1	2	3.00	0.50	150
4 Kottayam—Shertallai (Vembanad lake)	24	1	1	5.00	0.56	55
5 Do. Alleppey (Puthenthodu)	18	7	14	3.00	0.44	1,500
6 Do. Ambalapuzha (Kottayam—Changanacherry canal Pamba river)	23	1	1	4.30	0.50	75
7 Kottayam Munnar (Kottayam - Changanacherry canal, Pamba river)	32	1	1	6.30	0.75	75
8 Do. Chambakulam do.	23	1	1	4.30	0.50	75
9 Do. Thalavady do.	26	1	1	5.00	0.44	80
10 Do. Quilon (Kottayam Changanacherry canal Pamba river, Thrikkunnappuzha, Kayamkulam Kayal Chavara Canal Ashtamudi lake)	60	2	1	12.00	0.87	275
11 Kottayam Thalavadi (Kottayam - Changanacherry canal Pamba river)	26	1	1	5.00	0.44	80
12 Kumarakom - Muhamma (Vembanad lake)	6	1	5	1.10	0.25	220
13 Athirampuzha - Thanneermukkom Pennar thodu (Vembanad lake)	15	1	2	2.45	0.37	120
14 Do. Alleppey (Pennar thodu, Meenachil river and Vembanad lake)	22	1	1	5.30	0.50	80
15 Changanacherry - Quilon (Changanacherry) Kidangara canal, Pamba river, Trikkunnappuzha, Kayamkulam Kayal Chavara canal and Ashtamudi lake)	58	2	1	10.00	0.87	150
6 Changanacherry - Ambalapuzha (Changanacherry Kidangara canal Pamba river)	23	1	2	4.00	0.56	160
7 Changanacherry - Karumadi (Changanacherry Kidangara canal Pamba river)	15	1	1	4.30	0.50	60
8 Changanacherry-Neerettupuram (Changanacherry Kottayam canal)	10	1	1	1.45	0.31	55
9 Do. Payippad (Changanacherry - Kidangara canal, Pamba river)	20	1	1	5.00	0.50	60

APPENDIX III
List of Travellers' Bungalows, Rest Houses etc.

Name	Taluk & place	Location	Nearest Railway station, if any, & distance from it	By whom maintained	Class to which it belongs	Nature of accommodation and facilities provided
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Tourists' Bungalow with Annex, Munnar	Devikulam Munnar	1 fig. from the starting point from Panjakam College Jn. Munnar.	Always 72 miles	Tourists Department	1st class	2 main & 4 rooms. Electrified & sanitary & water arrangements available. Catering exists.
2 First Class Rest House, Munnar.	-do-	By the side of Always Munnar road near Munnar Town	-do-	P.W.D.	-do-	2 rooms -do-
3 Second Class Rest House, Munnar	-do-	-do-	-do-	-do-	2nd class	2 rooms -do-
4 Devikulam Rest House	Devikulam	5/2 of Munnar Devikulam Road	-do-	-do-	1st class	2 rooms -do-
5 Rest House, Vaikom	Vaikom	Near the Vaikom Boat Jetty	Appanchira (Vaikom Road 8 miles)	-do-	2nd class	2 rooms no catering.
6 Campshed, Vaikom	-do-	-do-	-do-	-do-	Campshed	-do-

(1)	(2)	(3)	(4)	(5)	(6)	(7)
7 Thalayar Campshed	Devikulam Thalayar	By the side of North Outlet road near Thalayar Police Station	Always 90 miles	P.W.D.	Campshed	2 rooms. Not electrified. No water supply & sanitary arrangements & catering.
8 Chinnar Campshed	Udumbanchola Chinnar	West of State Boundary	-do- 108	-do-	-do-	-do-
9 Kallar Campshed	Udumbanchola Kallar	37th mile Devikulam Kumili Road	-do- 109	-do-	-do-	-do-
10 Santhampara Campshed	Udumbanchola Santhampara	17/4 Devikulam Kumili Road	Always 94 miles	P.W.D.	Campshed	2 rooms. Electrified. Sanitary fittings available.
11 Neriamangalam Campshed		Rented to the Kerala State Electricity Board for holding their office.				
12 Bodinettu Rest house		The building is now used as an Agricultural & Income Tax & Sales Tax Checkpost.				
13 Municipal Rest House, Kottayam	Kottayam	Near Boat Jetty	Kottayam R.S.	Municipal Council, Kottayam	All facilities available.	

CHAPTER VIII

MISCELLANEOUS OCCUPATIONS

The Census Report of 1961 throws light on the pattern of miscellaneous occupations in the Kottayam District. The important miscellaneous occupational groups were classified at the Census under the broad division "Services". The total number of persons employed under each of the major groups is given in the following table:

Division	Total Persons	Workers Male	Female
Total	59,659	40,943	18,716
1. Public Services	6,437	6,106	331
2. Educational and Scientific Services	13,246	7,564	5,682
3. Medical and Health Services	4,250	3,070	1,180
4. Religion & Welfare Services	3,259	2,740	519
5. Legal Services	688	684	4
6. Business Services	330	325	5
7. Community Services etc.	1082	913	169
8. Recreation Services	570	510	60
9. Personal Services	29,035	18,308	10,727
10. Services not elsewhere classified	762	723	39

Public Services.

It may be seen from the above table that 59,659 persons were employed in public services. This figure includes the employees of both the State and Union Governments (excluding those working in such fields as transport, communication, education, health services, industries, construction etc.), members of the Armed Services and the Police and the employees of local bodies like the Municipalities. The particulars of persons employed in the Kottayam District in the more important of the minor groups referred to above are given below:

Group	Persons	Males	Females
Public Services in Police	1,302	1,288	14
Public Services in Offices of the Central Government	1,266	1,255	11
Public Services in Quasi Government Organisations and local bodies	865	820	45
Public Services in the Offices of the State Government	3,004	2,743	261

The public employees have their service organisations. These are affiliated either with the Kerala N. G. O. Union or the Kerala N. G. O. Federation, or Other State wide organisations. The employees in some of the Municipalities of the District have formed their organisations too, e. g. the Kottayam Municipal Workers Union, Kottayam, the Kottayam Municipal Staff Union, Kottayam, the Kottayam Municipal Higher Grade Staff Association, Kottayam, the Palai Municipal Thozhilali Union, Palai etc.

In the High Ranges the public servants enjoy certain special facilities. About 50 quarters have been provided at Devikulam for the accommodation of officers of the State Government. An Officers' Club is also functioning here. All Government employees in the locality have registered themselves as members of the club. The low paid officers in the High Ranges are being paid Hill Allowance at the rate of 20% of their basic pay.

LEARNED PROFESSIONS

Teachers.

The teachers who constitute one of the most important of the learned professions in the District were included among "Educational and Scientific Services" in the Census of 1961. The predominant group among them is comprised of those employed in schools, colleges and similar institutions of a non-technical type. This group accounts for 13,100 persons (7,431 males and 5,669 females) out of the total number of 13,246 persons (7,564 males and 5,682 females) engaged in educational and Scientific services. The teachers employed both in the Government and private schools in the District form a well organised occupational class with immense capacity for collective bargaining. Such all-Kerala teachers' organisations as the Kerala Aided Primary Teachers' Union, the Kerala Government Primary Teachers' Union, the Private Secondary School Teachers Association, the Kerala Private Secondary Headmasters' Association and the Departmental Graduate Teachers' Association have their active units in this District. The Kerala Private College Teachers' Association is an active organisation of teachers working in private colleges.

Doctors.

The Medical and Public Health Services accounted for 4,250 persons (3,070 males and 1,180 females) at the Census of 1961. The major group among them, viz. 4,159 persons (2,180 males and 1,179 females) consists of those employed in hospitals, sanatoria, nursing homes and maternity and child welfare clinics, as well as of Ayurvedic, Allopathic and Homoeopathic practitioners. Among these were 2,009 (1,001 males and 1,008 females) physicians, surgeons and dentists, the

Ayurvedic system claiming 989 persons (959 males and 30 females) and Homoeopathy 251 (228 males and 23 females). The nurses, pharmacists and other medical and health technicians numbered 1,784 (890 males and 894 females). The physicians of the District have also formed their organisations. A branch of the Indian Medical Association is functioning at Kottayam since 1933. In 1967 it had 125 members on its rolls. The Kerala State Indigenous Medicine Department Physicians Association, the Kerala Ayurveda Mandalam and the Kerala Grant Vaidyasala Sangham are also notable organisations in the field.

Lawyers.

The lawyers form one of the most prominent and active occupational groups in the District. The Census of 1961 gives the number of persons employed in legal services as 688 (684 males and 4 females). The figure includes barrister, advocates, solicitors, pleaders etc. The number of legal practitioners and advisers alone came to 338 (336 males and 2 females) while that of jurists and legal technicians including petition writers came to 571 (564 males and 7 females). The lawyers have their Bar Associations in all important centres where law courts are functioning.¹

Engineers.

The Engineers form part of the 'Business Services'. The total number of persons employed as architects, engineers and surveyors at the Census of 1961 came to 712 (707 males and 5 females). There were 282 Civil Engineers including Overseers. The Kerala State Electricity Board alone employed 172 Engineers in this District in 1965. The Engineers of the Public Health Engineering Department, the P. W. D. and the Kerala Electricity Board have their separate service organisations.

Journalists.

The journalists also form a significant occupational group, though numerically they form only a small section. As Kottayam is an active centre of journalistic activities the number of journalists is relatively larger than other Districts of Kerala. Kottayam District branch of the Kerala Union of working Journalists started in 1953 had 40 members on its rolls in 1965.

Personal Services.

The personal services include those rendered by domestic servants, cooks, hoteliers, washermen, barbers etc. The total number of persons employed in all these services together

¹ Information on these associations has been furnished in Chapter XII.

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come to 29,035 (18,308 males and 10,727 females) at the Census of 1961. The particulars of the number of persons falling within some distinct groups comprised in the above divisions are given below.

Group	Persons	Male	Female
Services rendered to households by domestic servants, cooks, etc.	12,446	5,881	6,565
Services rendered by Hostels, Restaurants, Eating houses, etc.	8,538	7,830	708
Laundry Services	5,144	1,825	3,319
Services, rendered by barbers dressing saloons etc.	2,390	2,346	44

It may be seen from the foregoing figures that women form the predominant group among domestic servants and cooks while men outnumber women among hotel employees. Domestic servants form an unorganised lot but hoteliers have organised themselves in trade Unions, e. g. the Changanacherry Taluk Hotel and Bakery Workers' Union, the Kottayam Hotel and Bakery Workers' Union etc. It is also noteworthy that while women form the major group among those who render laundry services men are the dominant group among those who are engaged in the hair dressing services. There is a Barbers' Union at Changanacherry.

Tailors.

The tailors constitute another occupational class. At the 1961 Census 3,347 persons (3,099 males and 275 females) were returned as tailors, dress-makers and garment makers. Tailoring shops may be seen in all parts of the District. Most of them are owned by individuals who attend to the work themselves. In some of the bigger shops functioning in urban areas like Kottayam there are hired tailors who work on regular wages. The Kottayam District Tailors' Association, Kottayam is an organisation of the tailors in this District.

Artists, Writers, Musicians etc.

Under this category comes musicians, singers, dancers, actors, authors, artists, social scientists etc. These professions absorb about 1,179 persons in this District. Kottayam being the seat of the Sahitya Pravarthaka Co-operative Society (S. P. C. S) Ltd. No. 2458 provides employment to a good number of literary men. The society is the biggest publishing and distributing agency of Malayalam books in Kerala. In Kottayam District there are many dancing Schools (Natananiketans) imparting instruction in dancing and allied professions. The dramatic clubs, Kathakali troupes etc., functioning in various parts of the District have brought out some outstanding cine artists and dramatists.

Other Occupations.

The Census Report of 1961 gives also details of the number of persons employed in many other occupations. The details in respect of a few such occupations are given below.

	Persons	Male	Female
1 Ordained Religious Workers	1,108	1,056	52
2 Astrologers, Palmists etc.	327	218	19
3 Sales Workers	24,926	2,335	15,71
4 Salesmen, Shop Assistants etc.	8,587	7,841	746
5 Hawkers, Pedlars etc.	4,611	3,889	722
6 Tappers (Palm, Rubber etc.)	13,346	12,480	866
7 Fishermen and Related workers	2,245	2,089	156
8 Drivers, Road Transport	3,687	3,687	..
9 Cycle Rickshaw and Rickshaw Pullers	88	88	..
10 Postmen and Messengers	582	582	..
11 Blacksmiths, Hammersmiths etc.	3,590	3,365	225
12 Jewellers, Goldsmiths etc.	2,242	2,229	13
13 Carpenters, Joiners etc.	8,109	8,084	25
14 Sawyers	2,253	2,249	4
15 Compositors, Printers etc.	961	946	15

CHAPTER IX

ECONOMIC TRENDS

Livelihood pattern

In the Census of 1971 the general population had been broadly divided into two classes viz., workers and non-workers. In the Kottayam District 6,19,613 persons (494,382 males and 125,231 females) constitute workers and 1,465,521 persons (560,583 males and 904,938 females) constitute non-workers. It may be noted that while 29.12 percent of the total population of Kerala constitute workers, 29.72 percent of the population of Kottayam District constitute workers. The percentage of non-workers are 70.88 for Kerala State. Table I gives the total number of percentage of workers engaged in the various industrial categories as well as of non-workers as per the 1971 census.

GENERAL LEVEL OF PRICES AND WAGES

Prices

A study of the general level of prices and wages helps us to get an insight into the general economic condition of a people. Since the 19th century there has been a tendency towards a rise in the general level of prices in this District as elsewhere in the country. The phenomenon has been accompanied by short period fluctuations as well as differential changes in the prices of particular classes of commodities. Though neither rising nor falling prices are necessarily associated with either any improvement or any decline in the position of the labouring classes, it is an admitted fact that every significant change in the general price level benefits one section or other of the community at the expense of the others. Creditors and all those with fixed money income are adversely affected by a rise in prices. At the same time rising prices coincide with active trade and the cultivators and creditors are benefited. It is a feature of Kottayam District that it produces such commercial crops as tea, rubber, cardamom, pepper, ginger, etc., and the cultivating classes here have considerably benefited from the rise in the price of these commodities.

TABLE—I

Classification of Industrial Workers

Industrial Category	Total	Male	Female
1 Population	20,85,134	1,054,965	1,030,169
As cultivator	1,50,655	1,47,649	3,006
2 As Agricultural Labourer	1,61,214	1,15,014	46,200
3 Live-stock, Forestry, Fishing Hunting and Plantations, Orchards and Allied activities	1,07,680	67,995	39,685
4 Mining and Quarrying	1823	1,731	92
5 Manufacturing, Processing,, servicing, and repairs			
(a) Household industry	14,911	9,431	5,480
(b) Other than household industry	39,831	36,466	3,165
6 In Construction	9,160	8,978	182
7 In Trade and Commerce	43,568	41,640	1,938
8 In Transport, Storage and Communications	16,009	15,452	557
9 In other Services	74,962	50,026	24,936
10 Total workers	6,19,613	4,94,382	1,25,231
11 Non-Workers	14,65,521	5,60,583	9,04,938

TABLE—II

Sex-wise Urban and Rural Population of workers and non-workers

District	Workers		Total	Non-Workers		Total
	Rural	Urban		Rural	Urban	
Kottayam	5,61,260	58,353	6,19,613	13,10,730	1,54,791	14,65,521

No statistical information is available in regard to the prevailing level of prices of commodities in any of the select centres of this District in the 19th century. The table III taken from the *Travancore State Manual* by Nagam Aiya, however, gives the price of some important food grains in December 1874 as compared with those of December 1904 in Travancore State as a whole.

TABLE—III

Prices of Foodgrains 1874 and 1904

No.	Name of foodgrains, oils & C.	Prices per Madras ¹			Prices per Madras			Increase or decrease per cent in prices
		Measure in December 1874			Measure in December 1904			
		Rs.	As.	Ps.	Rs.	As.	Ps.	
1	First class paddy	0	1	3	0	1	1½	—10%
2	Second class paddy	0	1	2	0	1	0	—12.28
3	First class rice	0	2	6	0	2	3	—10
4	Horse gram	0	1	1½	0	1	10	+63
5	Black gram	0	2	1½	0	2	6	+17.4
6	Green peas	0	1	10	0	2	10	+54.5
7	Gingelly	0	3	0	0	3	9	+25
8	Wheat	0	2	1½	0	2	7½	+28
9	Gingelly Oil	0	8	9	0	11	11	+36
10	Coconuts per 100	1	10	5	2	3	11	+35.9

1 As the seer varies from different localities the measure which is uniform throughout the whole Presidency has been adopted and the calculations made accordingly.

1. Madras measures—one and one-fourth Travancore Edangazhis

It may be seen from the above table that there was a clear increase in the prices of all important articles of consumption except paddy and rice during the period 1874 to 1904. The First World War (1914-18) and the period that followed witnessed an increase in the general price level. However, with the onset of the economic depression in the early thirties there was a steep fall in the price of all agricultural commodities. The Economic Depression Enquiry Committee Report makes the following observations in regard to the effects of depression on the price level in Travancore. "The worst feature of depression from the point of view of Travancore, as of India, is that the fall in prices was much more marked in the case of agricultural than in that of manufactured products. The prices of the staple articles of local production, such as paddy, pepper, coconut, rubber and tapioca, have fallen abnormally. Taking the general trend of the prices of agricultural products, we find that prices have in a decade fallen by 60 per cent. The year 1110 (1934-35), however, witnessed a rise in the prices of all kinds of products, but this rise was to a large extent due to diminished yield resulting from the failure of rains. What the vast majority of the people stand in need of is better prices for the products. Broadly speaking, all classes of people are effected by the prevailing depression, directly or indirectly. Some classes have been affected more severely than others. The fundamental cause of the trouble being the collapse of commodity prices, the bbw has directly fallen on those classes whose income depends entirely on the saleable surplus of their agricultural produce. The economic stress is

actually felt by the middle class of people. The depression has rudely disturbed the even tenor of their placed existence. Many industries which were thriving recently are passing through distressing times. Determined efforts have been made to alleviate the economic distress. The trends in prices during the period of the depression may be illustrated with reference to the wholesale prices of a few selected commodities like coconut oil, copra, coir, yarn, dry ginger and pepper. Table IV conveys this information.

TABLE—IV

The annual wholesale prices of select commodities from 1927 to 1936 (price percent)

Year	Coconut oil	Copra	Coir yarn	Dry Ginger	Pepper
	Rs.	Rs.	Rs.	Rs.	Rs.
1927	139.64	90.91	83.23	134.90	371.81
1928	169.89	114.16	85.16	130.87	510.83
1929	159.74	106.14	80.97	179.27	502.48
1930	116.38	76.07	80.08	155.02	396.39
1931	89.00	62.00	50.00	105.00	199.00
1932	102.00	66.00	47.00	67.00	198.00
1933	70.00	39.00	32.00	57.00	134.00
1934	61.00	39.00	43.00	74.00	151.00
1935	62.00	45.00	39.00	109.00	142.00
1936	85.00	57.00	45.00	184.00	120.00

In spite of the best efforts of the Government to arrest the deteriorating economic condition, the pace of the recovery was slow till the outbreak of World War II in 1939. The forces unleashed by the war brought about a steep rise in the general level of prices in the forties. In 1950-51 before the First Five Year Plan was launched, the sharp, though short-lived, impact of the Korean War boom also manifested itself in increase in commodity prices. Prices of cereals were more than four times higher than those of the pre-War period. Price controls and rationing were introduced with a view to meeting the food deficit and the consequent inflationary pressures. The cease-fire in Korea, the improvement in the world production of wheat and rice and better crop conditions in the country brought about a general decline in the prices in 1952-53. The year 1953-54 and the following year witnessed a recession. The check the fall in prices, the Government took specific measures, such as progressive decontrol, cutting down of food imports, building up buffer stocks, etc. By 1955-56 the upward trend in prices received a further impetus due to the fall in total cereal production on account of unfavourable weather conditions. Since 1956 the rise in price level has been

1. Economic Depression Enquiry Committee Report, p p. 10-17.

steady. With 1964 began an upsurge in prices. The trend gathers momentum in succeeding years. The rapidly increasing population, the sharp step-up in defence outlay necessitated by the aggressive postures of Pakistan and China, the failure of the monsoon, the set-back to the production of agricultural commodities and consequent inadequacy of food supplies—all these factors brought about a sharp spurt in the prices of articles of mass consumption. It may also be mentioned that the rise in prices during this period was also due to the increased outlay on the developmental activities initiated under the Five Year Plans. The cost of living index numbers computed for select centres of the Kottayam District reflect the general price level. Table V gives the working class cost of living index numbers for Changanacherry, Kottayam and Munnar from 1959 to 1971.

TABLE—V

Working Class Cost of Living Indices 1959 to 1971

	Changanacherry	Kottayam	Munnar
Base 1936	100	100	100
1959	446	433	444
1960	447	443	463
1961	468	470	477
1962	472	485	463
1963	485	495	472
1964	554	557	510
1965	624	625	552
1966	691	689	604
1967	720	718	633
1968	810	824	741
1969	827	835	759
1970	858	868	794
1971 (upto November)	849	869	819

The foregoing table would give an idea of the steep increase in the price level in the District in recent years. The rise has been most pronounced during the period 1963-68 when the consumer price index number rose from 485 to 810 at Changanacherry, from 495 to 824 at Kottayam and 472 to 741 at Munnar.

Apart from the general price level as measured by the cost of living index numbers the price movements may also be studied with reference to the changes in the prices of specific commodities. A statement of retail prices of certain important commodities such as tapioca, sugar, vegetable oils, pulses, firewood etc., at Kottayam from 1961 to 1971 is given in Table VI.

3/3718/MC.

TABLE—VI

Retail prices of select commodities at Kottayam - 1961-1971.

Commodity	Unit	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Tapioca	kg.	0.14	0.15	0.15	0.19	0.28	0.28	0.30	0.34	0.31	0.34	0.35
Sugar	"	1.22	1.18	1.24	1.28	1.34	1.44	1.60	1.74	1.78	1.85	1.96
Coconut oil	Litre	2.28	2.37	2.65	2.59	3.93	4.31	4.90	5.43	5.34	7.38	6.20
Fish	kg.	0.89	0.53	NA	NA	NA	NA	NA	NA	NA	NA	NA
Black gram	"	0.69	0.87	0.88	0.89	0.94	1.25	2.15	1.79	1.46	1.51	2.16
Green gram	"	0.79	0.79	0.88	1.19	1.33	1.40	1.84	1.72	1.62	1.63	1.72
Jaggery	"	0.75	0.95	1.10	1.14	1.15	1.29	NA	NA	NA	NA	NA
Coriander	"	1.26	0.96	0.92	1.93	2.24	2.77	2.45	1.76	2.93	2.93	2.93
Chillies	"	2.54	2.48	2.88	2.33	2.60	5.01	3.94	2.64	6.40	6.40	5.00
Arccanut	100	3.44	4.89	3.27	4.66	5.38	3.60	4.93	4.83	6.80	5.37	4.21
Firewood	Quintal	2.93	3.20	3.23	3.59	3.57	4.05	4.50	5.72	4.65	..	7.06
Mundu	No.	3.13	3.19	3.13	3.39	2.87	3.88	2.98	NA	3.64	3.76	4.29

We may also take into consideration the wholesale price at Changanacherry for select months of the year from 1959 to 1971 in order to illustrate the upward trend in price level in recent years.

TABLE—VII

Wholesale price of Rice per quintal at Changanacherry (1959 to 1971)

Year	January	April	July	October	November	December
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1959	41.31	45.75	50.73	42.23	44.04	42.03
1960	40.50	NQ	NQ	42.03	45.57	44.56
1961	58.23	62.70	67.53	67.53	66.84	68.00
1962	66.67	66.15	67.36	62.02	64.21	62.02
1963	60.81	62.01	61.67	61.85	66.43	72.2
1964	67.39	75.80	79.53	NA	N.A	NA
1965	NQ	..	..	..	..	..
1966	NQ	..	..	..	..	..
1967	NQ	..	..	..	..	..
1968	NQ	..	..	..	..	..
1969	NQ	..	..	..	..	..
1970	NQ	..	..	..	..	..
1971	NQ					

NQ—Not Quoted NA—Not Available.

It may be noted in this connection that Kerala is highly deficit in rice production. The major portion of the rice requirement of the people is met from the allotments made by the Centre from time to time. Statutory rationing has been in force in the State since October 1965, the quantum of rice ration being 160 grams. Nevertheless, in view of the irregular and inadequate supply of rice from the Central pool, the State Government have not been able in recent times to give the full rice ration to the card holders. This has been responsible for an abnormal increase in the price of rice in open market. The year 1967 has been one of unprecedented rise in the price of rice in the open market owing to the failure of the Central Government to fulfil its firm commitment regarding allotment of rice to the State.

A statement of the wholesale price of rubber, another important crop of the District, for the period 1960 to 1971 is also given in Table VIII.

TABLE—VIII
Prices of Rubber (variety RMA-2) per quintal at Kottayam

Year	Price Rs.
1960	353.41
1961	321.92
1962	305.13
1963	310-10
1964	311.30
1965	344.91
1966	549.56
1967	372.61
1968	389.55
1969	523.64
1970	464.66
1971	429.68

With effect from December 19, 1963 the Government of India have fixed the minimum price, exclusive of sales tax, for various categories of rubber with a view to protecting the interests of the producer. The minimum price fixed for Rubber RMA-2 would come to Rs 159.85 for 50 Kgs. Since 1965 the supply of natural rubber has been falling short of demand and the prices therefore shot up.

The price of cash crops such as pepper, ginger, cardamom tea etc., has also been showing wide fluctuations in recent years. A detailed study of these price trends is given in the Ernakulam and Alleppey District Gazetteers.

A statement of retail prices for select centres of the District, specially prepared for this chapter by the Department of Economics and Statistics is given at Appendix I.

Wages.

Though wages generally lag behind prices, the general wage level in this District, as elsewhere in the country, has shown a tendency to rise in recent years. In ancient times labour in Travancore was supplied by slaves or serfs attached to the soil. The wages paid to them were exceedingly low, irrespective of the fact whether they were paid in cash or in kind. With the abolition of slavery in Travancore in 1855 there was a gradual rise in the level of wages. Table IX gives the statement of daily wages of agricultural labourers in the Taluks of Vaikom, Ettumanoor, Kottayam, Changanacherry and Meenachil during the period 1880-1895.

TABLE—IX
Daily Wages of Agricultural Labourers

No.	Taluk	1880-85		1885-90		1890-95	
		As.	Ps.	As.	Ps.	As.	Ps.
1	Vaikom	2	8	3	5	4	0
2	Ettumanoor	2	8	3	6	4	6
3	Kottayam	2	0	2	10	3	6
4	Changanacherry	2	0	2	10	3	0
5	Meenachil	2	3	3	0	4	0

At one time it was the custom to pay the agricultural labourers more in kind than in cash. Thus early in this century the wages for reaping one *para* of paddy of wet land in Travancore varied from 10½ to 12 *edangazhis* of paddy. For transplanting the wage were 2 to 4 *chuckrams* per day¹ for winnowing paddy the rate was 1 *edangazhi* and for pounding it into rice 2 *nazhis* for every *para*. These items of work were done by females. Ordinary day labourers got four to six *chuckrams* per day in the rural areas and seven to nine *chuckrams* in towns. The wages of a mason varied from six annas to one rupee in rural areas and half rupee to 1½ rupees in towns. Similarly, a carpenter got ½ rupee to 2 rupees in towns and four annas to twelve annas in villages.

The price level steadily increased in the early decades of this century. The wages prevalent in certain select industries as per the Census of 1931 is given in Table X.

TABLE—X
Daily wages of workers in Select Industries in 1931

Industry	Daily wages in Chuckrams	
Coir mat and matting factory	Men	21
	Women	12
	Boys	10½
	Girls	9½
Match Factory	Men	14
	Boys	5½
Oil Mills	Men	15½
	Boys	7
Printing Works	Men	15½
	Boys	7
	Girls	7
Tile Factory	Men	15½
	Women	9
	Boys	9
Tea cultivation	Men	12½
	Women	9
	Boys	7
	Girls	7
Tea Manufacture	Men	15½
Rubber Cultivation	Men	10
	Women	8 ¾
	Boys	7
	Girls	7

1. 1 anna (6 pies)—1 Chuckram and 12 cash
16 Cash—1 Chuckram.

In the early thirties the economic depression resulted in the growth of unemployment among all classes of people. The retrenchment of labour force on the Tea and Rubber estates of the District was very considerable. There was all-round reduction in the number of employees in almost all industrial concerns. Agriculturists either postponed or curtailed the employment in their fields. The depression adversely affected the income from wages of the different classes of workers. The position in regard to wages of workers in some select industries of the District in 1936-37 is given in Table XI.

TABLE—XI
Wages of Workers in Select Industries—1936-1937

Industry	Average wages per day		
	Men	Women	Children
Tea factories	7 to 9 as.	4 to 5 as.	4 as.
Coin factories	8 to 10 as.	5 to 7 as.	4 as.
Tile factories	7 as.	5 as.	4 to 5 as.
Oil Mills	8 to 12 as.	..	5 as.
Rubber Manufactory	6 as.	4 1/2 as.	3 1/2 to 4 as.
Steel Works	6 as to Rs. 3	..	3 to 6 as
Mechanical Works	Re. 1-5-0	..	..
Cardamom	6 as.	4 1/2 as	..

The rise of the Trade Union Movement and the after effects of the Second World War (1939-45) led to an increase in the wages of workers of all categories—agricultural and non-agricultural. The rates of wages for labourers in the District in June 1969 was 4.75 per day for men.

STANDARD OF LIVING AND FAMILY BUDGETS

Economic Survey of Kuravilangad Village (1930)

The studies into the pattern of family income and expenditure undertaken at different periods serve to give us an idea of the standard of living of a people. *The Travancore Banking Enquiry Committee Report (1930)* throws light on the economic condition of the people of the village of Kuravilangad (Meenachil Taluk) during the period immediately preceeding the onset of depression. The findings of the committee in respect of this village are summarised below. The wealth of the village as estimated is given in Table XII.

TABLE—XII
Wealth of Kuravilangad Village (1930)

	Rs.
Cattle	24,483
Agricultural Holdings	12,29,273
House	1,28,036
Gold and silver	23,063
Utensils	18,934
Investments	53,896
Lent to others	42,625
Other assets	1,55,720
Total	17,76,030

Of what is shown above as investments, about 90 per cent was in *chitties*. Other assets consisted mostly of the value of land in other *karas*, and the right of redemption over properties mortgaged. The wealth per head was Rs. 488, and per family Rs. 2,921. The total income from agriculture worked up to Rs. 80,382, and from other sources to Rs. 42,348 making up a total of Rs. 1,22,730. The income per head was Rs. 34 and per family Rs. 201.

The totals from the annual budgets of 6 typical families in Kuravilangad as worked out by the Committee in its Report are also given in Table XIII.

TABLE—XIII
Family Budgets of six typical families in Kuravilangad Village (1930)

Agriculturists	Family in comfort	Family in indigence
No. of Members	10	6
Total income	Rs. 950	Rs. 230 (Rs. 30 borrowed)
Total expenditure	Rs. 670	Rs. 225 (Rs. 30 for drink)
Aritsans		
No. of members	8	5
Total income	Rs. 350	Rs. 125
Total expenditure	Rs. 330	Rs. 120 (Rs. 30 for drink)
Traders		
No. of members	7	8
Total income	Rs. 450	Rs. 280
Total expenditure	Rs. 400	Rs. 275

The agriculturists in indigence had to borrow to meet his family expenses. Not less than Rs. 30 went for drink. There

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were instances where families had been brought to straitened circumstances due to this habit.

Cost of Living Index Surveys 1946 and 1951

An important family budget survey was conducted in the erstwhile Travancore State in June 1946 by the Bureau of Statistics, Travancore University, on behalf of the Travancore Government. Among the seven towns selected for the survey in the State were Kottayam and Changanacherry from this District. The object of the survey was to collect basic data for the periodical compilation of the cost of living indices in select centres of the State. Similar surveys were conducted by the Division of Statistics, Travancore University, in a few more selected centres in Travancore-Cochin State in 1951. The centres covered by the new survey in Kottayam District were Mundakayam, Munnar, Palai and Peermede. The following economic aspects of the life of the people in these centres were studied from the data collected by the family budget enquiry.

1. Distribution of families in broad expenditure groups.
2. Composition of family.
3. Family budgets.
4. Particulars of commodities and average quantities of articles consumed per month in the family.
5. Cost of living index.

As it was felt that returns relating to total income for each family were not always reliable, a division of families in the economic strata was made according to the monthly expenditure in the family. Table XIV gives the percentage distribution of families according to the total monthly expenditure.

TABLE—XIV

Percentage distribution of the families according to the expenditure groups

Centres	Total No. of families	Less than 50	50 to 100	100 to 150	150 to 250	250 to 350	350 to 500	Average
Kottayam	2,098	20	48	18	10	2	2	101
Changanacherry	1,777	7	41	32	16	4	..	119
Mundakayam	1,030	3	38	36	19	3	1	126
Palai	1,000	1	31	41	23	3	1	134
Munnar	480	5	35	26	21	11	3	148
Peermede	497	3	34	40	20	3	..	126

It may be noted that in all the six centres families with an expenditure above Rs. 250 formed only a very small percentage. The largest number of families came within the expenditure groups Rs. 50 to 100 and Rs. 100 to 150.

As the standard of living of a family depends to some extent on its composition it would be interesting to have an idea of the average size of the family expressed in terms of adult equivalents in broad expenditure groups in respect of each of the six centres. Table XV conveys this information.

TABLE—XV

Average size of family in terms of adult equivalents in broad expenditure groups

Centres	Expenditure in rupees per month						Average size
	Below Rs. 50	50 to 100	100 to 150	150 to 250	250 to 350	350 to 500	
Kottayam	3.42	4.83	5.00	8.70	7.67	8.28	4.99
Changanacherry	3.03	4.25	5.46	6.85	8.57	9.68	5.14
Mundakayam	2.01	3.57	5.39	6.58	7.49	7.64	4.91
Palai	1.14	3.96	5.46	6.59	8.87	8.42	5.34
Munnar	2.03	3.17	4.23	4.88	5.24	6.12	4.07
Peermede	1.49	3.20	4.36	5.27	6.50	7.27	4.13

It may be noted that the average size of the families showed a tendency to increase along with the increase in total expenditure in respect of all the six centres. The Table in Appendix IV gives details of family expenditure under major items for the respective expenditure groups in all the six centres.

Table XVI gives the percentage of expenditure in the six centres in broad expenditure groups according to the items of expenditure.

TABLE—XVI

Percentage distribution of the total expenditure according to the items of expenditure

Centres	Expenditure group	Food	Clothing	Housing Light Fuel	Pansubari Recreation Medical Education	Miscellaneous
Kottayam	Below Rs. 50	65.0	5.5	12.9	4.2	12.4
	50-100	64.9	6.1	13.6	3.0	12.4
	100-500	61.1	6.5	15.0	3.2	14.2
	150-250	58.7	6.6	15.0	2.8	16.9
	250-350	54.0	6.7	14.0	2.6	22.7
	350-500	51.9	7.4	12.8	3.6	24.3
Changanacherry	Below Rs. 50	66.5	6.9	9.3	5.2	12.1
	50-100	64.7	8.9	10.7	4.2	11.3
	100-150	63.9	8.7	10.4	4.1	12.9
	150-250	60.4	9.1	11.1	3.7	15.7
	250-350	56.4	8.6	11.6	3.7	19.7
	350-500	56.1	7.1	9.7	3.3	24.8

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Centre	Expenditure group	Food	Clothing	Housing Light Fuel	Pansupari Recreation Medical Education	Miscellaneous	
Mundakayam	Below				4.0	5.3	
	Rs. 50	68.09	8.2	13.6	3.6	6.8	
	50-100	69.8	8.6	11.2	2.9	7.6	
	100-150	69.1	9.0	11.4	3.2	8.2	
	150-250	68.9	7.6	12.1	2.6	8.6	
	250-350	69.1	6.9	12.8	2.1	12.4	
Munnar	Below				3.3	12.1	
	Rs. 50	61.0	5.9	17.7	2.9	12.8	
	50-100	62.8	7.5	14.0	2.7	15.6	
	100-150	61.5	8.5	11.7	2.4	18.6	
	150-250	58.7	8.8	11.5	2.3	22.3	
	250-350	53.4	9.1	12.9	2.2	29.4	
Palai	below				3.7	15.3	
	Rs. 50	63.2	4.3	14.0	3.5	14.1	
	50-100	67.7	5.5	9.2	2.2	13.8	
	100-150	66.9	7.9	9.2	1.5	14.7	
	150-250	63.6	9.5	10.7	1.2	22.6	
	250-350	57.4	9.4	9.4	2.1	26.0	
Peermede	Below				6.3	5.1	
	Rs. 50	67.8	4.4	16.4	5.9	5.2	
	50-100	71.0	5.4	12.5	5.4	6.8	
	100-150	69.6	6.9	11.3	4.9	11.3	
	150-250	65.2	7.5	11.1	4.5	15.0	
	250-350	60.6	9.9	10.0	..	..	

The Tables given in Appendix V gives the average quantities of the various commodities consumed per month in the family according to the expenditure groups in all the centres.

Table XVII gives the cost of living index for the period of June 1964 for Kottayam and Changanacherry and February 1951 for Mundakayam, Munnar, Palai and Peermede in respect of the respective expenditure groups.

TABLE—XVII
Cost of Living Index for Expenditure Groups
(Rupees per mensem)

Centres	Below 50	50-100	100-150	150-250	250-350	350-500	Average
Kottayam	298	305	278	261	246	232	290
Changanacherry	341	352	384	294	275	252	349
Mundakayam	420	407	387	379	361	334	393
Munnar	348	356	340	306	272	234	328
Palai	280	297	295	285	246	225	291
Peermede	415	415	383	320	314	..	308

Family Budgets of Agricultural Labourers

In order to have a picture of the standard of living of the people living in the rural areas of the District, we may rely on the findings of the sample survey of the family budgets of agricultural workers conducted by the Statistics Department of the State in four selected villages in Kottayam District at the instance of the Minimum Wages Committee for Employment in Agriculture constituted by the Government of Travancore-Cochin in 1953. Enquiries were conducted in villages of Vazhapally (Changanacherry Taluk) Thiruvappu (Kottayam Taluk) Vechoor (Vaikom Taluk) and Ramapuram (Meenachil Taluk).

Table XVIII shows the average distribution of percentage of expenditure per family per year in these villages.

TABLE—XVIII
Average Distribution and percentage of expenditure
per family per year

Items	Vazhapally		Thiruvappu		Vechoor		Ramapuram	
	200		200		100		107	
	No. of cards analysed	%	No. of cards analysed	%	No. of cards analysed	%	No. of cards analysed	%
Amount	Rs.	%	Amount	Rs.	Amount	Rs.	Amount	Rs.
Food	300.4	64.8	317.5	60.9	349.2	67.8	381.4	66.5
House Rent	0.4	0.1	0.1	..	..	..	..	..
Light and Fuel	33.2	7.1	18.3	3.6	27.8	5.4	7.4	1.3
Pansupari	28.1	6.0	30.9	5.9	20.00	3.9	31.2	5.4
Clothing	39.7	8.6	41.5	7.9	31.0	6.0	48.0	8.4
Miscellaneous	62.1	13.4	112.9	21.7	86.8	16.9	105.8	18.4
Total	463.9	100.00	521.2	100.00	514.48	100.00	573.8	100.00

Family Budget of Toddy Tappers.

We may also refer to the findings of the enquiry conducted into the family budgets of toddy tappers in Meenachil (Meenachil Taluk) by the Statistics Department of the State in 1957-58. Hundred households of toddy tappers were enumerated in Meenachil. On an average there were seven members in a household. Among every ten person in the population there were two earners, one earning and seven non-earning dependents. Their total household expenditure came to Rs. 132.84. Of these Rs. 88.46 was spent on food, Rs. 8.64 on clothing, Rs. 13.87 on housing and Rs. 21.87 on miscellaneous items. The details of household expenditure are given in table XIX.

TABLE—XIX

Details of household Expenditure in Meenachil

All	132.84
<i>Food</i>	
All	88.46
General (Rice Cereals and Tapioca)	44.84
Pulses	0.90
Vegetables	1.63
Meat, fish etc.	6.76
Oil and fats	4.60
Milk and milk products	4.25
Fruits	1.27
Condiments and spices	24.21
<i>Clothing</i>	
All	8.64
Dhoti	2.31
Sari	0.38
Shirting and clothing	1.17
Blouse	0.83
Ready made garments	0.33
Frocks	0.11
Neriath	1.04
Other Clothing	0.34
Blanket, bed sheet and bedding	0.64
Laundry, Washerman and washing	0.82
Footwear	0.08
Tailoring	0.46
<i>Housing</i>	
All	13.87
Fuel and Lighting	7.39
Housing	6.48
<i>Miscellaneous</i>	
All	21.67
Toilet	0.73
Barber and Shaving	1.36
Chewing	3.67
Beedi and Cigarettes	1.88
Drugs and intoxicants	3.38
Medical Care	2.51
Education	1.62
Conveyance and Travelling	1.00
Ceremonials	2.86
Others	2.51

It may be seen from the above table that the bulk of the expenditure was on food.

Family Budgets of Plantation Workers

In March 1958 the Department of Statistics conducted an Enquiry into the Family Budgets of the Workers in the Tea plantations in Kerala as part of the Nutritional Diet Survey of Workers in tea plantations. Tea estates from Kottayam were covered by the survey. The list of estates covered with particulars of the average household size, sex-ratio, etc. is given in Table XX.

TABLE—XX

Average Household size in Estates of Plantation Workers

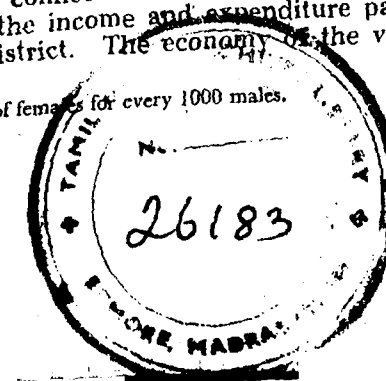
Name of Estate	Sample of Persons	Population		Average household size	Adult equivalent	Sex Ratio 1
		Male	Female			
Kannimala	44	20	24	4.4	3.30	1200
Devikulam	54	28	26	5.4	4.12	929
Munnar	47	24	23	4.7	3.72	958
Choolamala	41	22	19	4.1	3.36	864
Fairfield	42	17	25	4.2	3.40	1471
Pasuparai	41	21	20	4.1	3.10	952
Wellarady	47	25	22	4.7	3.58	880
Pasumala	53	23	30	5.3	4.00	1304
Panniyar	42	10	23	4.2	3.22	1211
Elappally	43	19	24	4.3	3.32	1263

Data relating to family budgets were collected from the sample household at each of the estates. The average monthly expenditure per household under five broad groups viz., food, fuel and lighting, housing, clothing and miscellaneous is given in the table at Appendix VI. It may be noted that 67.4% of the total expenditure was incurred on food, 5.6 on fuel and lighting, 1.2 on housing, 10.9 on clothing and 14.9 on miscellaneous items.

Survey of the Kurichi Village (1961)

The findings of the Village Survey Conducted in Kurichi (Changanacherry Taluk) in connection with the 1961 Census also help to throw light on the income and expenditure pattern of a typical village in the District. The economy of the village

1 The figures given are those of females for every 1000 males.



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was mainly dependent on agriculture. Out of 112 households covered by the survey 89 derived their principal income from agricultural labour. The average monthly income of 5.62 per cent of the households was less than Rs 25. At the same time 20.22 per cent households earned between Rs 25 and Rs 50 per month, 46.07 per cent households between Rs 51 and Rs 75, 16.85 per cent between Rs 76 and Rs 100 and the rest above Rs 100 per month. The average number of workers from these households was 1.50, 2.54, 2.73 and 4.20 respectively. The average monthly income of the households of the different categories was Rs 21.99, Rs 41.64, Rs 63.34, Rs 87.39 and Rs 137.17. When all the households were put together 84.30 per cent of the total income was derived by way of wages. They also derived 14.69 per cent of the total income from the small plots cultivated by them. A few households received help from relatives and a few others derived a small income from other unidentifiable sources.

As for expenditure in the agriculture income group, as high as 88.64 per cent of the total expenditure was on food. The main items of food were rice, tapioca, fish, coconut and oils on which 51.60 per cent, 16.72 per cent, 8.35 per cent, 4.36 per cent and 3.12 per cent of the expenditure on food were spent. Among the other items condiments, chillies and pulses were the most important. A small amount was spent on liquor and a greater amount on smoking and chewing. The amounts spent on all items varied almost in proportion to the number of members in the different income groups. All the households taken together spent Rs 14.81 per month per equivalent adult male for food. Among the different income groups this amount was found to vary from Rs 11.20 for the lowest income group to Rs 15.40 for the highest income group. For the three intermediate income groups the amounts were Rs 15.00, Rs 14.60 and Rs 15.00 respectively. It may thus be seen that the standard of living of all the income groups except the lowest one did not vary. After food, the largest percentage of expenditure, namely 5.13 per cent, was on clothing, 3.52 per cent was spent on miscellaneous items and 2.71 per cent on housing, light, fuel etc. Among the miscellaneous items the largest amount, namely 58.03 per cent, was spent on dhobi and soap. Barber, travelling and religious observances also claimed small amounts. In spite of the poor income, all the households except those in the lowest income group spent some amount for amusements and for investments in savings schemes, particularly in kuris conducted among themselves. While small amounts had been spent by certain households on education, none spent anything towards medical fees or medicines. Even though all these households had small plots of their own to be cultivated, no amount was spent on them either.

Out of the 112 households in the village 23 came under the "miscellaneous occupational income group." These house-

holds (except one which was a rented building occupied by a student and not covered by the Survey) consisted of those of government servants, businessmen, barbers and carpenters. One household was that of a single woman who depended upon help from relatives and rent of a building and whose income was less than Rs 25 per month. Among the remaining households two had a monthly income between Rs 25 and Rs 50, five between Rs 51 and Rs 75, 8 between Rs 75 and Rs 100 and 6 above Rs 100. The average incomes of the different households were Rs 16.66, Rs 42.71, Rs 68.75, Rs 86.30 and Rs 133.31. Compared to the agricultural labourers this occupational group had regular employment and regular income. 69.34 per cent of the total income of all the households put together was derived by way of salary or wages. Business run by the households, household cultivation and help from relatives were the other important sources of income.

As for expenditure, 82.16 per cent of it was incurred on food which was slightly less than that among the agricultural labourers. The chief items of food were rice, tapioca, fish, coconut and oils for which 48.19 per cent, 13.27 per cent, 8.78 per cent, 5.97 per cent and 3.20 per cent of the total expenditure were spent. The percentages of expenditure on rice and tapioca were smaller and those on the other items greater than in the agricultural group. The amounts spent on liquor as well as chewing and smoking were also smaller than in the case of agricultural labourers. The total expenditure on food per adult male equivalent was Rs 16.21 per month. For the different income groups this amount worked out to Rs 16.67, Rs 14.80, Rs 17.04, Rs 15.41 and Rs 16.71 indicating only a minor difference between the different income groups. 6.65 per cent of the total expenditure was spent on clothing and 6.03 per cent on miscellaneous items. The expenditure on the latter item was high compared to the agricultural labourers. Considering the details of the miscellaneous expenditure, it was found that 36.43 per cent of it was spent on dhobi and soap, 24.03 per cent on saving schemes, 16.09 per cent on education and 13.18 per cent on travelling. The percentage spent on dhobi and soap was smaller and that on education and savings schemes higher than in the agricultural income group. This group also spent a small amount on amusements, religious observances and medicines. Housing, light, fuel etc. claimed 3.78 per cent of the total expenditure of which a major portion was spent on lighting. Very little was spent on the maintenance or reconstruction of the house and practically no amount for fuel which they managed to collect from the compounds. Unlike the agricultural labourers this group spent a smaller amount on the household cultivation and business.

General Level of Employment.

The total number of persons employed in the Public and Private sectors in the District in 1970 stood at 92,808. Out

of this 71,718 were employed in the private sector and 21,090 in the public sector. The table XXI gives the number of employees in the private and public sectors in the District as on 31st March 1961 to 1970.

TABLE—XXI

Employment in the Public and Private Sectors in the District (as on 31st March 1961-1970)

Year	Public sector	Private sector	Total
1961	15,911	39,523	55,434
1962	16,588	46,284	62,872
1963	17,594	53,776	71,370
1964	18,807	69,560	88,367
1965	18,576	72,771	91,347
1966	19,071	77,738	96,809
1967	17,780	75,129	93,837
1968	19,034	74,590	93,624
1969	20,569	73,431	94,000
1970	21,090	71,718	92,808

Unemployment.

The Census of 1961 throws light on the extent of unemployment in the District. In the rural areas 13,450 persons were returned as employment seekers, the majority of them belonging to the age group 13-34. The statement in Table XXII gives the statistics of unemployed persons in rural areas in the age group 15 years and above and their distribution by sex and educational levels.

TABLE—XXII

Persons unemployed aged 15 and above in Rural areas by sex and by educational levels

Educational levels:	Unemployed Persons aged 15 and above			Percentage distribution		
	Persons	Males	Females	Persons	Males	Females
Total unemployed	13,234	10,003	3,231	100.00	100.00	100.00
Illiterate	710	610	100	5.36	6.10	3.10
Literate (without educational level)	2,677	2,411	266	20.23	24.10	8.23
Primary or Junior Basic	2,359	2,115	244	17.83	21.14	7.55
Matriculation and above	7,488	4,867	2,621	56.58	48.66	81.12

In the urban areas 22 out of every 1,000 persons were returned as unemployed. The statement Table XXIII shows the number of unemployed persons in the urban areas by sex and educational levels.

TABLE XXIII

Persons unemployed aged 15 and above by sex and Educational levels in Urban areas.

	Total Persons	unemployed Males	Females
Total	2,536	1,859	677
1 Illiterate	29	28	1
2 Literate (without educational level)	425	404	21
3 Primary or Junior Basic	643	586	57
4 Matriculation or Higher Secondary	1,159	696	463
5 Technical diploma not equal to degree	36	12	24
6 Non-technical diploma not equal to degree	9	3	6
7 University degree or post-graduate degree other than technical degree.	130	81	49
8 Technical degree or diploma equal to degree or post-graduate degree.	105	49	5
Total	1	1	..
(i) Engineering	..	..	..
(ii) Medicine	2	2	..
(iii) Agriculture	2	2	..
(iv) Veterinary & Dairying	..	..	..
(v) Technology	5	..	..
(vi) Teaching	95	44	51
(vii) Others			

According to the Survey of Employment and Un-employment in Kerala conducted in 1965, the un-employed persons in the District as percentage of labour force formed 6.80. The percentages for the males was 5.69 and for the females 9.97.

The following table on the number of work seekers in the District from 1961 to 1971 will help to convey an idea of the general level of unemployment in the District.

Number of work seekers (1961-1971)

Year and date	Number
31-12-1961	11,978
31-12-1962	14,124
31-12-1963	10,520
31-12-1964	12,752
31-12-1965	12,794
31-12-1966	13,070
31-12-1967	13,336
31-12-1968	15,406
31-12-1969	19,620
31-12-1970	24,260
31-12-1971	28,632

Employment Exchange.

The Employment Exchange, Kottayam, was set up in 1957. Its territorial jurisdiction extends over the whole of the Kottayam District. Since its inception the Kottayam Employment Exchange has been engaged in registering un-employed persons and finding suitable occupations for them. An idea of the working of the Exchange since its inception can be had from the Table at Appendix VII which gives the figures relating to the total number of registered employment seekers, number of placings and persons on the live register for each of the years from 1957 to 1966. A statement of the registered employment seekers on the basis of occupational break-up for the period 1960-64 is given in the table at Appendix VIII.

In addition to the task of registration and placement of un-employed persons, the responsibility for collecting Employment Market Information is vested in the Employment Exchange. Under this system Employment Returns are collected every quarter from all Establishments in the public sector and selected establishments in the private sector. The information thus collected is utilised for man power budgeting, vocational guidance and many other planning and administrative purposes such as vocational training and for assessing the impact of the Five Year Plan in creating new employment. The registration figures of applications in the Exchange also help in assessing the nature and extent of unemployment and other related subjects are also conducted by the Exchange.

In the complex economic structure of modern times where people make their living by following myriad occupations, it is often difficult for fresh entrants into the employment markets to make a wise and pragmatic choice of a career that suits their abilities and aptitudes while giving them the maximum job satisfaction. To meet this need a Vocational Guidance Unit was started in the Kottayam Employment Exchange in 1962-63. It assists the employment seekers in the choice of an occupation.

To get the maximum job satisfaction, one must know all about the occupation in which he is to start his career before selecting a job. To facilitate this, career pamphlets containing detailed information regarding selected occupations in which qualified applicants are in short supply on an All India basis are published by the National Headquarters. These Pamphlets are made available for sale at nominal price at the Employment Exchange. Reference books on training facilities in India and other useful publication on occupational information are also made available at the Employment Exchange.

Achievements under the Five Year Plan.

A brief survey of the major achievements of the District under the various Five Year Plan may be attempted in this

Chapter. The main objective of the first Five Year Plan (1951-56) was increased food production. This objective was achieved in this District both by intensive and extensive cultivation. The *kayal* lands, popularly known as the 'Kari Lands' which were cultivated only once in two years in normal times, were made cultivable once a year. The use of chemical manures was popularised by opening a net work of manure depot in the different parts of the District and by selling chemical fertilizers at subsidised rates to the cultivators. Lift Irrigation Schemes were started on the banks of the Muvattupuzha river and paddy lands which used to be cultivated only once in a year were converted into double crop and in some cases even triple crop lands. Considerable progress was achieved in this District during the first Five Year Plan in increasing the production of food crops.

In the Second Five Year Plan (1956-61) apart from the implementation of the agricultural production schemes, attempts were made to weave the pattern of industrial development, to improve communication facilities and establish and expand Irrigation and Power Projects. The establishment of an Industrial Estate at Ettumanur provided a nucleus for industrial development of the District among cottage Industries, extraction of oil by indigenous process, spinning of coir yarn, retting coconut husks and mat weaving have been the most popular. Encouragement was also given for the expansion of these and other cottage industries by providing assistance and guidance through the Community Development Blocks.

The most important means of communication in this District are the Kottayam-Kumily Road, the Main Central Road and the Alwaye-Munnar Road. During the third Five Year Plan, improvements were made to these main roads. The work of construction and improvement of branch roads, connecting these main Roads, was also undertaken. The Ernakulam-Quilon Railway line, which has contributed to a large measure to the economic development of this District, was also laid during this period.

A lion's share in the Plan expenditure went to Irrigation and Power Projects in this District. The most powerful generating stations in Kerala were developed in Kottayam District. The spill-over work of constructing a 110 K. V. transformer station at Sengulam was completed during the Second Five Year Plan. During this period it was also possible to provide carrier current communications at Pallivasal and Sengulam Generating Stations and to extend Rural Electrification in the High Ranges. The work on the Panniar Hydro Electric Project Scheme was started in 1955-57 and the major part of works was completed during the Second Five Year Plan.

The Third Five Year Plan (1961-66) envisaged among other things, follow-up activity in regard to spill over schemes of the first and second Five Year Plans.

The Community Development Programme was introduced in the Kottayam District with the inauguration of the Uzhavur N. E. S. Block in October 1954. The District has since been delimited into 13 N. E. S. Blocks viz., (1) Madappally, (2) Vazhoor, (3) Pallam, (4) Ettumanoor, (5) Pampady, (6) Vaikam, (7) Kaduthuruthy, (8) Uzhavoor, (9) Lalam, (10) Erattupetta, (11) Kanjirappally, (12) Arudai and (13) Devikulam. A complete list of the Blocks with details of their status in November 1964, the population and area covered by them, the dates of their establishment, the number of villages and Panchayats etc., is given in the Table at Appendix IX.

The Community Development Programme is a multipurpose programme embracing all fields of developmental activity. These activities may be classified under the following broad heads:— (1) Agriculture and Animal Husbandry, (2) Irrigation, (3) Co-operation, (4) Health and rural sanitation, (5) Education, (6) Social Education, (7) Communication, (8) Rural Arts, Crafts and Industries and (9) Housing. A statement of the physical achievements and people's contribution in the Uzhavoor N. E. S. Block till the end of January 1965 is also given at Appendix X.

APPENDIX I

Monthly Average Prices for the month of August 1939, 1951, 1956, 1961, 1963, 1966.

S.L. No.	Name of Commodity	Unit	August 1939			August 1951			August 1956			August 1961			August 1963			August 1966		
			Kottayam	Changanacherry	Munnar	Kottayam	Changanacherry	Munnar	Kottayam	Changanacherry	Munnar	Kottayam	Changanacherry	Munnar	Kottayam	Changanacherry	Munnar			
1	Rice	Kg.	0.11	0.12	0.15	0.44	0.46	..	0.53	0.53	0.54	0.85	0.71	0.82	0.69	0.64	0.69	0.76*	0.76*	0.76*
2	Corriander	"	0.24	0.24	0.26	2.20	2.47	..	1.01	0.93	1.08	1.23	1.23	1.48	0.99	0.98	1.00	2.82	2.95	2.75
3	Chillies	"	0.52	0.51	0.48	2.47	2.76	..	2.14	2.25	2.47	2.50	2.46	2.76	2.70	2.80	3.25	5.76	5.83	6.25
4	Onions	"	0.07	0.07	0.08	0.26	0.26	..	0.20	0.18	0.26	0.26	0.26	0.35	0.23	0.23	0.23	0.65	0.68	0.78
5	Salt	"	0.11	0.11	0.11	0.13	0.11	..	0.07	0.07	0.11	0.06	0.10	0.15	0.08	0.08	0.12	0.10	0.09	0.12
6	Tapioca	"	0.04	0.04	0.04	0.13	0.13	..	0.13	0.13	0.13	0.13	..	0.15	0.15	0.11	0.19	0.28	0.26	0.25
7	Greengram	"	0.18	0.18	0.18	0.97	0.87	..	0.60	0.85	0.55	0.89	0.88	0.82	0.94	0.84	0.81	1.56	1.53	1.75
8	Blackgram	"	0.18	0.18	0.18	0.97	0.87	..	0.71	0.71	0.68	0.74	0.75	0.83	0.92	0.88	1.11	1.38	1.29	1.55
9	Mutton	"	0.55	0.55	0.55	2.76	2.20	..	2.07	2.20	2.76	3.31	2.75	3.31	3.42	3.50	3.75	5.00	5.00	5.50
10	Fish	"	0.31	0.26	0.42	2.20	1.65	..	1.23	0.79	1.92	0.49	2.62	1.10	1.80	1.56	1.40	2.93V	2.98V	1.50
11	Milk (Cow)	Litre	0.18	0.14	0.09	0.73	0.73	..	0.73	0.55	0.37	0.82	0.70	0.45	0.84	0.84	0.46	1.20	1.20	0.60
12	Tea	Kg.	1.10	1.04	0.97	4.96	5.51	..	4.67	5.38	5.51	5.25	5.75	4.83	5.00	5.18	5.50	5.00	6.00	6.50
13	Sugar	"	0.31	0.31	0.35	1.10	1.15	..	1.06	0.98	1.04	1.23	1.21	1.30	1.21	1.21	1.22	1.47	1.47	1.52
14	Coconut oil	Litre	0.29	0.26	0.34	2.02	2.38	..	1.58	1.48	1.65	2.17	2.17	2.42	2.63	2.55	3.06	4.40	4.37	4.75
15	Coconut	100	2.25	2.12	5.00	25.00	28.00	..	15.25	14.50	21.00	23.50	25.00	35.00	34.60	25.40	37.20	51.25	45.33	55.00
16	Kerosene	Litre	0.18	0.18	0.23	0.41	0.32	..	0.73	0.73	0.46	0.41	0.37	0.47	0.53	0.55	0.55	0.53*	0.54*	0.53*
17	Firewood	M.T	7.38	6.40	4.92	30.00	52.50	..	25.19	31.00	29.50	24.38	21.50	26.00	27.50	21.16	25.50	29.00	25.00	23.67
18	Arecanut	100	0.44	0.42	0.47	3.00	3.00	..	3.37	3.81	5.00	3.31	3.40	3.63	3.40	2.90	4.40	3.50	4.13	4.50
19	T. baccor(card)	Kg.	0.97	0.90	0.90	3.86	7.16	..	3.92	3.31	2.73	3.85	3.43	3.17	4.60	4.78	7.00	5.00	5.00	6.50

* August 1965 - Control price

V Variety change

APPENDIX II

Agricultural Wages for the years 1960-66 at Poozhikole

Type of Labour		1960	1961	1962	1963	1964	1965	1966
	Carpenter	2.55	2.66	3.00	3.22	4.16	5.98	6.00
Skilled Labour	Blacksmith	NA	NA	NA	NA	NA	NA	NA
	Mason	2.55	2.66	3.00	3.11	3.91	5.85	6.0
	Men	1.75	1.92	2.06	2.25	2.57	3.29	3.5
Field Labour	Women	0.87	0.92	1.12	1.32	1.52	1.92	2.3
	Children	NA	NA	NA	NA	NA	NA	NA
Other agricultural Labour	Men	1.56	1.71	2.01	2.19	2.48	2.92	3.3
	Women	0.77	0.77	0.77	NA	NA	NA	2.5

Agricultural Wages for the year 1960-66 at Keezhanthur Centre

Type of Labour		1960	1961	1962	1963	1964	1965	1966
	Carpenter	4.50	4.38	4.67	5.00	5.00	5.13	5.92
Skilled Labour	Blacksmith	NA	NA	NA	NA	NA	NA	NA
	Mason	4.50	4.46	4.57	4.61	4.62	4.77	5.8
	Men	1.75	1.70	1.60	1.61	1.66	2.04	2.7
Field Labour	Women	1.00	1.02	1.10	1.11	1.14	1.39	1.6
	Children	0.75	0.77	0.85	0.86	0.89	1.04	1.4
Other Agricultural Labour	Men	1.75	1.70	1.60	1.61	1.66	2.06	3.10
	Women	1.00	1.02	1.10	1.11	1.14	1.39	1.9
	Children	0.75	0.77	0.85	0.86	0.89	1.04	1.53
Herdsmen	Men	..	..	1.33	..	..	2.00	2.00

APPENDIX III

Minimum Rates of Wages payable to the labourers employed in the Tea and Rubber Estates.

The Minimum Time Rates

A For Tea Estates which admeasure 100 acres in bearing and above and Rubber Estates which admeasure 200 acres in bearing and above in extent.

Consolidated wage rates
(including basic wage and
dearness allowance)

	Rs.	Ps.
(a) Field Workers		
Men	1	72
Women Tappers	1	50
Women other than Tappers	1	31
Adolescents	1	06
Children	0	85
(b) Factory Workers		
Men	1	88
Women	1	44
Adolescents	1	19

B For Tea and Rubber Estates other than those mentioned under item A above.

(a) Field Workers		
Men	1	65
Women Tappers	1	47
Women other than Tappers	1	27
Adolescents	1	04
Children	0	83
(b) Factory Workers		
Men	1	63
Women	1	44
Adolescents	1	17

Guaranteed Time Rates

Workers working on piece rates shall be entitled to receive a guaranteed time rate over and above the piece rates irrespective of results. The rates shall be:

A For Tea Estates which admeasure 100 acres in bearing and above and Rubber Estates which admeasure 200 acres in bearing and above in extent.

(a) Men	0	88
(b) (i) Women Tappers	0	88
(b) (ii) Women other than tappers	0	69
(c) Adolescents	0	56
(d) Children	0	46

B For Tea and Rubber Estates other than those mentioned under item A above

(a) Men	0	84
(b) (i) Women tappers	0	84
(b) (ii) Women other than tappers	0	65
(c) Adolescents	0	53
(d) Children	0	42

APPENDIX IV

Details of family expenditure under major items

		Kottayam					
Items	Unit	Below Rs.50	Rs.50- 100	Rs.100- 150	Rs.150- 250	Rs.250- 350	Rs.350- 500
Rice	Edangazhi	29.58	48.24	69.81	95.30	133.10	157.67
Condiments	lbs.	..	..	..	..	..	..
Tapioca	"	22.15	30.72	31.02	29.83	16.25	13.29
Pulses	"	1.09	2.04	4.34	7.85	12.22	20.15
Vegetables	"	7.42	15.29	25.03	40.92	50.05	68.96
Meat	"	0.37	0.62	1.72	4.42	9.72	14.77
Fish	"	2.24	3.73	5.97	9.56	15.22	23.97
Milk	Edangazhi	0.67	2.69	6.16	16.80	25.07	37.24
Tea, etc.	lbs.	2.19	4.09	6.86	10.36	14.45	20.98
Oil	Edangazhi	0.62	1.12	1.71	2.50	3.58	4.85
Coconuts	Nos.	9.00	18.00	30.00	43.00	53.00	65.00
Clothing	Yds.	2.13	4.07	7.20	11.70	18.47	28.33
Washing	Nos.	8.00	17.00	37.00	82.00	122.00	185.00
Rent	As	27.20	56.00	132.80	228.80	366.40	449.60
Light	As	1.20	2.60	4.14	7.95	10.82	11.70
Fuel	lbs.	195.21	322.85	533.08	743.31	923.51	1,268.89
Education	As	22.40	35.20	99.20	233.60	459.20	840.00
Pansupari	As	1.04	1.52	2.32	3.12	3.84	6.40
		Changanacherry					
Rice	Edangazhi	27.84	50.22	74.59	84.40	124.83	191.38
Condiments	lbs.	..	..	..	..	..	..
Tapioca	"	38.40	64.69	78.28	63.07	51.69	46.97
Pulses	"	1.36	2.28	4.62	8.55	11.13	20.96
Vegetables	"	3.71	9.73	16.68	29.38	39.39	66.32
Meat	"	0.12	1.11	20.09	4.84	9.23	10.86
Fish	"	2.24	5.38	8.06	11.95	18.10	12.45
Milk	Edangazhi	0.67	2.53	5.94	12.32	22.04	41.23
Tea, etc.	lbs.	2.92	4.82	6.86	9.78	13.86	16.78
Oil	Edangazhi	0.58	0.92	1.37	2.16	3.29	6.78
Coconuts	Nos.	8.00	15.00	22.00	36.00	55.00	66.00
Clothing	Yds.	2.48	6.26	9.60	14.43	21.30	26.70
Washing	Nos.	5.00	12.00	22.00	48.00	60.00	132.00
Rent	As	14.40	30.40	52.80	102.40	198.40	272.00
Light	As	0.60	2.20	3.50	5.09	9.54	11.13
Fuel	lbs.	165.18	345.38	525.57	720.79	998.59	1,201.31
Education	As	20.80	33.60	76.80	184.00	393.92	859.20
Pansupari	As	1.28	2.08	3.04	3.60	5.26	7.92

APPENDIX IV (Contd.)

		Below Rs. 50	Rs. 50- 100	Rs. 100- 150	Rs. 150 250	Rs. 250- 320	Rs. 350- 500
		MUNDAKAYAM					
Rice	Edangazhi	9.40	16.24	23.63	35.47	46.51	61.70
Condiments	lbs.	2.14	3.90	4.92	7.25	15.07	18.68
Tapioca	"	3.49	7.51	11.08	14.72	18.52	12.38
Pulses	"	0.48	1.74	2.43	4.10	4.45	5.12
Vegetables	"	1.25	2.54	3.60	6.39	8.59	19.60
Meat	"	1.81	4.39	6.09	7.86	16.41	21.22
Fish	"	1.71	3.17	4.20	6.50	7.63	8.25
Milk	Edangazhi	0.68	1.49	3.63	7.00	17.89	24.53
Tea, etc.	lbs.	3.13	4.92	7.20	10.99	18.19	24.04
Oil	Edangazhi	1.60	2.26	3.24	5.28	8.29	10.65
Coconuts	Nos.	2.19	3.68	5.54	7.90	14.31	25.35
Clothing	Yds.	3.31	6.38	9.81	12.51	17.60	21.81
Washing	Nos.	0.97	2.08	3.07	4.45	5.85	9.90
Rent	As.	1.61	2.50	4.84	9.72	17.74	34.00
Light	As.	0.79	1.03	1.32	2.13	4.06	4.70
Fuel	lbs.	3.09	4.67	6.35	8.10	10.78	13.40
Education	As.	1.18	2.92	5.24	8.95	15.93	34.00
Pansupari	As.	1.64	2.62	3.13	5.27	6.54	7.30
		PALAI					
Rice	Edangazhi	8.00	21.34	34.45	50.60	65.38	74.78
Condiments	lbs.	1.40	5.66	7.49	9.61	12.62	19.11
Tapioca	"	4.57	9.71	11.12	10.11	12.14	10.67
Pulses	"	1.00	1.62	1.98	2.36	3.66	5.67
Vegetables	"	0.86	2.26	3.60	4.78	6.59	8.78
Meat	"	1.57	2.53	6.09	8.22	13.62	16.00
Fish	"	1.57	2.52	4.20	5.79	6.31	7.22
Milk	Edangazhi	1.07	1.34	3.63	6.27	15.36	21.22
Tea, etc.	lbs.	1.71	2.14	7.20	7.01	11.17	19.25
Oil	Edangazhi	1.43	2.95	3.24	4.80	7.62	12.56
Coconuts	Nos.	2.36	3.53	5.54	7.98	13.26	13.11
Clothing	Yds.	2.04	4.56	9.81	17.30	27.55	28.54
Washing	Nos.	0.55	1.20	3.07	1.37	3.36	2.94
Rent	As.	2.71	3.17	4.84	10.28	14.79	24.67
Light	As.	0.71	1.16	1.32	2.27	3.07	7.00
Fuel	lbs.	2.57	3.39	6.35	6.97	9.54	12.56
Education	As.	6.00	10.58	5.24	24.71	62.76	98.50
Pansupari	As.	1.57	2.90	3.13	2.66	3.66	8.33

APPENDIX IV (Contd.)

Items	Unit	Below Rs. 50	Rs. 50- 100	Rs. 100- 150	Rs. 150- 250	Rs. 250- 350	Rs. 350- 500
MUNNAR							
Rice	Edangazhi	8.00	14.76	21.22	30.36	35.53	39.57
Condiments	lbs.	1.40	3.39	6.16	8.60	12.07	13.57
Tapioca	"	3.70	3.48	3.69	3.19	2.75	2.36
Pulses	"	0.96	1.92	3.43	4.61	6.98	8.50
Vegetables	"	1.96	3.56	6.67	10.50	16.35	18.86
Meat	"	1.30	2.79	5.63	10.07	15.55	16.82
Fish	"	0.78	1.46	2.57	4.26	6.91	6.00
Milk	Edangazhi	1.64	3.24	6.96	14.77	22.71	31.48
Tea, etc.	lbs.	3.48	6.11	11.75	16.69	22.87	25.84
Oil	Edangazhi	2.26	3.63	5.29	8.09	11.70	17.40
Coconuts	Nos.	1.56	2.45	3.12	4.74	6.25	7.50
Clothing	Yds.	2.61	5.58	10.54	17.37	27.10	32.10
Washing	Nos.	1.18	1.80	3.05	4.93	8.56	8.30
Rent	As.	4.48	5.61	8.17	13.69	27.34	28.50
Light	As.	1.06	1.52	2.25	3.52	4.34	5.32
Fuel	lbs.	2.28	3.33	4.20	5.46	7.01	6.88
Education	As.	4.15	7.73	16.40	31.90	58.38	103.16
Pansupari	As.	1.48	2.18	3.37	4.66	6.80	8.21
PEERMEDE							
Rice	Edangazhi	5.69	12.38	19.27	27.07	38.00	..
Condiments	lbs.	2.89	6.67	9.63	11.75	17.82	..
Tapioca	"	4.46	7.46	8.38	9.50	8.50	..
Pulses	"	1.27	3.25	5.45	6.85	10.79	..
Vegetables	"	1.31	3.21	5.39	7.08	12.10	..
Meat	"	0.65	2.50	5.10	8.38	15.61	..
Fish	"	1.13	3.14	3.50	4.22	8.29	..
Milk	Edangazhi	0.69	2.70	6.31	10.10	16.60	..
Tea, etc.	lbs.	2.68	5.83	9.00	12.07	18.60	..
Oil	Edangazhi	1.41	2.97	4.60	6.03	11.25	..
Coconuts	Nos.	1.58	3.00	4.57	6.34	9.25	..
Clothing	Yds.	1.54	4.07	8.06	12.67	27.23	..
Washing	Nos.	1.65	2.74	4.85	6.45	9.18	..
Rent	As.	1.85	3.63	5.22	7.68	10.79	..
Light	As.	0.67	1.00	1.57	2.00	2.90	..
Fuel	lbs.	3.23	4.76	6.32	9.00	13.82	..
Education	As.	0.15	1.14	3.09	12.50	32.21	..
Pansupari	As.	2.19	4.42	6.31	8.16	12.32	..

APPENDIX V

Average quantities of the various commodities consumed according to the expenditure group

Items	Unit	Below Rs. 50	Rs. 50- 100	Rs. 100- 150	Rs. 150- 250	Rs. 250- 350	Rs. 350- 500
KOTTAYAM							
Rice	Edangazhi	13.6	22.2	32.1	42.9	61.2	73.0
Pulses	lbs.	3.4	0.8	1.6	3.9	4.5	7.4
Tapioca	"	1.6	2.1	2.1	2.0	..	..
Vegetables	"	1.6	3.3	5.4	8.8	10.8	14.9
Meat	"	0.3	0.5	1.4	3.6	7.9	12.0
Fish	"	1.5	2.5	4.0	6.4	10.9	16.1
Milk	Edangazhi	0.6	2.4	5.5	15.0	22.4	33.3
Tea, Coffee etc.	lbs.	1.5	2.8	4.7	7.1	9.9	14.4
Oil	Edangazhi	1.5	2.7	4.1	6.0	8.6	11.7
Coconut	Nos.	2.2	4.1	7.1	10.0	12.3	15.2
House rent	As.	1.7	3.5	8.3	14.3	22.9	28.1
Light	Unit	0.6	4.8	1.3	2.5	3.4	3.7
Fuel	lbs.	0.6	..	7.1	9.9	12.3	16.9
Clothing	Yds.	2.1	4.1	7.2	11.7	18.5	28.3
Pansupari	As.	1.3	1.9	2.9	3.8	4.8	8.0
Education	As.	0.4	1.2	4.0	10.0	19.7	33.2
Recreation	As.	0.3	0.1	0.7	1.1	2.2	5.8
Medical	As.	0.7	0.9	1.5	3.5	6.8	13.5
Washing	As.	..	..	..	..	7.3	11.1
CHANGANACHERRY							
Rice	Edangazhi	12.8	23.0	34.3	38.8	57.4	88.0
Pulses	lbs.	0.5	0.8	1.7	3.2	4.1	7.7
Tapioca	"	2.6	4.4	5.3	4.3	..	..
Vegetables	"	0.8	2.1	3.6	6.3	8.5	14.3
Meat	"	0.1	0.9	1.7	3.9	7.5	88.8
Fish	"	2.1	3.6	5.4	8.0	12.1	8.5
Milk	Edangazhi	0.6	2.1	5.3	11.0	19.7	36.8
Tea, Coffee etc.	lbs.	2.0	3.3	4.7	6.7	9.5	11.5
Oil	Edangazhi	1.4	2.2	3.3	5.2	7.9	16.5
Coconut	Nos.	1.9	3.6	5.1	8.3	12.7	15.5
House Rent	As.	0.9	1.9	3.3	6.4	12.4	17.0
Light	Unit	0.3	4.6	1.1	1.6	3.0	3.5
Fuel	lbs.	2.2	..	7.0	9.6	13.3	16.0
Clothing	Yds.	2.5	6.3	9.5	14.4	21.3	26.8
Pansupari	As.	1.6	2.6	3.8	4.6	6.6	8.9
Education	As.	0.4	0.7	2.4	7.1	15.9	41.1
Recreation	As.	0.3	0.4	0.7	1.4	2.5	2.4
Medical	As.	0.6	1.0	1.7	3.0	6.2	10.2
Washing	As.	..	..	..	..	3.6	7.9

APPENDIX V (Contd.)

Items	Unit	Below Rs.50	Rs.50- 100	Rs.100- 150	Rs.150- 250	Rs.250- 350	Rs.350- 500
MUNDAKAYAM							
Rice	Edn.	17.84	30.81	44.82	67.29	88.23	117.05
Condiments	lbs.	3.92	7.15	9.03	13.30	27.63	34.23
Tapioca	"	64.62	39.23	25.31	271.67	343.19	192.23
Pulses	"	1.23	4.48	6.26	10.57	11.47	13.19
Vegetables	"	4.45	8.32	12.78	22.68	30.52	69.63
Meat	"	2.12	5.14	7.13	9.20	19.21	24.83
Fish	"	3.05	5.67	7.50	11.60	13.61	14.72
Milk	Edn.	0.73	1.60	3.89	7.50	19.18	26.29
Tea, coffee etc.	lbs.	3.15	4.95	7.25	11.06	18.30	24.19
Oil	Edn.	0.50	0.71	1.01	1.65	2.59	3.33
Coconuts	Nos.	9.19	15.42	23.18	33.10	59.96	106.18
Clothing	Yds.	2.43	4.68	7.20	9.18	12.91	16.00
Washing	Nos.	9.68	20.83	30.70	44.48	58.52	99.00
Rent	As.	25.81	41.50	77.50	155.53	283.85	544.00
Light	Unit	1.19	1.55	3.49	5.66	10.76	12.45
Fuel	lbs.	176.64	267.13	363.39	463.47	616.38	766.34
Education	As.	18.84	46.64	83.78	143.17	254.81	544.00
Pansupari	As.	6.46	10.35	12.34	20.83	25.81	28.83
PALAI							
Rice	Edn.	15.71	40.48	65.35	95.99	124.03	141.86
Condiments	lbs.	3.92	10.37	13.73	17.62	23.13	35.03
Tapioca	"	84.67	179.90	206.03	187.32	224.93	197.69
Pulses	"	2.58	4.17	5.10	6.08	9.43	14.61
Vegetables	"	3.05	8.03	11.12	16.98	23.41	31.09
Meat	"	1.84	2.95	3.88	9.62	15.94	18.73
Fish	"	2.80	4.50	5.23	7.12	11.26	12.88
Milk	Edn.	1.15	1.44	3.22	6.72	16.47	22.75
Tea, coffee etc.	lbs.	1.72	2.15	4.59	7.05	11.24	19.37
Oil	Edn.	0.45	0.92	1.20	1.50	2.38	3.93
Coconut	Nos.	9.89	18.97	24.46	33.42	55.54	54.91
Clothing	Yds.	1.50	3.34	7.10	12.62	20.21	20.94
Washing	Nos.	5.50	12.00	13.60	19.70	33.60	29.40
Rent	As.	43.36	50.72	83.68	164.48	236.64	394.72
Light	Unit	1.07	1.74	3.52	6.01	8.13	18.55
Fuel	lbs.	146.97	193.87	269.36	398.61	545.59	718.30
Education	As.	96.00	169.28	247.20	395.36	1,004.16	1,576.00
Pansupari	As.	0.62	1.15	1.07	1.05	1.45	3.29

APPENDIX IV (Contd.)

Item	Unit	Below Rs. 50	Rs. 50- 100	Rs. 100- 150	Rs. 150- 250	Rs. 250- 320	Rs. 350- 500
MUNNAR							
Rice	Edn.	15.18	28.00	40.26	57.60	67.40	75.07
Condiments	lbs.	2.57	6.21	11.29	15.77	22.13	24.88
Tapioca	"	68.55	64.48	68.37	59.10	59.95	43.73
Pulses	"	2.47	4.95	8.34	11.88	17.98	22.67
Vegetables	"	6.96	12.65	23.69	37.30	58.08	67.00
Meat	"	1.52	3.27	6.59	11.79	18.20	19.69
Fish	"	1.39	6.61	4.59	7.60	12.33	10.71
Milk	"	1.76	3.47	7.46	15.84	24.35	33.75
Tea, coffee etc.	"	3.50	6.15	11.82	16.80	23.02	26.00
Oil	Edn.	0.71	1.13	1.65	2.53	3.65	5.43
Coconuts	Nos.	6.37	10.26	13.07	19.85	26.18	31.41
Clothing	Yrds.	1.91	4.09	7.73	12.74	19.88	23.55
Washing	Nos.	11.80	18.00	30.50	49.30	85.60	83.00
Rent	As.	71.68	89.76	130.72	219.04	437.44	486.00
Light	Unit	1.59	2.23	5.96	9.33	11.50	14.09
Fuel	lbs.	130.39	190.44	240.20	312.26	400.90	393.46
Education	As.	15.52	36.94	87.72	244.90	577.06	1,191.13
PEERMADE							
Rice	Edn.	10.79	23.49	36.56	51.35	72.09	No. of
Condiments	lbs.	5.30	12.23	17.65	21.54	32.67	families
Tapioca	"	82.63	138.22	155.26	176.01	187.49	too
Pulses	"	3.27	8.37	14.04	17.65	27.80	small
Vegetables	"	4.65	11.40	19.15	25.15	42.98	
Meat	lbs.	0.76	2.93	5.97	9.81	18.28	
Fish	"	2.02	5.60	6.25	7.53	14.79	
Milk	Edn.	0.74	2.89	6.77	10.83	17.80	
Tea, Coffee etc.	lbs.	2.70	5.87	9.06	12.15	18.72	
Oil	Edn.	0.44	0.93	1.44	1.89	3.52	
Coconuts	Nos.	6.62	12.57	19.14	26.55	38.24	
Clothing	Yrds.	1.13	2.97	5.91	9.29	19.97	
Washing	Nos.	16.50	27.40	48.50	64.50	91.80	
Rent	As.	29.60	58.08	83.52	122.88	172.64	
Light	Unit	1.01	1.50	4.16	5.30	7.68	
Fuel	lbs.	184.72	272.22	361.44	514.71	790.36	
Education	As.	34.40	79.52	166.56	440.80	765.12	
Pansupari	Unit	0.86	1.75	2.49	3.22	4.86	

APPENDIX VI

Average monthly expenditure per household in Tea Estates (1958)

Name of the estate	Total Amount	Amount	Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure
	Rs. Ps. (2)	Rs. Ps. (3)	(4)	Rs. Ps. (5)	(6)	Rs. Ps. (7)	(8)	Rs. Ps. (9)	(10)	Rs. Ps. (11)	(12)
(1)											
Amalaim	201.96	142.73	70.67	9.97	4.04	0.58	0.29	19.89	9.85	28.79	14.25
Amalaim	188.54	138.55	73.49	8.89	4.72	0.80	0.42	17.93	9.51	22.37	11.66
Amalaim	117.09	78.84	67.33	7.55	6.45	3.27	2.79	12.89	11.01	14.54	12.42
Choolamalai	156.93	99.85	63.63	10.12	6.45	1.98	1.26	21.33	13.59	23.65	15.07
Fairfield	228.57	159.54	69.80	8.68	3.80	2.69	1.18	19.72	8.62	37.94	16.60
Pasupara	129.68	82.34	63.49	7.49	5.78	1.71	1.32	20.84	16.07	17.30	13.34
Wallardy	191.52	119.81	62.56	10.06	5.25	3.35	1.75	18.28	10.07	39.02	20.37
Palumalai	149.55	101.29	67.80	5.38	3.60	1.35	0.90	14.03	9.38	27.40	18.32
Fanniyar	156.82	99.31	63.33	11.80	7.52	1.18	0.82	20.17	12.86	24.26	15.47
Elappally	104.73	74.99	71.60	8.40	8.02	1.51	1.44	8.41	8.10	11.55	10.84

APPENDIX VII

Registration and placement in the Employment Exchange

Year		No. of registrations	No. of placements	No. of L.R. at the end of the year
1957	Men	11,859	1,145	7,701
	Women	3,434	104	2,227
	Total	15,293	1,249	9,928
1958	Men	6,241	830	6,316
	Women	1,846	103	2,128
	Total	8,087	933	8,444
1959	Men	6,693	703	7,195
	Women	1,847	180	2,191
	Total	8,540	883	9,386
1960	Men	7,188	831	8,143
	Women	2,122	194	2,718
	Total	9,310	1,025	10,861
1961	Men	6,904	835	9,020
	Women	2,260	249	2,958
	Total	9,164	1,084	11,978
1962	Men	9,396	1,041	10,604
	Women	3,314	136	3,520
	Total	12,710	1,177	14,124
1963	Men	8,915	1,114	7,181
	Women	3,017	154	3,339
	Total	11,932	1,268	10,520
1964	Men	11,452	1,021	8,924
	Women	3,498	222	3,828
	Total	14,950	1,243	12,752
1965	Men	9,734	993	8,930
	Women	3,797	334	3,864
	Total	13,531	1,327	12,794
1966	Men	9,113	676	8,339
	Women	4,413	180	4,731
	Total	13,526	856	13,070

APPENDIX VIII

Broad Occupational Break-up of the Live Register

Employment Exchange
1960-64

Occupational Division	1960	1961	1962	1963	1964
1 Professional, Technical & Related Workers	1,064	910	1,156	629	710
2 Administrative, Executive & Managerial Workers	16	33	21	2	-
3 Clerical and related workers	792	1,075	772	14	18
4 Sales Workers	8	6	6	1	-
5 Farmers, Fishermen, Hunters, Loggers & Related Workers	59	75	59	36	24
6 Miners, Quarrymen & Related Workers	4	3	-	-	-
7 Workers in Transport & Communication Occupations	285	308	483	310	349
8 Craftsmen, Production Process Workers & Labourers not elsewhere classified	748	660	644	309	367
9 Service, Sport & Recreation Workers	433	545	840	46	78
10 Workers not classifiable by Occupations	7,452	8,363	10,143	9,173	11,209
Total	10,861	11,978	14,124	10,520	12,752

APPENDIX IX

Statement of Community Development Blocks started in Kottayam District showing population

Sl. No.	Taluk	Name of Block	Headquarters	Present status	Year o starting	Population	No. of Panchayats
1	Changanacherry	Madappally	Madappally	Stage II	1-4-1958	1,65,652	6 Panchayats
2	Do.	Vazhur	Chamampathi	Stage I	1-4-1961	88,368	5 "
3	Kottayam	Pallam	Vadavathur	Stage II	2-10-1956	2,11,954	7 "
4	Do.	Ettumanur	Mannanam	Stage I	1-4-1962	1,21,876	6 "
5	Do.	Pampady	Anicaud	Stage II	1-9-1958	91,380	5 "
6	Vaikom	Vaikom	Vaikom	Stage I	2-10-1959	99,117	6 "
7	Do.	Kaduthuruthi	Kaduthuruthi	Stage II	1-4-1957	1,08,031	7 "
8	Meenachil	Uzhavur	Kozha	Stage II	2-10-1954	1,14,652	6 "
9	Do.	Lalam	Pravithanam	Stage I	1-4-1960	99,019	7 "
10	Do.	Erattupetta	Erattupetta	Stage I	1-4-1959	96,386	8 "
11	Kanjirapally	Kanjirapally	Kanjirapally	Stage II	2-10-1957	1,16,441	5 "
12	Peermede and portions of Udumbanchola	Arudai	Arudai	Stage I	1-5-1963	2,00,167	11 "
13	Devikulam and portions of Udumbanchola	Devikulam	Devikulam	Stage I	1-5-1963	2,09,348	11 "

Note: The populations of Pallam, Changanacherry, Vaikom and Lalam Blocks include the population of Kottayam, Changanacherry, Vaikom and Palai Municipalities respectively.

APPENDIX X

**Physical Achievements and Peoples Contribution in the Uzhavur
N. E. S. Block as on January 1965.**

	<i>Achievements upto 31-1-1965</i>	<i>Achievement upto 31-1-1965 during the Stage II period</i>	<i>Achievement upto 31-1-1965 from the inception of the Block</i>
1 Compost (Pits) Nos.	450	1,990	5,418
2 Chemical fertilisers (mds)	22,585	74,570	1,31,187
3 Insecticides (Cwts)	180	628	9,866
4 Plants sprayed (Nos)	80,154	2,16,615	8,36,385
5 Improved seeds (Mds)	360	2,010	2,040
6 Green Manure seeds distributed (lbs)	398	2,578	2,612
7 Green Manure cuttings (Nos)	1,01,000	10,15,000	12,33,300
8 Coconut seedlings (Nos)	12,538	27,377	54,418
9 Fertilisers and Cultural demonstra- tions (Nos)	110	374	1,037
10 Holdings taken up	80	494	3,911
11 Area under Japanese method of paddy cultivation (acres)	900	2,250	8,981
12 Quantity of vegetable seeds (lbs)	13	77	126.25
13 Improved implements (Nos)	..	158	221
14 Young farmers clubs (Nos)	..	..	14
15 Crop competitions (Nos)	4	8	13
16 Persons participated (Nos)	40	80	130
17 Breeding centres, Natural (Nos)	..	..	..
18 Breeding centres, Artificial (Nos)	..	..	2
19 Pedigree Bulls supplied (Nos)	..	..	2
20 Insemination, Natural (Nos)	..	..	128
21 Do. Artificial (Nos)	1,232	3,314	4,485
22 Veterinary dispensaries (Nos)	..	..	2
23 Animals inoculated (Nos)	1,391	1,879	4,352
24 Bulls castrated (Nos)	201	736	1,000
25 Hatching eggs distributed (Nos)	..	..	25,920
26 Pedigree birds supplied (Nos)	210	620	1,500
27 Poultry Units opened	..	15	28
28 „ treated and vaccinated (Nos)	119	710	8,230
29 Cattle show conducted (Nos)	..	1	1
30 Quantity of mineral mixtures (mds)	3.30	27	38
31 Area under fodder cultivation	17	44	114
32 Milk societies registered (Nos)	..	1	2
33 Pump sets supplied (Nos)	..	..	5
34 Tanks improved (Nos)	..	..	3
35 Canals and channels constructed—net area irrigated	..	..	..
36 Wells	..	125	125
37 Tanks	..	750	750
38 Canals	..	1,200	1,200
39 Others	..	650	659
40 Area reclaimed (acres)	..	..	155
41 Demonstration plots for social conservation (Nos)	..	..	..
42 Surface wells constructed	..	9	24
43 „ renovated (Nos)	..	2	9
44 Tube wells	..	..	..
45 Fisheries and Fingerlings	..	..	..
46 Soakage pits (Nos)	..	..	59
47 Rural latrines (Nos)	..	489	289
48 Drains constructed (Yds)	..	100	49
49 Smokeless chulas (Nos)	..	..	..
50 Village lanes paved (sq. yds)	..	..	..

APPENDIX X—(Contd.)

	<i>Achievements upto 31-1-1965</i>	<i>Achievement upto 31-1-1965 during the Stage II period</i>	<i>Achievement upto 31-1-1965 from the inception of the Block</i>
51 Bathing ghats (Nos)	..	1	1
52 Primary Health Centres (Nos)	..	..	1
53 Existing dispensaries (converted)	..	..	..
54 Mobile Health Centres (Nos)	..	..	..
55 Baby clinics (Nos)	..	1	5
56 Maternity and Child Welfare Centres	..	1	1
57 Family Planning advising clinics (Nos)	..	..	..
58 Village houses constructed	..	..	..
59 Village house reconditioned	..	36	74
60 Aid given to existing schools	..	..	9
61 Community Centres (Nos)	..	..	..
62 Children's Park	..	2	29
63 Sports Club (Nos)	..	..	1
64 Adults Literacy Centres (Nos)	..	..	289
65 „ benefited (Nos)	..	..	43
66 New Libraries and reading rooms (Nos)	..	..	5,000
67 Books supplied (Nos)	..	99	371
68 Entertainments (Nos)	44	1	14
69 Cultural clubs (Nos)	1	75	857
70 Members (Nos)	75	2	12
71 Women's Clubs (Nos)	..	345	1,460
72 Members (Nos)	..	12	36
73 Village Leaders Camps	1	952	2,228
74 „ trained (Nos)	60	1	3
75 N.C.C., A.C.C., B.S.S. Camps	..	127	262
76 Cinema shows	20	..	..
77 Pucca roads (Miles)	..	175	43.75
78 New Kacha roads (Miles)	0.4	3	14
79 Existing roads (Miles) improved	..	3	47
80 Culverts	..	3	11
81 Foot bridges	..	..	13
82 Production Centres	..	..	9
83 Crafts adopted	..	..	499
84 Students trained	..	7	862
85 Bee-hives supplied (Nos)	2	..	..
86 Credit/Multipurpose Co-operative Societies (Nos)	..	1	14
87 Industrial Co-operative Societies (Nos)	..	2	19
88 Farming Co-operative Societies	2	..	4
89 Others (Nos)	..	3	27
90 Total	2	..	64
91 Membership in credit and multi- purpose Societies	9	3,675	10,059
92 Industrial	..	740	1,652
93 Farming	1,951	1,951	2,113
94 Others	..	2,745	3,620
95 Total	1,960	..	15,456
96 Labour value (Rs. '000)	13,802	44,724	2,91,458
97 Land (acres)	0.15	0.15	26.38
98 Cash and other Contributions	2,638	18,543	1,74,610

CHAPTER X

GENERAL ADMINISTRATION

The Kottayam District is divided both on geographical and functional basis for purposes of general administration. Geographically, it is divided into 2 Revenue Divisions, 8 Taluks, 20 Firkas and 101 Villages. Functionally, the District administration is channelled through various Departments of the State Government each of which has one or more offices of its own at the District level.

The role and functions of the District Collector.

The District Collector is the head of the District Administration and as such he occupies a key place in the administrative set-up of the District. He is referred to as the king-pin of the administration or the pivot around which the administration revolves, or the eyes and ears of Government or the 'Ma-Baap' of the District. From whichever angle one may look at this office, the fact remains that it is today of paramount significance in the administration of the country. The Government have recognised the Collector as their chief representative in the District and other officers as his technical assistants. As the accredited agent of the Government the Collector is the "nerve centre" of all Government activities in the District. He supervises, directs and co-ordinates the activities of the various departments with particular reference to the planned development of the District. The authority of the District Collector is derived from different statutes, executive instructions and other ancillary powers. He also enjoys all the residuary functions in the District. Whenever the Government require any particular activity to be carried out in the District, they look up to the Collector for help, especially if what is proposed to be done is not specifically ear-marked as the function of any Department. Apart from all these, the Collector's authority is sanctioned by historical factors, conventions and traditions. As the officer responsible for land revenue collection which is perhaps the earliest function of any Government known to history, the Revenue Collector had gained over the centuries considerable prestige and importance. During the British period in addition to collection of revenue he was also put in charge of the maintenance of law and order. This made him a key functionary of Government having wide powers and large responsibilities.

The transition from foreign rule to independence did not involve any diminution in the authority and importance of the Collector. On the other hand, his functions have only increased in variety and importance. With the advent of economic planning the Government have begun to rely more and more on the District Collector for the effective co-ordination and implementation of plan schemes.

The functions of the District Collector may be classified into seven important groups, viz: (1) Revenue, (2) Law and Order, (3) Elections, (4) Development, (5) Relation with local bodies, (6) Welfare activities, and (7) Miscellaneous functions. The more important of the functions falling under each group are described below:

Revenue functions.

The Collector is the head of the Land Revenue Department in the District. The major revenue duties include general supervision and control of revenue collection, land records and the staff of the Revenue Department. This involves promotions, transfers, demotions, punishments etc., of the subordinate officers according to the rules framed by the Government, guiding and controlling the work in the Collectorate and subordinate offices through frequent inspections and discussions and supervising over the collection of revenue, submission of periodical returns to the Board of Revenue and the Government and also hearing of appeals against decisions of the subordinate officers. In this category may also be included that civil supply functions in connection with food-grains, sugar, cement and other essential commodities.

In the exercise of his revenue functions the Collector comes into contact with other Departments. This is particularly seen in regard to land acquisition and revenue recovery. The functions of the Collector in regard to taking possession of the required land and handing it over to the requisitioning departments have been specified in the Kerala Land Acquisition Act (1961). The Revenue Recovery Act lays down clear responsibilities for the Collector and his subordinates. In the discharge of these, he comes into contact even with the Department of the Government of India like the Income Tax Department.

The District Collector is also responsible for safeguarding Government lands and he is given specific functions and powers under the Kerala Land Conservancy Act (1957). Under the Act the Collector is to take action against encroachers. But in actual practice the Collector's powers have been delegated to the Tahsildars for all actions except hearing of appeals. The Collector is to hear appeals against the orders of the Tahsildar.

Mention may be made of the powers under the Kerala Stamp Act (1959) also. The Collector has powers in respect of adjudication of stamps, impounding of documents, refund of stamps and offences under the Kerala Stamp Act.

The staff of the Collectorate is divided into 8 sections. For each section, there is a section head. The bluzur Sheristadar is the Chief Ministerial Head of the Office. The Additional District Magistrate is the head of the Office. All the Revenue Officials in the District are under the direct control of the Collector.

Law and Order.

The Collector is primarily responsible for the maintenance of Law and Order in the District. In order to enable him to discharge his duty in this regard the police force in the District is placed under his general control and direction. By virtue of his office the Collector enjoys the powers of the District Magistrate and is designated Additional District Magistrate. But with the separation of the judiciary from the executive he enjoys only such of the powers of the District Magistrate as are of an executive nature. The Superintendent of Police is to assist the Collector in this respect. The Collector has also the authority to investigate into allegations against the police officials of the District.

In the discharge of his duties in regard to Law and Order the Collector is assisted by his Personal Assistant who is also an Additional District Magistrate. The Revenue Divisional officers are also Executive First Class Magistrates. These functions of Additional District Magistrate also involve certain powers under the Arms Act and powers regarding the issue of passports and the conduct of confidential enquiries.

The Collector has some powers in regard to the law officers in the District. The appointment of Government Pleaders and Public Prosecutors and Additional Government Pleaders and Public Prosecutors are made by the Government on the nomination of the Collector in consultation with the District Judge. The fees to Government Pleaders and Public Prosecutors and Additional Government Pleaders and Public Prosecutors are sanctioned by him. Their travelling allowance bills are also passed for payment by the Collector. It may be noted in this connection that the District has one District Government Pleader and Public Prosecutors and 2 Additional Government Pleaders and Public Prosecutors. All these officers have their headquarters at Kottayam.

The posts of Assistant Public Prosecutors are outside the purview of the Public Service Commission. Appointments to the posts of A. P. Ps., Grade II are made by direct recruitment on a District-wise basis. As and when a regular vacancy in the category of A. P. P. s, Grade II arises the Collector will notify the vacancy and invite applications from Advocates possessing prescribed qualifications. The Collector will then prepare a panel of names in consultation with the Superintendent of Police and the District Judge and forward the same to the Government. The Government are the final authority to make appointments to the posts of Assistant Public Prosecutors in Grade II. But

the Collector can make temporary appointments of Assistant Public Prosecutors, (Grade II) in vacancies caused by the grant of leave or by reason of death or resignation of an officer in the grade and which are not likely to last for a period exceeding 3 months. Appointments to the posts of Assistant Public Prosecutors, Grade I are made by the Government by promotion from among the A. P. Ps, Grade II. The Assistant Public Prosecutors are under the administrative and disciplinary control of the District Collector, though the Superintendent of Police has a general supervisory control over them. It may be noted that there are 4 Assistant Public Prosecutors in this District (1 Grade I and 3 Grade II) with headquarters at Kottayam, Meenachil and Ponkunnam.

Elections.

In any democracy the way the elections are held is of great importance. The Collector is the Chief Electoral Officer at the District level. In this capacity he is responsible to see that elections are held in a free and fair manner in his District. He is in overall charge of all items of work connected with the elections. The Collector has statutory, administrative and executive powers in this connection. He is the Returning Officer of the Parliamentary Constituencies. The Tahsildars are Electoral Registration Officers and revising authorities. The Collector is responsible for the supply, storage, movement, distribution and accounting of all items of election materials and equipment. He has to supervise all arrangements with regard to the conduct of the elections. He has also to arrange for proper arrangement and security during the period of polling and counting of votes at each centre.

Development.

With the advent of planning, the Collector enjoys a variety of functions connected with it. The District Officers of the concerned departments are treated as his Technical Assistants. The Collector has the power to require the presence of any District Officer or any other Government Officer in the District to assist him at any conference or at functions and to call for reports from them. In case of difference of opinion between the Collector and the District Officer in regard to non-technical matters, the District Officer shall carry out the directions of the Collector and then report the matter to his Head of the Department, if he considers it necessary. The tour programmes of the District Officers are to be sent to the District Collector in advance. Moreover, the Heads of Departments while on tour in the District are also to meet the Collector and discuss with him outstanding matters connected with their Departments. To facilitate such meetings, the Heads of Departments are expected to send copies of their tour programmes to the District Collector for advance information. The confidential reports of the District

Officers also pass through the Collector who can record his own remarks about the Officer concerned and this forms an effective weapon in the hands of the Collector to make his authority felt.

The Collector is the Chairman of the District Development Council. The Officers of all Departments concerned with Planning and Development are bound to give the District Collector information regarding the initiation and progress of schemes and also to give him all the facilities to inspect the works in progress. The Collector as the Chairman of the District Development Council may request any head of the Department to be present at the meetings of the District Development Council. The Head of the Department concerned is supposed to attend such meetings unless he has other pressing engagements. In such cases the Head of the Department will inform the Collector of the position in advance and attend the next meeting of the Council.

The Collector is the co-ordinator par excellence of all Government activities in the District. In all developmental and planned activities co-ordination is of great importance and the Collector imparts this vital element into the Governmental activity in the District. The most important field in this respect is agriculture. The Collector is responsible for augmenting the agricultural production of the District. The District Agricultural Officer and the Additional District Agricultural Officer have been declared personal Assistants to the Collector. They are even expected to submit important files to the Collector for orders. There are Community Development Blocks 13 in number in the District. They have Agricultural Extension Officers whose most important function is development of agriculture. The Collector is expected to control and guide all these activities and implement all the programmes satisfactorily.

Relation with Local Bodies

In Kerala the legislation regarding Panchayat Raj has not been passed, though the draft bill has been published. The Collector has however certain statutory functions under the Municipalities Act (1960) and the Kerala Panchayats Act (1960). According to Section 43 of the Kerala Municipalities Act, the Collector, if authorised by the Government may enter on and inspect any immovable property to any work in progress under the control of any Municipal authority, call for any document in the possession or under the control of any Council or Commissioner, require any Council or Commissioner to furnish any return, plan, estimate, statement, account or statistics or any information or report on any Municipal matters, and record in writing, for the consideration of the Council or Commissioner, any observations he may think proper in regard to its or his proceedings or

duties. Moreover section 44 of the Act empowers the Collector to call upon the Commissioner to explain his failure to carry out any resolution of the Council and to send a report to the Government together with his explanation. The Collector is also authorised under section 45 (2) of the Act. to suspend any resolution, order, licence, permission or Act passed, granted or done by the Council if in his opinion, an immediate action on the lines is necessary.

Under Section 46 of the Act, the Collector may, in case of emergency, direct or provide for the execution of any work, the immediate execution of which is, in his opinion, necessary for the safety of the public, and may direct that the expense of executing such work be incurred from the Municipal Fund.

Under Section 17 (2) of the Kerala Panchayats Act all questions relating to the qualification of a person to be a member of the Panchayat are to be referred to the Collector for his decision. According to Section 75 of the same Act, the Collector has to prescribe the conditions under which an Executive authority of a Panchayat may require the Village Officer having jurisdiction over the Panchayat area or any part thereof to collect any tax cess or surcharge or fee due to the Panchayat. Further, under Section 91 of the Panchayats Act prior sanction of the Collector is necessary for providing any stand or halting place for motor vehicles.

Welfare Activities.

The welfare activities of the Government are increasing day by day, and this has added considerably to the responsibilities of the Collector. The welfare functions or 'Ma-Baap' functions as they may be called, relate to the administration of Old Age Pensions, assistance to T. B. patients, assistance to destitute widows, relief measures in times of emergencies like famine, floods, epidemics etc. The following powers are exercised by the Collector in this regard:—

Nature of Power	Extent
1 To sanction Old Age Pension	Upto Rs. 15 in each case
2 To sanction grant under "Famine Relief" to victims of natural calamities	Upto Rs. 2,500
3 To sanction grants under	Not exceeding Rs. 50 per mensem in extraordinary case subject to annual expenditure of Rs. 2,000
4 To sanction financial assistance to agriculturists for loss of crops on account of natural calamities	No limit

Nature of Power	Extent
5 To sanction loans for housing scheme	Upto Rs. 20,000
6 To sanction financial assistance to indigent T. B. Patients	At Rs. 30 per mensem up to a maximum of 6 months
7 To sanction discretionary grant to the families affected by natural calamities	Upto Rs. 50
8 To sanction grant-in-aid to physically disabled and handicapped destitute	Rs. 15 per mensem
9 To sanction pension to destitute widows	Upto Rs. 20 per mensem

The Collector is also responsible for the welfare activities carried out through the N. E. S. Blocks. In this connection he has been empowered to discharge the following functions:—(1) To sanction individual 'Schemes' within the approved programme, the cost of which does not exceed Rs. one lakh and which does not involve appointment of staff borne on regular establishment. (2) To accord administrative approval and to sanction expenditure within the approved programme for individual items of 'work' upto a limit of Rs. one lakh according to the general procedure outlined by the Government. (3) To sanction loans within the approved programme for individual items of 'work' upto a limit of Rs. 10,000 in each case and loans under the Land Improvement Loans Act and Agricultural Loans Act upto, Rs. 5,000 in each case.

Miscellaneous Functions.

The Collector is the Chairman of the Regional Transport Authority which is statutory body exercising statutory functions. In this capacity he exercises many of the powers under the Motor Vehicles Act. The District Information Officer functions according to the instructions and guidance given by the Collector. The Collector is also a member of the District Recruitment Board of which a member of the Public Service Commission is the Chairman, and he is thus associated with the process of selection of candidates for appointments to certain categories of posts under Government. The Collector is also made responsible for the National Small Savings collection and the collections to the State Loans and the National Defence Fund. He is also the Chairman and member of a large number of committees and organisations functioning at the District level. A list of such committees and organisations which is given at Appendix will illustrate the variety of miscellaneous responsibilities which the District Collector, Kottayam has to shoulder. Another important function of the Collector is his treasury and financial function. He is responsible for the due accounting of all money

received and paid, and the punctual submission of all returns due from the District treasury.

It will be clear from the foregoing analysis that the functions and responsibilities of the Collector are many and varied. His position is more than one of *primus inter pares*. It is even more than that of the Captain of a team. While guiding the activities of other Departments, he has to exhibit a great amount of patience, tact and goodwill. All the activities of the Government in the District depend mainly on the Collector and the way he does it will determine its effectiveness and usefulness to the public.

District Development Council.

With a view to ensuring the sustained interest of the people and making them give positive help and guidance to the Collector in the satisfactory discharge of his duties in the field of general administration various non-statutory bodies consisting of official and non-official members have been set up in all Districts of Kerala. The most important of such bodies is the District Development Council with the Collector as Chairman. The Kottayam District Development Council was first set up in 1960. It consists of official and non-official members. The following is the general set-up of the Council, (i) All M. Ps in the District, (ii) All M. L. As in the District, (iii) Chairman of the Kottayam Municipality, (iv) one representative of the Co-operative Movement to be nominated by the Government, (v) one representative of the Panchayats from each Block in the District, (vi) Members of the State Planning Advisory Board residing in the District, (vii) Non-official Members of the National Saving State Advisory Board residing in the District, (viii) One Agriculturist, (ix) A maximum of five Members representing other interests, of which one shall be a lady, and (x) All the District Officers of the Development Departments.

The Personal Assistant to the Collector is the Secretary of the Council. The functions of the Council include (i) advising on the formation of the annual plan of development for the District within the general framework of the State Five Year Plan, (2) reviewing progress in the implementation of approved programme of development, (3) recommending measures for the effective and speedy fulfilment of schemes of economic and social development and, more especially of national extension and community projects, agricultural programmes, local development works, social services and village industries, (4) promoting public co-operation and participation in development programmes and expanding local community effort both in urban and rural areas, (5) assisting the development of co-operative and village Panchayats, (6) promoting the small savings movements, (7) supervising the work of Village Panchayats in respect of land reform, and management and rural development generally, (8) enlisting the active

association and co-operation of teachers, students and others in the study and development of local resources, (9) providing opportunities for general education through fairs, exhibitions, seminars etc. and (10) training of members of Panchayats and Co-operatives.

The meetings of the District Development Council were held once in a month till recently in order to review the progress of the work. The agenda of the meeting and the progress reports are distributed among the members in advance. The non-official members make detailed enquiries about the progress of the work and the District Officers supply them with the requisite information. Each item of work to be undertaken is placed on the agenda at the request of the official members and a general discussion takes place. Till recently there were also Sub-committees of the District Development Council formed for specific purposes, but they have since been dissolved in the wake of the Emergency.

Block Development Committee.

The Block Development Committee is constituted in each Block to advise and help the Block Development Officer in carrying out the development works of the Block area. Originally constituted in 1957 as Block Advisory Committees, the Block Development Committees, as they are now called, consist of (1) M. L. As, and M. Ps representing the Block area, (2) representatives of Panchayats not exceeding seven in number, (3) two Social workers including a woman, (4) one representative of the Social Welfare Board, (5) one representative of the Bharat Sevak Samaj, (6) the Chairman of the Municipalities falling within the Block area, (7) two or three prominent non-officials whose association with the Committee would be beneficial and (8) one representative of the Harijans. The Tahsildar of the Taluk is also a member of the Block Development Committee. The Revenue Divisional Officer of the area concerned is the Chairman and the Block Development Officer, the Convener of the Committee. The Committee meets every month to review the progress of the activities connected with the implementation of plan Schemes, especially in the fields of Agriculture, Minor Irrigation, Co-operation and Panchayats. The agenda for the meetings of the Block Development Committee includes the presentation by the Block Development Officer of a report on the activities of the previous months and a general discussion of the same by the members. The successful implementation of the developmental programmes depends to a large extent on the enthusiasm and co-operation of the members of the Block Development Committees.

The District Recruitment Board.

In pursuance of the recommendations of the Administrative Reforms Committee (1958), a District Recruitment Board for each of the nine District of Kerala was constituted with a

member of the Public Service Commission as Chairman and the District Collector as member. The District Recruitment Board, Kottayam began functioning in October 1959. The function of the Board is to make selection for the following categories of posts in the public services of the State.

1. All posts on a pay of Rs. 35 or less.
2. Non-technical posts for which the minimum educational qualification is lower than a pass in the S. S. L. C. Examination.
3. Minor technical posts such as drivers, fitters, mechanics, boatmen etc., even though the minimum pay attached to them may be above Rs. 35.

There are more than 400 categories of posts belonging to the various Departments in the lists of posts ear-marked for recruitment through the District Recruitment Board. The selections made by the District Recruitment Board are treated as those made by the Public Service Commission. The general rules followed by the Kerala Public Service Commission as well as the rules of procedure of the Kerala Public Service Commission and the Kerala State and Subordinate Service Rules (1958) are generally applicable to the selections of the District Recruitment Board. The recruitment to posts is made by the Board after interviewing the candidates. The particulars of the number of candidates advised by the District Recruitment Board, Kottayam for recruitment during each of the years from 1960 to 1966 are given below:—

Year	No. of candidates
1960	135
1961	170
1962	182
1963	261
1964	247
1965	174
1966	236

Offices at the District level.

A good number of State Government Offices function in Kottayam at the District level. Administratively they are under the control of their respective Heads of Departments. The functions of the most important District Offices are given in the relevant Chapters. A list of chief officers functioning at the District level in Kottayam is given below:—

1. District Agricultural Officer, Kottayam
2. District Veterinary Officer, Kottayam
3. District Indigenous Medical Officer, Kottayam

4. District Medical Officer of Health, Kottayam
5. District Educational Officer, Kottayam
6. District Industries Officer, Kottayam
7. Inspector of Factories, Kottayam
8. District Welfare Officer, Kottayam
9. Divisional Forest Officer, Kottayam
10. District Statistical Officer, Kottayam
11. District Labour Officer, Kottayam
12. Deputy Registrar of Co-operative Societies, Kottayam
13. Executive Engineer, Buildings and Roads, Kottayam
14. Executive Engineer, Minor Irrigation, Kottayam
15. Executive Engineer, P. H. E. D., Kottayam
16. District Information Officer, Kottayam
17. Superintendent of police, Kottayam
18. District Employment Officer, Kottayam
19. District Panchayat Officer, Kottayam
20. District and Sessions Judge, Kottayam
21. Asst. Excise Commissioner, Kottayam
22. Asst. Commissioner of Agrl. Income Tax & Sales Tax, Kottayam
23. Asst. Director of Survey & Land Records, Kottayam
24. District Educational Officer, Palai
25. District Educational Officer, Kanjirapally
26. Wild Life Preservation Officer, Tekkadi
27. Divisional Forest Officer, Munnar

Central Government Offices

The most important of the Central Government Offices or Officers functioning in the District are the following:—

1. Superintendent, Central Excise, Kottayam
2. Income Tax Officer, Kottayam
3. Field Publicity Officer, Ministry of Information and Broadcasting, Kottayam
4. Superintendent of Post Offices, Kottayam
5. Divisional Engineer, Telegraphs, Kottayam.

APPENDIX I

List of Committees in which the Collector is
Chairman or Member

No.	Name of the Committee	Capacity in which Collector functions
1	District Development Council	Chairman
2	District (Harijan Welfare) Advisory Committee	do.
3	District Food Sub-Committee (of the D. D. C.)	do.
4	District Recruitment Board	Member
5	Regional Transport Authority	Chairman
6	Kottayam Medical College Area Development Authority	do.
7	Kottayam Medical College Hospital Advisory Committee	do.
8	Government Homeo Hospital Advisory Committee, Kurichi	do.
9	District Soldiers, Sailors and Airmen's Board, Kottayam	do.
10	District Jurisdiction Committee	Member
11	Kuttanad Development Board	(Presided over by the Collectors of Alleppey and Kottayam in turn)
12	District Advisory Committee for Planning	Chairman
13	District Home Guards Advisory Committee	do.
14	District Land Development Committee, Peermade	do.
15	Wild Life Preservation Committee	Ex-Officio Member

CHAPTER XI

REVENUE ADMINISTRATION

Land Tenures

As in other parts of the erstwhile Travancore area of the State the lands in Kottayam District have come under two broad classes viz., *Janmam* lands (belonging to *Janmis* or landlords) and *Pandaravaka* lands (belonging to the *Sirkar*). The extent of *Janmam* lands in this District has not been much but it would be appropriate in this context to make a brief reference to the characteristics of *Janmam* tenure.¹ The word *Janmam* meant the exclusive ownership of the soil and *Janmam* property was reckoned as the absolute private property of the owner or proprietor. Generally *Janmam* lands were tax free and the *Janmis* as a rule never alienated lands by absolute sale except to other *Janmis*, whether *brahmaswams* or *devaswams*. The peculiarities of the *Janmam* tenure may be briefly summed up as follows:—

- (i) it normally enjoyed absolute freedom from taxation,
- (ii) This condition ceased the moment the land passed into the hands of others than *devaswam* or Brahman *Janmis* for a money consideration provided that the mere letting out of the lands to a tenant for rent does not vitiate the tenure,
- (iii) On such alienation taking place, the land became liable to a light tax to Government called *rajabhogam* which was a fee or light tax paid apparently in acknowledgement of fealty to the sovereign; the rate of *rajabhogam* varied and is said to have been 1/8, 1/6, 1/5, 1/4, or 1/3 of the full assessment, the last three rates, however, being exceptional,
- (iv) The light assessment continued for ever as a burden on the estate, even though the *kanam* was redeemed,
- (v) If the *kanamdar* died heirless, the land lapsed to the *Sirkar*, the *Janmi* being entitled only to any residence of rent (*michavaram*) payable to him by the deceased,
- (vi) Lastly, if the *kanamdar* abandoned the land as unfit for cultivation (*nirthul*), the *Sirkar* took it and granted it again to any body who asked for it on full assessment.

¹ For a detailed account of the different theories of the origin of *Janmam*, see the corresponding Chapters in the Trivandrum and Kozhikode District Gazettees.

The *Janmam* lands have been broadly classified into three categories viz., (1) Lands entirely freehold and exempt from payment of any kind of tax to Government under any circumstances called 'Freehold', (2) Lands originally exempt from payment of tax but subsequently becoming liable under certain conditions, and (3) Lands paying *rajabhogam* or a light tax from the very beginning.

Under the first class in this District were comprised (i) The *desams* of the Punjar Raja (Minachil) viz., Punjar Edavaka, (ii) The *Desams* of the Edappally Raja lying in Changanacherry and (iii) The *desams* attached to Kongurpally Namboothiripad's Sastha and Bhagavati Changanacherry). In the revenue account of the Government these lands were termed *Adhikara ozhivu* and *Desa ozhivu*. They constituted compact blocks of territory and were free from tax of any kind and from all Government interference in the matter of revenue administration. Their owners enjoyed absolute control over them in connection with their revenues and rents and took from the ryots and *pattam* or rent as well as the *rajabhogam* which in the case of other lands would go to the State.

Under the second class were comprised (1) *devaswam* properties and (2) *brahmaswams* or holdings of Malayali Brahmins. In their normal condition such lands were exempt from tax but this condition ceased the moment the land passed into the hands of those other than *devaswam* or *brahmaswam* Janmis for a money consideration. On such alienation the lands became liable to a light tax called *rajabhogam* and the property so taxed became subject to escheat and was then taken over by the *Sirkar*, if the tenant were to die heirless. Moreover, if the land coming under this class were to be abandoned as *Nirthal* or unfit for cultivation, then also it was taken over by *Sirkar* and dealt with as *Sirkar Pattam* lands.

Under the third class were comprised the holdings of various escheats and others including those of *Madambimar* eg:— the *Vadayattu* Chief. These lands have been subject to *rajabhogam* from the very beginning. The tenure held good as far as the land was not alienated by sale.

The *janmis* created various kinds of subordinate tenures under them, the most important being the *kanappattam* tenure. *Kanappattam* is a combination of a lease and mortgage. It is periodically renewable on payment of a certain percent of the mortgage amount. The *Kudiyan* enjoys the usufructs of the property demised, reserves a portion of it in lieu of interest on his *artham*, and pays *Sirkar* assessment, if any the renewal fees and the produce of the land. Beside *Kanappattam* there have been a number of other tenures relating to *Janmam* property eg., *Verumpattam*, *Pattam*, *Kuzhikanam*, *Otti*, *Attiper* etc., *Verumpattam*, is a simple lease without any debt or money consideration entering into the transaction. *Pattam* and *Kuzhikanam* resemble *verumpattam*, but

they confer on the tenant the right to make improvement on the land for which he is entitled to receive compensation on the expiry of his term. *Otti* is a usufructuary mortgage in which an amount is borrowed by the *Janmi* on the security of his land and the property is left with the *kudiyan* for enjoyment of its produce as interest for the amount. *Attiper* is the out and out surrender of the *Janmi's* right by sale.

Janmam lands were once exempted from taxation as long as they remained in the possession of the *Janmi*. On alienation such lands were subjected to a light assessment, viz., *rajabhogam*. The *Janmi* and *Kudiyan* Acts gave the tenants of these lands full proprietary right subject to the payment of *janmikaram* to the *Janmi*. These lands were later charged to basic tax. The Kerala *Janmikaram* Payment Abolition Act 1960, however, provided for the abolition of the payment of *janmikaram*.

Sirkar Lands

All lands other than *janmam* are known as *Pandaravaka* or *Sirkar* (Government) property. In theory as well as practice the Government is the owner in respect of such lands and whatever rights the ryots have in them are derived from the State. The *Sirkar* lands also originally belonged to the *janmis*, but in course of time they came to be vested in the Government by conquest, escheat, accretions, by the action of rivers, lakes and the sea, etc. The various sub-divisions and classification of Government lands are given below:

Sirkar Lands					
Registered lands	Poramboke	Tharisu	Thanathu lands	Reserved forests and reserved lands	Unreserved lands
Pandaravaka	Sripandaravaka		Kandukrishi		Sripadam lands

In Kottayam District the Government lands come mainly under the following heads:—(i) Registered lands, (ii) *Poramboke*, (iii) *Tharisu* and (iv) Reserved forests.

The bulk of the registered lands come under *Pandaravaka*. They are lands of which the State is the owner or landlord and all rights of the ryots are derived from the *Sirkar*. The tenant who was nearly a tenant-at-will was made practically the owner of the land subject to the payment of Government tax by the Pattom Proclamation of 1040 K. E. (1864-65). The *Devaswam* Proclamation of 1077 K.E. (1901-1902) converted the whole of the *Sirkar Devaswam* lands into *Pandaravaka* lands. The total area of land under *Pandaravaka* in each of the Taluks in this District in 1964-65 is given below.

Area under Registered lands, 1965

Name of Taluk	Total extent of Registered lands		
	A	C	L.
Changanacherry	62,426	91	19
Kottayam	1,19,525	18	234
Vaikom	70,907	59	459
Minachil	1,66,982	84	723
Devikolam	1,50,893	55	—
Udumbanchola	65,577	67	—
Peermede	79,709	15	—
Kanjirappally	60,211	03	..

There are no *Sri pandaravaka* lands (lands belonging to Sri Padmanābhaswami Temple) or *Sripadam* lands (lands belonging to the female members of the Travancore royal family) in this District. The *Kandukrishi* lands which were the *stanam* properties of the Maharajas of Travancore lay scattered at one time in all parts of Travancore including Kottayam. In 1949 the Maharaja surrendered all his rights over *Kandukrishi* lands to the Government and they were subjected to basic tax.

Poramboke Lands:

Poramboke lands mean and include unassessed lands which are the property of the Government, used or reserved for public purposes or for the communal use of the villagers. They made no attempt to assess with any accuracy the area of bridges, ditches, dykes and fences on or beside the same, (b) the beds and banks of rivers, irrigation and drainage channels traffic canals, tanks, lakes, backwaters and water courses, (c) markets, burial grounds, landing ghats and (d) all other property of the Government which are declared to be *poramboke* under the Land Conservancy Regulation. All the lands of this description within the limits of Cadastral Survey have been mostly recorded as *poramboke* in the Settlement Register. But there are lands which, though, not recorded as *poramboke* in the settlement Register, fall under the above definition or are required to be treated as *poramboke* in the public interest.

Tharisu:

There are waste lands at the disposal of the Government and are available for extension of cultivation consistently with the requirements of the public for communal purposes. These are surveyed and assessed or unassessed lands and recorded as *tharisu* in the settlement records as distinguished from *poramboke*.

A table containing the total area of land under *Poramboke* and *Tharisu* in each of the Taluks in this District in 1965 is given below.

Statement showing the Taluk-wise particulars of the Extent of land under Poramboke and Tharisu in Kottayam District.

Name of Taluk	Poramboke			Tharisu		
	Acre	Cent	Sq. links	Acre	Cent	Sq. links
Total:	4,55,437	86	313	91,960	58	004
1. Changanacherry	2,255	99	690	52	94	119
2. Kottayam	13,730	42	226 5/6	17	65	177
3. Vaikom	10,741	81	361	83	88	620
4. Minachil	7,825	03	99 1/6	3,775	06	286
5. Devikolam	82,134	70	312	73,632	96	176
6. Udumbanchola	1,94,492	74	170	627	98	250
7. Peermede	1,19,144	29	167	12,289	96	150
8. Kanjirappally	25,112	86	287	1,480	13	226

Survey and Settlement

The first settlement in Travancore of which there is any record is that of 948 K. E. (1772-73 A. D.). It applied to all cultivated areas, both fields and gardens, but it was not accurate as it was only a *Kettezhuthu* or a record of what was heard i. e., such information as was gathered by a personal conference with the holders of the land. The next settlement was in 978 K. E. (1802-03 A. D.), i. e., 30 years later. It also comprised both fields and gardens. As in the earlier settlement no actual measurements were taken this time also, but the area and assessment were fixed by local inspection and information. In other words the new settlement was a *Kandezhuthu*, i. e., a record of what was seen and was therefore more accurate. During both these settlement an estimate was made of each field in terms of *para* and area and assessment in each field was fixed on the basis of his estimate. The assessment on wet lands was generally made payable partly in paddy and partly in money. Moreover, those garden and dry lands which contained trees were subjected to a tree tax which was also fixed both in kind and money. Pure dry lands which contained no taxable trees were assessed on their seed capacity.

The next settlement was in 993 K. E. (1818 A. D.) which comprised only the garden and dry lands. It was carried out more or less on the lines of the previous settlement. There was another settlement in 1012 K. E. (1837 A. D.) which was also confined to garden and dry lands. The taking of field measurements and the adoption of different rates for different classes of coconut trees were the salient features of this settlement. Apart from the coconut, other trees like, jack, areca, palmyrah, mango, etc. were also assessed to revenue. The

settlement was not based on any uniform principle and varying rates were assessed for each kind of tree in each Taluk.

These earlier settlements were defective in many respects. They made no attempt to assess with any accuracy area of each holding, its exact boundaries or the classification of the soil. No field or village maps or sketches of any kind were prepared. The revenue accounts were not brought up to date with the transfer of properties registered so much so the revenue officials did not know on whom to call for collection of arrears, if any. Further, no units of measurement was recognised or followed. To make matters worse there was glaring inequality in assessment as no consideration was given to the nature of the soil, facilities of cultivation, or the produce grown on the land. The settlement of 1012 K. E. (1837 A. D.) also contemplated periodical revision of garden lands once in twelve years with a view to ensuring increase of Government revenues, but such periodical revisions were not carried out. In view of these drawbacks and difficulties a special department was organised in Travancore in 1876-77 to study and report on the question. One or two small tracts of territory were experimentally surveyed and the principles of the new settlement formulated and certain proposals made. Subsequently it was resolved to carry out a survey of the whole Travancore State which was to be followed by a Revenue Settlement. These were announced by the Royal Proclamation of Kumbhom 14, 1061 (February 24, 1886 A.D.).

The main features of the new survey and settlement, were declared to be accurate measurement, demarcation, mapping out, valuation of properties of every description, and registration of titles as the basis of sound revenue administration. A uniform standard of land measurement in acres and cents and of grains in *paras* and *edangazhis* was laid down. Several old cesses were abolished and the old complicated tenures were simplified. The assessment of garden lands was made permanent without periodical revision. Many taxes were made uniform. Moreover, on the settlement being made each land holder was also to be provided with a *patta* showing the particulars of his land, the assessment due thereon, the deductions therefrom the net demand etc. The settlement was to be declared unalterable for 30 years. In pursuance of this Proclamation the Survey and Settlement Departments were organised. The settlement was completed by the end of Midhunam 1085 (July 1910).

The settlement of 1061 K. E. (1886) proved unsatisfactory and caused vast disparities in the incidence of taxation. In regard to dry lands the method adopted in the earlier settlements, viz., taxing both the land and the trees standing thereon was given up and new rates were adopted which were very heavy. The result was that similar lands situated in the same locality had to pay different rates of assessment. Land holders

who had to pay, say 14 np. (4 chukrams) before the settlement, had after the settlement to pay Re. 1 (28 chukrams) per acre. Ryots enjoying trees such as coconut, jack, arecanut, etc., had to pay only light taxes. The very same kind of trees which were taxed in South Travancore (e.g., mango, palmyrah etc.) were exempted from tax in North Travancore. Certain fertile pieces of land, by virtue of their location in hilly tracts or places far off from markets, had to be classified under a lower *taram* fixing low rates of assessment. Even though conditions had since changed, holders of these lands still continued to pay only lower taxes while owners who held the same kinds of lands in other places paid very high rates. Lands under favourable tenures were assessed only with a portion of the full assessment while those under some other tenures were charged with full assessment. Favourably assessed lands, it may be noted, came to 25% of the total tax paying lands in Travancore State.

Systems of Survey:

An accurate survey is an indispensable requirement of a settlement to bring as near a relation as possible between enjoyment and the revenue accounts showing the same. It is necessary for the preparation of a correct account of the lands and for statistical and administrative purposes too. It might be interesting in this connection to describe the different systems of survey which were adopted for purposes of revenue settlement in this District. Cadastral survey as the basis of the revenue settlement was for the first time introduced in Travancore in 1058 K. E. (1882-83) and it was conducted on the lines of the different systems prevalent in the Madras Presidency from time to time. They are the following:—

(1) *Tak System*:— The first system adopted was known as the 'Tak' system or the Triangulation system. Under this method, no distinction was made between revenue and survey fields, and as such the chances of error were small. The use of sub-numbers and letters in addition to the survey numbers to denote the individual holdings was exceptional under this arrangement. The survey maps prepared under this system facilitated ready reference to properties. Owing to the exceptionally small area of holdings in Travancore, the irregular shape of field boundaries and the undulatory and wooded character of the surface of the country, the progress of survey operations under the 'Tak' system was considerably hampered. The system was also costly.

(2) *Base lines and Offsets*:—A new system known as 'Base lines and Offsets' was introduced about the close of 1063 K. E. (1887-88). Under this altered method, a distinction was made between survey fields and revenue fields. Unlike under the Tak system, no revenue field was to be separately demarcated, but several such fields were clubbed together, up to an extent of 6 acres in wet and 12 acres in dry lands,

to form survey fields, and each revenue field, though not demarcated, was to be separately measured and entered in a sketch book with particulars as to the relative position measurement, tenure and area. The bends and tri-junctions on the boundaries of revenue and survey fields were fixed by offsets from long chain lines running between Khandam stations and certain intermediate points where necessary. Though the revenue fields were not separately surveyed, the sketch-book which gave their areas was sufficient for settlement in respect of wet lands and unplanted dry lands which were assessed on the basis of the area. But in the case of gardens or plantations in which the assessment was rated on the trees, the system proved defective. With one survey number covering several revenue fields, each of which had a sub-number of the sub-divisions again marked by letters in some cases, the processes of classification, assessment on the block system, and the preparation of field records for individual settlement were attended with great difficulty and delay. Certain modifications were made in 1074 K.E. (1898-99) in the system introduced in 1063 K. E. (1887-88). These consisted of the confining of the entry in the field sketches to the side measurements of the holdings the lettering of the ends of chain lines and the entry in separate field books of the offsets taken on these lines.

(3) *System of Triangles and Offsets*.—In the year 1078 K. E. a further change of the system was made.¹ It was known as the system of 'Triangles and Offsets.' Under this method, unlike in the two previous systems, the survey fields were split up into large triangles by lines running from tri-junction to tri-junction as far as possible and offsets taken up to the bends on the sides of survey fields and revenue fields within each. The survey field was thus made capable of independent plotting. All surveys undertaken since then have been carried out in this system.

A statement showing the distribution of the taluks in this District according to the method of survey applied to each is given below:

Statement showing the distribution of the Taluks according to the method of survey applied to each and the dates of commencement and completion of survey operations

Description of method	Period during which the method was in force	Names of Taluks worked under the method	Date of commencement of operations	Date of completion of operations
System of "Base lines and Offsets"	From 1064 to 1074 K.E.	Changanacherry	1069 (1893-94)	1072 (1896-97)
		Kottayam	1070 (1894-95)	1072 (1896-97)
		Vaikom	1071 (1895-96)	1074 (1898-99)
		Ettumanoor	1072 (1896-97)	1075 (1899-1900)
System of "Triangles and Offsets"	From 1078 to 1081 K.E.	Minachil	1078 (1902-03)	1081 (1075)

1. The date given as 1098 K. E. in the *Quilon District Gazetteer* (p. 502) is not correct. The actual date is 1078 K. E. (1902-03).

It may be mentioned here that the Anchanad tract in the High Ranges was surveyed in 1075 K. E. (1899-1900) and 1076 K. E. (1900-1901) under the Triangles and Offsets system.

Basic Tax

After the settlement of 1886 A. D. in Travancore no attempt was made at a comprehensive resettlement in the State. The Government gave up the entire idea of a resettlement and introduced a new system of land tax. This tax known as the 'basic tax' was introduced by the famous Land Tax Proclamation issued by the Maharaja of Travancore in 1121 K. E. (1945-46). The introduction of basic tax served more or less the purpose of a general revenue settlement. According to this system all land irrespective of the nature of the tenures, the kinds of crops raised or the actual yield from them were subject to a basic tax at the rate of 2 nP. per cent. The table given below shows the area of land assessed to basic tax in the various taluks of the District and the revenue derived from 1964-65.

Area on which basic tax is levied

Name of Taluk	Nilam			Purayidam			Total		Demand of basic Tax Rs.
	A	C	Sq. lgs.	A	C	Sq. lgs.	A	C	
Changanacherry	11,615	80	724	50,811	10	295	62,426	91	1,24,983.11
Kottayam	38,117	13	054	81,408	05	180	1,69,525	18	2,48,109.05
Vaikom	29,101	54	446	41,806	05	013	70,907	59	1,47,999.59
Minachil	8,614	39	944	1,58,368	44	779	1,66,982	84	3,33,965.70
Devikolam	3,992	39	750	1,46,901	15	250	1,50,893	55	3,02,916.43
Udumbanchola	881	19	250	64,696	47	750	65,577	67	1,34,988.04
Peermade	438	00	850	79,271	14	150	79,709	15	1,59,418.30
Kanjirappally	102	41	000	60,108	62	000	60,211	03	1,20,259.66

Incidence of land revenue on the basis of 1961 Census for latest year--9.04 (90 paise)

Based on the Census of 1961 the incidence of taxation per head on the net land revenue current demand was Rs. 1.89 in Kottayam District. It may be mentioned in this connection that the levy of basic tax was discontinued in Kerala following the invalidation of the Kerala Land Tax Act (1961) by the Kerala High Court in 1962. However, consequent on the enactment of the Constitution Seventeenth Amendment Act (1964) which includes the Kerala Land Tax Act (1961) in the Ninth Schedule to the Constitution the system of Basic Tax has been introduced.

Plantation Tax

The Kerala Plantation (Additional Tax) Act 1960 came into force on April 1, 1960. According to this Act all holders of Plantations, irrespective of their capacity, as owners,

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tenants, mortgagees, trustees, receivers, managers or in any other capacity are liable to pay in addition to the basic tax, a plantation tax at the following rates specified in the schedule of the Act.

<i>Extent</i>	<i>Rate</i>
1. Where the aggregate extent of plantations held by a person is below five acres	Nil.
2. Where the aggregate extent of plantations held by a person is below five acres or more	Nil.
(a) on the first two acres	Nil.
(b) on the remaining extent	Rs. 8 per acre.

It may be noted that 'Plantation' for the purpose of this Act includes coconut trees, arecanut trees, rubber, coffee, tea and cardamom plants, and pepper vine. The extent of Plantation held by a person may ordinarily be revised at the end of five years. The following table shows the amount of assessment in each of the Taluks of the District during the period.

Plantation Tax Assessment (1964-65)

<i>Taluks</i>	<i>Number of assesses</i>	<i>Demand Rs.</i>
Total	4,418	97,14,531.51
Changanacherry	191	46,681.13
Kottayam	300	1,00,847.23
Vaikom	174	48,183.08
Minachil	1,600	53,22,235.49
Devikolam	212	11,95,435.70
Udumbanchola	1,204	11,75,949.01
Peermede	137	13,69,998.01
Kanjirappally	600	4,55,204.88

Irrigation Cess

Irrigation cess is collected on a small scale from this District. The irrigation cess collected is at the following rates:

- | | |
|---|-----------------|
| 1. Single crop lands converted to double crop | Rs. 6 per acre |
| 2. Existing wet lands | Rs. 5 per acre |
| 3. New conversion for single crop | Rs. 6 per acre |
| 4. New conversion for double crop | Rs. 10 per acre |

The demand and collection under Irrigation Cess in the concerned Taluks (1964-65) are given below.

Irrigation Cess Assessment (1964-65)

<i>Taluks</i>	<i>Demand Rs.</i>
Total	12,396.29
Changanacherry	1,523.10
Kottayam	9,231.00
Vaikom	..
Minachil	1,642.19
Devikolam	..
Udumbanchola	..
Peermede	..
Kanjirappally	..

Building Tax

A tax on buildings, the floor area of which exceeds, 1,000 sq. ft. and the construction of which has been completed subsequent to March 2, 1961 is being levied from March 1961 according to the Building Tax Act 1961. The rates of tax are given below:

Less than 1,000 sq. ft.	Nil.
1,000 to 2,000 sq. ft.	10 nP.
2,001 to 4,000 sq. ft.	20 ..
4,001 to 8,000 sq. ft.	30 ..
8,001 to 12,000 sq. ft.	40 ..
Above 12,000 sq. ft.	50 ..

A taluk-wise statement of the demand under Building Tax in the Kottayam District for the year is given below:

Demand and Collection under Building Tax (1964-65)

<i>Name of Taluk</i>	<i>Number of assesses</i>	<i>Demand Rs.</i>
Total	1,532	68,112.16
Changanacherry	185	1,405.09
Kottayam	478	15,182.16
Vaikom	165	3,508.52
Minachil	176	2,633.59
Devikolam	233	29,276.58
Udumbanchola	82	4,609.69
Peermede	125	11,006.03
Kanjirappally	88	490.50

It may be mentioned that buildings owned by the State Government, Central Government or any local authority and buildings used principally for religious, charitable or educational purposes or as workshops are not assessable to building tax under Section 3 (1) and (2) of the Act. The Tahsildar is the assessing authority and the Revenue Divisional Officer the appellate authority.¹

¹ The Kerala Building Tax Act was struck down as unconstitutional by a judgement of the Kerala High Court in 1964-65.

Land Assignment

Kottayam is one of the Districts of Kerala where the land assignment work has been carried on with vigour. As per the list approved under the Land Assignment Rules (1958) a total area of 127,553 acres 48,555 cents of land was available for assignment in this District. Out of this an extent of 14,238 acres 53,191 cents of land had been assigned under the old Rules. Since the coming into force of the Kerala Land Assignment Rules (1964) an extent of 207 acres 67,429 cents of land had been assigned upto the end of August 1964. There is no Land Assignment Committee as per the Land Assignment Rules (1964).

The largest extent of Land available for assignment is in the Taluks of Udumbanchola (64,031 acres 47,750 cents), Peermede (23,631 acres 13 cents), Devikolam (20,720 acres 03,523 cents) and Minachil (4,383 acres 68,076 cents). In the Taluks of Devikolam and Peermede, Special Tahsildars with special staff are attending to the Land Assignment work. The Special Tahsildar for Survey and Categorisation of Waste Lands, Nedumkandam, is attending to the land assignment work in Udumbanchola Taluk. In the remaining Taluks the regular Tahsildars are attending to this work.

HIGH RANGE COLONISATION SCHEME

It might be relevant in this context to refer to the High Range Colonisation Scheme started in 1954 to encourage settlement of families in the High Ranges. The object of the scheme was to solve the twin problem of over-population and poverty in erstwhile Travancore-Cochin State by providing adequate land with facilities for cultivation to the landless agriculturists living in other parts of the State. The original proposal was to settle about 8,000 families of landless agricultural labourers in an area of 40,000 acres of land. The colonists were to be given an area of about 5 acres each and also financial assistance to the tune of Rs. 2,000 by way of interest-free loans for house construction, cultivation, purchase of cow and agricultural implements. The estimated expenditure of the scheme was Rs. 233.5 lakhs of which the Government of India had agreed to give a loan of 214 lakhs interest free, to be repaid in 25 annual instalments. Accordingly about 1,777 families were allotted blocks under the Scheme. In 1964 there were only 1,513 families residing in the colonies, the others having abandoned the blocks or absconded. The original plan of settling 8,000 families was dropped afterwards due to non-availability of arable lands without affecting Forest Conservation. The land was given to the colonists on lease without limitation of time. A *pattom* equivalent to Basic Tax is levied

from them. The right of the lessee is heritable but not alienable. The lease is subject to cancellation in the event of alienation or desertion. The inheritance of the whole of a colonist's holding shall be to a single heir of his choice. The heir shall be a member of his family. Government have placed the entire scheme under the administration and disciplinary control of the District Collector Kottayam.

There are four colonies under the Scheme, viz., Kallar-Pattom colony, Kanthalloor colony, Marayoor colony and Deviyar colony. The Pattom colony, Kallar, consists of 6 camps the first one having been opened on January 20, 1955 and the last on September 3, 1959. There are 1,397 blocks in the colony, the total area being 6,913.10 acres. The Marayoor colony was established on February 24, 1955. In the beginning it consists of 149 blocks and an area of 799 acres. Only 126 persons actually occupied the block out of the 149 blocks allotted. Several of the colonists have since been either shifted from here or have absconded. The present area of Marayoor colony is only 222.30 acres. The Kanthalloor colony was started on April 4, 1955 in the Kanthallor area, comprising the villages of Kanthalloor, Kottabampur and Vattavada in Devikolam Taluk. A total of 262 blocks covering an area of 1,304.36 acres were surveyed and allotted. Of this 247 blocks were actually allotted and 220 persons occupied their blocks. But most of the Blocks were found to be unfit for cultivation and Government accordingly ordered the shifting of 97 colonists from Kanthalloor to Kallar. At present there are only 39 settlers in this colony. Since the Blocks allotted to the colonists at Marayoor were found unsuitable for cultivation and habitation, the Deviyar colony was opened in the Deviyar coupe to settle 73 colonists from Marayoor. The extent of land allotted to each family was about 3 acres as the soil in this colony was found to be quite fertile. At present there are only 70 colonists in this colony.

A total amount of Rs. 29,13,913.70 in cash and Rs. 97,031.24 in kind had been issued to the colonists by way of financial assistance till 1964. No further loan is being issued to the colonists who have misused the loans granted or have defaulted the repayment of the loans. Each colonist is also supplied with 73 c. feet of timber at concessional rates for the construction of houses. The timber value is adjusted towards the last instalment of the payment of loan. In each colony some area of land is set apart for common amenities. The extent of area in each of the 3 colonies is given below:

Name of Colony	Area	
	Acre	Cent
Total	82	36
Pattom colony	55	12
Marayoor colony	15	15
Deviyar colony	12	09

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The following public institutions are functioning in the Pattom colony:—(1) Government High School, (2) Government L. P. School, (3) Private L. P. School, (4) Full time Government Dispensary, (5) Ayurvedic Dispensary, (6) Veterinary Dispensary, (7) Sub Post Office and (8) Police Station. One Government Lower Primary School is functioning in the Deviyar colony. In addition, roads, irrigation channels, etc., have also been constructed by Government for the benefit of the colonists.

The administration of the Colonies is vested in the Revenue Divisional Officer, Devikolam. He is assisted by Village Assistants in the colonies and one Deputy Tahsildar at Headquarters. Ravages of wild animals, want of communication facilities and unsuitability of soil, etc., are the major handicaps that confront the colonists in some cases. Most of the colonists have not so far brought their full allotment under cultivation. Several cases of unauthorised alienation were noticed and their allotments cancelled. It may also be mentioned that altogether 24 blocks have been allotted to Government servants in the colonies and 36 blocks to Ex-service men in the Kallar colony. The original plan was to complete the colonisation scheme in the first Five Year Plan period, but the target could not be achieved and the scheme had to be carried over to the Second and Third Plan periods also.

LAND REFORMS

The Royal Proclamation of Edavam 21, 1040 K. E. (2nd June 1865) is the earliest attempt at land reform in Travancore. This Proclamation which has been looked upon as the "Magna Carta of the Travancore ryot" enfranchised the Sirkar Pattom lands and converted the large body of ryots from the position of mere tenants-at-will to that of full proprietors. By this Proclamation the ryots were conferred ownership rights, heritable, saleable and otherwise transferable subject to the obligation of paying the tax assessed on them. The ryot could hereafter invest his labour and capital and effect substantial improvements on the land. It was clearly laid down that Government would acquire these lands only for public purposes, and that whenever such acquisition was made, compensation would be paid not only for this ryot's improvements but also for the land itself. The Proclamation conferred on the ryot fixity of tenure by checking arbitrary evictions of all kinds and by restricting the demand for exorbitant claims by the Government. Following the Proclamation several vexatious taxes were abolished and strict orders were issued that the maximum rate of land tax which was prescribed by the Proclamation should not be exceeded.

The Proclamation of Karkatakam 25, 1042 K. E. (August 8, 1867) is also another measure of far-reaching consequence. It was promulgated to guarantee to the tenants of the *jenmom*

lands permanency of occupation rights and to prohibit their indiscriminate eviction from land ensuring at the same time the payment of all legitimate dues to the *jenmis*. The rights and obligations of the landlord and the tenant were thus equitably adjusted to their mutual advantage.

An important Act passed in 1068 K. E. (1892-1893) abolished the old practice of unrestrained coercive processes and laid down a legal procedure to safeguard the interests of land holders. The Jenmi-Kudiyan Act of 1071 (1895-96) made detailed provision relating to the rights and liabilities of *jenmis* and tenants in furtherance of the Proclamation of 1042. The next landmark in the history of land reforms is the Jenmi-Kudiyan (Amendment) Regulation of 1108 K. E. (1932-33). Far-reaching changes were made by this Regulation. The *jenmis* who were regarded as landholders were practically reduced to the position of persons entitled merely to certain dues called *jenmikaram* which are a charge on the land. The tenants became practically the owners of the land subject to the payment of the *jenmi's* dues. Those *jenmi's* dues which were payable on specific occasions were converted into annual payments which added along with the annual *michavaram* were termed *jenmikaram*.

In spite of the various attempts made now and then to protect the rights of the tenants complaints of eviction continued to be heard from various sources. Hence the subject of land reforms and protection of tenant rights received the serious attention of the Government in the post-Independence era. The Travancore-Cochin Government passed the Stay of Execution Proceedings Act in 1950 in order to give protection to the ryots from arbitrary eviction. After the birth of Kerala State the Kerala Stay of Eviction Proceedings Act 1957 was passed to stay eviction of tenants. *Kudikidappukar* and certain other classes of persons cultivating land under various tenures pending the enactment of a comprehensive legislation relating to tenancy and agrarian reforms. In 1958 was passed the Kerala Agriculturists Debt Relief Act. It provided for repayment of debts incurred prior to June 1, 1940. This was a measure intended to help the agriculturists. Another important legislative measure was the Kerala Compensation of Tenant Improvement Act 1958 which provides for compensation to tenants at the rate of 15 times the net annual yield for trees planted by them and actual value for permanent structures put up by them. The Act conferred on the tenants the right to compensation for improvements effected by them even if there is a contract to the contrary stipulated in the deed providing for lease or *otti*.

The most revolutionary piece of land reforms introduced in Kerala in recent years is the Kerala Agrarian Relations Act of 1960 (Act IV of 1961) which has now become defunct. The Act sought to fix a ceiling on the extent of land that could be held by a family or by any adult unmarried person. All lands in excess of the ceiling were to be surrendered to the Government

on payment of compensation. Lands so surrendered were to be distributed among the landless. The tenants were also given fixity of tenure over their holdings and they could be evicted by the landlord only in very exceptional circumstance. Moreover, fair rents in respect of holdings were to be fixed by Land Tribunals set up for the purpose. While the Kerala Agrarian Relations Act (1960) was being progressively implemented, the Kerala High Court delivered two important judgements in 1962 declaring some of the provisions of the Act as unconstitutional in their application to the Malabar and Travancore areas of the State. In the wake of these judicial decisions, the Kerala Tenants and Kudikidappukars Protection Ordinance was promulgated by the Governor in December 1962. It provided for the stay of all suits and proceedings for eviction of tenants from their holdings as well as for the recovery of arrears of rent which accrued due from a tenant before the 15th February 1961. The Ordinance was later replaced by an Act of the Legislature in 1963. The Kerala Agrarian Relations Act was also in the meantime removed from the statute book pending the enactment of a more comprehensive and flawless legislation pertaining to tenancy and agrarian reforms.

Kerala Land Reforms Act 1963

While reviewing the position, Government kept in view: (1) the broad principles of land reforms as enunciated in the Five Year Plans, (2) the basic aims of the Kerala Agrarian Relations Act, (3) the need for doing justice to all sections of the population, (4) the necessity for reducing the strain on the finances of the State and (5) the desirability of having a law which is capable of smooth and easy administration. After examining the matter the Government came to the conclusion that it was better to enact a new piece of legislation. Thus the Kerala Land Reforms Act (1963) came to be enacted. The new law remedies the defects and difficulties that existed in the old Act as below.

(1) The discrimination shown in the fixation of rates of fair rent in Malabar and other areas of the State has been given up. The rates of fair rent have been made uniform throughout the State and these conform to the general principles laid down in the Five Year Plans.

(2) The small-holder has been given a reasonable deal in the fixation of fair rent and in the Malabar area, in the surrendering of his rights to the cultivating tenant.

(3) The religious institutions have been guaranteed the income that they were deriving on the 21st January, 1961.

(4) The jurisdiction of civil courts to interrupt the proceedings before a Land Tribunal has been barred.

(5) The cultivating tenants do not have to wait for the State to step in for purchasing the rights of landlords. They could apply directly for purchasing those rights soon after the Act was brought into force.

(6) The Land Tribunal is empowered to adjudicate whether a person is a tenant or not. A person has now got the right to move the Land Tribunal to prepare a record of his rights and the Land Tribunal has been given facilities to prepare it.

(7) The classification of lands and the prescription of equivalents for purposes of ceiling have been done on a more rational basis following the scientific data available with the Bureau of Economics and Statistics.

(8) Existing pure pepper and pure arecanut gardens which are contiguous and five acres and more in extent have been exempted from the imposition of ceiling.

(9) The anomalous treatment given to an adult unmarried person has been removed.

(10) The slab system of awarding compensations has been dispensed with.

The Act confers three main benefits on the cultivating tenant. Firstly, he is given security of tenure and consequently he cannot be evicted. Secondly, he is given the rights to pay not more than the fair rent fixed under the Act. Thirdly, he is given the right to purchase landlord's rights and become the full owner of the land. These rights accrue subject to certain obligations. Certain categories of lands and tenancies are also excluded from the purview of the provisions of the Act. The more important amongst them relate to occupation of Government land, escheat lands and tenancies created by official receivers of courts, court of wards etc. Section 3 of the Act explains the various categories. In order that there might be no further complications in the nature of tenurial relationship henceforth, it has been laid down in the Act that no future tenancies will be valid in law except when the tenancies are created by (1) a minor, (2) a widow, (3) an unmarried woman, (4) a divorced woman, (5) a person incapable of cultivating land by reason of any physical or mental disability, or (6) a serving member of the Armed Forces or a seaman.

It has been recognised as an essential principle of land reforms that special protection should be given to landlords who own small holdings, as otherwise the reforms might, while conferring benefits on one section of the society, cause undue hardship to another for no fault of its own. In accordance with this policy, the small landholders have given reasonable protection under the Land Reforms Act (1963) keeping in view the interests of the tenants as well. While the tenants of big landholders are given the choice to pay fair rent or contract rent whichever is less, the tenants of small landholders do not enjoy this concession as it is considered that a small benefit should accrue to the small landholder who also is entitled to a reasonable treatment. Again in areas where the tenants enjoyed security of tenure under any law in force prior to

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January 21, 1961, while the cultivating tenants of big landholders can purchase the landlord's rights, the cultivating tenants of small landholders can do so only after allowing the small landholder to resume a portion of the land, if he so chooses. These are two essential benefits conferred on the small landholders.

The Act finally lays down that no family or adult unmarried person shall own or hold more than 12 "standard acres" subject to a minimum of 15 acres and a maximum of 36 acres in extent. This area is termed as the 'ceiling area'. A family is to consist of the husband, wife and their unmarried minor children or such of them as exist. Transfers effected after December 18, 1957 except as noted below are to be disregarded when calculating the 'ceiling area' of the transferor. The exception referred to is in regard to transfers effected before the 15th September 1963 in the following ways.

- (1) by way of partition or
- (2) on account of natural love and affection
- (3) in favour of a person who was a tenant of the holding before the 18th December, 1957 and continued to be so till the date of transfer, or
- (4) in favour of a religious, charitable or educational institution of a public nature solely for the purposes of the institution.

Transfers by persons owning or holding land in excess of the ceiling area after September 15, 1963 are declared null and void.

The Five Year Plans contemplate that certain special categories of lands should be exempted from ceiling provisions. Accordingly the following are some of the important categories of lands which are exempted from the ceiling provisions under the Kerala Land Reforms Act 1963.

- (1) Plantations of coffee, tea, rubber, cocoa, cardamom and cinnamon,
- (2) Pure pepper and pure arecanut gardens as on April 1, 1964 which are 6 acres or more in contiguous extent,
- (3) Private forests,
- (4) Lands comprised in mills, factories, or workshops and which are necessary for the use of such mills, factories or workshops,
- (5) Commercial sites, and
- (6) lands owned or held by a religious, charitable or educational institution of a public nature or a public trust etc.

As it is almost impossible to determine separately the income from each field and effect a comparison a more practicable and at the same time a reasonable approach has been adopted on the basis of the "standard acre." The 'standard

acre' has been defined as an extent of land that would yield a net income of Rs. 450 per annum. Based on the figures of average yield collected by the Bureau of Economics and Statistics of the State for various crops in the various Districts and Taluks, the extent of land cultivated with different crops which would yield this net income has been calculated and a schedule of equivalents drawn up. The schedule for Kottayam District is given below.

Lands other than Nilams

Class of Land	One Standard Acre
1. Garden	1.25 acres
2. Dry land principally cultivated with cashew	1.75 "
3. Other dry land	3.00 "
4. Palliyal land	3.00 "
5. Rubber plantation	1.75 "
6. Tea plantation	0.50 "
7. Coffee plantation	1.00 "
8. Cardamom plantation	1.50 "
9. Cinnamon plantation	1.50 "
10. Cocoa plantation	1.50 "

Standard acres of Nilam

Taluks	Double crop Nilam (acre)	Single crop Nilam (acre)
1. Changanacherry	1.50	2.50
2. Kanjirapally		
3. Peermede		
4. Kottayam		
5. Vaikom		
6. Minachil		
7. Devikolam		
8. Udumbanchola		

Agricultural Income Tax & Sales Tax Department

The Inspecting Assistant Commissioner of Agricultural Income tax and Sales tax, Kottayam, is the head of the Department in the District. There are 10 Sales Tax Offices and 4 Sales Tax Check Posts in this District under his control. The particulars are given below:—

Sales Tax Offices

1. Sales Tax Office, Spl. Circle, Kottayam.
2. Sales Tax Office, I Circle, Kottayam.

3. Sales Tax Office, II Circle, Kottayam.
4. Sales Tax Office, Changanacherry.
5. Sales Tax Office, Ponkunnam.
6. Sales Tax Office, Palai.
7. Sales Tax Office, Vaikom.
8. Sales Tax Office, Devikolam.
9. Sales Tax Office (High Ranges), Devikolam.
10. Sales Tax Office, Peermede.

Check Posts

1. Sales Tax Check Post, Ponkunnam.
2. Sales Tax Check Post, Kumily.
3. Sales Tax Check Post, Bodimettu.
4. Sales Tax Check Post, Chinnar.

The Sales Tax Officer, Special Circle, Kottayam has jurisdiction over the entire Kottayam District and he deals with major assessment files. The other Sales Tax Officers have jurisdiction over the respective Taluks and certain contiguous villages of the adjacent Taluks for administrative convenience. The Sales Tax Officer (High Ranges) has jurisdiction over the Taluks of Devikolam, Udumbanchola and Peermede. The Sales Tax Officer, Peermede has also jurisdiction over the Taluks of Peermede and Udumbanchola. The Sales Tax Officer (High Ranges) deals only with the files relating to the cardamom dealers.

There are Assistant Sales Tax Officers in the Sales Tax Offices, I Circle Kottayam, II Circle Kottayam, Changanacherry, Ponkunnam, Palai and Devikolam in order to assist the Sales Tax Officers in their work. They are doing assessment work with regard to the files in which the turnover falls below Rs. 20,000. They also conduct routine inspection work. In addition, there are Sales Tax Inspectors in the offices of the Sales Tax Officer, Spl. Circle, Kottayam, the Sales Tax Officer, I Circle, Kottayam the Sales Tax Officer, Ponkunnam and the Sales Tax Officer, Palai to check evasion of the payment of tax and to attend to other works in the field. Under the Inspecting Assistant Commissioner, Kottayam alone there are 4 Sales Tax Inspectors. They conduct vehicle checking, patrolling throughout the night to check evasion, inspection of shops and all kinds of investigation work.

Out of the 4 Check Posts in this District the one at Ponkunnam is an Internal Check Post. All goods vehicles which pass through this Check Post are checked to see whether any goods are being transported without supporting bills or other documents as contemplated in the Kerala General Sales Tax

Act and Rules. The other Check Posts are in the borders of the State.

The statement showing the collection and expenditure under General Sales Tax and Central Sales Tax for the year 1957-58 to 1964-65 is furnished below.

Year	General Sales Tax	Central Sales Tax	Expenditure
	Rs.	Rs.	Rs.
1957-58	42,17,002.41	2,07,403.75	2,27,892.79
1958-59	41,48,769.09	2,92,740.90	2,23,050.35
1959-60	55,82,538.61	4,20,994.98	2,63,422.29
1960-61	69,29,144.73	6,78,908.08	2,88,380.30
1961-62	73,04,023.77	6,78,908.08	2,66,826.25
1962-63	86,72,845.69	5,82,283.10	2,90,285.81
1963-64	98,02,718.65	13,59,691.77	3,08,256.06
1964-65	1,09,20,021.29	17,33,093.68	3,53,270.43

The statement of collection and expenditure under Agricultural Income Tax for the same period is given below:

Year	Collection	Expenditure
	Rs.	Rs.
1957-58	1,47,67,146.94	72,121.59
1958-59	1,22,26,215.11	74,417.38
1959-60	1,19,49,349.39	81,145.59
1960-61	1,52,54,419.97	89,594.49
1961-62	1,69,15,099.60	1,01,988.00
1962-63	1,86,50,324.76	1,25,951.49
1963-64	1,58,36,023.22	1,34,026.64
1964-65	1,38,73,965.12	1,33,657.74

Stamps

Stamps form an important source of revenue to the State. They are of different kinds such as General Stamps, Court Fee Stamps, Revenue Stamps, Service Postage Stamps etc. They are sold through all the Treasuries of this District. There is District Treasury at Kottayam which is under the control of a

District Treasury Officer. The District Treasury was turned into a banking one with effect from July 27, 1964. The State Bank of Travancore conducts the cash business of the Treasury. Payment of pension and transactions relating to Savings Bank are conducted at the District Treasury itself.

There are eight Sub-Treasuries in the District. They are at Kottayam, Changanacherry, Ettumanoor, Vaikom, Minachil, Devikolam, Ponkunnam and Peermede. The Sub-Treasuries at Ettumanoor, Vaikom, Peermede and Devikolam are non-banking ones and the rest are banking. The Sub-Treasuries are under the charge of Sub-Treasury Officers. The Collector of the District exercises the following powers in regard the Treasuries.

1. Monthly verification of cash balance of District Treasury till it was converted into a Banking one.

2. The emergency powers envisaged in Rules 23 and 18 of the K. T. C. Vol. I.

3. The same power over the District Treasury Officer which Collector exercises over other District Officers.

The Tahsildars verify the cash balance of non-banking Sub-Treasuries every month.

Issue of vehicle tax licences, payment of interest on G. P. Notes, custody and issue of postal stationery, sale of forms are also attended to at the Treasuries.

A statement of the total receipts and issue of different kinds of stamps from the Treasuries in Kottayam District from 1960-61 to 1963-64 is given in the next page.

Excise Department

The Assistant Excise Commissioner, Kottayam, is in charge of the Kottayam Excise Division which comprises the entire Revenue District. For the purpose of administration, it is divided into 13 Ranges, each under an officer of the rank of an Excise Inspector. The following are the Ranges in this Division:—(1) Devikolam, (2) Udumbanchola, (3) Peermede, (4) Kanjirapally, (5) Changanacherry, (6) Kottayam, (7) Pampady, (8) Ettumanur, (9) Kuravilangad, (10) Minachil, (11) Poonjar, (12) Vaikom and (13) Kaduthuruthy. There are 262 toddy shops and 83 arrack shops in this Division. Besides, there are 43 different kinds of Foreign liquor shops. The Abkari policy is to put up the privilege of retail vend of liquors in independent shops for each financial year in public auction to give the right of vend to the highest bidder on contract basis. The successful bidder is allowed to run the shop with a minimum advance security deposit of 3/10 of the bid amount. The annual rental is realised in the equal monthly instalments.

REVENUE ADMINISTRATION

Statement showing the total receipts and issue of different kinds of stamps for the Treasuries of Kottayam District for the year 1960-61 to 1963-64

Description of stamps	1960-61		1961-62		1962-63		1963-64	
	Receipt Rs.	Issue Rs.	Receipt Rs.	Issue Rs.	Receipt Rs.	Issue Rs.	Receipt Rs.	Issue Rs.
STATE:								
Bills of Exchange & Hundis	17,675.00	16,413.50	31,360.50	20,093.75	4,500.00	14,952.75	31,650.00	9,364.25
Adhesive Revenue Stamps	2,310.00	16.75	9,180.00	483.00	80.00	422.25	9,200.00	8,218.00
Other general stamps	11,36,899.20	9,91,230.25	14,62,541.00	9,96,208.00	10,063.77	12,09,228.00	14,38,445.00	16,73,381.60
5 Ps. Revenue stamps	65,030.00	71,807.05	1,18,800.00	97,745.50	27,600.00	52,129.20	7,920.00	8,146.50
10 Ps. Revenue Stamps	..	..	..	..	68,200.00	54,168.30	1,06,500.00	1,09,382.50
Court fee stamps	5,99,962.00	4,54,693.09	9,21,853.23	4,69,638.77	6,26,847.60	6,70,712.16	6,14,028.60	5,86,313.63
CENTRAL:								
Banderola	29,300.00	7,465.00	..	9,837.00	..	15,200.00	..	5,000.00
Central excise Revenue Stamps	97,920.00	21,180.00	13,104.00	23,124.00	7,200.00	45,992.00	54,000.00	41,970.00
Postal stamps and stationery	17,99,623.15	15,97,944.75	16,36,824.55	14,74,356.75	27,46,073.30	18,90,142.30	17,79,965.40	20,72,161.90
Service postage stamps new	5,61,700.00	2,28,169.78	2,58,824.00	2,92,618.25	9,48,760.00	5,60,494.75	3,59,924.00	5,53,993.50
Service postage stamps old	..	13,812.70	..	11,681.00	..	11,799.20	..	2,805.70

The major sources of income of the Excise Department in this District are the following:—

(a) *Rental*:—This is the revenue derived from the sale of privilege of vending toddy, arrack and foreign liquor including cocobrandy in independent shops.

(b) *Tree tax*:—Toddy required for sale in the toddy shops is drawn from trees marked out for the shop under tree tapping licenses. Generally toddy is drawn from coconut trees and choondapana trees. Tree tax levied at present for a coconut tree is Rs. 10 and that for a choondapana tree is Rs. 20 for half a year.

(c) *Duty on Arrack and Cocobrandy*:—The rate of duty now prevailing on a litre of arrack of 30 U. P. is Rs. 2.50. The duty levied on cocobrandy of 25 U. P. is Rs. 2.70 for full bottle of 700 M. litres and Rs. 1.35 per half bottle of 350 M. litres.

(d) *Gallonage fee*:—Gallonage fee at the following rates is levied on the volume of sales by foreign liquor licensees, to any person other than foreign liquor licensees for private consumption.

Spirits—Rs. 4 per litre.

Medicated wine—1.50 per litre.

Wines of all other kinds excluding mase wine Rs. 2 per litre. Beer, Cider and Fermented liquors—Rs. 1.50 per litre.

(c) *Fixed fee licenses*:—Various kinds of foreign liquor, licenses are issued on annual license fee. The rates of license fee is given below:—

Foreign Wholesale—	Rs. 4,000 per annum (F. L. 1.)
Foreign liquor Hotel/Restaurant—	Rs. 3,000 per annum (F. L. 3)
Foreign liquor Club	Rs. 250 per annum (F. L. 3)

The excisable liquors are Toddy, Arrack, Foreign liquor and Denatured spirit. Opium is given for private consumption to permit holders only. There are no Pharmaceuticals in this Division. There is only one Distillery in this Division viz., Messrs. the Devikolam Distilleries Ltd., Vaikom. Cocobrandy is manufactured in this Distillery.

The revenue derived from the Excise Department in this District for the period 1961-62, 1963-64 is given below:—

	Rs.
1961-62	62,71,526.26
1962-63	70,28,002.88
1963-64	76,77,489.25

Registration Department

The Registration Department in the District is under the District Registrar, Kottayam. There were only 14 Sub-Registry Offices under the control of the District Registrar, Kottayam, when his office began functioning in 1072 K. E. (1896-97). Several offices were formed and abolished since then according to the increase or decrease in the volume of registration work. There were 24 offices in this District in 1958. When the Alleppey District was formed in 1958, three offices fell within that District. Similarly with the formation of the new Ernakulam District in June 1952 ten Sub-Registry Offices went over to that District. Three new Sub-Registry Offices were opened at Ramapuram, Pampady and Karukachal on June 1, 1962. Thus there are 14 Sub-Registry Offices in this District at present. Two Upper Division Clerks are posted as Ex-Officio Sub-Registrars at the Sub-Registry Offices at Devikolam and Peermade which are located in Hill Stations. The Principal Sub-Registry Office at Kottayam is amalgamated with the office of the Registrar and the Amalgamated Sub-Registrar is exercising certain powers of the Registrar by virtue of the powers conferred by Section 7 (2) of the Indian Registration Act (1908).

The basic function of a Registering Officer in the registration and attestation of documents. The District Registrar is competent to register any document pertaining to property situated in any part of the District. The duties and responsibilities of the Registration Department have increased in recent years consequent upon the introduction of various development schemes. The Registrar exercises the powers of the Collector under Sections 16, 38 (2), 40 and 42 of the Stamp Act. He is the "Marriage Registrar of the District" under the Special Marriage Act and "Registrar of Societies" under the Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act (Act XII of 1955). The District and Sub-District licenses for Document Writers and Scribes are also renewed by the Registrar.

The Sub-Registrar is the head of his office and he is competent to register all documents pertaining to properties situated in his Sub-District. The Sub-Registrar is also Ex-Officio Chitti Registrar. The Sub-Registrars are declared as Marriage Registrars also under the Special Marriage Act.

The Chitti Auditor is a touring Officer in the grade of a 2nd Grade Sub-Registrar. He inspects and audits the chitties registered in the various Sub-Registry Offices.

The name, location and date of establishment of the Sub-Registry Offices in this District are given below:

3/3718/MC.

3/3718/MC.

<i>Name of Office</i>	<i>Location</i>	<i>Date of Establishment</i>
1. Changanacherry	Changanacherry	1-5-1043 K.E. (1867)
2. Devikolam	Devikolam	1-4-1071 K. E. (1895)
3. Ettumanoor	Ettumanoor	1-5-1043 K. E. (1867)
4. Kaduthuruthy	Kaduthuruthy	1-11-1088 K. E. (1913)
5. Kanjirappally	Ponkumam	1-11-1067 K. E. (1892)
6. Karukachal	Karukachal	1-6-1962
7. Kottayam Principal	Kottayam	1-5-1043 K.E. (1867)
8. Kottayam Addl.	Kottayam	2-8-1083 K. E. (1908)
9. Minachil	Palai	1-5-1043 K. E. (1867)
10. Pampady	Pampady	1-6-1962
11. Peermude	Azhuthai	9-1-1087 K. E. (1911)
12. Poonjar	Poonjar	18-11-1083 K. E. (1913)
13. Ramapuram	Ramapuram	1-6-1962
14. Vaikom	Vaikam	1-5-1043 (1867)

The number of documents registered in this District and the receipts and expenditure of the Department for the years 1959-60 to 1963-64 are given below:

<i>Year</i>	<i>Documents registered</i>	<i>Receipts Rs.</i>	<i>Expenditure Rs.</i>
1959-60	41,186	3,52,545	1,78,319
1960-61	48,344	4,30,240	1,97,256
1961-62	46,075	4,41,462	1,93,496
1962-63	45,897	5,06,535	2,17,277
1963-64	45,025	4,33,316	2,17,491

Central Excise

The Central Excise administration in this District is vested in the Superintendent of Central Excise, Kottayam Circle, with headquarters at Kottayam. The various formations in this Circle are (i) Kottayam MOR (ii) Changanacherry MOR, (iii) Mundakayam MOR, (iv) Vandiperiyar Range, (v) Vaikom Range and (vi) Cement Factory Range, with 2 Preventive and Intelligence Units at Kottayam and Mundakayam. Besides, the Pathanamthitta Range in Quilon District is also placed in charge of the Superintendent of Central Excise, Kottayam.

The Palai and Munnar Ranges in the Kottayam District are in the jurisdiction of the Superintendent of Central Excise, Moovattupuzha Circle with headquarters at Moovattupuzha (Ernakulam District). The Superintendent of Central Excise, Kottayam Circle, exercises jurisdiction over the major part of the Kottayam District. The excises dealt with in this Circle are Tobacco, Sugar, Coffee, V. N. R. Oil, Patent and Proprietary Medicines, Electric Motors, Aluminium, Matches, Wireless Receiving sets, Electric Battery, Tea, Cement, Plywood, Cycle tyres and tubes and Rubber products. In the Palai and Munnar Ranges which come under the jurisdiction of the Superintendent of Central Excise, Moovattupuzha Circle, Tobacco, Coffee and Tea excise alone are dealt with.

The revenue under Central Excise during 1963-64 in this District was about 66½ lakhs. The expenditure incurred on the Central Excise administration was about Rs 3,14,000.

Income Tax

The Kottayam Income Tax Circle comprises the revenue Taluks of Kottayam, Changanacherry, Kanjirappally, Peermude, Meenachil and Udumbanchola in the Revenue District of Kottayam and also the revenue Taluks of Chengannur and Tiruvella in the Revenue District of Alleppey. There are at present four Income Tax Officers in Kottayam Circle—the I. T. O. Main Circle who is in charge of the General administration of the Office and three additional Officers with independent jurisdiction. The details regarding the number of assesses and tax collected during each of the five years from 1959-60 to 1963-64 are given below.

A. Number of assesses assessed to Income Tax

<i>Year</i>	<i>Main I.T.O.</i>	<i>I. Addl. I.T.O.</i>	<i>II. Addl. I.T.O.</i>	<i>Total</i>
1959-60	273	872	940	2,085
1960-61	939	785	1,053	2,777
1961-62	1,166	952	816	2,934
1962-63	1,237	961	905	3,103
1963-64	1,013	1,133	1,364	3,510

The third Addl. Income Tax Office was created only this year.

B. Amount of Income Tax collected

<i>Year</i>	<i>Main</i>	<i>I. Addl.</i>	<i>II. Addl.</i>	<i>Total</i>
1959-60	42,51,467	14,25,938	10,01,333	66,78,738
1960-61	43,07,421	11,30,604	8,18,906	64,56,931
1961-62	48,15,483	7,38,565	13,77,932	69,31,980
1962-63	56,72,521	12,96,373	14,70,477	84,39,371
1963-64	41,97,871	18,50,900	15,41,475	75,90,246

KOTTAYAM

C. Gift Tax Collected

Year	Main	I Addl.	II. Addl.	Total
1959-60	..	..	..	..
1960-61	11	51,002	8,032	59,045
1961-62	6,636	75,539	49,169	1,31,344
1962-63	13,009	49,583	24,886	87,473
1963-64	1,620	62,135	27,321	91,076

D. Wealth Tax Collected

Year	Main	I. Addl.	II. Addl.	Total
1959-60	..	..	..	..
1960-61	2,488	25,800	100	28,388
1961-62	65,058	20,046	16,367	1,01,471
1962-63	54,717	21,610	6,880	83,207
1963-64	53,555	20,269	7,679	81,503

CHAPTER XII

LAW, ORDER AND JUSTICE

Incidence of Crime in the District

Murder, dacoity, robbery, house-breaking, theft, ordinary theft, cattle theft and rioting constitute the important crimes reported from the Kottayam District in recent years. The figures relating to the various crimes for each of the years from 1958 to 1967 are furnished in Table I.

TABLE—I

Important Crimes Reported (1958-67)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Murder	55	54	57	53	39	34	33	38	33	38
Dacoity	1	4	2	1	1	1	1	4	2	2
Robbery	11	16	17	13	12	4	2	6	4	11
House breaking theft	101	191	310	274	173	250	249	250	225	24
Ordinary theft	284	372	267	302	284	273	293	328	318	30
Cattle theft	21	21	17	9	7	13	15	14	11	25
Rioting	173	177	111	109	98	104	62	..	..	..

Cases of suicide are also reported frequently. Usually suicide is committed by hanging oneself or by drowning or by poisoning or by placing one's head on the railway track as the train passes by. Protracted ailments and incurable diseases lack of proper employment, disappointment in love, failure in examinations and similar set-backs, domestic troubles and mental aberrations are the main causes of suicide in the District. Table I in Appendix I gives the sex-wise figures of cases of suicide reported during the period 1958-67.

Cases under the Gambling Act and the Suppression of Immoral Traffic in Women and Girls Act are also reported frequently. Cases of drunkenness are also frequent. Table II in Appendix I shows the number of such cases reported during the period 1958-67.

The statement showing the value of property stolen and recovered during the period in question is also furnished in Table III in Appendix I.

Evolution of the Police Force

It was during the days of Dewan Ummini Thampi (1809-1811) that an organised police force of 200 men was raised in Travancore. Col. Munro, who succeeded Ummini Thampi as Dewan in 1811 introduced several reforms in this force by raising its strength from 200 to 500 men.

In 1831 for the first time in the history of Travancore a law regarding the police was passed. This was followed by the enactment of a second Police Regulation in 1847-48. In 1854-55 in the wake of the formation of the Revenue Divisions a reorganisation of the police administration was also effected. The Dewan Peishkar, the Officer-in-charge of the Revenue Division, was empowered to supervise and control the functions of the Police. The Tahsildars were also empowered to control and supervise the police within their respective Taluks.

In 1881 Dewan Ramiengar submitted a report to the Government recommending several changes in the organisation of the police and on the basis of this report, a new Police Regulation was enacted. Accordingly the entire police force in Travancore was again reorganised. Special qualifications were prescribed for the candidates who are recruited to the police. A Police Training School was established with a view to training the new recruits. In order to meet emergencies a small Armed Reserve Force consisting of 147 men was also organised.

In 1919 the entire police in Travancore was brought under the control of a new Officer designated the Commissioner of Police. The District Superintendent of Police was made the head of the police at the divisional level and the Assistant Superintendents at the Sub-divisional level. In 1938 the designation of the Commissioner of Police was changed to the Inspector-General of Police. In the same year the posts of a Deputy Inspector-General and an Assistant Inspector-General were newly created. Following this several important changes took place in the Travancore Police Force. The new reforms introduced include the formation of an Intelligence Bureau, the separation of the State General Reserve from the District Reserve Units, formation of the Vehicle Taxation Branch, setting up of the Wireless and Motor Transport Units, the formation of the Women Police Wing etc. In 1949, as a result of the integration of Travancore and Cochin, the Police Forces in these two States were combined and placed under one Inspector General of Police. In order to achieve uniformity in ranks, the Station House Officers in Travancore area were also designated as Sub-Inspectors. The Traffic and Taxation Branch and the Armed Reserve were separated and each unit was placed under a separate Superintendent of Police. The Palace Guards Unit was merged with the Police Department. It was also provided that all the superior cadres of the Police Force were to be held by the officers belonging to the Indian Police Service.

Organisation of the Police Force

The functions of the Local Police include the prevention and detention of crimes, maintenance of law and order, escorting and guarding prisoners, guarding treasuries etc. Besides the police men have to perform many other duties, viz., service of summons, execution of warrants, guarding of public and private property placed in their charge and the prosecution of criminals.

The Superintendent of Police, Kottayam, is the head of the Police Department at the District level. He is directly responsible to the Deputy Inspector-General of Police, Southern Range, Trivandrum. In matters of administration, he is assisted by a Personal Assistant in the rank of a Deputy Superintendent of Police. Besides the Personal Assistant, the office of the Superintendent of Police is manned by one Manager, 1 Head Clerk, 1 Head Accountant, 7 Upper Division Clerks and 25 Lower Division Clerks.

The entire Police District is divided into two Sub-Divisions, viz., Kottayam and Meenachil and each Sub-Division is placed under the control of a Deputy Superintendent of Police or an Assistant Superintendent of Police. The Sub-Divisions are again divided into Circles which in turn are divided into Police Stations. The Circle is under the control of the Circle Inspector and the Police Station of the Sub-Inspector. There are Out-posts in important Police Stations having vast jurisdiction. Each out-post is under a Head Constable who is assisted by 3 Police Constables. There are altogether 5 Circles 25 Police Stations and 24 Out-posts in this District. The names of Circles, Police Stations and Out-posts are furnished in the Table at Appendix II to this Chapter.

The Local Police consists of 3 Deputy Superintendents of Police (including the Personal Assistant), 5 Circle Inspectors, 27 Sub-Inspectors, 125 Head Constables and 687 Police Constables. This includes the Traffic Control Unit consisting of one Traffic Sub-Inspector and 11 Head Constables.

The registration of cases is done in Police Stations and investigation of minor cases is done by Sub-Inspectors and Head Constables. Cases of a grave nature are often personally investigated by the Circle Inspectors or Sub-Divisional Officers. The progress of investigation is promptly watched by superior officers and timely instructions are given to the subordinates.

For the proper conduct of cases charged by the police, this District has one Assistant Public Prosecutor (Grade I) and 3 Assistant Public Prosecutors (Grade II). The Headquarters of the Assistant Public Prosecutor Grade I is at Kottayam and those of the Assistant Public Prosecutors Grade II are at Kottayam, Meenachil and Ponkunnam. The District Government Pleaders conduct Prosecutions in the Sessions Court, Kottayam.

A Special Branch Staff consisting of 1 Inspector, 2 Sub-Inspectors and 16 Head Constables is attached to the Office of the Superintendent of Police. They gather information on the law and order situation and pass on the same to the Superintendent of Police. Besides, they enquire into the antecedents of candidates for recruitment to public service, issue of pass ports etc.

A District Intelligence Bureau consisting of 1 Sub-Inspector and 3 Head Constables is also working in the District Police Office.

The District Armed Police in Kottayam District consists of 2 Reserve Inspectors, 4 Reserve Sub-Inspectors, 7 Jemedars, 33 Head Constables and 461 Police Constables.

Table No. II gives briefly the particulars of the strength of the Police force in Kottayam District in 1964-65.

TABLE - II

Strength of the Police force under the Superintendent of Police,
Kottayam in 1964-65

	SP.	Dy. SP.	CIs.	SIs.	Jem.	HCS.	PCs.
1. Local Police	1	1	5	..	..	..	..
(a) Attached to Police Stations							
Law & Order Supervising Officers	..	..	..	26	..	114	687
(b) Traffic Control	..	..	..	1	..	11	..
2. D.I.B. (District Intelligence Bureau)	..	..	..	1	..	3	..
3. S.B. (Special Branch)	..	..	1	2	..	16	..
4. P.A. to S. P.	..	1	..	..	..	..	..
5. District AR (Armed Reserve)	..	..	2	4	7	33	461
Total:	1	2	8	34	7	177	1148

Total sanctioned strength of the Police in the District as follows:

S.P. 1, Dy. S.P. 3, C.I.s. 8, S.I.s. 34, Jem. 8, HCS. 179 and PCs. 1189.

Police Housing Scheme

The statement given in Appendix III shows the number of residential quarters constructed for each rank. Steps have been taken to provide quarters to more officers and men.

Police Club

No police club is functioning at present in Kottayam. Nevertheless, there is a proposal to set up one and steps are being taken to raise the funds necessary for its construction.

Popular Committee

For the enforcement of the Suppression of Immoral Traffic in Women and Girls Act, an Advisory Committee including the prominent citizens of Kottayam has been formed.

The administration of the Rescue Shelter also is vested in the Committee.

HOME GUARDS ORGANISATION

There is a unit of the Home Guards in this District. The Kerala Home Guards was constituted under the Act XVI of 1960 in order to provide an opportunity to the citizens to place their services voluntarily at the disposal of the State, to fulfil tasks which may be allotted to them during times of necessity. The Organisation is intended to be a truly National Force of disciplined volunteers drawn from all walks of life and united by the common ideal of selfless and purposeful service to the country. It is being organised and trained throughout India on a common pattern, to fulfil the specific functions mentioned below:—

- 1 To serve as an Auxiliary to the Police and generally help in maintaining internal security,
- 2 To help the community in any kind of emergency, like an air-raid, a fire, a flood, an epidemic etc.,
- 3 To perform such emergency tasks as may be directly or indirectly connected with the country's defence and
- 4 To organise units to provide essential services such as Motor Transport, Pioneer and Engineering Groups, Fire Brigades, Nursing, First Aid, Operation of Power and Water Supply installations etc.

The organisation started functioning in December 1960. The Government sanctioned the formation of one company of 108 volunteers in the District in the first instance. The strength has subsequently been increased. The Home Guards organisation in the District is under a Commandant appointed by the Government. He is assisted by four staff officers viz., 1 Inspector, 1 Sub-Inspector and 2 Havildars. They impart training to the volunteers in the District. A statement of the sanctioned and existing strength of the Home Guards unit in Kottayam District as on December 31, 1968 is furnished below:—

Sanctioned and Existing strength of the Home Guards as on 31st December 1968

	Authorised strength	Actual Strength
<i>Volunteer Officers</i>		
D. C. (District Commandant)	1	1
S. Os. (Staff Officers)	4	2
C. Cs. (Company Commanders)	15	6
<i>Sub-Unit Leaders</i>		
Platoon Commanders	45	14
Company Sergeant Major	15	7
Platoon Sergeant	45	9
Other Home Guards	1,350	282

The volunteers are given regular training at select centres. The Training Centres in Kottayam District are Kottayam, Palai,

3/3718/MC.

Changanacherry, Vaikom, Kuravilangad, Ayarkunnam, Karukachal, Ettumanoor, Ponkunnam, Manarkad and Mundakayam. There is a District Advisory Committee for the Home Guards in the District to assist the District Commandant in the selection of volunteers. It consists of non-officials and officials.

Fire Service

The Fire Service in Kerala State was separated from the Police Department when the Kerala Fire Force Act (1962) came into force with effect from January 22, 1963. The Director of Fire Force, with headquarters at Trivandrum, is the Head of the Department. The State is divided into two Regions, the Northern Region with headquarters at Calicut and the Southern Region with headquarters at Ernakulam. A Regional Fire Officer is in charge of each Fire Service Region. Fire Stations are established for the protection of the major urban centres. The staff structure and the number of fire fighting units for each city or town are fixed according to population.

The Kottayam District forms part of the Southern Region of the Department of Fire Force. Only Kottayam town in this District has a Fire Station. It has three pumping units attached to it—one Basic, one Reserve and one Ambulance. The particulars of the staff structure are given below:—

Sub Officer	1
Leading Firemen	2
Driver Mechanic	1
Firemen Driver	4
Firemen	13
Telephone operator-cum-clerk	1

Fires are divided into three categories, viz., serious, medium and small according to the estimated value of the property damaged. Serious fires are those in which the estimated damage is Rs. 50,000 and above or in which loss of human life is involved irrespective of the value of the property damaged. Medium fires are those in which the estimated damage is over Rs. 10,000 and below Rs. 50,000 and small fires those of Rs. 10,000 and less. The statistics relating to each class of fire in Kottayam district for each of the years from 1961-67 and the approximate value of the property lost are given below:—

Statistics of Fire Calls					Approximate value of property lost Rs.
Year	Serious	Medium	Small	Total	
1961	1	1	22	24	6,10,549
1962	..	1	25	26	2,28,427
1963	1	..	39	40	1,79,06,370
1964	2	2	30	34	81,39,805
1965	..	2	48	50	94,955
1966	..	1	37	38	46,335
1967	1	3	31	35	5,01,706

Some other relevant statistics regarding the working of the Fire Station, Kottayam are given in the following tables:

Statistics of incident calls (Rescue calls) attended

Year	No. of calls attended
1961	2
1962	1
1963	Nil
1964	2
1965	2
1966	5
1967	2

Statistics of Ambulance Calls attended

Year	No. of calls	Amount Collected Rs.
1961	6	23.50
1962	10	96.50
1963	7	25.50
1964	7	25.50
1965	Nil	..
1966	1	No charge was collected.
1967	Nil	..

Statistics of stand-by and private pumping work undertaken

Year	No. of calls	Amount Collected Rs.
1961	Nil	Nil
1962	..	..
1963	1	Free of charge
1964	1	10
1965	Nil	..
1966	2	Free of charge
1967	Nil	..

Criminal Investigation Department

The Crime Branch C. I. D. was reorganised on a regional basis as per Government Order M. S. 320/Home (A) Department dated December 25, 1969. Till then it was functioning as a unit of the Office of the State Examiner of Questioned Documents under the Superintendent of Police Crime Branch C. I. D. According to this reorganisation Kottayam was placed under the Deputy Superintendent of Police, Ernakulam. This Department collect and disseminate useful information regarding crime and criminals.

JAILS

There are six Sub-jails in Kottayam District. The details of their location, year of establishment and sanctioned accommodation are given below:—

Name and Location	Year of establishment	Sanctioned Accommodation
A Class Sub Jail, Kottayam	1959	100
Do. Meenachil	N.A.	..
Do. Ponkunnam	1959	150
Do. Peermede	1959	60
Do. Devikolam	1961	45
Ordinary Sub Jail, Vaikom	1958	15

Each of the Sub-jails (A class) is under a Superintendent who is directly responsible to the Inspector-General of Prisons, Kerala State. The Superintendent is assisted by a Head Warder and 5 Warders each. The Ordinary Sub-jails is in the charge of the Deputy Tahsildar or in his absence the concerned Sub-Registrar of the locality. The Sub-jails are the places of confinement for (1) of prisoners kept in custody during remand and pending trial or preliminary investigation before the Magistrate's Court, (2) prisoners from Central Jails summoned to give evidence in local courts, (3) prisoners in custody on transit from one station to another and (4) all criminal prisoners sentenced to imprisonment for one month or less. The administration of the jails is governed by the Kerala Prison Rules, 1958. As a rule the under-trial prisoners are separated from convicted prisoners, first offenders from habituals, and adolescents from adults. There are separate wards for males and females. The daily routine of the Sub-jails is as follows. The Sub-jail wards are unlocked at day-break and the prisoners are allowed to have their morning ablutions. Some prisoners are then deputed to the kitchen for preparing the morning *Kanji*, while some others are assigned the work of sweeping the wards and the compound. After the morning *kanji* is served the able-bodied prisoners are provided with some work such as gardening, cleaning the compound etc., and under-trial prisoners are taken to the courts. The mid-day meal is served after 11 a.m. Convicted prisoners who are due for release on the expiry of their terms are usually released after mid-day meals. The prisoners are also allowed to take bath everyday. For purposes of bathing one ounce of coconut oil or gingely oil is issued to every prisoner on every Wednesday or Saturday. The evening *kanji* is served to the prisoners at 5 p.m. and at six O' clock they are all locked up again. In the Sub-jails the prisoners are supplied one Malayalam Newspaper and also books from the local libraries. The A Class Sub-jails have generally their own Boards of Visitors. The Inspector-General of Prisons, the Director of Health Services, the Sessions Judge of the District, the Senior Medical Officer, and the Probation Officer, function as official members

of the boards. The Municipal Chairman, if any, the M. L. A., and M. P. of the locality, a Doctor, a Lawyer and a Woman Social Worker of the place and another respectable person of the locality serve as non-official members of the boards. The members of the Board visit the jails periodically and give advice and guidance in regard to their proper administration. As the Sub-jails serve only a limited purpose and do not accommodate long-term prisoners, there are no facilities for providing vocational and educational training in them as in Central Jails. But most of them have small gardens in their premises, and every available space is also utilised for cultivation of tapioca and other vegetables on a small scale.

PROBATION DEPARTMENT

The staff of the Probation Department in the District consisting of a District Probation Officer and a Peon is under the direct control of the Chief Probation Superintendent, Trivandrum, and the Probation Department as a whole is under the control and supervision of the Inspector-General of Prisons. The District Probation Officer is in charge of the work of Probation and After-care under the Probation of Offenders Act (1958), the Kerala Borstal School's Act (1961) and the Suppression of Immoral Traffic in Women and Girls' Act (1956). He is also called upon by the Courts to submit preliminary enquiry reports in respect of offenders proposed to be dealt with under the Probation of Offenders Act. Besides Probation and After-care work he is also expected to conduct the discharge enquiries about the inmates of Balamandirs, Protective Homes etc. with a view to rehabilitating them after discharge from their institution. The supervision of the convicts released prematurely under the Advisory Board Scheme is also attended to by the District Probation Officer.

Balamandir, Kottayam

A Certified School (Balamandir) was opened at Kottayam in December 1962 and was temporarily accommodated in a building belonging to the Beggar Relief Centre. It is an institution for providing detention facilities to the children dealt with under the Children Act. Facilities for education and recreation are also provided in the institution. In the Certified School at Kottayam detention facilities are being provided for 200 inmates. Primary education will also be provided to the inmates in addition to training in useful handicrafts and trades.

Rescue Shelter, Kottayam

The Rescue Shelter, Kottayam, was started in 1958-59 under the 'Social' and Moral Hygiene and After-Care Programmes of the Second Five Year Plan. It is a Protective Home for the detention of women and girls committed under

the provisions of the Suppression of Immoral Traffic in women and Girls Act (1956). In addition, women and girls rescued from the verge of moral danger are also given shelter here at their request. The Rescue Shelter, Kottayam has accommodation for 25 women at a time and the maintenance charge fixed by the Government is Rs. 25 per head permensem. The care and nurture of children admitted along with the women detained in the Shelter are also attended to there itself up to the age of 6 years. The staff of the Shelter consists of a Superintendent, a Matron and a Peon. The day-to-day administration of the Shelter is carried on by the Managing Committee consisting of both officials and non-officials constituted by the Government. The Committee has a non-official, as Chairman and a Government official (the Superintendent of the Shelter) as Treasurer. The inmates of the Shelter are provided with facilities for vocational training in such crafts as spinning, hand-pounding of rice, cutting and tailoring, basket making, embroidery, mat-weaving etc.

Remand Home:

A remand Home was started in Kottayam as a part of the Social Welfare programme under the Third Five Year Plan.

ADMINISTRATION OF JUSTICE

Historical Background

In olden days there was no regular judicial system in the erstwhile Travancore State. The judiciary was not a separate organ and the administration of justice was conducted by the *Naduvazhis* and *Desavazhis* in conformity with *maryada* or custom. The executive officers were also authorised to exercise judicial functions. The *melvicharippukar* was the only divisional officer who exercised purely judicial functions.

During the time of Dewan Ummini Thampi, a few courts known as the *Insuafl Cutcherries* were established for the dispensation of justice. However, Col. Munro who succeeded Ummini Thampi abolished these Courts and took the duty of the dispensation of justice in his own hands for some time. But as there were many difficulties in this system, Col. Munro, in consultation with the Pandits, drafted a set of rules called "*Chattavariyolas*" based on the *Dharma Sastras*, the regulations in vogue in the Company and, above all, on the established usages in the country. These were promulgated with the sanction of the then ruling Rani—Rani Gouri Lakshmi Bai—on 30th Chingam 987 K. E. (September 1811). Munro's scheme provided for the establishment of a Principal Government for the State and Subordinate or Zilla Courts of which one was to be set up at Vaikom in this District. Col. Munro also made an attempt to abolish the system of trial by ordeal. But the Rani was strongly against the proposed measure and she prevailed upon him to retain it. It was therefore decided that

trial by ordeal might be resorted to with the express sanction of the Dewan. The new scheme devised by Col. Munro and approved by the Rani marked a turning point in the history of judicial administration. It also placed the judiciary on a much higher pedestal.

In 1811 Zilla Courts were first established in Travancore and placed under the orders of the Dewan who was the head of all the departments of public service. These Courts were to enquire into all cases, civil criminal or police, which were brought before them, and report to the Dewan, who passed orders on each case. In 1814 an Appellate Court, attached to the Dewans Cutcherry, was formed in order to hear appeals on the decisions of the Zilla Courts. In 1817 Tahsildars were authorised to hear petty police cases. Munsiff's Courts were established in 1831 and they were invested with jurisdiction in petty police cases and in civil cases upto Rs. 100. A general scheme of judicial administration based on the system obtaining in the Madras Presidency was introduced by means of five Regulations in 1834. A code of Civil Procedure, based on the British Indian Act, was introduced in 1861. This was followed by the enactment of another Regulation in 1865 defining the status of Vakils, their discipline and their rights in relation to courts. Two Regulations were passed in the next year, the first empowering a single judge of the Zilla Court to try and determine civil and criminal cases, and the second raising the jurisdiction of the Munsiffs to hear and decide suits of the value not exceeding Rs. 200. A subsequent Regulation relieved the Dewan of the exercise of judicial functions as Chief Magistrate and invested the Division Peishkar and the Superintendent Cardamom Hill with full powers of a Magistrate in their respective jurisdictions.

In 1881 the whole judicial system was re-organised. The number of Zilla Judges and Munsiffs was much reduced. The jurisdiction of Munsiffs was raised to Rs. 500, while they were invested with final small cause powers in personal suits up to the value of Rs. 20. In 1890 the small cause jurisdiction of the Munsiffs was raised from Rs. 20 to Rs. 30 and the final appellate jurisdiction of the Zilla Judges from Rs. 50 to Rs. 60. To prescribe the mode of valuing suits for the purpose of determining the jurisdiction of Courts and of assessing pleaders' fee for purpose of taxation of costs, a Regulation was passed in 1892. In 1901 the ordinary jurisdiction of the Munsiffs was raised from Rs. 500 to Rs. 1,000 and steps taken to raise their small cause jurisdiction from Rs. 30 to Rs. 50 in individual cases on the recommendation of the High Court. In 1917 a Village Panchayat Court was set up for the first time in Kottayam. A Second Class Bench Magistrates Court each was set up at Kottayam and Changanacherry under the Criminal Procedure Amendment Regulation VI of 1097 (1921-22). Several other reforms were introduced in the judicial system in succeeding years.

Organisation of Civil Courts

The District Judge, Kottayam is the highest judicial authority in the District and he presides over the District Court. The District Court is the Principal court of original civil jurisdiction in the District and it is also a court of appeal from all decrees and orders upto the value of Rs. 10,000 passed by the subordinate courts from which an appeal can be preferred. The District Judge exercises general control over all civil courts in the District and their establishments and inspects the proceedings of these courts.

The District Court, Kottayam has also attached to it an Additional District Judge. Subordinate to the District Court Kottayam are 2 Sub-Courts, 7 Munsiff's Courts and 2 Village Panchayat Courts. The Sub-Judge exercises both original and appellate jurisdiction. He tries original cases the value of which is unlimited and appeal cases the value of which does not exceed Rs. 5,000. The Munsiff exercise only original civil jurisdiction. He tries original cases the value of which does not exceed Rs. 5,000. The Village Panchayat Court constituted under the Travancore Village Panchayat Courts Act, I of 1090 K. E. (1914-15) is empowered to try petty civil suits the value of which does not exceed Rs. 100. Section 73 of the said Act permits of revision being preferred before the District Court in civil suits.

The District Court, Kottayam has attached to it a District Judge and an Additional District Judge. The Courts subordinate to the District Court, Kottayam as it stood on 31-3-1964 are as follows:—

<i>Courts</i>	<i>Stations</i>
1 Sub Court (two benches)	Kottayam
2 Sub Court (one bench)	Meenachil
3 Munsiff's Court (one bench)	Kottayam
4 Do. do.	Ettumanur
5 Do. do.	Changanacherry
6 Do. do.	Kanjirappally
7 Do. do.	Meenachil
8 Do. do.	Vaikom
9 Do. do.	Devicolum
10 Village Panchayat Court	Kottayam
11 Village Panchayat Court	Changanacherry

The Munsiffs at Ettumanur and Devicolum are First Class Magistrates also. The Village Panchayat Courts function also as Bench Magistrate's Courts.

Statistics of Civil Courts

In the various courts including the Village Courts in the Kottayam District at the beginning of the year 1963-64, there were 1980 suits pending. During the same year 2817 cases

were instituted and 211 were received otherwise. Of these 164 were accounted as transferred and 3,256 were disposed of and the balance pending at the end of the year was 1688.

Of the 2,917 suits instituted, 2,072 were for money or movable property; 295 were for immovable property; 252 related to mortgages, 298 were for specific relief and other reliefs.

Of the suits instituted, 572 were of value not exceeding Rs. 100 but not exceeding Rs. 1,000 506 were of value above Rs. 1,000 but not exceeding of Rs. 5,000 25 were of value above Rs. 5,000 but not exceeding Rs. 10,000, 124 were of value above Rs. 10,000 and 1 of value which cannot be estimated in terms of money. The total value of suits instituted was Rs. 45,82,160.41.

Of the 3,256 suits disposed of 201 were without trial, 1,954 were exparte, 160 were on admission of claims, 543 were by compromise, and 1,298 were after full trial.

There were 956 appeals (including miscellaneous appeals) pending at the beginning of the year 1963-64. During the year 1963-64, 673 appeals were instituted and 176 were received otherwise. The total for disposal was 1,805 of which 153 were transferred and 928 were disposed of. The balance pending at the end of the year was 724.

Of the 928 appeals disposed of, 73 were dismissed or not prosecuted the lower court decrees, 468 were confirmed 97 modified, 193 reversed and cases remanded for retrial were 97.

Organisation of Criminal Courts

The Civil District and the sessions Division being coterminous with the corresponding Revenue District, the District Judge, Kottayam is also the Sessions Judge of the Division. The Sessions Court is the principal court of original criminal jurisdiction in the Sessions Division. It is presided over by the Sessions Judge. The Additional District Judge and the Sub-Judges function as Additional Sessions Judge and Assistant Sessions Judge respectively. The Courts subordinate to the Sessions Court, Kottayam as it stood on March 31, 1964 are as follows:—

<i>Courts</i>	<i>Stations</i>
1. Assistant Sessions Court (two benches)	Kottayam
2. Assistant Sessions Court (one bench)	Meenachil
3. District Magistrate's Court	Kottayam
4. Sub-Divisional Magistrate's Court	Ponkunnam
5. Additional First Class Magistrate's Court	Changanacherry
6. Additional First Class Magistrate's Court	Vaikom

3/3718/MC.

Courts	Stations
7 Additional First Class Magistrate's Court	Meenachil
8 Additional First Class Magistrate's Court	Peermede
9 Munsiff-Magistrate's Court	Devicolum
10 Munsiff-Magistrate's Court	Ettumanur
11 Sub Magistrate's Court	Kottayam
12 Do.	Meenachil
13 Do.	Udumbanchola
14 Bench Magistrate's Court	Kottayam
15 Do.	Changanacherry

The Sessions Judge tries criminal cases which are committed to his court by Judicial Magistrates after preliminary enquiry and hears appeals against the decisions of Judicial Magistrates. The Sessions Judge and Additional Sessions Judge can pass any sentence authorised by law, but any sentence of death passed by them is subject to confirmation by the High Court. The Assistant Sessions Judge can pass any sentence authorised by law except a sentence of death or of imprisonment for life or of imprisonment for a term exceeding ten years.

The separation of the judiciary from the executive is complete in this State so that, like every other District, Kottayam has also two categories of Magistrates - Executive and judicial. The Executive Magistrates are the Executive Officers of the Revenue Department in whom is vested the responsibility for the maintenance of law and order. The District Collector, by virtue of the office he holds, retains some of the powers of a District Magistrate. He is an Additional District Magistrate. Similarly the Revenue Divisional Officers are ex-officio First Class Magistrates and they exercise magisterial powers and functions within their revenue jurisdictions. The category of Judicial Magistrates consists of (1) the District Magistrate, (2) Sub-divisional Magistrates, (3) First-Class Magistrates, (4) Sub-Magistrates and (5) Bench Magistrates.

Under the criminal Procedure Code and various other statutes the functions of a Magistrate fall within three broad categories, viz., (1) functions which are 'Police' in their nature, as for instance, the handling of unlawful assemblies, (2) functions of an administrative character, as for instance, the issue of licenses for fire arms etc., and (3) functions which are essentially judicial, as for instance, the trial of criminal cases. The allocation of powers between the two categories of Magistrates proceeds upon the principle that matters which are purely police or administrative in their nature should be dealt with by the Executive Magistrates while those which are judicial in nature are strictly within the purview of the Judicial Magistrates. As officers of the Revenue Department the Executive Magistrates are under the control of the Government through the Board of Revenue while the Judicial Magistrates are under the control of the High Court.

The District Magistrate is the principal magisterial officer of the District and as such he has general administrative superintendence and control over all Judicial Magistrates. He inspects once in every year all the Courts of the Sub-Divisional and First-Class Magistrates in the District and such of the Courts of Sub-Magistrates as he considers necessary. His primary responsibility is to see that there is no congestion of work in any Court and that the Magistrates dispose of the work in their Courts properly and promptly. In addition to general supervisory functions the District Magistrate has also a specified area assigned to him, the cases arising from which he normally disposes of himself. He hears appeals from second class cases arising within that area or within any other area not assigned to any other First-Class Magistrate. It is open to him to transfer to or from his file, particular cases, or class of cases, and appeals, but he is expected to dispose of himself the cases of special difficulty and importance. The District and Sessions Judge inspects the Court of the District Magistrate annually as the nominee of the High Court. He may, if he thinks fit, also inspect the court of any other Judicial Magistrate in the District as such nominee, but he does not have general powers of superintendence over Magistrates in his own right.

The ordinary powers of the Magistrates of the several classes are detailed in Schedule III of the Code of Criminal Procedure (Act V of 1898). They may be invested with such additional powers by the State Government as are detailed in Schedule IV of the Code. They are competent to pass the following sentences.

- (a) *Sub-Divisional and First Class Magistrate*
 - 1 Imprisonment for a term not exceeding 2 years including such solitary confinement as is authorised by law.
 - 2 Fine not exceeding Rs. 2,000.
- (b) *Magistrate of the Second Class*
 - 1 Imprisonment for a term not exceeding 6 months including such solitary confinement as is authorised by law.
 - 2 Fine not exceeding Rs. 500.

Statistics of Criminal Courts

74 offences were reported to the Sessions courts during the year 1963-64. The number of persons under trial (including those pending from the previous year) was 137. The cases of 127 persons are disposed of during the year. Of these, 51 persons were acquitted or discharged and 76 persons are convicted. The cases of 9 persons were referred to the High Court, for confirmation of death sentences. The sentences passed by the Court of Sessions were as follows:—

Number of persons sentenced to death	9
Number of persons sentenced to life imprisonment	13

Number of persons sentenced to rigorous imprisonment	49
Number of persons imprisoned and fined	2
Number of persons sentenced to be sent to borstal school	1
Number of persons released on probation	2

The total number of offences reported during the year in the various Magistrate's Court of the District was 14,487. The number of persons under trial (including those pending from the previous year) was 23,160. The cases of 21,186 persons were disposed of during the year and 1,974 persons were awaiting trial at the end of the year. Of the cases of 21,186 persons disposed of 5,493 persons were acquitted or discharged, 14,347 persons were convicted, 75 persons were committed to the Sessions and the cases of 1271 persons were otherwise disposed of.

The sentences passed by the Magistrate's Court, were as follows:—

Number of persons sentenced to simple imprisonment only	45
Number of persons sentenced to rigorous imprisonment only	277
Number of persons imprisoned and fined	13,784
Number of persons released on probation	143
Number of persons sent to borstal school	40

Law Offices in the District

The following are the Law Officers of Government functioning in the Kottayam District.

Designation	Number
1 Government Pleader and Public Prosecutor	1
2 Assistant Government Pleaders	3
3 Assistant Public Prosecutors	4

Number of Legal Practitioners

The total number of Legal Practitioners in this District including Advocates in the Kottayam District in 1963-64 is 303.

Bar Associations

Bar Associations function in almost all centres where there are courts of law. The available particulars on the most important of these associations collected in 1964-65 are given below:

Associations	Date of Establishment	Number of members	No. of volumes in the Library if any
1 Kottayam	N.A.	140	3,000
2 Vaikom	1954	42	Nil
3 Peermade	1957	6	Nil
4 Devikolam	N.A.	9	Nil
5 Udumbanchola	1961	4	Nil
6 Ettumanur	1940	16	Nil
7 Changanacherry	N.A.	38	500

APPENDIX I

			By drowning	By poisoning	By hanging	Other causes	Total
1958	Male	Adults	3	10	63	2	78
		Children	..	..	..	..	..
	Female	Adults	6	11	19	3	39
		Children	..	..	..	..	..
1959	Male	Adults	..	22	59	..	81
		Children	..	..	..	..	..
1960	Male	Adults	5	13	21	1	40
		Children	..	..	..	..	..
	Female	Adults	7	9	18	2	36
		Children	..	..	..	..	..
1961	Male	Adults	4	7	49	..	60
		Children	..	..	..	..	..
	Female	Adults	6	11	25	..	44
		Children	..	..	..	..	..
1962	Male	Adults	12	10	68	..	90
		Children	..	..	..	..	..
	Female	Adults	12	10	42	..	64
		Children	..	..	..	..	..
1963	Male	Adults	16	14	26	2	57
		Children	..	..	..	..	..
	Female	Adults	13	10	21	..	44
		Children	..	..	..	..	..
1964	Male	Adults	7	19	71	6	103
		Children	..	..	..	..	..
	Female	Adults	9	21	23	2	55
		Children	..	..	..	..	..
1965	Male	Adults	10	23	56	8	97
		Children	..	..	..	..	..
	Female	Adults	12	28	6	..	46
		Children	..	..	..	..	..
1966	Male	Adults	15	31	73	5	124
		Children	..	..	..	..	..
	Female	Adults	8	13	7	..	38
		Children	..	..	..	..	..
1967	Male	Adults	27	38	84	..	149
		Children	..	..	..	..	..
	Female	Adults	3	27	11	..	41
		Children	..	..	..	..	..

KOTTAYAM

APPENDIX I

TABLE—I

Important Crimes reported (1958-67)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Murder	55	54	57	53	39	34	33	38	33	38
Dacoity	1	4	2	1	1	1	1	4	2	2
Robbery	11	16	17	13	12	4	2	6	4	11
House breaking theft	101	191	310	274	173	250	249	250	225	243
Ordinary theft	284	372	267	302	284	273	293	328	318	306
Cattle theft	21	21	17	9	7	13	15	14	11	25
Rioting	173	177	111	109	98	104	62	..	..	..

TABLE—II

Statement of cases under Gambling Act etc.

Year	Cases under Gambling Act	Cases under suppression of immoral Traffic in Women & Girls Act	Cases of Drunkenness
1958	79	4	216
1959	86	7	193
1960	91	5	212
1961	102	6	301
1962	99	3	287
1963	81	5	219
1964	88	7	298
1965	7	2	Nil
1966	13	Nil	Nil
1967	51	1	Nil

TABLE—III

Statement of the value of property stolen and recovered

Year	Property lost (value in Rs.)	Property recovered (value in Rs.)	Percentage
1958	1,11,346.39	63,846.69	61.8
1959	1,17,173.70	42,209.14	36.2
1960	1,24,471.25	29,773.00	22.00
1961	3,04,606.00	77,518.00	25.4
1962	12,063.00	6,464.00	54.00
1963	93,443.00	37,225.00	39.84
1964	1,16,222.00	61,467.00	52.89
1965	1,10,895.00	27,566.00	24.88
1966	1,72,220.00	43,935.00	25.51
1967	1,19,116.00	66,518.00	55.9

APPENDIX II

List of Sub Divisions, Circles, Police Stations and Out Post of Kottayam District

Kottayam Sub Division:

Circles	Police Station	Out Post
I Kottayam Circle	1 Kottayam West	Boat Jetty
	2 Kottayam East	Ayrkunnom
	3 Changanacherry	Sachivothamapuram
	4 Pampady	..
	5 Kumarakom	Thiruvappu
II Ponkunnam Circle	1 Ponkunnam	..
	2 Karukachal	Vakathanam
	3 Manimala	Chamapathal
	4 Erumeli	..
	5 Mundakayam	Kootikal
III Feermade Circle	1 Peermede	{ Upputhara Vagamon
	2 Vandiperiyar	Kumili
	3 Vandanmedu	..
	4 Ayyappancoil	Kattappana
	5 Kallar Pattom Colony	..

Meenachil Sub Division

Circles	Police Station	Out Post
IV Vaikom Circle	1 Vaikom	{ Vadayar Vechur Brammamangalam
	2 Kaduthuruthy	Manjoor
	3 Kuruavilangad	..
	4 Ettumanoor	Kidangoor
	5 Meenachil	Ramapuram
	6 Erattupetta	Thidanad
V Munnar Circle	1 Munnar	Thalayar
	2 Devikolam	Santhanpara
	3 Udumbanchola	Mannamkantom
	4 Vellathooval	..

KOTTAYAM

APPENDIX II

Government Quarters Provided for Officers and Men

	S.P.	Dy. S.P.	C.I.	S.I.	HGs. & PG.
Superintendent of Police, Kottayam	1	..	..	..	..
Dy. Superintendent of Police, Meenachil, Kottayam and P.A. to Superintendent of Police	..	1	..	..	..
Circle Inspectors	..	..	4	..	..
Changanacherry Station	..	..	..	1	36
Devikolam Station	..	..	..	1	31
Thalayar O.P.	..	..	..	..	3
Thidanad O.P.	..	..	..	..	4
Kottayam East & West	..	..	..	1	63
Karukachal	..	..	..	1	24
Kumarakom	..	..	..	..	3
Mundakayam	..	..	..	1	11
Kootical O. P.	..	..	..	..	5
Munnar Station	..	..	..	..	11
Peermede	..	..	..	1	19
Upputhara O. P.	..	..	..	..	4
Ponkunnam Station	..	..	..	1	31
Udumbanchola	..	..	..	1	11
Santhanpara O. P.	..	..	..	..	5
Vaikom Station	..	..	..	1	25
Vandiperiar Station	..	..	..	..	19
Kumily Out Post	..	..	..	..	3
Mannankandam O. P.	..	..	..	..	5
A.R. Kottayam	..	..	..	1	51
A.R. Baracks accommodation	..	..	..	..	280
Total	1	1	4	12	644

Construction of Quarters in Progress in 1965

Erattupettah	1	34
Ettumanur Station	1	38
Meenachil	1	43
Mundakayam	..	12
Total	3	127

CHAPTER XIII

OTHER DEPARTMENTS

The organisational set-up of some of the departments not dealt with in the other Chapters is described in this Chapter.

PUBLIC WORKS DEPARTMENT

The Public Works Department functions in the District through the following Divisions viz., the Buildings and Road Division, Kottayam, the Buildings and Roads Division Moovatupuzha, the Buildings Division (Medical College), Kottayam and the Minor Irrigation Division, Kottayam.

Buildings and Roads Division, Kottayam

This Division is comprised of the Taluks of Kottayam, Changanacherry, Meenachil, Kanjirapally and Peermede and a portion of Udumbanchola. There are five Sub-Divisions under it with headquarters at Kottayam, Changanacherry, Palai, Kanjirapally and Peermede. The following Sections are attached to each of the Sub-Divisions.

Sub-Division

Section

Kottayam

1. Kottayam
2. Pampady
3. Kumarakom
4. Ettumanoor

Palai

1. Palai
2. Kuravilangad
3. Erattupetta

Changanacherry

1. Changanacherry
2. Puthupally
3. Karukachal

Kanjirapally

1. Kanjirapally
2. Manimala
3. Vazhoor

Peermede

1. Peermede
2. Kumily
3. Elappara

The Executive Engineer, Buildings and Roads, Kottayam, is in charge of the Division assisted by one Technical Assistant, one Divisional Accountant and one Junior Superintendent. There are two Head Draftsmen in the Drawing Branch. The Divisional Accountant is in charge of the compilation of accounts and is also in over-all charge of the ministerial establishment. The Junior Superintendent is in charge of the Work Establishment and General Section. The work in the Drawing Branch is distributed among two Upper Division Draftsmen, 6 Lower Division Draftsmen, 1 Tracer and 1 Blue Printer. Each Sub-Division is under an Assistant Engineer and the Section under a Junior Engineer.

Buildings & Roads Division, Moovattupuzha

The Buildings and Roads Division, Moovattupuzha (Ernakulam District) also exercises jurisdiction over a portion of the Kottayam District. The P. W. D. Sub-Divisions of Vaikom and Devikulam form part of this Division. The details of the sections in these sub-Divisions are given below:—

Sub-Division	Section
1. Vaikom	
1. Vaikom	
2. Talayolaparamba	
2. Devikulam	
1. Udumbanchola	
2. Munnar	
3. Pallivasal	

Buildings Division (Medical College), Kottayam

The Division has jurisdiction over Kottayam and Alleppey Districts and partly over Quilon District. Its main functions are:—1. Construction of Medical College buildings at Arpookara. 2. Construction of Government Polytechnic, Nattakam. 3. Construction of Government Hospital, Kottayam. 4. Construction of District Hospital buildings at Alleppey. 5. Construction of Central Hatchery works at Chengannur. 6. Construction of major bridges in various places as instructed by the Government in Kottayam and Alleppey District. 7. Maintenance and repairs of machinery of P. W. Division in South Circle (Workshop at Kollakadavu) and 8. Electrical wiring works and maintenance works of Government buildings in Kottayam and Alleppey districts. The Sub-Division and Sections in the Division are as follows:—

Sub-Divisions	Sections	Function
1 Medical College Sub-Division, Arpookara	3 Sections at Arpookara	Construction of Medical College Buildings, Arpookara.
2 Medical College Sub-Division, II, Kottayam	3 Sections at Kottayam and one at Arpookara	Construction of Polytechnic and Government Hospital buildings & Medical College buildings.
3 Hospital Sub-Division, Alleppey	3 Sections at Alleppey	Construction of Hospital buildings at Alleppey.
4 Bridges Sub Division, Chengannur	1 Kottayam 2 Arattupuzha 3 Pulikeezhu 4 Chengannur	Construction of bridges do. do. Construction of Central Hatchery works at Chengannur.
5 Bridge Sub-Division, Mavelikkara	1 Kannettill 2 Haripad 3 Alleppey	Construction of bridges do. do.
6 Workshop Sub-Division, Kollakadavu	Separate sections are not formed of Government machinery. Assistant Engineer Junior Engineer & other staff are working in the workshop.	
7 Electrical Wing Sub-Division, Kottayam	1 Kottayam 2 Alleppey	Wiring & Maintenance of electrical works in Government buildings in Kottayam District. Wiring & Maintenance of electrical works in Government buildings in Alleppey District.

The Division is under an Executive Engineer who is assisted by a Financial Advisor and Divisional Accountant in his office. All the Sections are under the immediate control of the Assistant Engineers and all the Assistant Engineers under the control of the Executive Engineer.

PUBLIC HEALTH ENGINEERING DEPARTMENT

A Division of the Public Health Engineering Department functions in the Kottayam District under the charge of the Executive Engineer. This Division is designated Public Health Division, Kottayam. There are two Sub Divisions under this Division. One Assistant Engineer holds the charge of each Sub-Division. The headquarters of the Division and the two Sub-Divisions is at Kottayam. The Division office and the Sub-Division offices are housed in the Department's own building constructed over the Low level Service reservoir.

Sub-Division I has three Section offices under it and Sub-Division II has 4 sections under it. One Junior Engineer is holding the charge of each section. The headquarters of two sections under Sub-Division I are away from Kottayam, one at Palai and the other at Mundakayam. Same is the case with Sub-Division II. One Section is at Vaikom and another at Peroor. The remaining sections of both Sub-Divisions are functioning in the Division office Building at Kottayam.

This Division attends to the works of two major water supply schemes, Kottayam Water Supply Scheme and Vaikom Water Supply Scheme. The works in all the rural water supply schemes of this District are also attended to by this Division. The maintenance of the above schemes are also being attended to by this Division. The Water Supply and sewage disposal system of the Medical College, Kottayam is being executed by this Division on behalf of the Medical College Division, Kottayam. There are some major non-Governmental works also such as construction of E. S. I. Dispensary and its quarters, water supply and sanitary installation to Rubber Board staff quarters etc.

There is one store sanctioned to this Division under the direct control of the Executive Engineer. The materials such as pipes of various sizes, cement, M. S. rods etc., required for the works are stored in the Division store.

AGRICULTURE DEPARTMENT

There are two officers in the cadre of District Agricultural Officer in this District viz., the District Agricultural Officer and the Additional District Agricultural Officer, both having their headquarters at Kottayam. They are directly under the control of the Joint Director of Agriculture (Southern Region) with his headquarters at Trivandrum. The District Agricultural Officer is in charge of the District Office and the general administration while the Additional District Agricultural Officer is in charge of the plan schemes in general.

As far as agricultural extension is concerned, the District Agricultural Officer and Additional District Agricultural Officer are the final authority in the District. They are vested with the duties of controlling supplies and services and guiding and supervising the extension activities at the Taluk and Block level. They are responsible for the organisation and co-ordination of the activities of field workers such as Agricultural Assistants, Agricultural Extension Officers, Fieldmen, Maistries etc., in the Department. Supervision and inspection of the demonstration plots, trial plots etc., form part of their duties.

The District Agricultural Officer and Additional District Agricultural Officer have the following technical staff to assist them in implementing various schemes and in carrying on the

general administration: 1. Technical Assistant, 2. Plant Protection Assistant (Mycology), 3. Plant Protection Assistant (Entomology), 4. Agricultural Assistant (Marketing) and 5. Agricultural Assistant (Market Intelligence). All these Officers are attached to the office of the District Agricultural Officer.

Below the District Agricultural Officers come the Agricultural Assistants and Agricultural Extension Officers. Their functions are to formulate and execute the agricultural programmes in consultation with the District Agricultural Officer and Additional District Agricultural Officer and the Block Development Officers for the Panchayats and N. E. S. Blocks in their respective areas. They organise Farmers' Societies, arrange Village Leaders Camps, meetings and group discussions, give necessary technical guidance to cultivators and supervise the work of the Fieldmen, Compost Inspectors and Spraying Supervisors and Gramsevakas etc., under them. They are also expected to have personal contacts with the farmers and study their problems and give full technical advice in solving the problems of agriculture. They also organise and supply the requisites of agricultural production such as seeds, insecticides, manures, pumpsets etc. Loans of all types—short, medium and long term—are issued through them and the technical recommendations of the applications are to be done by the Agricultural Extension Officers.

There are 13 N. E. S. Blocks in this District where the offices of the Agricultural Extension Officers are situated. They are at Pallom, Madapally, Ettumanoor, Kaduthuruthy, Vaikom, Uzhavoor, Lalam, Erattupettah, Kanjirapally, Pampady, Vazhoor, Arudai and Devikolam. In addition to the N. E. S. Blocks there are 3 Paddy Seed Farms under the charge of Agricultural Assistants. They are at Kozha where *Viruppu* and *Mundakan* seeds are multiplied, Valachira where also *Viruppu* and *Mundakan* seeds are multiplied and at Kumarakom where *punja* seeds are multiplied.

ANIMAL HUSBANDRY DEPARTMENT

The administration of the Animal Husbandry Department at the district level is carried on by the District Veterinary Officer with his headquarters at the Civil Station, Kottayam. The various institutions of the Department, viz., Veterinary Hospitals, Veterinary Dispensaries, Key Village Centres, Artificial Insemination Centres, Poultry Farms and Piggery Development Blocks are under his supervision and control. He is also responsible for the proper direction and supervision of the various Animal Husbandry development programmes of the N. E. S. Blocks, implementation of the departmental programmes and co-ordination of the activities of the subordinate staff.

There are sixteen Veterinary Surgeons in this District and they are in immediate charge of the Veterinary and Animal

Husbandry institutions. They not only work as subordinates of the District Veterinary Officer but also supervise and direct the work of Livestock Assistants and Poultry Assistants within their jurisdiction. The Livestock Assistants are in charge of minor Veterinary Institutions.

The Animal Husbandry activities of the N. E. S. Blocks are carried on by the Extension Officers for Animal Husbandry who are advised, controlled and supervised by the District Veterinary Officer as far as the technical aspects are concerned. The Extension Officers (A. H.) are assisted in their work by Livestock Assistants. The administrative control of the Animal Husbandry staff of the Blocks is vested in the Block Development Officers concerned.

The following institutions are run by the Department in Kottayam District:—(1) Veterinary Hospitals at Kottayam, Meenachil, Thalayolaparambu, Changanacherry, Vandiperiyar, Nedumkandam, Peermade, and Adimali. (2) Veterinary Dispensaries at Kodungoor, Elappara, Kumily and Marayoor. (3) Veterinary Dispensaries at Pariyaram, Panachikad, Neendoor, Pampady, Kidangoor Kozha, Puthuveli, Memuri, Mula-kulam, Vaikom, Vakathanam, Champakara, Ponthampuzha, Kanjirapally, Kallar and Mundakayam. (4) Key Village Centre, Kottayam, with 10 sub Centres; Key Village Centre, Palai, with 10 Sub Centres and Key Village Centre, Vaikom with 6 Sub Centres. (5) Piggery Development Block at Thalayolaparambu and (6) District Poultry Farm Manarcad.

Another scheme for the development of hill cattle is being worked with its headquarters at Kanjirapally. The Officer in charge of the Hill Cattle Development Scheme is directly responsible to the Director of Animal Husbandry.

The following figures of expenditure incurred by the Animal Husbandry Department in the District during the three years from 1961-62 to 1963-64 show the increasing importance attached to the Animal Husbandry activities in recent years.

Year	Expenditure
1961-62	1,68,034.60
1962-63	2,65,955.05
1963-64	3,12,873.00

FOREST DEPARTMENT

The Kottayam Forest Division has an extent of 344 sq. miles of Reserve Forests spread over Kottayam and Ernakulam Districts. The eastern boundary of this Division touches the eastern border of the State at Kumily. The reserve forests are rich in their tree growth, accommodating a good variety of species from high priced Rosewood to Bamboos and Reeds. Annually timber worth about Rs. 50,00,000 is extracted from

these forests. The Cardamom Hill Reserve is a speciality of this Division.

The Division is under the administrative control of a Deputy Conservator of Forests with headquarters at Kottayam. There are 4 regular Ranges and one special Range, each under the control of a Forest Ranger. The regular Ranges are Kumily, Ayyappancoil, Kumily and Nagarampara. The special Range has his headquarters at Keerithodu. The Ranges are divided into Sections under the control of Foresters, and Sections are again divided into Beats under Forest Guards. The total strength of the executive staff of the Ranges is as follows:—

Rangers,	8
Dy. Rangers	3
Foresters	25
Forest Guards	79

There is also a Flying Squad in this Division headed by a Forest Ranger who has under him Foresters and Forest Guards.

There are 3 Sale Depots, one Major Depot and 2 Minor Depots, viz., Parampuzha (Major Depot) and Vetticad and Kumily Minor Depots. The Major Depot is controlled by a Forest Ranger and the Minor Depots are managed by Foresters. The timber extracted from the reserves is worked down to the Depots from where it is sold.

For checking the Forest produce on transport there are Checking Stations, one each at Kumily, Pullupara, Cum-mummettu and Mulamavoo.

The Munnar Forest Division was formed with effect from April 1, 1963 as part of the Chalakudy Forest Circle. It has its headquarters at Madupatty. The Division is under a Divisional Forest Officer of the rank of an Assistant Conservator of Forests. There are three territorial Ranges and one special Range under this Division. Each of the Range is under a Range Officer. The details of the Ranges are given below:—

Name of Range	Headquarters
1. Adimali Range	Adimali
2. Devikolam Range	Devikolam
3. Marayur Range	Marayur
4. Panniar afforestation Range (Special Range)	Ponmudi

The Ranges are in their turn divided into sections (in charge of Foresters) and Sections are sub-divided into Beats

(in charge of Forest Guards). The particulars of executive staff employed in this Division are as under.

Rangers	4
Foresters	14
Forest Guards	40
Surveyor	1
Survey lascars	2
Watchers	8

There is a Sandalwood Depot at Marayur, in the charge of a Range Officer. Sandalwood collected are sold in auction at the Depot and bidders are mostly from other States like Maharashtra, Gujarat, Andhra Pradesh and Mysore. About 40 tons of Sandalwood are sold annually.

Timber from this Division is sent to the depots at Ernakulam, Mudical, Varapuzha and Kothamangalam.

There are Forest Checking Stations in the major out-let roads, viz., at Chinnar in the Munnar-Udumalpet road and at Pallivasal and Neriamangalam in the Munnar-Always road. There is also a proposal to open a Checking Station at Bodimet.

Hydel Forest Division, Kottayam

The Hydel Forest Division, Kottayam, is a special Division of the Kerala Forest Department formed for the specific purpose of helping the Kerala State Electricity Board, to make available the Forest area required for Hydro-Electric Projects. At present this division has jurisdiction over the areas required by the Kerala State Electricity Board in the Sabarigiri and Idikki Hydro-Electric Projects. The main functions of this Division are (1) To clear the forest areas coming within the submergible zone of the Sabarigiri and Idikki Hydro-Electric Projects and (2) To clear and to make available the forest land required by the Kerala State Electricity Board for the construction of the staff Colonies, Power Houses, Dams, Magazine sites etc. The Division also acts as a liaison Division between the Kerala State Electricity Board and the State Forest Department. This Hydel Forest Division is divided into 5 Ranges of which one Range is at Anathode which attends to all the works connected with the Sabarigiri Projects and 2 Ranges at Idikki and 2 Ranges at Kulamavu. The Ranges at Idikki and Kulamavu attend to the clearance works of the Idikki Hydro-Electric Project area. The jurisdiction and function of each Range are as follows:—

1 Idikki Range

Headquarters Anathode. Attending to the clearance works in the Sabarigiri Hydro-Electric Project.

2 Idikki I Range

Headquarters Kulamavu. This Range is in charge of all the Colony areas, work areas etc., and also attends to the clearance works coming within the waterspread area falling in the left bank of the Cheruthony River.

3. Idikki II Range

Headquarters Idikki. This Range attends to only the clearance work coming within the submergible zone of the Left Bank of the Periyar River.

4. Idikki III Range

Headquarters Idikki. This Range attends to the clearance of the Forest growth in the Reservoir area of the Periyar Right Bank.

5. Idikki IV Range

Headquarters Kulamavu. This Range attends to clearance of the waterspread area falling in the Right Bank of Cheruthony River.

As this Division has been formed at the request of the Kerala State Electricity Board the establishment charges are met by the Kerala State Electricity Board.

INDUSTRIES DEPARTMENT

The Office of the Industries Department in Kottayam District falls within the jurisdiction of the Central Region with headquarters at Ernakulam. The District Industries Officer is the head of the Industries Department at the District level and is in charge of all industrial programmes in the District. He is also the Registrar of Industrial Co-operatives and all statutory functions relating to Industrial Co-operatives, except Audit, come within his purview.

The District Industries Officer is assisted in the discharge of his duties by one Assistant District Industries Officer, one Technical Supervisor, one Extension Officer (Ind.), one Organizer, (Small Industries) two Senior Coir Inspectors, one Junior Co-operative Inspector, one Junior Supervisor (Handloom), one Statistical Investigator, one Field Assistant and a ministerial staff of twelve at the office. There are two Sub Offices under the District Office that of the Quality Marking Depot Tester and of the Senior Inspector (Coir) in the Industrial Estate with office at Vaikom. In addition there are twelve Extension Officers (Ind.) in the N. E. S. Blocks with the administrative control vested in District Industries Officer.

The functions of the District Industries Officer under various items of activities can be enumerated as follows:—

1. Promotion and organisation of new Industries,
2. Giving assistance to existing Industries for Development,

3/3718/MC.

3. Organisation, supervision, and control of Industrial Co-operatives.

In this context, applications for issue of controlled commodities, import licenses, loans, hire purchase of machinery, essentiality certificates etc., are received and processed at District level and sponsored through the District Industries office. The State Bank of India consults the District Industries Officer into the technical feasibility of the concerned industry before granting loans for small scale industries.

CO-OPERATIVE DEPARTMENT

The Deputy Registrar of Co-operative Societies, Kottayam is the head of the Co-operative Department in the District. He is responsible for the effective and proper working of all types of societies other than Industrial, Handloom, Cottage Industries, Coir and Fisheries. The powers of registration of new societies and amendment to bye-laws etc., are also being exercised by the Deputy Registrar since 1958. In addition to exercising statutory powers he controls and regulates the work of the staff of the Department in the District.

The Deputy Registrar is assisted in his work by three Assistant Registrars—one for Administration, another for Planning and the third for Consumer Stores. The Assistant Registrar (Administration) is the chief ministerial officer to assist the Deputy Registrar in all his functions except those related to Planning. The Assistant Registrar (Planning) is in charge of all the plan schemes in the District and he is assisted by a Senior Inspector (Planning). The Assistant Registrar (Consumer Stores) is in charge of the Centrally sponsored scheme of Consumer Co-operative Societies (Consumer Stores).

Below the Assistant Registrars, there are the Inspector-cum-Extension Officers for Co-operation who are the executive officers working in the field. There are two categories of Inspectors, viz., Junior and Senior. They conduct statutory enquiries and inspection of societies, hear arbitration suits in the capacity of arbitrators, execute the awards and exercise the powers of the Tahsildar under the Revenue Recovery Act. They also attend to work relating to Co-operative Societies in the N.E.S. Blocks in their capacity as Extension Officers for Co-operation. There are altogether 25 Inspectors in this District. Of these four attend to the liquidation work, one to the work relating to Farming Societies assisted by a Village Level Worker, one for work connected with Harijan Societies and another for work relating to the Limeshell Societies. In addition there are Auditors engaged in the audit of all types of societies in the District. They are directly under the control of the Deputy Registrar of Co-operative Societies (Audit), Kottayam.

LOCAL FUND AUDIT DEPARTMENT

The District Office of the Local Fund Audit Department attends to the audit of the accounts of local bodies (Municipalities and Panchayats), and Miscellaneous grant-in-aid institutions in the Kottayam District. The District Inspector of Local Fund Accounts with headquarters at Kottayam is the head of the Office. He is under the immediate administrative control of the Assistant Examiner of Local Fund Accounts, Central zone, Ernakulam. It is the duty of the District Inspector to see that the statutory audit of the accounts of receipts and expenditure of Local Bodies and other grant-in-aid institutions is done within the prescribed time limit. Irregularities noticed in audit are brought to the notice of the administrative authorities through audit reports and objection statements, calling forth attention to set right the irregularities. The only source of revenue of this Department is the amount realised as audit fees from Municipal Councils. No audit fee is levied from Panchayats and other grant-in-aid institutions.

ECONOMICS AND STATISTICS DEPARTMENT

The District Statistical Officer is the head of the Department of Economics and Statistics at the District level. He is responsible for the conduct of all important statistical surveys and studies taken up by the Department in the District. In his technical work, the District Statistical Officer is assisted by the Senior Research Assistant, Research Assistants, and Compilers and in his non-technical work by the Accountant-cum-Clerk, Typist and Peon respectively.

The District Statistical Officer is responsible for the overall supervision of the Statistical Unit at the District level. The Senior Research Assistant, though equal in status to the District Statistical Officer and responsible for the successful conduct of the Vital Statistics schemes, actually assists the District Statistical Officer in his work. The Technical work in the office connected with the Statistical Surveys is attended to by the seven Compilers under the supervision of two Research Assistants according to the instructions issued by the District Statistical Officer. It includes scrutiny, preliminary processing and compilation of various data. In addition to these the progress reports on Plan Schemes relating to the various Departments at the District level are consolidated and presented by the District Statistical Officer to the District Development Council.

Field Work

The Field work in respect of the Land Utilisation Survey, Crop-cutting, Coconut and Arecanut Survey, Price Collection etc., is done by the Statistical Inspectors at the Taluk level. The actual collection of data is attended to by the Investigators.

under the supervision of the Statistical Inspectors. There are 4 Statistical Inspectors in this District and each of them has two Taluks under his jurisdiction. The total number of Investigators attending to this work comes to 17.

The Collection of data in respect of the National Sample Survey is being attended by the 8 Investigators specially appointed and trained for this purpose. The work of the N. S. S. Investigators is supervised by the Statistical Inspectors, (N. S. S.) Kottayam.

The field work in respect of the collection of Plantation and Industrial Statistics is done by the Statistical Inspector (I & P) attached to the District Statistical Office. He is assisted in office work by one of the Compilers and in field work, when necessity arises, by Investigators attached to the District Statistical Office.

The field work connected with the special Intensive Survey taken up by the Department is carried out by 4 S. I. S. Investigators attached to the District Statistical Office. Their work is supervised by the Research Assistants as directed by the District Statistical Officer.

There is an Administrative Intelligence Unit at the District level which comprises the 13 Junior Statistical Inspectors attached to the 13 C.D. Blocks in this District. The administrative control of these Junior Statistical Inspectors is vested with the Block Development Officers concerned, whereas the technical control is being exercised by the District Statistical Officer. The Junior Statistical Inspector is responsible for the conduct of all the statistical studies at the Block level. He consolidates the various progress reports connected with the Plan Schemes, reviews the progress of the schemes and takes up their evaluation. In addition he undertakes all sorts of statistical studies like Crop Cutting, Surveys, collection, compilation and presentation of data relating to Plan Schemes implemented in the Block and attends to the work connected with the "Impact of Plan Programme" a survey recently introduced in the Blocks. He is assisted in this work by the Gramasevaks.

PUBLIC RELATIONS DEPARTMENT

The District Information Officer, Kottayam, is the head of the Department of Public Relations at the district level. He issues press releases on Governmental activities in the District and acts as the press liaison officer of the Government. He collects information on developmental activities in the Blocks and other departments and focuses public attention on these activities by issuing feature articles to the Press. He occasionally visits information centres in N. E. S. Blocks and guides in the proper functioning of the Centres. He also organises cultural functions for dance and dramatic troupes visiting Kerala from other States. An Information Centre attached to the District

Information Office is being opened. Tourists coming from abroad will find it useful to visit the District Information office and get guidance from the District Information Office as to the places of interest worth visiting in the District. The District Information Officer distributes effectively publicity materials relating to Five Year Plans, National Defence etc., and makes arrangements for press conferences or interviews to the journalists and State guests etc. There is a film unit attached to the District information Office and film shows on Five Year Plans and Defence activities are conducted throughout the District with the co-operation of public institutions and voluntary organisations like Bharat Sevak Samaj, local libraries, educational institutions etc.

CHAPTER XIV

LOCAL SELF-GOVERNMENT

Early History

The Kottayam District had its own local self-governing institutions even from very early days. A feature of ancient Kerala polity was that local assemblies called *kuttams* checked the despotism of the rulers and helped to preserve the rights and privileges of the people at large. In the age of the Second Chera Empire (800-1102 A. D.) Nantuzhainad had an assembly which was called the *Munnuttuvar* (Three Hundred). The local rulers carried on the administration only in accordance with the wishes of these assemblies. Such local self-governing institutions functioned in some form or other down to modern times, but they disintegrated with the break-up of the self-sufficient village economy all over the country in the wake of British conquest and occupation in the mid-nineteenth century.

Growth of Modern Local Self-Government

Local self-government in the modern sense is only of recent origin. The reforms introduced in British India in the field of local self-Government by the famous Resolution of May 18, 1882 had their reactions in the Indian States as well. In erstwhile Travancore the Town Improvement and Conservancy Regulation was passed in 1069 K. E. (1893-94). It provides for a Town Improvement Committee and a Town Fund for Kottayam. The membership of the Town Improvement Committee set up under the provisions of the Regulation of 1069 varied from five to nine with a permanent official majority. The powers of the Committee were limited and their duties were confined to the supervision of sanitary arrangements. The Committee had no power of taxation. In 1895 rules were framed to regulate vehicle traffic under the Town Improvement Committee. In 1900-01 the Regulation of 1069 K. E. was superseded by Regulation III of 1076 K. E. which authorised local taxation with the prior sanction of the Government and augmented the financial resources of the Committee. In 1903-04 (1079 K. E.) house scavenging was introduced under the Town Conservancy and Improvement Regulation and this was followed a few years later by the scavenging fees system. By the year 1909-10 (1085 K. E.) house tax began to be levied. Regulation V of 1085 (1909-10) introduced certain amendments in order to improve the working of the Regulation. A Town Improvement

Committee was formed at Vaikom in 1086 K. E. (1910-11). The President of the Town Improvement Committee, Kottayam, was also given increased powers of appointment and punishment. In 1911 the tax payers of Kottayam were allowed the privilege of electing five non-official members to the Committee. In the next year a Town Improvement Committee was formed in Changanacherry. Regulation II of 1088 (1912) gave the Presidents of Town Improvement Committees powers of inspection and control of sale of foodstuffs and aerated water. The supervision and control of the cattle pounds were also transferred to the Committees in the same year. The responsibility of each Committee was made complete in regard to anti-plague operations within its jurisdiction. Since 1918 with the increase in the number of non-official members, the committees had non-official majorities. A further advance was made in the next year when a non-official President was appointed to the Town Improvement Committee of Kottayam. In 1096 K. E. (1919-20) a new Regulation was passed constituting the Town Improvement areas into Municipalities and enlarging the scope of activities of the Municipal Councils. The privilege of electing non-official Presidents was extended to all the Municipal Councils in this District. The powers of the Presidents in regard to appointments etc., were enhanced in 1921 and the pay of the Municipal establishment was revised in 1922. Street lighting in the Municipal towns was also undertaken by the Councils at their own cost. Besides attending to public health and sanitation, the Councils also discharged some other obligatory functions like vaccination and registration of births and deaths. In 1105 K. E. (1929-30) sanction was accorded for the prominent roads within Kottayam town being provided with electric lights.

In 1941 the Travancore District Municipalities Act was passed in order to reorganise the existing Municipalities in that State and according to the provisions of this Act the Municipalities in Kottayam District were also reorganised. In December 1949 the town of Palai was constituted into a Municipality under the provisions of the Act of 1941. The latest piece of municipal legislation in Kerala is the Kerala Municipalities Act, 1960 which now governs the constitution and working of the Municipalities in the District. The Municipal authorities charged with carrying out the provisions of the Act are: (1) the Council; (2) a Standing Committee of the Council; (3) a Chairman and (4) a Commissioner. All the Councillors are to be elected, the strength of each Council varying from 16 to 32 according to population. The term of office of the Councillors is five years. Every Council is to have a Chairman and a Vice-Chairman elected from among its members. The Chairman convenes the meeting of the Council and presides over it. The Standing Committee is to be elected by the Council from among its own members. It is to consist of five members if the strength of the Council is 20 or less and seven members when the strength is more than 20. It has an elected

Chairman. The Commissioner is appointed by the Government in consultation with the Council and he is the Chief Executive Officer. Every Municipal Council may levy: (1) a property tax; (2) a profession tax; (3) a tax on animals, vessels and vehicles; (4) a show tax; (5) a tax on advertisements and (6) a duty on certain transfers of property in the shape of an additional stamp duty. Every Municipality constituted under the Kerala Municipalities Act, 1960 is also vested with routine civic functions such as those relating to the provision of water supply, lighting, and drainage, maintenance and repair of streets, numbering of buildings, grant of permission to construct buildings, control over abandoned lands and insanitary buildings, grant of licence for places in which animals are kept, provision of Municipal slaughter houses, regulation of milk trade, maintenance of public markets, provision of public cart stands, licensing of places for disposal of the dead, compulsory registration of vital statistics, compulsory vaccination etc. etc. The Government of Kerala in their G. O. MS. 513/65/HLD dated June 5, 1965 passed orders on the recommendation of the Municipal Grants Enquiry Committee which was constituted under section 136 of the Kerala Municipalities Act to evolve general principles in the matter. Accordingly Kottayam along with other major Municipalities of the State will get an annual general grant of Re. 1 per head of population. Besides the municipalities will get special purpose grant in respect of specified services at 50% of the cost of such services.

The first step towards the development of local self-government in the rural areas of the Kottayam District was taken with the promulgation of the Travancore Village Panchayat Act in 1100 K. E. (1925). Under this Act the Government had power to declare any revenue village or group of villages as a village for the purposes of this Act, and set up a Village Panchayat for the area. The Panchayat was to consist of not less than 5 and not more than 11 members. Ettumanoor in this District was one of the places in the State where a Panchayat was set up under the Act. The Panchayat started functioning in 1109 K. E. (1933-34). The duties of the Panchayats were classified obligatory and discretionary. The obligatory functions included the construction, maintenance and repair of communications and drains, street cleaning, excavation, maintenance and improvement of wells and tanks for the supply of water to the public for drinking and bathing, construction and maintenance of bathing ghats, opening and maintenance of burial grounds, control and management of cattle pounds and the enforcement of sanitation. The discretionary functions comprised of primary education, lighting of public places, planting of avenue trees, improvement of agriculture and cattle and development of cottage industries.

The Travancore Village Union Act of 1940 provided for Village Unions, a type of local self-governing organisation, slightly less powerful than the Village Panchayats. The tenure

of the members was fixed as 3 years. Within the limit of their resources the Village Unions attended to certain public utility services such as cleaning of streets, the construction, maintenance and improvement of wells and tanks for the supply of drinking water to the public, opening of burial and burning grounds, control and management of cattle pounds and provision for stud bulls, sanitation, clearing of silt from canals or channels and carrying out of petty irrigation works. With the integration of the States of Travancore and Cochin the Travancore-Cochin Panchayat Act II of 1950 was passed and it governed the Panchayats in Kottayam District and the rest of the Travancore-Cochin area till the enactment of the Kerala Panchayats Act of 1960. The new Act provided for a unified and decentralised system of administration of village affairs through Panchayats by organising them as units of local self-government at village level.

MUNICIPALITIES

There are four Municipalities in this District viz., Kottayam, Vaikom, Changanacherry and Palai. Brief accounts of the construction and working of each of the Municipalities are given below:—

Kottayam Municipality

The Kottayam Municipality which was formally set up in 1095 K. E. (1924-25) had its origin in the Town Improvement Committee established in the late 19th century under the provisions of the Travancore Town Improvement and Conservancy Regulation of 1069 K. E. (1893). It has an area of 10.22 sq. Kms. and a population of 52,683 according to the 1961 Census. For purposes of municipal administration the Municipality is divided into 29 wards of which three are double-member wards. The Municipal Council consists of 32 members, seats having been reserved in two wards for women and in one ward for Scheduled Castes and Schedule Tribes. The reservation have been made in wards where the population of women and Scheduled Castes is comparatively high. The Council elects a Chairman and a Vice-Chairman from among its members. The Kottayam Municipality has constituted four Committees for carrying on the municipal administration. They are (1) the Standing Committee, (2) the Lighting Committee, (3) the Public Works Committee and (4) the Health Committee. The most important Committee is the Standing Committee which is constituted under the Kerala Municipalities Act, 1960.

The chief executive officer of the Municipality is the Commissioner who is appointed by the Government. He is the head of the Municipal establishment. He attends the meetings of the Council and the Committees and takes part in their deliberations, but he has no right to move resolutions or to vote. He is assisted in his executive work by a Municipal Engineer and a Health Officer.

The Public Works section of the Municipality is under the Municipal Engineer. The Municipality maintains 58.97 Kms. of roads within the municipal area. At the same time 41.86 Kms. of roads including 8.45 Kms. of State Highway are maintained by the Public Works Department within the Municipality. The Council maintains neither any major bridge nor any major ferry service. It runs a Municipal Rest House which has 6 double rooms and 28 single rooms. The Municipality gets an average annual income of Rs. 20,000 from the Rest House. The number of street lights maintained by the Council comes to 2,437. Of these 2,356 are ordinary lamps, 37 fluorescent lamps, and 44 mercury vapour lamps. In 1963-64 the Municipality incurred an expenditure of Rs. 53,856 on street lighting.

The Municipal Health organisation is under the Health Officer who has 4 Health Inspectors and a Sanitary Inspector to assist him in the discharge of his duties. The town is divided into three divisions, viz., Eastern, Central and Western for carrying on effective work connected with the registration of birth and deaths. The registration work in the Central division is attended to by a full-time Birth and Death Registrar while that in the Eastern and Western divisions is attended to by the Lady Assistant attached to the Maternity and Child Welfare Centres of the divisions concerned. The Council runs two Maternity and Child Welfare Centres, one at Kanjikuzhi and another at Thiruvathukkal. It employs one Midwife and two Nurses each for work in these centres. Each centre caters to the needs of about 5,000 to 6,000 people. The Council has appointed three Vaccinators (2 males and 1 female) to attend to the vaccination work within the municipal area. It maintains ten public latrines for the convenience of the public. The conservancy work within the Municipality is carried on by a special staff employed for the purpose. The night soil, rubbish, cow-dung and other town refuse are collected and removed to the Night Soil Depot and trenching ground at Vadavathur, situated three miles away from the town limits and converted into compost manure. Two lorries and one tractor are used for the transportation of the night soil. A sum of Rs. 5,240 was realised by the Council from the sale of compost manure in 1963-64. Protected piped water schemes is in force in the town. 4,219 taps and 392 house connections were provided in 1963-64. The Kottayam Municipality is in charge of the distribution of water in the town since April 1, 1965. There was no comprehensive underground drainage system. Some of the built up drains in the various parts of the town empty themselves in nearby fields and canals.

The Kottayam Municipal Council also carried on certain cultural activities. It conducts an annual Municipal Exhibition which synchronises with the Tirunakkara Arat festival in March. The Municipality gives annual grants to 10 Public Libraries situated within the municipal limits. It also maintains 4 Public Parks as follows:—(1) Vedipura Children's Park (near

Civil Station), (2) Municipal Park, Opposite to the Medical College Hospital, (3) Tirunakkara Maidan and (4) K. N. Narayana Aiyar Memorial Children's Park, near South Post Office. There is a Raido Kiosk in each of these Parks.

The Kottayam Municipality levies the various taxes prescribed in the Kerala Municipalities Act (1960), the chief items being the property tax, the profession tax, and the tax on animals, vessels and vehicles. There were 9,840 houses within the Municipality which were assessed to property tax in 1963-64. In addition to the revenue from taxes the Municipality also gets considerable income from certain remunerative enterprises. Though it does not run any transport services of its own, it maintains a municipal Bus Stand which is touched by 125 private buses on an average every day. In addition to the Bus Stand the Council maintains 3 daily markets, a cart stand and a slaughter house. In 1963-64 it derived an income of Rs. 54,965 from the bus stand, Rs. 75,070 from the market, Rs. 3,015 from the cart stand and Rs. 3,001 from the slaughter house.

Vaikom Municipality

The Vaikom Municipality was constituted as a Town Improvement Committee in 1086 K. E. (1911-12). It has an area of 4.89 Sq. Kms. and a population of 17,410 according to the Census of 1961. The Municipality is divided into 14 electoral wards and has 16 Councillors. A seat each is reserved in two double-member wards for women and Scheduled Castes and Scheduled Tribes respectively. The Council has a Chairman and a Vice-Chairman elected from among its members, and a Commissioner appointed by the Government. There is a Standing Committee of five members constituted under the provisions of the Kerala Municipalities Act. In addition the Council has set up four Committees, viz., the Library Committee, the Tax Appeal Committee, Public Health Committee and the Town Hall Committee.

The Public Works wing of the Municipal establishment is under the Public Works Supervisor who is assisted by an Overseer. The Council maintains only 4 miles and 7 furlongs of ordinary roads (7.564 Kms.) within the municipal area. All the metalled roads are maintained by the Public Works Department. The Vaikom Municipal Council does not maintain any major bridge, ferry services or rest houses. In 1963-64 there were 415 ordinary electric lights and 17 mercury vapour lamps in the town under the Council.

The Public Health establishment is headed by the Health Inspector. He is assisted by a Sanitary Overseer, 12 Sweepers and 6 Mosquito Mazdoors. A Birth and Death Registrar-cum-Vaccinator is also employed. There is a full-time municipal midwife. The Council also runs a Maternity and Child Welfare

Centre. There is no scavenging service in the Vaikom Municipality. Almost all houses are provided with pit latrines. The Council, however, maintains one public latrine and has also taken steps to introduce the E. S. P. (Environmental Sanitation Project) type latrine scheme in the town. The street sweeping and rubbish are collected and used for filling low lying areas. The Council maintains two carts for this purpose. The main source of water supply in Vaikom is the 8 municipal wells provided at different centres of the town in addition to private wells. A protected water supply scheme for Vaikom town is in the process of execution. There is no comprehensive drainage scheme for this Municipality.

The Municipal Council maintains a Municipal Library and Reading Room and also a Radio in the Municipal Park. Detailed information on the Library is given in Chapter XV.

The Vaikom Municipality levies all the taxes prescribed in the Kerala Municipalities Act, viz., property tax, entertainment tax, profession tax, vehicle and animal tax, advertisement tax and show tax. Among the remunerative enterprises owned by it may be mentioned a bus stand, two daily markets and a slaughter house. In 1963-64 the Council obtained an income of Rs. 10,516 from the bus stand, Rs. 2,459 from the market and Rs. 1,197 from the slaughter house.

Changanacherry Municipality

The Changanacherry Municipality was originally set up as a Town Improvement Committee in 1088 K. E. (1912-13). It has an area of 25.90 sq. Kms. and a population of 42,352 according to the Census of 1961. The municipal area is divided into 25 wards of which three (Ward Nos. I, XII, XXIII) are double-member wards. One seat each is reserved in Ward Nos. I and XXIII for women and another in Ward No. XII for Scheduled Castes. Thus there are 28 members in this Municipal Council. The Council has a Chairman and a Vice-Chairman elected from among its members. The Commissioner who is appointed by the Government in consultation with the Council is the Chief Executive Officer of the Municipality. A Standing Committee of 7 members set up under the provisions of the Municipalities Act looks after the most important administrative matters. In addition there are 4 Committees set up by the Council, viz., the Tax Appeal Committee, the Library Committee, the Sanitation Committee and the Entertainment Tax Committee.

The Public Works establishment of the Municipality is under two Overseers, one first grade and the other second grade. The total length of roads and lanes in the town is 88.31 Kms. of which 8.85 Kms. are concrete roads and 23.74 Kms. are metalled roads. The concrete roads, about 8.85 Kms. of metalled roads and a few other roads are maintained by the Municipality. Important but dusty roads in the municipal area

are watered to a length of about 8 Kms. twice a day during the hot season with a watering lorry owned by the Council. In 1963-64 the total number of street lights maintained by the Council came to 1,773. It spent a sum of Rs. 32,854.30 on street lighting during the year.

The Public Health establishment consists of 2 Health Inspectors, 4 Health Assistants, 1 Midwife and 5 Peons. The Council does not maintain any medical institution, but gives an annual grant of Rs. 300 to a Visha Vaidyasala. However, it maintains a good segregation building at Erupad for segregating persons suffering from contagious and infectious diseases. Vaccination against small pox is also conducted by the Public Health Staff. Two Health Assistants function as Registrars of Births and Deaths and Vaccinators. A total length of 67.5 Kms. of roads is swept daily by the staff specially employed for the purpose. The drains in the town are also properly cleaned every day. There are 7 public latrines with 23 seats and 6 urinals in the town. Rubbish filth and night soil are collected and removed to the trenching ground and manufactured into compost manure. In 1963-64 the Council derived an income of Rs. 192.53 from the sale of compost. There is no water supply scheme in this town. The Council maintains 15 public wells at different places of which 11 are used solely for drinking purposes by the public. Drinking water is supplied to the public by means of covered tanks and also by means of a municipal lorry during the hot season of the year. The Council also maintains 5 public tanks of which one is reserved for the use of the washermen in the town. There is no drainage scheme in this Municipality.

The Changanacherry Municipality runs a Municipal Library and Reading Room. In 1963-64 it had a total collection of 7,499 books and 82 members on its rolls.

The revenue of the Municipality is derived from taxes and remunerative enterprises. It levied the property tax, profession tax, advertisement tax, show tax, tax on vehicles and animals, and tax on entertainments. The most important of the remunerative enterprises owned by it are markets, (one vegetable market and two fish markets) a cart stand, a slaughter house and a cattle pound. In 1963-64 the Municipality obtained an income of Rs. 34,543 from the markets, Rs. 14,785 from the cart stand, Rs. 2,800 from the slaughter house and Rs. 178.50 from the cattle pound.

Palai Municipality

The Palai Municipality was established in 1949. It has an area of 10.22 Sq. Kms. and a population of 15,457 according to the Census of 1961. The Municipality is divided into 14 electoral wards of which two (Ward No. II and XII) are double-member wards. One seat is reserved for women in Ward No. II and another for Scheduled Castes and Scheduled Tribes in

Ward No. XII. The strength of the Municipal Council is thus 16. The authorities vested with the administration of the Municipality are the Chairman, the Council, its Standing Committee and the Commissioner. The Chairman is elected by the Council from among its members. There is also a Vice-Chairman who is elected on similar lines. The Commissioner who is appointed by the Government after consultation with the Council is responsible for the custody of all records including all papers and documents connected with proceedings of the Council, its Standing Committee and other Committees. The Standing Committee of the Council consists of 5 members. Apart from the Standing Committee the Palai Municipality has also constituted other committees like the Standing Committee, the Library Committee, the Tax Appeal Committee and the Planning Committee in order to attend to various items of Municipal administration.

The activities of the Municipality relate mainly to Public Works, Public Health and Sanitation. The Public Works establishment is presided over by a qualified Overseer. The total length of the roads maintained by the Council is 22 miles of earthen roads. The Public Works Department maintains 7 miles of roads within the Municipal limits. The Council maintains 13 high power lights and 598 electric lights. In 1963-64 it spent a sum of Rs. 13,973 on lighting alone.

The Public Health establishment is under a Health Inspector who is assisted by a Sanitary Overseer. The Municipal Council also employs a full-time midwife. There is no Maternity and Child Welfare Centre under the Municipality. The Public Health section attends also to registration of births and deaths and vaccination. The Council maintains one public latrine for the use of the people. The filth, rubbish etc., from within the municipal limits are collected in a lorry maintained for the purpose and removed to the trenching ground and the same is utilised for the manufacture of compost manure. Out of 3,467 houses in the Municipal area about 2,000 are provided with latrines. There is no private scavenging as such in the Municipality. The town has no protected water supply scheme either. For a period of about six months in the year drinking water is supplied to the people by means of the Municipal lorry by storage and distribution at 10 water tanks situated in the different parts of the town. Wells constructed by private parties in different localities also form a source of water supply for drinking and other purposes. There is no comprehensive drainage system in Palai town, but some drains are constructed by the Council in important parts for the easy flow of storm water.

The Palai Municipality runs a Public Library and Reading Room in the centre of the town. A Committee consisting of 5 members of the Council and 3 members from among the members of the Library manages its affairs. In 1963-64 the

library had, 6,176 volumes and 544 members on its rolls. The library is accommodated in a beautiful three-storeyed building constructed out of funds made available to the Municipality by the Government under the Third Five Year Plan. A Radio and a Loud speaker set are also installed in the library building adjacent to the Municipal park for the benefit of the people.

The financial resources of the Municipality consists mainly of income from taxes and remunerative enterprises. The taxes levied are property tax, profession tax, tax on animals and vehicles, advertisement tax, entertainment tax and show tax. The number of buildings assessed to property tax came to 22,650 in 1963-64. Among the remunerative enterprises the most important are the municipal market and the municipal bus stand. The market is maintained with three separate apartments for the sale of vegetables, fish and meat. The municipal bus stand is used on an average by 90 buses a day. In 1963-64 the Council received an income of Rs. 13,477 from markets and Rs. 28,669 from the bus stand. It has also taken steps to construct a car stand with all modern facilities and sanitary arrangements and it is expected to yield an annual income of Rs. 10,000. It has also taken steps to set up a municipal cart stand.

Financial Position of the Municipalities

The total receipts (excluding opening balance) and expenditure (excluding closing balance) of each of the Municipalities during the year 1963-64 are given below:

<i>Municipality</i>	<i>Receipts</i> Rs.	<i>Expenditure</i> Rs.
Kottayam	10,58,957.03	9,87,054.62
Vaikom	1,46,660.52	1,54,379.76
Changanacherry	5,56,953.41	3,79,527.90
Palai	2,86,827.32	1,64,244.04

Detailed statements of the receipts and expenditure of the different Municipalities under various heads are given in the tables given at Appendix I to this Chapter.

A statement regarding the total demand, collection and balance of the four Municipalities in the District is given as Appendix II.

PANCHAYATS

The Directive Principles of State Policy, contained in Article 40 of the Indian Constitution proclaim, that the State shall take steps to organise Village Panchayats and endow them with such power and authority as may be necessary to enable them to function as units of local self-government. Consequently the Panchayats that existed in the Travancore and

Cochin areas of the State were reconstituted on the basis of an Act passed in 1950 (Travancore-Cochin Panchayat Act II of 1950). With the passing of the Act new Panchayats were also set up in places where there were neither Panchayats nor Village Unions. These Panchayats started functioning with effect from August 15, 1953. The latest piece of Panchayat legislation which is in operation is the Kerala Panchayats Act of 1960. It provides for a unified and decentralised system of administration of village affairs through Panchayats by organising them as units of local self-government at Village level. The new Panchayats elected under the Act assumed office on January 1, 1964.

Organisation of Panchayats

The entire District of Kottayam excluding the Municipal areas is divided into 89 Panchayats. The area of the Panchayat is generally coterminous with the revenue unit viz., the village, but in certain cases more than one village or parts thereof constitute a Panchayat. The Panchayat is governed by a representative body elected on the basis of adult franchise. The Panchayat area is divided into wards for the purpose of election. In those wards where the Scheduled Castes constitute not less than five per cent of the total number of voters, a seat is reserved for them. All the rest are single member wards. The number of members in each Panchayat is fixed by the Government on the basis of population. According to the Panchayats Act, 1960, Panchayat areas with a population not exceeding 10,000 at the latest Census elect seven members and Panchayat areas with a population exceeding 10,000 elect one additional member for every population of 3,500 subject to a maximum of 15 members. A Panchayat to which no woman has been elected as member is entitled to nominate a woman to be a member of the Panchayat at a special meeting convened for the purpose. The term of office of the members of a Panchayat is fixed as five years under the Act. But the Government may, by notification in the Gazette, reduce or extend the term of office of the members of any Panchayat. Soon after the Panchayat election, the members of each Panchayat elect from among themselves a President and a Vice-President at a meeting duly convened for the purpose. When the office of the President falls vacant, an acting President can be appointed by the Director of Panchayats until a new President is elected.

The administration of the Panchayat area is vested in the whole Panchayat comprising of the President, Vice-President and the members. The President convenes meetings of the Panchayat, forwards half-yearly reports to the Deputy Director of Panchayats, and performs all the duties and exercises all the powers specifically conferred on the President by the Act. The President has full access to all records of the Panchayat and no official correspondence between the Panchayat and the

Deputy Director and authorities above him may be conducted, except through the President. The Panchayat meets at least once in a month. One-third of the total number of members forms the quorum for ordinary meetings, but for special meetings the quorum is half the number of members. The Panchayat may constitute Functional Committees for different subjects such as sanitation, communication, public health, education etc. Such Committees may consist of both Panchayat members and others who are interested in the Public welfare and who are nominated by the Panchayat. The Panchayat may constitute also Ward Committees with the ward members and other local inhabitants nominated by the Panchayat to study and report on the needs of the wards. In cases of emergency the President or the executive authority of the Panchayat can order any work of the Panchayat to be executed without the previous sanction of the Panchayat. But such action has to be reported to the committee at its next meeting and has to be ratified by it. The President has to make a report to the Director of Panchayats, within three days after each meeting of the Panchayat, about the Proceedings of the meeting.

Panchayat administration and control

For purposes of administration the Panchayats are classified into four Grades on the basis of their annual income inclusive of grants and contribution from Government.¹ The following are the four grades of Panchayats. 1. *Special Grade* Panchayats having an income of more than Rupees one lakh and which are notified as special grade by the Government. 2. *Grade I*. Panchayats having an income between Rs. 50,000 and Rupees one lakh. 3. *Grade II*. Panchayats having an income between Rs. 20,000 and Rs. 50,000. 4. *Grade III*. Panchayats having an income of less than Rs. 20,000. Munnar is the only Special Grade Panchayat in this District. In addition there are 4 First Grade Panchayats, 31 Second Grade Panchayats and 53 Third Grade ones. For the proper conduct of Panchayat administration, whole time executive officers called Panchayat Officers are appointed by the Government in all Panchayats. There are four grades of Panchayat Executive Officers corresponding to the four-fold classification of Panchayats on the basis of income. They are:—1. Special Grade Panchayat Executive Officers on Rs. 150-250. 2. Grade I Panchayat Executive Officers on Rs. 100-200. 3. Grade II Panchayat Executive Officers on Rs. 80-180 and 4. Grade III Panchayat Executive Officers on Rs. 40-120.

The executive power of the Panchayat rests with the Panchayat Officer. He has the right to attend the meetings of the Panchayat but he cannot move resolutions or take part in the voting. He is bound to carry out the resolutions of the Panchayat, execute Panchayat works subject to the provision

1. C. O. MS. 189/63/DD. dated 2-3-1962.

made in the annual budget, maintain records and control and supervise subordinate servants of the Panchayat. He carries on correspondence on behalf of the Panchayat, but as noted earlier, such correspondence takes place only through the President. The President, however, is bound to transmit to the proper destination all the papers sent to him by the Panchayat Officer. If the Panchayat does not have a Panchayat Officer the latter's duties devolve on the President. The Government of Kerala have also conferred the powers of a *Proverthicar* in respect of the Revenue Recovery Act on the executive authorities of certain Panchayats in the State.¹

Above the Panchayat Officers there are the Panchayat Inspectors. There is a Panchayat Inspector for each Block to superintend the working of the Panchayat. There are thirteen such Panchayat Inspectors in the Kottayam Revenue District. They inspect the accounts of the Panchayats once in every month. They are also the authorities empowered to countersign the Pay and T. A. Bills of the Executive Officers and the staff of the Panchayats. At district level there is a District Panchayat Officer who is the immediate superior of the Panchayat Inspectors. He is empowered to inspect and superintend the working of the Panchayats. He is immediately responsible to the Deputy Director of Panchayats, Ernakulam, who is the Regional Officer having jurisdiction over three revenue Districts.

Financial Resources

Under the provisions of the Kerala Panchayats Act (1960) every Panchayat has to levy in its area a building tax, a profession tax and a vehicle tax. The building tax has to be levied on all buildings in the Panchayat area at such percentage of the net annual rental value of the building as may be fixed by the Panchayat subject to a maximum of 10 per cent and a minimum of 4 per cent. The profession tax has to be levied from every company which transacts business and every person who exercises a profession within the Panchayat area at such rates as may be fixed by the Panchayat not exceeding the minimum rates prescribed under the rules. The vehicle tax may be levied on all vehicles except motor vehicles kept or used in the Panchayat area at such rates as may be fixed by the Panchayat not exceeding the maximum rates prescribed. A cess on all lands in the Panchayat area except those exempted by the Government has to be levied at the rate of 2 nP. per annum for every 5 cents of land or part thereof. Land cess is to be collected as if it is a basic tax. Service tax not exceeding such rates as may be prescribed for sanitation, water supply, scavenging, street lighting and drainage may be levied with the sanction of the Director. A duty in the form of a

1. Vide Notification—Revenue B Department No. 46035/B2/30/Rd., dated November 11, 1960.

surcharge on the duty imposed by the Kerala Stamp Act, 1960 shall be levied on certain transfers of property in the Panchayat area. The Panchayat may, if it resolves, also levy a show tax on all shows in its area at the rates prescribed by the Government. The Act also provides for payment by the Government annually to each Panchayat a grant which shall be equal as near as may be to $\frac{2}{3}$ of the amount of the basic tax collected by the Government from the Panchayat area in the preceeding year. The Government has also to pay to the Panchayats a grant the aggregate of which shall be as near as may be equal to the balance of the basic tax collected by the Government in the preceeding year from all the lands in the State in such proportion as may be fixed by the Government in having regard to the area, population, available resources and needs of development of the Panchayats and the cost of the Panchayat administration. In addition a Panchayat may with the sanction of the Director levy either from the whole Panchayat area or any specified portion thereof and for a specified period a surcharge on building tax in order to cover any unusual expense incurred by it in respect of education, treatment of diseases including maternity and child welfare services, supply of protected water, scavenging and drainage. The surcharge is however not to exceed $\frac{1}{4}$ of the tax levied.

Moreover, Government also usually sanctions Special Grants to Panchayats every year for specific purposes. Other grants given by Government are building grants and establishment grants. Building grants are sanctioned to a few Panchayats every year for the construction of their office buildings. Four or five Panchayats are selected each year for this purpose and each is given about Rs. 2,500. The balance required for the purpose has to be met from the Panchayats.

The total receipts and expenditure in respect of the Panchayats in Kottayam District for each of the years from 1959-60 to 1963-64 are given below:—

Year	Number of Panchayats	Total Receipts Rs.	Total Expenditure Rs.
1959-60	76	9,85,414.80	9,44,815.35
1960-61	76	12,33,023.00	10,55,798.43
1961-62	89	13,52,756.29	11,62,100.36
1962-63	89	24,56,975.95	13,94,501.93
1963-64	89	17,62,414.04	16,63,139.19

Activities and Achievements of the Panchayats

The Panchayats in Kottayam District carry on manifold activities. Minor public works such as small bridges, culverts, roads, bunds, foot-paths, sluices etc., are undertaken by them. Bathing ghats, urinals, latrines, wells and similar works providing public health amenities are also executed. The Panchayats also provide irrigation facilities by renovating tanks

and constructing field channels etc. The work of maintenance of village roads is also attended to by the Panchayats in the District. The Panchayats also encourage the execution of numerous public works sponsored by the N. E. S. Blocks by giving contribution from their funds.

The Panchayats provide health amenities of all kinds to the public. Fifteen Panchayats in Kottayam District had a midwife each under their service in 1964-65. Two Panchayats were running Maternity and Child Health Centres. Provision of good drinking water, construction of sanitary urinals and latrines, watering of dusty roads during hot months, cleaning of drain roads and other public works, control of offensive and dangerous trade providing sanitation facilities and lighting arrangements during fairs and festivals etc., are also among the main services attended to by the Panchayats. Some of the Panchayats provide medical aid too. Many Panchayats constructed new wells and improved old wells to tackle the problem of providing drinking water. There were 426 wells under 63 Panchayats in the District in 1964-65. At the same time there were 22 piped water supply schemes owned by the Panchayats. Moreover, 14 Panchayats in this District were closely associated with the rural piped water supply schemes of the Public Health Engineering Department. Street lighting is another important function of the Panchayats.

Markets form an important source of income for most of the Panchayats. In 1964-65 there were 76 Panchayats in this District which were having markets. The total number of markets came to 94 of which 62 were public markets and 32 private markets. At the same time there were 188 licensed slaughter houses and 50 public slaughter houses under 39 Panchayats in the District. At the same time there were 50 cattle pounds run by 40 Panchayats. Ferry service is another useful amenity provided by the Panchayats. In 1964-65 there were 35 Panchayats in Kottayam District which conducted 124 ferries in all. The Kumarakam and Nattakam Panchayats were conducting 11 and 12 ferries respectively. Theatres form one of the main sources of revenue of the Panchayats. Thirty-two Panchayats in this District had 35 theatres of which 15 were permanent and 20 temporary.

The Panchayats also engaged themselves in social and cultural activities in the villages by opening libraries and reading rooms and by giving grants to other libraries. Twenty Panchayats in this District were having reading rooms and libraries under their management. The total number of such libraries came to 22. The Nattakam Panchayat was having three libraries under its management. Sixty-three Panchayats in Kottayam spent an amount of Rs 15,514.00 as grants to libraries. Besides libraries and reading rooms physical and educational institutions such as sports clubs, recreation clubs, nursery schools, mahilasamajam etc., are also given grants-in-aids by Panchayats. In 1962-63 there were twelve Panchayats

which spent a sum of Rs. 1,580 under this head. Besides, some of the Panchayats have also taken up the responsibility of primary education by conducting educational institutions. Five Panchayats maintain primary schools. They are Neendoor, Arudai, Chempu, Melukavu and Elappana. Installation of community listening sets is another important activity of the Panchayats. In 1962-63 there were 8,201 radio sets under 84 Panchayats in this District. Intensive family planning activity is also organised under the auspices of 12 Panchayats. Four Panchayats in this District, viz., Akalakunnam, Anickad, Aimanom and Ettumanoor had Yogasana instructors in order to impart training in the Yogic system of physical education to the villagers.

The total expenditure incurred by the Panchayats in Kottayam District on Public Works, Public Health and Medical Services and Educational and Cultural Activities in 1962-63 and 1973-64 are given below:—

Year	Public Works Rs.	Public Health and Medical Services Rs.	Educational and Cultural Activities Rs.
1962-63	4,09,527.35	2,321.00	17,094.00
1963-64	3,86,402.42	377,675.00	37,301.52

ORGANISATION AND WORKING OF TWO TYPICAL PANCHAYATS

Vakathanam Panchayat

The Vakathanam Panchayat is a third grade Panchayat in Madapally N. E. S. Block. Established in August 1963 it has an area of 10.2 sq. miles and a population of 23,259 as per the 1961 Census. The Panchayat area is divided into ten wards each of which sends one member to the Panchayat. The members meet at least once in a month.

The Vakathanam Panchayat is active in almost all fields of developmental activity. With the welfare of the inhabitants of the Panchayat area as its aim it has undertaken many works of public utility, such as construction and maintenance of roads, culverts, water supply scheme, bathing ghats, wells, irrigation tanks, etc. Till March 1964 this Panchayat had spent Rs. 1,03,622 from the Panchayat fund for the execution of Public Works of the kind mentioned above. In addition it had spent Rs. 82,100 under L. D. Scheme and Rs. 62,000 from Block fund. The Panchayat area is served by a net work of roads. It has 42 miles of cartable village roads, one major bridge and a number of culverts. Again this Panchayat is conducting one ferry service.

The Vakathanam Panchayat has tried its best for the improvement of agriculture. Two irrigation tanks, one at Thevaruchira and another at Palakottuchira, are maintained by it. There is a Co-operative Society at Njalikuzhi which assists the cultivators by giving loans and supplying improved

seeds and manure. A seed store had been established at the headquarters of the Panchayat by the Agriculture Department. A common smoke house has been sanctioned to this Panchayat by the Rubber Board. In order to implement the scheme of compost manufacture a loan of Rs. 2,000 has also been made available to it by the Agriculture Department. Three irrigation canals and four bunds have been constructed for the benefit of agriculturists. The Panchayat has an ambitious proposal for implementing the scheme for converting single crop paddy fields into double crop ones by erecting permanent bunds around selected paddy fields. There is a Khadi Weaving Co-operative Society working at Njalikuzhy in the Panchayat area. Four bathing ghats are maintained by the Panchayat for the benefit of the public. Nine wells have been constructed with the aid of the Madapally Block for the supply of drinking water. This Panchayat owns a water supply scheme at Njalikuzhy with ten street taps. Another scheme at Jerusalem Mount in Vakathanam Panchayat is under execution. A full-time sweeper is being employed by the Panchayat to keep the streets and markets clean. An amount of Rs. 1,000 per annum is being spent on measures to prevent the outbreak of epidemics in the Panchayat area. The provisions of the Prevention of Food Adulteration Act are also enforced. This Panchayat has installed 232 street lights and the annual expenditure on this amounts to Rs. 3,296.

The Vakathanam Panchayat is very active in the field of education as well. There are twelve Primary Schools (six Upper Primary Schools and two High Schools) in this Panchayat area. One of the model schemes of Vakathanam Panchayat is to start Pre-Primary Schools, wherever necessary. By 1964 it had started two such schools, one at Manikandapuram and another at Kadamari. There are four good libraries for which grants are paid from the Panchayat fund. The Panchayat has also supplied community listening sets to these libraries. Three Radio Rural Forums are also functioning in this Panchayat area. Two Mahila Samajams, one at Njalikuzhy and another at Thottacad, are also functioning in their own buildings. The Panchayat has given building grant worth Rs. 1,000 each to these Samajams towards the construction of buildings.

There is a Veterinary Dispensary at Manikandapuram ward. The site for the Dispensary was purchased by the Panchayat and transferred to the N. E. S. Block, Madapally. The building was constructed by the Block with contribution from the Panchayat.

The Panchayat has a scheme to start a public market at Njalikuzhy in addition to the existing one at Puthenchania and to construct one Community Hall and Stadium at its headquarters. The estimated cost of the above works amounts to Rs. 45,000. The Panchayat has also invested Rs. 4,000 in Development Loan.

The Vakathanam Panchayat has realised the importance of people's participation in the development programmes. A Village Volunteer Force consisting of 226 members has therefore been organised under its auspices. The members of the force have constructed two roads and improved a number of old ones.

Thus the Vakathanam Panchayat has achieved a great deal since its establishment. Considering its meritorious service and creditable achievement this Panchayat was awarded Development prizes by the Government consecutively for three years from 1961-62 and it has been selected as a model Panchayat in Kottayam District.

A statement of income and a brief abstract of receipts and expenditure of the Vakathanam Panchayat for 1963-64 are given below:

<i>State of Income</i>	<i>Rs.</i>
1. Building Tax	4,876.71
2. Profession Tax	2,109.50
3. Vehicle Tax	423.00
4. Entertainment Tax	23.01
5. Land Cess	63.74
6. Licence fees	650.25
7. Income from market	..
8. Income from all other miscellaneous items	1,090.35

Statement of Receipts and Expenditure of Vakathanam Panchayat for 1963-64

	<i>Rs.</i>
Opening Balance	14,020.48
Receipts during the year including grants	16,456.76
Total	30,477.24
Expenditure during the year	18,272.01
Balance	12,205.23

Teekoy Panchayat

Teekoy is a Third Grade Panchayat established on the 1st January 1962. It has an area of 10.5 sq. miles and a population of 7,527 according to the 1961 Census. It is divided into 7 wards. There is no reservation of seat for Scheduled Castes or Tribes in this Panchayat but there are eight members including one woman member who is nominated. The Panchayats meet at least once in a month.

Though this Panchayat was established only in January 1962, its record of achievement during the short period of its existence is creditable. On the Republic Day in 1962 a Village

Volunteer Force with 74 members was organised and it has co-operated in all the activities of the Panchayat since then. In 1964 there were 209 members in this Force. To start with, the Panchayat was located in a small rented building, but the local public decided that the Panchayat should have a building of its own to locate its office. The Village Volunteer Force came forward to take up the work. They obtained 25 cents of land as *Bhoodan* and constructed a spacious building at a cost of Rs. 12,000. The only expenditure from the Panchayat fund for the erection of the building was Rs. 1,000 while an expenditure of Rs. 11,000 was met by way of labour and articles donated by the Village Volunteer Force. The new building to which the Panchayat shifted its office in June 1964 is electrified and equipped with furniture and a radio. Perhaps, this is the only Panchayat in the State with an office building constructed free of cost by the Village Volunteer Force.

Another important item of work taken up by the Panchayat is the construction of a foot bridge over the Teekoy river at a cost of Rs. 13,800 out of which the Panchayat spent only Rs. 5,000. The Village Volunteer Force met the balance by accepting free labour. This Panchayat has laid 6 miles of new roads, the entire work being done by the Village Volunteer Force. In 1963-64 there were 12 miles 4 furlongs of Panchayat roads and an amount of Rs. 1,917 was spent by the Panchayat on their maintenance.

The Teekoy Panchayat has also earned 50 cents of land free of cost for conducting a public market in this Panchayat area.

There are two public libraries in this Panchayat and the Panchayat gave a grant of Rs. 50 to each of them during 1963-64.

There are two Upper Primary Schools, three Lower Primary Schools and a High School in the Teekoy Panchayat. The Panchayat has schemes to give grants to Primary Schools for noon-feeding and purchase of furniture. It has also a scheme to open a Nursery School.

Other important institutions in this Panchayat area are a Midwifery Centre, a Key Village Centre and a Service Co-operative Bank. A Co-operative Tea Factory aided by the State Government and the Tea Board is sanctioned for this Panchayat. This is the only factory of its kind in the Kerala State.

It was reported in 1964-65 that the Panchayat had formulated the following schemes for the benefit of the public:—

1. Constructing a bridge at Njantukallu over the Teekoy river at a cost of about Rs. 40,000 by local contribution and a nominal contribution by the Panchayat.

3/3718/MC.

2. A bridge over the Makanal stream at Velathussery at a cost of about Rs. 20,000 the source of fund being the same as in the case of the bridge mentioned above.

3. Construction of about five miles of roads.

4. Introducing water supply scheme at Vellikulam and Arukonmala in this Panchayat.

A statement of the income and the receipts and expenditure of the Teekoy Panchayat for 1963-64 is given below:—

**Statement of Income of the Teekoy Panchayat for
the year 1963-64**

	Rs.
Building tax	6,615.56
Profession tax	1,244.00
Vehicle tax	29.50
Land cess	21.16
Show tax	6.00
Service taxes	Nil.
Licence fee	88.25
Duty on transfer of property	Nil.
Income from public market	Nil.
Basic tax grant	Nil.
Income from private market	Nil.
Surcharge on building tax	Nil.
Income from all other miscellaneous items	696.37

**Statement of Receipts and Expenditure of Teekoy
Panchayat for the year 1963-64**

	Rs.
Opening balance	1,770.69
Receipts during the year including grants	14,503.84
Grand total	16,274.53
Expenditure during the year	8,550.52
Balance	7,724.01

**APPENDIX I
Receipts of the Municipalities in Kottayam District (1963-64)**

Items	Kottayam Rs.	Vaikom Rs.	Changanacherry Rs.	Pala Rs.
Grand Total:				
Grants from Government	53,772.82	10,456.56	13,212.36	17,134.15
Grants from other sources	3,14,789.81	46,617.65	1,13,917.78	550.00
Property tax on buildings and lands	6,759.00	1,502.00	2,935.00	47,914.85
Tax on Vehicles & Animals	1,07,189.07	12,844.00	26,835.55	543.00
Profession tax	8,613.70	834.75	2,547.00	22,503.24
Tax on Advertisements	89,353.69	7,613.45	22,662.55	918.65
Tax on Entertainments	4,234.74	3,304.00	2,631.00	19,023.17
Show Tax	1,194.45	64.50	189.00	3,311.00
Cattle pound	5,761.00	..	1,017.50	156.50
Conservancy receipt	78,429.71	1,949.25	35,578.50	45.00
Income from markets	39,187.28	3,000.80	19,365.54	13,477.75
License fees	3,391.25	..	16,266.00	8,504.26
Cart stand fees (Ferry)	54,059.50	10,515.50	..	..
Bus Stand Fees	1,162.38	191.90	694.35	28,669.60
D. N. & D. W. Fees	2,726.33	269.01	2,159.90	999.64
Fines and compounding fees	4,967.68	532.30	292.60	2,311.59
Other fees	..	10,040.60	23,195.76	984.00
Library receipts	43,544.11	..	..	1,486.50
Sale Tax (Surcharge on transfer of property)	5,105.10	..	2,837.50	159.48
Sale of old materials	7,500.00	100.00	2,663.90	..
Interest (on investments)	60,748.87	4,298.90	3,582.50	1,324.00
Rent on lands and buildings	4,673.25	4,528.81	3,900.84	565.45
Miscellaneous other items	..	..	..	..
Other deposits & Debt Head Receipts	1,02,634.64	12,186.08	26,441.14	4,874.50
P.W. Security	..	2,371.83	608.00	305.00
Advance recoverable	4,352.52	416.75	1,176.90	859.55
Surcharge on profession tax	..	..	..	..
Additional Entertainment tax & surcharge on show tax	42,697.60	8,021.80	..	16,155.40
Receipts under P. F. A. Act	1,692.00	..	..	..
Realisation of sinking funds	10,416.53	..	..	..

Abstract of the Accounts of the Municipalities in Kottayam District (1963-64)

Items	Kottayam Rs.	Vaikom Rs.	Changanacherry Rs.	Palai Rs.
<i>Receipts</i>				
Grand total including opening balance	13,30,263.24	1,68,873.19	5,56,953.41	2,84,137.14
1. Opening balance	2,71,306.21	22,212.67	2,00,444.32	1,23,060.48
2. Total Receipts	10,58,957.03	1,46,660.52	5,56,953.41	2,86,827.32
(i) Grants and contribution	53,772.82	10,456.54	13,212.36	17,684.15
(ii) Rates and Taxes	6,17,181.72	82,767.45	1,94,724.64	94,182.66
(iii) Realisation under Special Acts	2,886.45	202.50	1,724.00	313.75
(iv) Revenue derived from Municipal property	2,07,063.58	15,891.17	63,282.00	44,500.45
(v) Miscellaneous	17,572.78	13,673.40	27,541.83	2,211.43
(vi) Deposits Accounts	1,06,987.16	23,669.46	56,024.26	4,874.50
(vii) Municipal Fees	43,075.99	..	..	..
(viii) Realisation of investments	10,416.53	..	..	..
<i>Expenditure</i>				
Grand total including closing balance	3,43,208.62	1,68,873.19	5,56,953.41	3,15,850.76
1. Closing balance	71,902.41	14,493.43	1,77,425.51	1,51,606.72
2. Total Expenditure	9,87,054.62	1,54,379.76	3,79,527.90	1,64,244.04
(i) General supervision & Collection of Revenue	1,60,324.46	26,687.25	55,284.04	36,848.42
(ii) Public works	2,65,790.83	48,393.90	1,48,788.86	54,086.03
(iii) Education	9,006.00	5,322.17	4,176.35	4,267.58
(iv) Medical Service & Sanitation	2,27,445.56	33,124.49	80,832.79	25,578.15
(v) Lighting & Other Municipal purposes	87,760.70	8,822.38	32,854.30	15,648.34
(vi) Interest on sinking fund	..	..	..	..
(vii) Miscellaneous	74,712.28	2,276.60	1,543.07	7,109.32
(viii) Debt loans	59,569.38	14,041.94	13,938.23	17,446.70
(ix) Deposit accounts	1,02,443.41	12,039.93	42,030.26	2,810.00
(x) Advance recoverable	..	3,712.10	..	449.50

APPENDIX II

Demand Collection and Balance Statement of Kottayam, Palai, Changanacherry and Vaikom Municipalities (1967-68)

Name of Municipality	Demand Rs.	Collection Rs.	Balance Rs.
(1)	(2)	(3)	(4)
Kottayam	27,81,612	25,81,856	1,43,188
Palai	4,06,051	3,51,080	54,643
Changanacherry	7,76,457	7,70,939	32,224
Vaikom	2,28,840	2,09,039	18,062

CHAPTER XV

EDUCATION AND CULTURE

Historical Background

Kottayam occupies an important place in the literary and cultural map of Kerala. There were great centres of learning and culture in this District even in ancient days. The rulers of Vadakkumkur and Tekkumkur were great patrons of learning. Kottayam, Changanacherry etc., which were the seats of the Tekkumkur Rajas attracted scholars from all parts of the State. The Vadakkumkur Rajas figure in the famous poem *Unnuneeli-sandesam*, composed in the 14th century, and their capital Kaduthuruthi was the rendezvous of scholars and men of letters. The great poet Melpathoor Narayana Bhattathiri (1560-1646) enjoyed the patronage of one of the Vadakkumkur chiefs. This is testified to by his work *Bimbaleesaprasasthi*, a panegyric on king Koda Varma of Vadakkumkur. In the 18th century the Vadakkumkur Rajas patronised such great scholars as Ramapurarthu Variyar.

On the eve of the British conquest of the country, the most important indigenous educational institutions of the land were the *Ezhuthupallies* or Pāl Schools, *Kalaries* or Military Schools and the *Vedic* Schools. The *Ezhuthupalli* with an *Asan* or Village School Master at its head provided facilities for the pupils to acquire the elementary knowledge of the three 'R's. The curriculum of studies in these schools included writing the letters of the alphabet in the sand, writing short verses on *Ola* or Cadjan leaf, studying by heart some short verses of a devotional character etc. After undergoing a course of studies in the *Ezhuthupallies* the pupils went to the *Kalaries* in order to get training in gymnastics and the use of arms. Almost every *Kara* or Village had a *Kalari* where physical education was imparted. The *Vedic* Schools were meant for higher education in the *Vedas*, the *Sastras* and the *Upanishads*. In addition, those young men who wanted to prosecute higher studies approached individual scholars, physicians and astrologers of distinction who were willing to help the aspirants for knowledge.

Beginnings of State Activity in the Field of Education

The direct activity of the State in the field of education in erstwhile Travancore began more than a century ago when Rani

Gouri Parvathi Bai, with the assistance of Dewan Col. Munro, introduced in 1817 a system of free and compulsory education under State control. Malayalam primary Schools were established in all the villages and guardians of children between ages of 5 and 10 were enjoined under law to send them to schools. Men of suitable qualifications were appointed as teachers. Every school was to have two teachers paid by the State, each teacher receiving a monthly salary of 50 fanams, a little over Rs. 7. The Tahsildar of the Taluk was to inspect the School once in 15 days and acquaint himself with the details of management, find out the number of pupils, the quality of teaching and the level of their studies and send reports to the Government. This was a clear recognition of the principle that the cost of education was a charge on public funds and that the supervision thereof the legitimate function of the State. However, it was only in 1866-67 that primary education was placed on a firm footing. More Malayalam primary schools were also established on a sound basis. The year stands out as a prominent landmark in the history of educational progress.

Origin of Western Education and Pioneer Work done in the District.

The pioneer work in the field of Western Education in erstwhile Travancore State was started at Kottayam among the Syrians by the C. M. S. Missionaries. As early as 1813 the Syrians set up a College or Seminary at Kottayam for training their priests and ministers. The Puthencoor Syrians had at the instance of Col. Macaulay, invested a sum of 3,000 Star Pagodas (Rs. 10,500) with the British Government as a perpetual loan carrying interest at 8% per annum on the understanding that the income therefrom was to be utilised for charitable purposes. It was the accumulated arrears of interest due on this investment that was utilised for the erection of the Seminary in 1813. It was the hope of the C. M. S. that this Seminary "might be the happy means of raising up a host of the most important missionaries of our Society that could possibly be desired". With the blessings of the Rani's Government the C. M. S. Missionaries soon decided to introduce in the College several branches of secular instruction with a view to developing it as "a place for general education from whence any demands of the State for officers to fill all departments of public service would be met". Through Col. Munro's influence, Rani Lakshmi Bai made a gift of a large extent of landed property at Kottayam as the site for the proposed college and also of some money and building materials for its erection. Her successor, Rani Parvathi Bai, also gave handsome donations and a tract of land situated at Kallada near Quilon, since then known as Munro Island, to serve as an endowment for the College. At the suggestion of Col. Munro the operation of the Seminary was soon supplemented by a system of parochial schools attached to each Parish Church. At the same time the Missionaries set up Grammar Schools which were to receive the best

pupils that passed out of the parochial schools and to prepare them for higher education at the collegiate level. A Grammar School was thus established at Kottayam in 1821. Simultaneously the foundation of female education was laid by the wives of the C. M. S. missionaries who showed considerable enthusiasm for the cause. Thus as a result of the work of the C. M. S. Missionaries a fourfold system of education with the College or Seminary imparting higher and theological education, a parochial schools attached to each church, a grammar school serving as a place of intermediate instruction and providing the link between parochial schools and the seminary and a few schools for girls was evolved and developed over the years.

Among the early C. M. S. missionaries who did pioneering work may be mentioned Bailey, Baker and Fenn. There was almost a division of labour among them. Bailey attended to literary work. He translated the English Bible into Malayalam and brought out two English Dictionaries. Baker's work was connected with the establishment of the Parochial and Grammar Schools. The Seminary was put under the supervision of Fenn. It made steady progress under his stewardship during the period 1819-1827. The following account given by Fenn in 1820 might be read with interest in this connection:—"The number of students is forty-two, of whom twenty-one have passed through five initiatory ordinations. Their improvement has been tolerably good. Some can read English as well as the generality of our youths, and are making advance in the knowledge of it. All have acquired some knowledge of figures and some can go through the first four rules of Arithmetic according to our mode and in our language with the same readiness as the youth at home. In Sanskrit and Malayalam the progress is fair. With regard to Syriac we have hitherto refrained from any interference in the mode of teaching. We have directed the attention of the most proficient student to the Latin language. Dr. Watt's first and second catechisms are among the books with the students are learning and though simple in themselves they contain what the students have hitherto been ignorant of. The application of many of the students has been very great, many of them, not more than twelve, thirteen or fourteen years old, were up till past twelve O' clock of a night learning the tasks assigned to them. We deemed it our duty to repress this over-exertion".¹ It may be noted that the curriculum of studies in the Kottayam college was gradually enlarged so as to include the study of Latin, Hebrew, Greek, Mathematics, History and Geography in addition to English, Malayalam, Syriac and Sanskrit. The Syrians separated from the Mission. When the Madras College was handed over to the C. M. S. in 1837 when the University was set up in 1857, the Kottayam College was one of the first to be affiliated to for Matriculation. The Maharaja of Travancore who visited the institution in 1880 remarked

1. History of Christianity in India, Hough, Vol. V. p. 387.

"Long before the state itself undertook the humanising task of education, the Christian Missionaries had raised the beacon of knowledge in the land". University classes were started in 1892 and the institution acquired the status of a Second College. In 1907 the University classes were separated from the school classes.

In the meantime, in 1063 K. E. (1887-88) the successful working of the English Schools established by the Missionaries led to the entry of the State in the field of English education. The beginnings of English education under State auspices in erstwhile Travancore may be traced to the year 1834 when an English School was started at Trivandrum by Maharaja Swathi Thirunal. The policy of establishing English Schools was not, however, confined to the capital town. District English Schools were soon opened at Kottayam and other important centres. In 1069 K. E. (1893 A. D.) in furtherance of the Government's policy of having a range of four High Schools running from north to south at a distance of 40 miles from each other, the District School of Kottayam was also raised to the High School standard. At the same time Government followed a generous policy of aiding private educational institutions.

Literacy and Educational Standards

Kottayam occupies a high place among the Districts of Kerala in point of literacy and educational standards. In the Census of 1951 the District occupied the first rank and in 1961 the second rank in the matter of literacy. According to the Census of 1961 there are 550,809 male literates and 429,464 female literates in this District. The general literacy rate is 56.6 per cent, the percentages of male and female literacy being 62.4 and 50.5 respectively. It may be pointed out that at the Census of 1951 the percentage of literate population to the total population of the District was 52.75 and that of literate males to the total male population 59.32 and of literate females to the total female population 45.97. These percentages recorded appreciable increase during the decade 1951-61, though the District comes only next to Alleppey in point of literacy and educational standards at the 1961 Census. Moreover the percentage of general literacy in the District is much higher than the All-Kerala average of 46.8 per cent, and more than double the literacy rate for India as a whole, i.e., 24 per cent. The percentages of male and female literacy are also much above the Kerala figures of 55 per cent and 38.9 per cent respectively. The high percentage of literacy in the District may be attributed to the existence of a large number of educational institutions run under the auspices of private agencies like the Church and the Nair Service Society.

Considered Taluk-wise it is seen that in 1961 Changanacherry Taluk lead in the literacy rate while Devicolum Taluk

came last. The Taluk-wise figures of literacy according to the Census of 1961 are given below:—

Growth of Literacy

<i>District/Taluk</i>	<i>Total Literates</i>	<i>Percentage of literates to the total population</i>	<i>Proportion of literates to total literates in the District</i>
	1961	1961	1961
Kottayam District	980,278	56.57	100.00
Changanacherry Taluk	144,795	64.52	17.05
Devicolum	40,014	32.49	2.56
Kanjirappally	88,287	59.34	8.16
Kottayam	270,814	64.17	30.47
Meenachil	186,621	60.23	23.47
Peermede	55,040	41.19	3.66
Udumbanchola	72,834	46.81	0.63
Vaikom	121,868	56.57	14.00

Literates by educational levels can be broadly classified as follows:—

Literates by Educational level and Effective Rate of Literacy

<i>Educational level</i>	<i>Persons</i>	<i>Percentage to total literates</i>	<i>Percentage to total population of age-group 5 and above</i>
Total Literates	980,273	100.00	66.64
Literates (with-out educational level)	628,991	64.06	42.69
Primary or Junior Basic	292,348	29.82	19.87
Matriculation & Above	59,934	6.12	4.08

Only 6.12 per cent of the literates have passed the educational level of 'matriculation and above'. Excluding the age-group 0-4 from the total population the effective literacy rate for the district works out to 66.64 per cent, 73.44 per cent for males and 59.56 per cent for females. The following statement gives male and female effective literacy rates.

Effective Rates of Literacy by Sex

<i>Educational level</i>	<i>Percentage of male literates to male population of age-group 5 and above</i>	<i>Percentage of female literate to female population of age-group 5 and above</i>
Total literates	73.44	59.56
Literate (without educational level)	45.52	39.75
Primary or Junior Basic	22.48	17.16
Matriculation and above	5.44	2.65

Spread of Education among Women

To the Christian Missionaries goes the honour of having commenced female education in this District. The pioneer in the field was Mrs. Bailey, the wife of Mr. Bailey of the Church Mission Society, who arrived Kottayam at in 1816. Mrs. Bailey gave instruction to few girls in her own house. Mrs. Fenn and Mrs. Baker later opened a school at Kottayam for the instruction of about a dozen girls. At a later stage Mrs. Baker gave instruction to 18 girls in her own house, providing free boarding and lodging expenses to them at a total cost not exceeding Rs. 20 a month. In 1827 Mrs. Baker made the following report of their progress "All these children except two are below 12 years of age and scarcely learned anything before they came. They are now employed from morning till noon at their needles etc., and the after part of the day at their books". In the meantime Mrs. Johnson also started a Girls School at Kottayam and Mrs. Peet another at Mavelikara (Alleppey District). The education imparted in all the schools was free. The pupils were also fed and clothed free. The Miss Baker Memorial Girls School which was set up to perpetuate the memory of Miss Baker, the daughter of Mrs. Baker, stands even today as a memorial to the early pioneers in the field of female education in the District. This tradition is kept up uniformly as statistically revealed by the Census returns. The progress of literacy and education among the females have gone up to 50.5 per cent according to the census of 1961. This phenomenal increase in literacy is certainly based on the early activities of female education in the District.

Spread of Education among Backward Classes

All students belonging to the Scheduled Castes and Scheduled Tribes are exempted from payment of all kinds of fees at all levels of education. They are given lump-sum grants of Rs. 3 to Rs. 40 for purchasing books in Pre-Matric classes and Rs. 60 to Rs. 240 in Post-Matriculation classes. These concessions are also to the students converted to Christianity from among the above communities. Moreover, students belonging to Other Backward Communities (O. B. C.) are exempted from payment of all kinds of fees subject to certain income limits. Those studying in the Post-Matric classes and are residing in approved hostels are given boarding and lodging charges and pocket money and the day scholars are allowed a monthly stipend of Rs. 40 for those who are residing within a radius of 5 miles and Rs. 45 for others.

Besides these concessions, a number of schools were started by Harijan Welfare Department with a view to imparting primary education among the Scheduled Castes and Scheduled Tribes. This was done especially in the interior places where such institutions were not run by the Department of Education.

1. History of Christianity in India Hough, Vol. V. p. 392.

There were 20 Welfare Schools for Scheduled Castes and 22 Tribal Schools in the District as on March 31, 1965. Besides, three Government Residential Basic Schools were also started for imparting primary education exclusively for Scheduled Tribe Students. These three schools are being conducted on a residential basis.

Noon-feeding of pupils studying in the welfare and Tribal Schools is also done under the auspices of the Department. All expenditure for the award of educational concessions and the maintenance of the Welfare, Tribal and Residential Basic Schools is met by the Government. The available details are given below:

Expenditure incurred on award of Educational Concessions for Pre-Matric and Post-Matric studies of Scheduled Castes, Scheduled Tribes and other Backward Communities

Year	Pre-Matric	Post-Matric
	Rs.	Rs.
1958-59	3,96,844.00	2,37,928.34
1959-60	4,02,196.57	2,02,227.68
1960-61	5,66,738.17	2,14,189.93
1961-62	5,40,229.18	2,59,866.96
1962-63	6,22,526.42	3,28,668.16
1963-64	6,41,012.23	5,61,973.65
1964-65	6,97,188.40	6,10,892.53

The expenditure incurred during the years 1961-62 to 1964-65 on Noon-feeding in the Welfare and Tribal Schools is furnished below:—

Year	Welfare Schools	Tribal Schools
	Rs.	Rs.
1961-62	3,479.78	23,438.58
1962-63	19,797.32	15,086.47
1963-64	18,736.01	10,020.25
1964-65	11,643.03	4,984.47

In order to spread literacy among the adults, Night Schools and Libraries are run by the Government in select centres. At the end of 1964-65 there were 4 Night Schools and 21 Libraries in this District. The administrative control of the Welfare and Tribal Schools, except Government Residential Basic Schools, was transferred to the control of the Education Department with effect from May 1, 1965.

Two Hostels for boys, one at Peermede and another at Changanacherry are being run. Students undergoing Pre-Matric studies are admitted in the Welfare Hostel at Peermede. The Welfare Hostel at Changanacherry is exclusively for college students and it is being run as a Cosmopolitan Hostel. The total number of seats in the Welfare Hostel at Peermede is 30, 10% of the seats being reserved for Non-Harijans. The inmates are given free boarding and lodging. The food charges per head are limited to Rs. 25 per mensem. The number of students admitted in the Welfare Hostel at Changanacherry is 40. The monthly boarding charges in this Hostel are limited to Rs. 40 per head. The expenditure incurred for running these hostels during the years 1958-59 to 1964-65 is furnished below:—

Year	Rs.
1958-59	19,173.36
1959-60	17,996.96
1960-61	19,848.26
1961-62	27,743.55
1962-63	29,864.31
1963-64	28,414.37
1964-65	28,779.78

Two Hostels are subsidised by the Harijan Welfare Department at present, one at Peermede and the other at Munnar. Boarders in these hostels are being paid at the rate of Rs 22 per mensem for meeting the boarding and lodging charges. The expenditure incurred towards the sanctioning of boarding charges for each year is furnished below:—

Year	Rs.
1962-63	4,892.14
1963-64	7,502.59
1964-65	9,637.50

Training institutions were started from 1957-58 onwards for imparting training to Scheduled Caste and Scheduled Tribe candidates in Rattan Work, Carpentry, Weaving, Tailoring etc. The trainees were given a monthly stipend of Rs 25 each.

The duration of the course is two years. At present there are the following institutions:

1. Medical Welfare Training Centres for Scheduled Castes	3
2. Industrial Training Centres & Craft Centres for Scheduled Castes	4
3. Model Welfare Training Centres for Scheduled Tribes	2
4. Craft Centres for Scheduled Tribes	2

The expenditure for the running of the above institutions is being met by the Department. A total sum of Rs 2,74,918.28 was incurred for the running of the Training Centres for Scheduled Castes from 1958-59 to 1963-64. The expenditure incurred for the above period for the running of the training centres for Scheduled Tribes for the above period was Rs. 58,044.21.

Nursery Schools

Pre-Primary classes of the Nursery (Kindergarten) School pattern are conducted in certain centres of the District for the education of children below 5½ years of age. In 1964-65 there were 7 Nursery Schools in this District. The Taluk-wise details of the number of such schools with particulars of the number of pupils and teachers in them are given below:—

Taluk	No. of Schools		No. of Students		No. of teachers	
	Govt.	Private	Boys	Girls	Men	Women
Total	2	7	148	137	10	2
Kottayam	1	1	64	47	3	2
Peermede	..	1	19	21	1	..
Meenachil	..	1	18	21	2	..
Vaikom	1	2	20	14	2	..
Devicolum	..	2	27	34	2	..

Primary Schools

Primary Education which is free extends to a period of seven years. The first seven standards are collectively known as the Primary Grade and are divided into two sections. They are (1) Lower Primary and Junior Basic containing any or all of the Standards I to IV and (2) Upper Primary and Senior Basic containing any or all of the standards V to VII. All Primary Schools are mixed schools and have generally Malayalam as the medium of instruction.

In the School year 1964-65 there were 573 Lower Primary Schools and 258 Upper Primary Schools. Among the 573 Lower Primary Schools 220 were run by Government and 353 by private agencies. Among the 258 Upper Primary Schools 76 were Government Schools and 182 were private schools. The table in the next page shows the number of Primary Schools (Lower and Upper) in each Taluk with details of the number of students and teachers in them in 1964-65:

Statement of Primary Schools—1964-65

Particulars	No. of Institutions		No. of pupils on the rolls		No. of teachers	
	Government	Private	Boys	Girls	Men	Women
DISTRICT TOTAL	296	535	181569	171934	4265	4355
Lower Primary Schools	220	353	110723	112690	2219	2519
Upper Primary Schools	76	182	70846	62244	2046	1836
1. Kottayam						
Lower Primary Schools	48	116	26242	24613	653	854
Upper Primary Schools	23	35	24105	21031	580	537
2. Changanacherry						
Lower Primary Schools	33	44	17959	17131	379	424
Upper Primary Schools	16	30	10129	10088	457	317
3. Vaikom						
Lower Primary Schools	34	37	14328	13658	237	273
Upper Primary Schools	11	14	6854	5050	194	164
4. Devicolum						
Lower Primary Schools	22	16	6488	4279	115	86
Upper Primary Schools	4	3	1170	806	50	41
5. Meenachil						
Lower Primary Schools	61	70	26871	36143	437	484
Upper Primary Schools	11	53	12700	11377	329	435
6. Peernede						
Lower Primary Schools	..	21	4907	4385	89	108
Upper Primary Schools	1	10	3279	2623	85	91
7. Udumbanchola						
Lower Primary Schools	7	21	6405	5226	111	91
Upper Primary Schools	5	8	4735	4037	93	56
8. Kanjirappally						
Lower Primary Schools	15	28	7523	7255	143	199
Upper Primary Schools	5	29	7874	7202	258	195

Secondary Schools

Standards VIII, IX and X are collectively known as the Secondary Grade. The Secondary Schools are run by Government as well as by private agencies. The medium of instruction is generally Malayalam. However, for pupils whose mother-tongue in Tamil, provision is made for giving instruction in Tamil, if there be sufficient number of pupils. In 1964-65 there were 143 Secondary Schools in the Kottayam District. The following table gives particulars of the number of Secondary Schools in each taluk with particulars of the number of students and teachers in them in 1964-65:

Taluk	No. of Institutions		No. of pupils on the rolls		No. of teachers	
	Govt.	Private	Boys	Girls	Men	Women
Total	27	116	49,718	42,138	2,256	1,310
1. Kottayam	8	39	13,369	12,859	690	420
2. Changanacherry	3	16	6,012	6,139	295	165
3. Vaikom	7	11	9,162	7,569	348	271
4. Devicolum	3	3	2,484	1,313	87	445
5. Meenachil	1	31	12,669	9,681	572	293
6. Peernede	1	5	937	555	45	14
7. Udumbanchola	2	1	994	747	37	10
8. Kanjirappally	2	10	3,964	3,275	182	92

Basic Schools

Basic Education was introduced in the State by private enterprise in 1946. Since 1958-59 the policy of orienting Primary Schools towards the basic pattern is being progressively implemented by Government. Activities which can foster a sense of self-reliance in the pupils have been included in the curriculum of studies. The contents in the syllabus also include pupils' self-government, cultural and recreational activities, national life and practice of simple useful crafts. Basic Training Schools and other post-Basic institutions have also been started in order to meet the shortage of trained personnel for Basic Education. The following table gives particulars of the number of Basic Schools in the District with details of the number of students and teachers in them in 1964-65:

Junior Basic Schools 1964-65

Taluk	No. of Institutions		No. of pupils on the rolls		No. of teachers	
	Govt.	Private	Boys	Girls	Men	Women
Total	4	1	877	747	16	13
1. Kottayam	2	..	213	184	5	6
2. Changanacherry	2	..	210	169	4	6
3. Udumbanchola	..	1	454	394	7	1

Training Schools

In 1964-65 there were 13 Basic Training Schools in this District. The course of training in a Training School extends over a period of two years. The minimum qualification for admission to the course is a pass in the S.S.L.C. Examination. The candidates are selected by a Board constituted by the Public Service Commission. The selection of untrained teachers employed in Primary Schools for admission to Training Schools is, however, made by the authorities of the Education Department. The successful trainees are awarded Teachers' Training Certificate.

The table given below shows the Taluk-wise particulars of such schools with details of the number of students and teachers in them in 1964-65:

Taluk	No. of Institutions		No. of pupils on the rolls		No. of teachers	
	Govt.	Private	Boys	Girls	Men	Women
Total	3	10	591	979	51	23
1. Kottayam	3	3	276	438	24	12
2. Changanacherry	..	3	132	253	11	5
3. Kaujirapally	..	1	54	64	4	2
4. Meenachil	..	3	129	224	12	4

COLLEGE FOR GENERAL EDUCATION

There are 14 colleges for general education in the Kottayam District. They are the C. M. S. College, Kottayam, the St. Berchman's College, Changanacherry, the N.S.S. Hindu College, Changanacherry, the St. Thomas College, Palai, the Assumption College for Women, Changanacherry, the Bishop Chulaparampil Memorial College for Women, Kottayam, the St. Stephen's College, Uzhavur, the Baselius College, Kottayam, the St. Stephen's College Kuravilangad, the Alphonsa College for Women, Palai, the Devaswom Board College, Talayolaparamba, the Vidyadhiraja N. S. S. College, Vazhur, the K.M.F. College, Mannanom and St. George College, Aruvithura. All the colleges mentioned above except the Women's College are co-educational institutions. They are affiliated to the University of Kerala. Brief accounts of these colleges are given below:—

C. M. S. College, Kottayam

The C. M. S. College, Kottayam, one of the oldest educational institutions in South India was first started as a school in 1816. In 1892 it became a college affiliated to the Madras University.

The institution is managed by a local Governing Body under the Church Missionary Society of London. The college occupies a beautiful site of 40 acres of land and building with a room area of 25,000 sq. feet. It has in addition a stadium and other facilities for extra curricular activities. The institution offers instruction for the Pre-Degree course, the B. A., and B. Sc. Degree Courses and M.A. and M.Sc. Courses in select subjects. In 1967-68 the College had 2315 students on its rolls and 115 members on its teaching staff. The College Library which is called Collins Library had 27,192 volumes. There are separate hostels for men and women students and they provide accommodation for 58 and 140 students respectively. The College publishes its annual magazine under the name *Vidya Sangrah*.

St. Berchman's College, Changanacherry

The St. Berchman's College, Changanacherry, grew out of a High School of that name founded in 1891 by the late Bishop

Charles Lavinger of Kottayam. It was in 1922 that the High School was raised to a Second Grade College affiliated to the Madras University. In 1927 the College was raised to the First Grade with provision for the B. A. Degree course. The Archbishop of Changanacherry is now the Patron of the College. The institution offers instruction for the Pre-Degree course, the B.A., and B. Sc. Degree courses and the M. A. and M. Sc. Degree courses in select subjects. In 1967-68 there were 2,411 students on the rolls of the college and 128 members in its teaching staff. The College Library had 30,680 volumes. There are six spacious hostels attached to the College and together they provide accommodation for 720 students. The college also provides accommodation for some of the members of the staff in a building constructed for the purpose very near to the College. A special feature of the college is an open Air Theatre with upstairs rooms built with aid from the Ministry of Education, Government of India.

The N. S. S. Hindu College, Changanacherry

The N. S. S. Hindu College, Changanacherry, was started by the Nair Service Society in 1947. It offers instruction for the Pre-Degree course, the B. A. and B. Sc. Degree courses and the M. A. and M. Sc. Degree courses in select subjects. In 1967-68 there were 2,305 students on the staff of the College and 118 members on its teaching staff. The College library had a collection of 15,448 books. The College has two Hostels which provide accommodation for 260 women and 140 men respectively.

St. Thomas College, Palai

The St. Thomas College, Palai, was opened in 1950. It is owned by the Diocese of Palai and the Bishop of Palai is the patron and promoter. It offers instruction for the Pre-Degree course, the B. A. and B. Sc. Degree courses, and the M. A. and M. Sc. Degree courses in select subjects. In 1967-68 there were 2,354 students on the rolls of the College and 132 members on its teaching staff. The College library had a collection of 22,574 volumes. The College has an excellent hostel (Kristu Raja Hostel) situated in the campus itself in ideal surroundings and it provides accommodation nearly for 400 students.

Assumption College, Changanacherry

The Assumption College, Changanacherry, was formally founded as a Second Grade College for women in 1951 by the Archdiocese of Changanacherry. In 1957-58 it was raised to the standard of a First Grade College. The College provides instruction for the Pre-Degree and the B. A. and B. Sc. Degree courses. In 1967-68 it had 1847 students on its rolls and 78 members on its teaching staff. The College library had 12,848 volumes. There are six hostels attached to the College and they provide accommodation for 880 students.

Bishop Choolaparambil Memorial College, Kottayam

The Bishop Choolaparambil Memorial College, Kottayam, was started in 1955 to meet the widely felt need for a Women's College in Kottayam town. It is owned by the Bishop of Kottayam. The College offers instruction for the two year Pre-Degree Course and the B. A., and B. Sc., Degree Courses. In 1967-68 there were 1,678 students on its rolls and 71 members on its teaching staff. The College Library had a collection of 8,900 volumes.

St. Stephen's College, Uzhavoor

The St. Stephen's College, Uzhavoor, (Meenachil Taluk) was started in 1964. It is owned by the Diocese of Kottayam. The College offers instruction for the two year Pre-Degree course. In 1967-68 it had 675 students on its rolls and 29 members on its teaching staff. The college library had 2,188 volumes. There were hostels and they accommodate 191 students.

Baselius College, Kottayam

The Baselius College, Kottayam, was started in 1964. It is owned by the Orthodox Syrian Church. The college offers instruction for the Pre-Degree and B. A./B.Sc./B.Com. courses. In 1967-68 it had 1,146 students on its rolls and 45 members on its teaching staff. The college library had a collection of 3,533 volumes. There were no hostels attached to the college.

Devamatha College, Kuravilangad

The Devamatha College, Kuravilangad, was started in 1964. It is owned by the St. Mary's Forane Church, Kuravilangad under the Diocese of Palai. The college offers instruction for the two year Pre-Degree course. In 1967-68 there were 761 students and 31 teachers in the college.

Alphonsa College for Women, Palai

The Alphonsa College for Women, Palai, was started in 1964. The Bishop of Palai is the Patron of the college. The college offers instruction for the Pre-Degree course and B. A. Degree courses. In 1967-68 it had 1,180 students and 48 teachers. The college library had 4,150 volumes. There were four hostels attached to the college and altogether they provided accommodation for 250 students.

PROFESSIONAL & TECHNICAL SCHOOLS

Technical education has received attention in this District since the 19th century. It is worth mentioning that the Christian Missionaries were the pioneers in this field. Mrs. Bailey, the wife of Mr. Bailey of the Church Mission Society, taught Needlework and Embroidery to a few select girls at Kottayam even

as early as the second decade of the last century. The C. M. S. Industrial School was started in 1894. The most important technical and professional schools in the Kottayam District at present are the Industrial Training Institute, Ettumanur, the Government Polytechnic, Kottayam, the Junior Technical School, Pampady, the Junior Technical School, Palai, the Tailoring and Garment Making Centre, Kottayam, the C. M. S. Industrial School, Kottayam, the C. M. S. Printing School, Kottayam, Diocesan Industrial Training Institute, Palai and the Industrial Training College, Palai. Brief accounts of these institutions are given below:—

The Government Polytechnic, Kottayam

The Government Polytechnic, Kottayam, was started in 1960. It is located on a site of 17 acres of land on the Main Central Road in Nattakam Village, about two miles from Kottayam town. The institution offers instruction for the Diploma course in Civil, Electrical and Mechanical Engineering which extends over a period of three years. In 1967-68 there were 346 students on the rolls of the polytechnic and 29 teachers on its staff. The library of the institution had 2,662 volumes. The hostel attached to the college accommodate 105 students. The Polytechnic is under the administrative control of the Director of Technical Education.

Junior Technical Schools, Palai and Pampady

There are two Junior Technical Schools in this District. They are located at Palai and Pampady respectively. The Junior Technical School, Palai was started in 1961. The course of studies in Junior Technical Schools extends to a period of three years. It seeks to divert pupils from purely general education to productive occupations of a technical nature. The curricula consist of Humanities, General Science, Engineering subjects and different trades. The medium of instruction is Malayalam in the early stages and it is replaced by English by the time the students reach the final year of the course. In 1967-68 there were 106 students and 21 teachers in the Junior Technical School, Palai and 124 students and 22 teachers in the Junior Technical School, Pampady. There were 323 volumes in the library of the former institution and 415 in the library of the latter. There are no hostels attached to these institutions. These schools are under the administrative control of the Director of Technical Education.

Tailoring and Garment Making Centre, Kottayam

This institution is under the Director of Technical Education. It offers instruction for the one year Diploma course in Tailoring and Garment making conducted by the Government of Kerala. The sanctioned annual intake of the institution is 16 and the number of teachers two.

The C. M. S. Industrial School, Kottayam

The C. M. S. Industrial School, Kottayam, which started in 1894, is managed by the Central Kerala Diocese of the Church of South India. It offers a three year course in Carpentry. In 1967-68 there were 12 students and one teacher in this school. The school gets a grant of Rs. 40 per mensem from the Government.

The C. M. S. Printing School, Kottayam

This is also a private technical school owned by the Church of South India. It offers a two year course in Printing, Composing and Binding to about a dozen pupils at a time.

Diocesan Institute of Technical Training, Palai

The Institute of Technical Training was established by the Bishop of Palai in 1962. It was organised in collaboration with the German Organisation (Charitable) MISCREOR.

It has under it 3 industrial school—one for carpentry and wood works in Cherpunkal, another for electroplating in Palai and the third textile technology in Palai for women.

Industrial Training College, Palai

The Palai Diocese runs an Industrial Training College in Palai. It was recognised in 1967 as an I.T.I. although a third year of advanced course is conducted here as compliment to the I.T.I. course. There are two German Professors working here.

PROFESSIONAL & TECHNICAL COLLEGES

There are seven colleges for professional and technical education in the Kottayam District. They are the N. S. S. Training College, Changanacherry, the Mount Carmel Training College, Kottayam, the St. Joseph's Training College, Mannanam, the St. Thomas Training College, Palai, the Medical College, Kottayam, the Athurasramam Homoeopathic Medical College, Kurichi and the N. S. S. Co-operative College, Kottayam. Brief accounts of these institutions are given below:—

N. S. S. Training College, Changanacherry

The N. S. S. Training College, Changanacherry, was started in 1954. It is under the management of the Nair Service Society. The College offers instruction for the B. Ed. Degree course of the Kerala University. In 1967-68 there were 150 students and 8 teachers in the College. The library had a collection of 4,598 volumes. The college hostel provided accommodation for 50 students.

Mount Carmel Training College, Kottayam

The Mount Carmel Training College, Kottayam was started in 1953. The Mother General, St. Theresa's Convent, Ernakulam is the Manager of the College. The College provides instruction for the B. Ed. Degree course of the Kerala University. In 1967-68 there were 120 students on the rolls of the College and 9 members on its teaching staff. The College library had a total collection of 4,200 volumes. The College Hostel which has been built with financial aid from the University Grants Commission can accommodate 70 students at a time.

St. Joseph's Training College, Mannanam

The St Joseph's Training College, Mannanam, was started in 1957. It is situated on the north-east margin of the summit of a hill at Mannanam in the Ettumanur Pakuthi of Kottayam Taluk. The College is managed by the St. Joseph's Monastery, Mannanam which owns the St. Ephrem's High School started as early as 1885 and also the St. Joseph's Press which is more than a century old. The institution offers instruction for the B. Ed. Degree course of the Kerala University. In 1967-68 there were 120 students and 7 teachers in the College. The College library consists of 7,189 volumes. There is a Hostel attached to the College which provides accommodation for 68 students.

St. Thomas Training College, Palai

The St. Thomas Training College, Palai was started in 1957. It is situated on the banks of the Meenachil river on western side of the municipal town of Palai. The College is owned and administered by the Diocese of Palai. It offers instruction for the B. Ed. Degree course of the Kerala University. In 1967-68 there were 120 students and 10 teachers in the College. The College library had a collection of 2,367 volumes. There is a hostel for men attached to the College and it provides accommodation for 35 inmates. The women students are accommodated in a hostel run very close to the college by the Carmelite sisters.

The Medical College, Kottayam

The Medical College, Kottayam, formally started functioning at Trivandrum in 1961 as the necessary facilities were not then available at Kottayam. The college moved to its present location at Arpukkara, Kottayam with effect from December 1962. The institution is managed by the Principal who is under the administrative control of the Secretary, Health Department, Government of Kerala. The College offers instruction for the M. B. B. S. Degree course of the University of Kerala. The College also offers instruction for the Health Inspector Training Course. The main Departments of the College are

(1) Anatomy, (2) Bio-chemistry (3) Physiology (4) Pharmacology, (5) Pathology (6) Bacteriology (7) Social and Preventive Medicine (8) Medicine (9) Paediatrics and (10) Ophthalmology. To meet the requirements of the various Departments a Central Animal House has also been opened in the College in August, 1963. In 1967-68, there were 362 students and 98 teachers in the College. There is a Health Unit of the College at Ettumanoor which was started in August 1, 1965 with the Professor of Social and Preventive Medicine as Administrative Medicine as Administrative Medical Officer. An In-service Training Programme for Technicians was also started in April 1964 to meet the shortage of trained technicians. The College Library had 5,374 books. There are separate Hostels for men and women and they provided accommodation for 191 and 91 inmates respectively. The area surrounding the Medical College to an extent of 2½ sq. miles has been declared as a controlled area and the Medical College Area Development Authority has been constituted.

Athurasramam Homoeopathic Medical College, Kurichi

The Athurasramam Homoeopathic Medical College, Kurichi, was started in July 1958. It is situated in Kurichi village (Changanacherry Taluk) about 8 miles south of Kottayam town. The College owes its origin to the selfless and devoted efforts of Swami Athuradas and its management is vested in the Athura Sevasanghom registered under the Charitable Societies Act. Its administration is controlled by a Committee consisting of 11 members including a representative each of the Central and State Governments. The College provides facilities for the study of Homoeopathy in all its branches. There is provision for the study of all basic Medical Sciences such as Anatomy, Physiology, Pathology, etc. and Clinical subjects such as Surgery, Obstetrics, Gynaecology, Paediatrics Hygiene and Public Health and Medical Jurisprudence. The regular course is for four years but internship for a period of six months in a Government Hospital is essential for each student after the successful completion of the course. Those who complete the course successfully are awarded the Diploma in Homoeopathic Medicine (D. H. M.) by the Government of Kerala. In 1967-68 there were 241 students and 14 teachers in the College. The College library had 941 volumes. There are two separate Hostels for men and women. The former accommodated 92 inmates and the latter 82. The Homoeopathic Medical College has been receiving generous financial assistance from the Central and State Governments. The Government of India granted a sum of Rs. 2,20,000 in 1959-60 and Rs. 2,25,000 in 1961-62. It also sanctioned a grant of Rs. 25,000 for purchasing equipments in 1961-62 and another grant of Rs. 10,000 for opening an X-ray Department in 1962-63. The Government of India also pays a recurring grant of Rs. 20,000 to the College. A Research Homoeopathic Hospital set up with a grant of Rs. 30,000 from the Central Government is also functioning in the

College campus from April 1962. The Government of Kerala runs a Homoeopathic Hospital at Kurichi. It has provision for 50 beds and provides facilities for practical training to the students of the College.

N. S. S. Co-operative College, Kottayam

The N. S. S. Co-operative College, Kottayam, started functioning at Pandalam in July 1961. It was only in 1963-64 that it was shifted to Kottayam. The College is owned by the Nair Service Society. It imparts instruction for two courses, viz., the Higher Diploma in Co-operation (H. D. C.) and the National Diploma in Commerce (N. D. C.). The former is a one year course which is open to those who have taken a University Degree. The latter is a three year course which is to be followed by one year of practical training in commercial concerns arranged by Government. This is declared as equivalent to the B. Com. Degree. In 1967-68 there were 120 students on the rolls and 7 members on the teaching staff. The college library had 341 volumes. There are no hostels attached to the College.

Rubber Research Institute of India, Kottayam

Mention may also be made in this Chapter of the Rubber Research Institute of India, Kottayam which is one of the leading research institutions functioning in Kerala State. It was in 1954 that the Government of India in the Ministry of Commerce & Industry granted administrative sanction for the establishment of a Rubber Research Institute at Kottayam in order to cater to the needs of the Rubber Plantation Industry. A beginning was made during 1955 and an area of 82 acres was acquired at Puthupally for the establishment of the Rubber Research Institute. A Pathologist and an Agronomist were appointed to initiate research work on the control of diseases and laying out trials for determining the manurial requirements. But due to the paucity of laboratory facilities and supporting staff, not much progress could be made in this direction. The activities of the Institute were further enlarged with the completion of the Institute building towards the end of 1962 and with the appointment of the Deputy Directors for Agronomy and Chemistry/Rubber Technology Divisions in June 1963. The Director of Research took charge in May 1964 after which the research activities were properly co-ordinated. The work of the Rubber Research Institute is at present conducted in the following Divisions/Sections:—Agronomy, Botany, Plant Pathology, Chemistry/Rubber Technology, Extension and publicity. The Agronomy Division conducts research on the manurial experiments of rubber, from the seedlings to mature stage. Breeding work is being undertaken in the Botany Division to get high yielding materials, specific to the different agro-climatic zones. Investigations on the various diseases of rubber in South India with regard to the life histories of the causative organisms, factors favouring their incidence, intensity and periodicity in nature and formulation of effective and economic

disease control measures, from the main pre-occupation of the Pathology Division. The Chemistry/Rubber Technology Division undertakes certain laboratory investigations to find out the inorganic constituents of rubber latex, dry rubber content of latices collected from different fields, creaming studies, and determination of phenolic compounds in smoked rubber sheets. The Extension Wing attends to the work of educating the rubber growers in technical matters relating to rubber culture and disseminates the results of research work and improved practices among growers in order to raise rubber production at all levels. Advisory leaflets and notes on various aspects of rubber production are published by the Information and Publicity Section from time to time. The Section also attends to the work of publishing the quarterly *Rubber Board Bulletin*, both in English and Malayalam.

Social Education

As has already been mentioned, Kottayam occupies a very high position with regard to literacy and educational standards. In the matter of social education also, the District does not lag behind. The activities of social education began in the District when in 1951, the erstwhile Travancore-Cochin Government took active steps in the promotion of social education in the State. The programme received further impetus in 1952 when the various N.E.S. Blocks accepted social educational work as an integral part of their activities. Adult literary classes, women's clubs, mahilasamajams, radio rural forums, audio-visual exhibitions are among the main means of social education adopted by the N. E. S. Blocks.

There is a mobile Audio Visual Unit at Kottayam functioning under the Education Department. The area of operation of the Unit spread to the four educational Districts of Kottayam, Kanjirappally, Palai and Muvattupuzha. Educational films are exhibited under its auspices in schools and block areas.

Schools for the Cultivation of Fine Arts

This District has no notable schools for the cultivation of fine arts run either by the Government or by private agencies operating in the field of education. Nevertheless there are a few such institutions of lesser importance which may be referred to here. The Commercial Art Centre, Kottayam, established in 1958 gives training to talented pupils in Commercial Arts such as Designing, Painting, Lettering, Enamelling work, Model-making and such other works of art. The Assa Natana Kalamamithi, Changanacherry, registered in 1954, imparts training in Music and Dance to local children. The Peoples' Arts Club, Teekoy, (Meenachil Taluk) established in 1957 conducts classes in Music. The Backward Classes Arts Club, Mannanam, established in 1955 conducts classes in Music (vocal and instrumental) and Dance. The Aruvithura Club and Recreation Centre set up in 1956 also conducts classes where instruction in Dance

and Music is given. The Kalakshetram, Kottayam, which was established in 1957 is also a notable institution where instruction in Music (vocal and instrumental) is imparted. The Sree Narayana Arts Club, Mundakayam established in 1954 also conducts classes in music and drama. The Janatha Arts Club, Kanjirapally established in 1954 is another organisation which is carrying on cultural activities. An A class Arts Club as per the grading of the Kerala Sangeetha Nataka Akademy, it is perhaps the only institution of its kind in the District with its own building. It runs a private museum.

Oriental Schools and Colleges

The only notable institution in the field is the Nurul Huda Arabic College, Kanjirapally. It was established in 1952 by Hajee Syed Muhammed Rowther, a prominent Muslim planter and philanthropist of Kanjirapally. The college continues to be under the management of the Valikunnath house to which its illustrious founder belonged. In 1958 it was affiliated to the University of Kerala. The college offers instruction for the *Afsal-ul-ulema* courses. About a hundred students are on the rolls of this college. There are four members on its teaching staff. The management is in a position to provide free lodging and boarding facilities to all the students.

Schools for the Handicapped

The only institution in the field is the Government school for the Blind, Kottayam. Established in 1963 it is located at Olassa, four miles north-west to Kottayam town. In 1964-65 there were 5 students and 2 teachers in the school. Free boarding and lodging facilities are provided to the pupils of this school.

THEOLOGICAL EDUCATION

Kottayam is one of the most important centres of Christian theological education in the country. Theological education for aspirants to priest-hood in the Syrian Church was started at the Old Seminary, Kottayam, even as early as March 1815. The foundation of the Seminary building was laid in March 1813 in the time of the Malankara Metran, Mar Thoma VIII and the building was ready for use in 1815. With the exception of the Seminary at Cranganore started by the Franciscans in 1545 and the one at Vaipicotta by the Jesuits in 1587, both of which had become defunct long ago, the Syrian Seminary at Kottayam topped the list of educational endeavours in the Christian Church. Syriac education alone was conducted in the Seminary at first. But later English Education was also imparted with the help of Church Missionary Society. Syriac, Malayalam, English, Sanskrit, Latin and Hebrew were taught in the Seminary besides subjects like Theology, Bible etc.

The Kottayam Syrian Seminary had a chequered history since its inception. The conflict of interests between the Syrian priests and the C. M. S. Missionaries and internal dissensions within the Syrian Church itself adversely affected its fortunes. Teaching in the Seminary had to be suspended several times. The Seminary was itself in Government custody for long periods. In 1933 it was shifted from the Old Seminary to the Mar Dionysius (M. D. Seminary), Kottayam, with a view to expanding the scope of studies offered. The course was fixed as for three years and the syllabus was revised on the lines of that of the Serampore University of West Bengal. The teaching in the M.D. Seminary had to be stopped after three years and the Seminary was again shifted to the old Seminary in 1937. It continued to function in the Old Seminary till 1940, when it had to be closed down for two years. It was again revived in August 1942 in the M. D. Seminary. It continued here for another 20 years, but was again shifted in stages to its ancient location in 1959-60. The shifting was completed in June, 1961, when theological education in M.D. Seminary was stopped completely and the Old Seminary alone remained. It may be mentioned that the Seminary is now situated on a plot of 26 acres and 59 cents about half of which is planted with Rubber and the rest with Coconut trees. It is under the direct supervision of the Malankara Metropolitan in the Orthodox Syrian Church and is managed by the Principal assisted by the staff of the Seminary.

The course of teaching in the Seminary which was for three years from 1933 was increased to four years in June 1950 and to 5 years in June 1959. In addition to Syriac Language and Hymns and the Liturgies for the service of the Church, subjects as the Bible, Church History, Theology, Philosophy, Religions, Apologetics, Patoralia, Canons of the Church, Patristics, are also taught. The institution lays more emphasis on the spiritual life of the student than on teaching. A well arranged schedule of prayers, meditation, devotional addresses, devotional reading etc., is also adopted. Retreats and other programmes are also conducted. With effect from 1957 the Seminary has been giving the G. S. T. Diploma (Graduate in Sacred Theology) to successful students in the final years at an annual convocation held on the Seminary Day. There are proposals to raise the Seminary to the standard of a First Grade Theological College.

Literary, Scientific and Cultural Periodicals

Kottayam is one of the most important cultural centres of Kerala. It is therefore only natural that a good number of literary, scientific and cultural periodicals are published from here. The most important of these periodicals may be mentioned in this section. The *Malayala Manorama Weekly* which started publication from Kottayam in 1956 claims the highest circulation among the Malayalam periodicals in the State. According to the *Report of the Registrar of Newspapers of India* (1966) it had a circulation of 2,26,058. The *Cinema Masika*, the most popular of the film journals in Malayalam, is also

published from the District. This Magazine which commenced publication in 1946 had a circulation of 69,832 copies. Another film journal published from Kottayam was *Aruna*. Established in 1950, it had a circulation of 9,328 copies. The *Sarasan*, a literary monthly which commenced publication from Changanacherry in 1945, claimed a circulation of 19,000 copies. The *Family Planning* and *Homoeopathy* were two periodicals devoted to Medicine and Health which were published from Kottayam. The former started publication in 1912 and the latter in 1960. The details of their circulation are not available. The *Rubber Board Bulletin* which is being published by the Rubber Board with effect from 1960 had a circulation of 850 copies. The N. B. S. Bulletin published by the writers co-operative society since 1965 gives information on literary and cultural events. It had a circulation of 8,365 copies. The *Balamitram* is a children's daily published from Kottayam. It was started in 1922 and commanded a circulation of 1864 copies in 1966. A number of magazines devoted to Religion and Philosophy were also being published from this District by various Christian Missions.

The particulars about the more important of these journals are given below:—

Name of Publication	Nature of Publication	Date and place of Publication	Circulation
1 Church Weekly (Malayalam & English)	Weekly	1946 Kottayam	510
2 <i>Apnades</i> (Malayalam, English & Hindi)	Weekly	1950 Kottayam	N.S.
3 Swantantra Janatha (Malayalam)	Weekly	1964 Kottayam-1	1413
4 Janaswaram (Malayalam)	Fortnightly	1971 "	1610
5 Adhiyar Deepam (Malayalam & English)	Fortnightly	1963 "	1500
6 Kannan Devan Seethigal (English)	Monthly	1953 Munnar	1000
7 Aruna (Malayalam)	"	1950 Kottayam	9946
8 Assissi "	"	1953 Bharananganam	8533
9 Balamitram "	"	1922 Vadavathoor	1874
10 Cinema Deepak "	"	1948 Kottayam-1	1922
11 Film India "	"	1965 "	N.S.
12 Homeopathy "	"	1960 "	2000
13 Kala Necthi "	"	1965 Palai	1875
14 Karmala Kusuman "	"	1963 Mannanam	13,111
15 Kerala Digest "	"	1964 Changanacherry	2,795
16 Kuttikalude Deepika "	"	1958 Kottayam	5461
17 Malankara Sabha "	"	1946 "	2271
18 N.B.S. Bulletin "	"	1965 "	8365
19 Oonaruka "	"	1960 "	2758

20	Rubber	(Malayalam)	Monthly	1965	Kottayam-9	7900
21	Sarasan	"	"	1945	Changanacherry	25199
22	Therali	"	"	1972	Kottayam-1	3191
23	Treasury of knowledge	"	"	1933	Kottayam	1350
24	Veekshagopuram (Malayalam)	Monthly	"	1927	Kottayam	4649
25	Viswadeepam	"	"	1958	"	2000
26	Yuvakokam	"	"	1963	"	100
27	A.K.C.C. Bulletin (English & Mal.)	"	"	1953	"	3139
28	Anunodayam (Malayalam)	"	"	1937	Kottayam-1	1699
29	Cinema Masika	"	"	1946	Kottayam	69839
30	Cinema Vedi	"	"	1962	"	N.S.
31	Kerala Education Review	"	"	1963	"	800
32	Kerala Service	"	"	1959	"	1900
33	Sacred Heart	"	"	N.A.	"	N.S.
34	Thuvichadi	"	"	1952	"	1500
35	Vedaprachara Madhyasthan (English, Malayalam & Latin)	"	"	1960	Changanacherry	1000
36	Vidyarthi Mithram (English, Malayalam & Hindi)	"	"	1960	Kottayam	1900
37	Go Teach (English)	Quarterly	"	1963	Kottayam	350
38	Passion Flower (English)	"	"	1956	Bharananganam	500
39	Rubber Board Bulletin (English)	"	"	1961	Kottayam-9	850
40	Kathiroly (Malayalam)	"	"	1961	Changanacherry	1200

Literary, Scientific and Cultural Societies

Literary and cultural societies have flourished in Kottayam since the 19th century. The most notable of the early societies was the famous literary organisation known as the Bhashaposhini Sabha. It grew out of the Kavi Samajam which was founded in 1892 by such stalwarts as Kerala Varma Valia Koil Tampuran and Kandathil Varghese Mappila. The Bhashaposhini Sabha held into annual sessions in different parts of Kerala such as Trivandrum, Trichur, Kozhikode, Tellicherry etc. and it gave positive encouragement to literary activities. A quarterly known as *Bhashaposhini* was published under its auspices. With the death of Varghese Mappila in 1904 the organisation ceased to function effectively. It became defunct after its annual session at Vaikom in 1911. Brief accounts of the leading literary and cultural societies now functioning at Kottayam are given below:—

Sahitya Pravarthaka Co-operative Society

Kottayam is the headquarters of the Sahitya Pravarthaka Co-operative Society Ltd., No. 2458 which is the premier organi-

sation of the writers of Kerala. Popularly known as the S. P. C. S., this organisation was registered in 1945 with an initial capital of Rs. 120 contributed by twelve writers who joined together in Kottayam and decided to start Writer's Co-operative. Though set up as a Co-operative Society the S. P. C. S. is essentially a literary organisation which seeks to eliminate the handicaps that the writers of Kerala had been facing in the field of publication of their books and to guarantee to them a reasonable rate of royalty. The objectives of the society also include the convening of literary, economic and cultural conferences and the award of prizes for works of literary merit. The Society has made great strides since its inception. Details of the organisation, paid-up share capital, membership etc., of the society are given in Chapter VI. It may, however, be mentioned here that in 1966-67 it had 414 members on its rolls, and its total paid-up share capital came to Rs. 5,61,775.

The S. P. C. S. has rendered great service to Malayalam language and literature in recent years. The National Book Stall which is famous all over Kerala in its shorter form 'N.B.S.' is the sales Department of the Society and it is the largest book selling organisation in Malayalam holding more than 7,000 titles. The value of the sales in the N. B. S. came to over Rs. 7 lakhs in 1961-62, 9 lakhs in 1964-65 and 11 lakhs in 1966-67. The *N. B. S. Bulletin* published by the S. P. C. S. every month contains all relevant information about books that have been published or are about to be published in the different parts of the State. The *N. B. S. News* which appears as advertisements in Malayalam newspapers and journals conveys information about publications sponsored by the N.B.S. The N.B.S. itself has brought out reprints of some of the classical works in Malayalam which have been out of print for decades. Mention may be made in this connection of the *Amarakosa* by T. C. Parameswaran Moothatu, the *Malayalam-English Dictionary* by Dr. Gundert, *Sabdatharavali* by Sreekanthaswaram Padmanabha Pillai and *Mahabharatham* by Mahakavi Kunjikuttan Tampurarn. The expenses involved in reprinting the last mentioned book alone were estimated at more than one lakh of Rupees. One of the achievements of the S. P. C. S. is the publication of the *Das Capital* in Malayalam (May 1968). It may be mentioned that Malayalam is the first Indian language in which this book is being published in this country. The Society has also taken up the work of publishing an Encyclopaedia in Malayalam (*Viswavinjanakosam*) in 10 volumes. Moreover every year the society publishes a set of Children's Books. Entries are invited for competitions in children's books and a dozen of them which are adjudged the best are awarded prizes. The prize winning books are published by the N.B.S. and 12 of them, attractively printed and packed in a gift box, are offered for sale at concession rates. The S. P. C. S. also conducts every year handwriting competitions among school children in the State in which thousands participate and prizes are awarded to different class groups. It has

also instituted two prizes to be awarded annually to the best literary works produced in Malayalam. The M. P. Paul's prize carries Rs. 250 and the Kalyani Krishna Menon Prizes Rs. 100. Moreover, a writer's benefit Fund has also been constituted by the society in order to help the aged and sick writers and artists. It has been paying annually about Rupees 2 lakhs to authors by way of royalty during the last several years. It also arranges public meetings and sponsors book exhibitions on the occasion of the publication of important books. This is done with a view to attracting the attention of the public and making them book-minded. Another important innovation introduced by the N. B. S. is the Book Instalment scheme which enables book lovers to start small home libraries by investing Rs. 10 or Rs. 5 per mensem. The Printing Department of the S. P. C. S., viz., the India Press was started in 1953 and it is one of the first rate printing presses in Kerala equipped with modern machinery. The society has put up a press building at Nattakam valued at about Rupees one lakh. The S. P. C. S. has thus played a very useful part in the literary and cultural life of Kerala since its inception and its example is being followed in other parts of the country as well.

All Kerala Balajana Sakhyam, Kottayam

Kottayam is the headquarters of one of the most active children's organisations in the country. The organisation known as the All Kerala Balajana Sakhyam functions under the auspices of the *Malayala Manorama*. In 1967 it had a total membership of about 2,50,000 children enrolled in more than 3,200 branches spread all over Kerala. Perhaps, the biggest children's organisation in Asia today, it was started in May 1929 when no one had any concept of a children's organisation. The Balajana Sakhyam works for the all-round development of the personality of the child. Its aim is to lead children along the right path from childhood itself and to lift them out of the narrow barriers of communalism and parochialism into the wider fields of humanity as a whole. A non-political organisation, it has national integration as one of its main objects.

The Sakhyam has significant achievements to its credit since its inception in 1929. Some of its most important activities may be described here. It conducts an annual Exhibition of children's paintings in which about 3,500 children participate. Prizes are given to about 50 winners in various sections. Another activity of the Sakhyam is the annual Children's Art Festival. Competitions in drama, music, tableau, shadow-play, group song, dances etc., are held in different parts of the state and prizes are given to the winners. An annual Fourday Children's Camp is also held. Competitions in art, essays, speeches, fancy dress, sports and games etc. are held in this connection. Eminent men in different walks of life take study classes for children. There is an art Festival also. Prominent leaders of the country are invited to address the inmates of the camp. Discipline is also taught.

The Defence activities of the Balajana Sakhyam deserve special mention. Defence Seminars were organised in all the Districts under its auspices. The Sakhyam contributed about Rs. 12,500 to the National Defence Fund. All kinds of constructive work for children are also carried on under its auspices eg. kitchen garden, Poultry farming, Bee-keeping, Compost manure making etc. The members also collect funds to help the poor and the down-trodden. The reports of children's activities in different parts of the States as well as their stories, articles, poems etc., are published in the children column of the *Malayala Manorama* every week. Moreover, an inter-School Elocution Competition is held every year, and the winners of the prizes are given facilities for all-India tour. Sports, Games, the prizes are given facilities for all-India tour. Sports, Games, the prizes are given facilities for all-India tour. Sports, Games, the prizes are given facilities for all-India tour. A Leadership and Athletic Coaching Camps are also conducted. Above all, ship Training Camp is also organised every year. Above all, branch of the All Kerala Balajana Sakhyam conducts weekly meetings in which debates songs, speeches, story-telling, poetry-reading, short dramas, dances, etc. are some of the regular features.

It may be mentioned that the Balajana Sakhyam is an association "of the children, by the children, for the children". It is a well-knit, purely independent organisation with a Central Committee, Union Committees and Local Committees (more than 3200) all elected directly by children on a democratic basis.

Children's Theatres, Kottayam

Mention may also be made in this context of the Children's Theatres, Kottayam. The offspring of private initiative, this organisation founded in 1961 imparts instruction to children in dancing, *Kathakali*, *Bharatha Natyam*, *Drama*, *Ottam Thullal* and folk arts like *Sanghom Kali*, *Parichamuttu Kali*, *Kolodi Kali*, *Velakali*, etc. In 1967-68 it had 337 children on its rolls. The Theatres presents monthly cultural programmes for the benefit of children in Kottayam town and organisations and troupes from outside also participate in it.

LIBRARIES

The library movement in this District had its origin in the latter half of the 19th century. The Public Library Kottayam, was established as early as 1882. Among some of the early public libraries set up in this District may be mentioned the Public Library & Reading Room, Kaipuzha (1900), Bharata Vilasom Library & Reading Room, Karapuzha (1904) the Sri Moolam Club & Library, Devikolam (1915) the S. M. S. Club & Library, Peermede (1917) the Sri Moolam Shashtiabdapurthi Memorial Library & Reading Room, Ettumanur (1917), the Sri Vilasam Public Library, Kunnumbhagam (1927), the Public Library, Pampady (1932), the Mundakayam Public Library & Reading Room, Mundakayam (1935) and the Sahridayavayanasala

Kanjirapally (1936)¹. These libraries were established as result of the keen interest taken by the general public in the respective localities. At the same time the Government also took interest in the progress of the library movement. In 1935-36 the Travancore Government opened Rural Libraries attached to Departmental Primary Schools in some select centres and the Headmasters of the Schools concerned were put in charge of these libraries. In the management of the libraries they were assisted by local committees which consisted of three members each. The Headmasters were paid Rs. 3 each for library work. Each Library was provided with a set of 200 books and a daily newspaper and a magazine.

At present all the libraries in the District are affiliated to members of the Kerala Grandhasala sangham which is a non official organisation devoted to the organisation of the library movement in the State on democratic line. In 1963-64 there were 300 libraries in this District which had been affiliated to the Sangham. The relevant details regarding these libraries are given below:—

Number of Libraries	301
Number of Books	672,939
Value of books	Rs. 9,34,797
Members	61,107
Annual Income	Rs. 2,65,350
Government grant	Rs. 62,009
Other grants	Rs. 2,09,211
Value of Buildings and land	Rs. 12,74,250

The most important library in the District is the Kottayam Public Library. A short account of this institution is given below:—

Kottayam Public Library, Kottayam

The Kottayam Public Library established in 1882 is one of the oldest libraries in India. It was started by Rama Rao, the then Collector of Kottayam. Kumara Menon, Chulliyil Mathai Asan, and a few others purchased 7 cents of land in 1882 for the library. A two storeyed structure was put up for the library in 1931 thanks to the interest taken by John Kurian who was its President at that time. The library is at present housed in a modern four-storeyed building in the busiest centre of Kottayam town. This building which was constructed at a cost of Rs. 3 lakhs and christened the A. V. George Memorial Library Building is the tallest building in Kottayam town. Its ground-floor is let out for shops fetching an annual income of Rs. 12,360 to the library.

1. The figures given within brackets indicate the years in which the libraries were established.

The Kottayam Public Library is today one of the foremost institutions of its kind in Kerala State. It has total assets worth over 1 million Rupees. It is the first public library to have set up separate sections for women and children and has its own cinema equipment, a separate reference section an auditorium and a members room. In 1966-67 the individual membership of the library stood at 1,700. Even though membership of the library is restricted to those who pay membership fees, the General Reading Hall, with seating accommodation for 100 persons at a time, the Reference Section with seating accommodation for 30 persons at a time, the Women's section with seating accommodation for 40 women at a time, and the children's Section with seating accommodation for 60 children at a time are kept open from 8 a.m. to 8 p.m. every day and free access is allowed to visitors without any restriction whatsoever. More than 1,500 persons visit the library every day and the daily circulation of books stand at 250. There are different classes of members in the library:—

Patrons	- those who pay Rs. 500 or above,
Life members	- those who pay Rs. 250
A' Class	- Deposit Rs. 15 and monthly fee Rs. 3.
B' Class	- Deposit Rs. 10 and monthly fee Re. 1
Subscribers	- Deposit Rs. 5 and monthly fee 50 ps.
Special 'A'	- Registered institutions, organisations, Companies, etc., who pay Rs. 1,000
Special 'B'	- do- do- who pay Rs. 500

In 1966-67 there were more than 50,000 books in the library, the children's section also having 5000 books. The district distributing wing organised by the State Government is attached to the Kottayam Public Library. A librarian, a driver and a cleaner are serving this section. A mobile van is allotted to circulate books to about 120 member libraries in the District. The expenditure on this wing including pay and allowance of the staff is borne by the State Government.

The Kottayam Public Library subscribes to 28 dailies and 5 magazines in addition to a large number of periodicals received from foreign cultural organisations. It is a feature of this library that the books are arranged in open shelves and about 100 persons can select books at a time. Dewey's Decimal Classification is applied in arranging the books and title card and author card are kept in a card index cabinet.

The Kottayam Public Library has recently taken up a new project to establish a separate Children's library. It has been designed as an after-school institution which would offer the children a wide variety of experience. This institution will provide facilities for games, athletics, swimming, gymnastics and yoga exercises. Creative arts and crafts such as painting and sculpture and performing arts like dance, drama and music

will also find their proper place in the activities of the proposed library. Special programmes and group activities, such as picnics, trips, camps, celebration of national and international events and service activities will also be organised. To raise funds for this project estimated to cost Rs. one million, two lotteries were conducted in 1966-67 which brought about 9 lakhs of Rupees to the library. A plot with an extent of one acre eleven cents not far from the present library has been acquired, at a cost of Rs. 1,50,000, and the foundation stone of the proposed Children's Library Building already been laid. The Government of India has sanctioned a grant of Rs. 33,000 for purchasing books and furniture for the Children's Library.

Apart from the Kottayam Public Library there are 3 libraries in this District which have been recognised as 'A' Class libraries by the Kerala Grandhasala Sangham. They are the Vaikom Municipal Library, Vaikom, the Bharathivilasom Grandhasala, Karapuzha and the Sri Moolam Shashtiabdapurthi Smaraka Grandhasala, Ettumanoor. Such particulars as the date of establishment, the total number of volumes membership etc., in regard to those libraries as given in the *Kerala Grandhasala Directory* (1964) are furnished below:

Name of Library	Date of establishment	Number of volumes	Number of members	Government grant	Other Grants	Value of Buildings and land
				Rs.	Rs.	Rs.
Vaikom Municipal Library, Vaikom	1947	8,500	319	600	..	2,500
Bharathivilasom Grandhasala, Karapuzha	1904	7601	240	580	450	7500
Srimoolam Shashtiabdapurthi Smaraka Grandhasala, Ettumanoor	1917					
	1917	11277	280	1000	75	16000

Museums, Botanical Gardens, etc.

No museum and botanical gardens in this District are run by the Government. However, it is interesting to note that the Janatha Club, Kanjirapally, runs a modest Museum, perhaps the first one of its kind in the private sector in Kerala. This organisation has been collecting exhibitions since its inception in 1954. The Museum which was formally opened in 1965 contains an interesting collection of curios and works of art. Stamps of almost all countries, old and new coins and currency notes of various countries, articles of artistic value as well as of curiosity from various States of India and abroad, objects from the depth of the sea, seapons of warfare and antiques of Kerala etc., are exhibited here.

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

Early History

The Ayurvedic system of medical treatment held sway in this District till the introduction of Allopathy in the 19th century. The Kottayam District has in fact a proud record of achievements spread over centuries in the field of Ayurveda. Two of the eight famous Ayurvedic physicians (*Ashta Vaidyans*) of Kerala, viz., Vayaskara Moose and Olassa Moose belong to this District. They have been practising the Ayurvedic system from very early days. Even today they manufacture Ayurvedic medicines and treat patients.

Though the western system of medical treatment was introduced in Travancore during the reign of Rani Gouri Lakshmi Bai (1810-15), the Hospital of Kottayam was established only in 1042 K. E. (1866-67 A. D.). In the early days only very poor people with incurable diseases came in as in-patients in the hospital. Consequently the death-rate among in-patients was alarmingly high and this created a feeling of distrust among the people for Allopathy. Government took a series of steps to create public confidence in the system. In 1879-80 a Royal Proclamation was issued in Travancore making vaccination compulsory for all Government servants, pupils in schools, lawyers, persons seeking medical help from hospitals etc. A system of grant-in-aid to private allopathic medical practitioners was begun during the reign of Sri Moolam Thirunal (1885-1924). Training classes in Compounding and First Aid were started at Kottayam in 1911-12. Provision was also made for suitable dispensary treatment for tuberculosis in the hospital at Kottayam. On the whole Government followed a liberal policy of making medical aid available to all classes of people.

Vital Statistics

The registration of vital events is compulsory throughout the District. In the rural parts this is ensured under the provisions of the Travancore-Cochin Registration of Births and Deaths Act (1953) and the rules framed thereunder and in the municipal areas under the provisions of the Kerala Municipalities Act (1960). While the Health Assistants of the Department of Health Services attend to the work of registration, the Department of Statistics is the central agency for the compilation of

vital statistics. A statement of births, deaths and infant deaths for each of the years from 1959 to 1967 is given below:

Vital Statistics 1959-67

Year		Births		Deaths		Infant deaths	
		No.	Rate	No.	Rate	No.	Rate
1959	Total	45,918	29.88	10,917	7.10	1,959	42.66
	Rural	40,841	28.97	9,876	7.00	1,840	45.05
	Urban	5,077	39.98	1,041	8.20	119	23.44
1960	Total	43,935	28.07	10,500	6.71	1,311	41.22
	Rural	39,562	27.55	9,556	6.65	1,712	44.03
	Urban	4,373	33.90	944	7.32	69	15.78
1961	Total	46,842	26.83	11,994	6.87	1,937	41.35
	Rural	41,735	25.81	10,799	6.68	1,347	44.26
	Urban	5,107	29.59	1,195	9.26	90	17.62
1962	Total	43,035	24.11	10,341	5.80	1,579	36.69
	Rural	38,522	23.30	1,038	8.24	1,506	39.09
	Urban	4,513	34.19	9,256	5.60	73	16.18
1963	Total	45,870	25.14	10,236	5.61	1,396	30.43
	Rural	40,371	23.90	9,124	5.40	1,326	32.84
	Urban	5,496	40.81	1,112	8.26	70	12.741
1964	Total	47,979	21.73	10,424	5.59	1,457	30.36
	Rural	42,460	24.58	8,862	5.13	1,342	31.61
	Urban	5,519	40.08	1,562	11.34	115	20.83
1965	Total	46,966	24.63	9,778	5.13	1,435	30.55
	Rural	40,609	23.00	8,225	4.66	1,300	32.01
	Urban	6,357	45.16	1,563	11.10	135	21.23
1966	Total	NA	NA	NA	NA	NA	NA
	Rural	NA	NA	NA	NA	NA	NA
	Urban	NA	NA	NA	NA	NA	NA
1967	Total	43,398	21.73	8,661	4.35	1,119	25.79
	Rural	37,262	20.19	7,175	3.89	1,018	27.32
	Urban	6,136	41.71	1,486	10.10	101	15.46

As elsewhere in the State, the registration of vital events in this District is far from satisfactory, the number of births and deaths shown in the registers being much below the actual figures. A significant feature of vital statistics worth mentioning is that the months of May and June are conspicuous for births while those of July and August record the maximum number of deaths. It may also be noted that there has been a gradual decrease in the birth rate in recent years. Perhaps, the reason for this is the impact on the public mind of the family planning programmes pursued under the auspices of Government and voluntary social service organisations. Side by side with decrease in the birth rate we may also note a decrease in death rate. The latter is mainly due to such factors as the National Malaria Eradication Programme, Small-pox Eradication Programme, Improvement in Medical Aid, Maternity and Child Health Activities, environmental sanitation etc.

DISEASES

From the statistical data furnished by the Health Services Department, it is seen that the major diseases of the District are the diseases of respiratory system, Diarrhoea, Typhoid and other fevers, Tuberculosis, Anaemia, Malnutrition etc. The details of the number of attacks and deaths therefrom in respect of the major diseases in the Government medical institutions of the District are furnished in the table at Appendix I. For long, the main cause of mortality was Malaria, especially in High Range areas, but due to the effective steps taken under the Malaria Eradication Programme in this District the death rate due to Malaria is almost nil in recent years.

Small-pox

Although the outbreak of Small-pox was frequent in this District in the past, mortality from it has been almost negligible in recent years as the following figures would show:—

Year	Incidence of Small-pox	
	No. of attacks	No. of deaths
1957-58	34	10
1958-59	140	61
1959-60	142	72
1960-61	..	..
1961-62	7	1
1962-63	18	6
1963-64	52	19
1964-65	2	1
1965-66	1	..
1966-67	1	1

The decrease in the incidence of Small-pox is mainly due to the effectiveness of vaccination measures. The Municipalities have their own special staff of vaccination. The vaccination work in rural areas is attended to by the Health Assistants of the Health Services Department during their domiciliary visits.

Mass vaccination under National Small-pox Eradication Programme was started in the District on July 1st 1973 and was completed on May 31st, 1964. The details of the vaccination work done during the year are given below:—

Achievements	Physical
Primary	205,291
Re.	1,270,332
Total	14,73,673

A coverage of 85.3% was achieved in the area.

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The details of the primary and re-vaccination done at the four municipal towns of the District for 1966-67 and 1967-68 are given below:—

Name of Municipality	No. of primary vaccination		No. of re-vaccination	
	1966-67	1967-68	1966-67	1967-68
Kottayam	369	1,901	7,964	20,533
Palai	303	334	3,243	2,075
Changanacherry	65	95	3,286	2,648
Vaikom	335	521	2,337	4,196

Diseases of the Respiratory System

The death rate due to the diseases of the respiratory system and T. B. is high in this District. This is mainly due to the poor environmental sanitation, especially among the labour classes in Tea Estates. The majority of the population in this District are poor illiterate labourers without knowledge of Health Education.

The T. B. Clinic attached to the Medical College Hospital, Kottayam was having 48 beds in 1967-68. Another Clinic attached to the Government Hospital, Vaikom, provides out-patient facilities to T. B. patients. Besides T. B. Seal Wards of 12 beds each are attached to the Government Hospitals at Vaikom, Changanacherry and Palai.

Typhoid

Incidence of this disease is high in localities where there is scarcity of water and lack of protected water supply. E. S. P. type latrines are being supplied to the people through N. E. S. Blocks and the incidence is being reduced slowly. Whenever Typhoid cases occur the public health staff visit those places and give T. A. B. inoculations to those exposed to the risk of infection, disinfect the drinking water sources and educate the people about the mode of spread and prevention of the disease etc.

Leprosy

Incidence of this disease is very low in this District, though cases are reported from Vaikom Taluk. There are 9 centres for the survey, eradication and treatment of leprosy case in this District. The statistics of their working as on September 30, 1965 are given in Appendix IA.

Cholera

Cholera break out in an epidemic form in the High Ranges and coastal areas of the District occasionally. In 1958-59 there were 63 attacks and 19 deaths in the High Range Taluks. The worst outbreak of the epidemic in recent years took place in 1965. The epidemic entered this District from the neighbouring District of Alleppey and the first occurrence was

recorded on February 19, 1965. The areas worst affected in the Kottayam District were Madapally, Pallom, Vaikom and Kottayam municipal areas also. The total number of cholera attacks and deaths therefrom during that year came to 1770 and 63 respectively in this District. Necessary preventive measures were adopted by the Health Services Department to control the spread of the epidemic. Medical Officers, Nurses, Midwives, etc. were promptly posted to places where there were vacancies and sufficient stock of essential medicines like Glukose-Saline, Sulphanamide, Chlorostrep etc. were supplied. In all hospitals and health centres a ward was specially set apart for admission of suspected cholera cases. The other cases were admitted only on a restricted scale. Mass inoculation was resorted to in the affected areas. Vaccine was purchased from outside agencies since the stock in the Public Health Laboratory, Trivandrum and the daily production could not meet the situation. Chlorination of water sources and sanitation of the localities were attended to. In this District alone 337,123 inoculations were conducted till October 1965. As a result of the measures to prevent the recurrence of the attack, the number of cases of attack came down to 10 in 1967. The cases of death were only 3.

Malaria

Malaria was a serious problem in the eastern hilly parts of the Kottayam District as also in the foot-hill areas up to 1948. The western and Plain areas were practically free from the disease and the intermediary places had only low malarial incidence. Localities like Marayoor, Mannankandoni, Kumily, Udumbanchola, Upputhara etc. were notorious for Malaria. The conditions of transmission were such that a new person going to these areas and staying here for one or two nights could not have escaped contracting the disease from the bite of infected mosquitoes. These fertile places remained unexploited due to the highly malarial conditions in these areas and lack of action to control the disease in former days. Surveys conducted as early as 1934 showed that quartan infection (*Plasmodium malaria*) was the predominant type of infection, *P. Vivax* being fever. In Kumily which was a hyper-endemic area the average malaria rate was 35 percent of all cases attending dispensaries. The Malarial season when fresh cases occur due to active transmission of the disease by mosquitoes covers a period of 5 months from February to June. With the onset of the monsoon and the flushing out of streams the breeding of the particular type of mosquitoes which spread Malaria is much reduced and the Malarial transmission abruptly stops and resumes only when the next dry season commences from February.

Before 1945, distribution of anti-malarial drugs to Malaria patients was only actively carried out by the Public Health Department. A Malaria Observation Station was

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started at Adimali in 1941 to study the facts relating to the spread of the disease. It was shifted subsequently to Peermade in 1948. With the availability of D. D. T. for civilian use, D. D. T. spraying of all dwelling houses in the highly malarious place was started from 1948. Very gratifying results were obtained from the spraying programme as was reflected in the remarkable drop in the attendance of malaria patients in the dispensaries serving those areas, reduction in spleen rates and infection in children and also in the increased colonisation of people for food production. In the areas where tea cultivation was being carried out the estate authorities took anti-malaria measures by providing proper drainage and using chemicals for destroying mosquito breeding in the larval stage. With the availability of D. D. T. they also started spraying all the dwelling structures in the estate to give protection to the workers residing there. This proved to them to be economically profitable by the reduction of "sickness absenteeism" amongst labour.

The National Malaria Control Programme was started during 1953 and all the areas in Peermade and Devicolum Taluks were taken for control under the Endemic Malaria Unit, Trichur. The spraying of all dwelling structures and out-houses with D. D. T. was carried out in two rounds. The first round started on 1st November and ended on 15th January and the second one lasted from 15th February to 30th April. These two rounds of spraying in all houses were expected to cover the entire transmission period and to give protection against contracting malaria. Anti-malarial drugs were also distributed to all Malarial fever cases in order to provide them some relief. A remarkable drop in Malaria incidence was noted after spraying for one or two years. It was clear that eradication of Malaria was feasible.

In 1958 the National Malaria Eradication Programme was launched. As per this Programme thorough spraying for a 2 to 3 years of all areas, whether formerly malarial or not, followed by search of malaria cases in the entire population for a period of 2 to 3 years was carried out. All fever cases were presumed as malaria and blood was taken from all such persons for examination. They were also given anti-malarial drugs as a presumptive treatment. Those persons in whose blood malarial parasites were found during examination were given a 5 days radical treatment to clear them completely of the parasites from their body. The bulk of Kottayam District was covered by the Kottayam Hypo-Endemic Malaria Unit and a portion by the Trichur Endemic Unit. During 3 years of surveillance or search for fever cases from 1961 to 1963 only 4 malaria cases were found out amongst the population. On investigation 2 cases were found to have contracted malaria in areas out-side the State. The other 2 cases were treated radically and it was proved by subsequent search for fever cases that these cases had not caused any spread of the disease and that the disease

had died out. Of the 4 cases 1 was at Udumbanchola, 2 at Kuravilangad and 1 at Kanjirapally. Smears amounting to more than 5% of the population in Kottayam District were examined during 1961, 1962 and 1963. After this three year period of observation and search it was proved that there was no transmission of the disease and the cases were very few. The stage had been reached when malaria had been eradicated in the District. The special malaria staff appointed for the eradication programme was disbanded on March 31, 1954. Even after the eradication there is still the threat of Malaria being imported into the State by people who contract it in places where the disease is still prevalent. Hence vigilance has to be maintained to keep up the malaria free status obtained during the Eradication Programme by promptly detecting suspected cases and new comers. A new scheme in which malaria vigilance, intensification of Family Planning activities and a few other general items of basic health work are included, has been implemented from 1964. One Basic Health Worker has been appointed for every 10,000 of the population and they work on the regular staff of the Health Services Department under the District Health Administration. The scheme is being worked in each N.E.S. Block through the P. H. Centres. There are 13 P. H. Centres in this District and 172 Basic Health Workers as per the new scheme.

Filariasis

Kottayam District is almost free from filariasis but Vaikom town and the western half of Vaikom Taluk are filarial tracts. Filariasis surveys conducted in Vaikom as early as 1933 showed that filarial endemicity rates in the coastal villages varied from 1 to 28 per cent. In villages like Vaikom and Vadakummuri the rates were high, being 21 and 28 respectively. The filarial endemicity was high in the coastal sandy zone and markedly less in the inland flooded zones and intensive hilly areas. A Filaria Survey was done in nine villages of Vaikom Taluk by the Health Services Department in 1957-58. Out of 6,323 persons examined, 187 showed filarial infection. The Vaikom town area was surveyed during 1958-59. In 1962 the Malaria Institute of India conducted a Filaria Survey in Kottayam town area and a low infection (0.84%) was recorded from there also, showing both bancroftian and malayi infections. The survey results are tabulated below:—

Locality Surveyed	No. of persons	Infection rate	Disease rate	Endemicity rate
1 Kottayam	1,766	0.84	0.01	0.9
2 Vaikom taluk	6,323	2.9	1.8	4.7
3 Vaikom town	964	8.6	27.2	..

So far, no anti-filarial activity has been carried out in Kottayam District. But the Municipalities of Kottayam

Changanacherry and Vaikom are carrying out mosquito control by anti-larval measures in their respective areas, for which they are receiving grants from the State Government on recommendation from the Director of Health Services.

Organisational set-up of the Health Services Department

The District Medical Officer of Health, Kottayam is the chief executive of the Health Services Department in the District. He is in charge of the Medical and Public Health Wings, but is assisted by the Assistant District Medical Officer in matters pertaining to public health, and the District Family Planning Medical Officer in matters relating to Family Planning Maternity and Child Health and Malaria. These officers are assisted by a Public Health Supervisor who is a senior Health Inspector, a District Public Health Nurse who is a senior Nurse, a District Extension Educator for Family Planning activities and 2 Health Supervisors for Malaria activities. For registration of vital events, there are 72 Registrars of Births and Deaths in this District. The Health Inspectors attached to the Public Health Centres and Stage I Blocks are Taluk Registrars of Births and Deaths for their areas. They are under the direct control of the Medical Officers in charge of P. H. Centres or Block Development Officers. All categories of Health Inspectors also act as Food Inspectors within their jurisdiction. There are 72 Health Assistants in this District.

The Health Services Department runs 52 Government medical institutions as on 31-3-1967 in the District which include 10 Hospitals, 23 Dispensaries, 17 Health Centres and 2 T. B. Centres.* They have a total bed strength of 1,403. The Government Hospitals are located in the following places:—Vaikom, Palai, Kanjirappally, Changanacherry, Chitrapuram, Ramapuram, Thottakkad, Mundakayam and Kuravilangadu. These institutions are under the control of a Medical Officer each. In addition, there is the Medical College Hospital, Kottayam which has a bed strength of 422. Its administration is vested in the Principal Medical College, Kottayam. There are full-time Government Dispensaries located at the following centres, viz., Devicolam, Marayoor, Pattom Colony, Kallar, Kumily, Vandiperivar, Peermade, Koottikal, Manimala, Parathanam, Pampady, Sachivothamapuram, Parampuzha, Kuruppumthara, Brahmamangalam, Kadaplamattom, Erattupetta, and Poonjar. These institutions are under the control of Medical Officers. Further there are Bi-weekly Dispensaries at five centres, viz., Santhanpara, Vandanmedu, Kallar, Kalaketty and Peruva and Primary Health Centres at twelve centres viz., Edayazham, Arunoottimangalam, Koodallor, Adimali, Upputhura, Erumeli, Ullanadu, Edamaruku, Karukachal, Edayarikapuzha, Kumarakam, Mundakkunnu, Athirampuzha, Thalayolaparambu, Ettumanoor, Uzhavoor and Paika which are not attached to

* The number of institution comes to 53 with bed strength of 1775 in 1969-70.

Blocks. The two T. B. Centres are at Vaikom and Kottayam. A Government dispensary was opened at Kattapana in 1968. The total number of in-patients and out-patients come to 150,603 and 3,015,382 respectively.

Further there are 16 Health Inspectors in this District attached to Primary Health Centres and they are entrusted with Public Health activities. The Health Inspectors are also registrars of Birth and Deaths in their areas. They are under the direct control of the Medical Officers in charge of the P. H. Centres. The Health Inspectors also act as Food Inspectors within their jurisdiction. Below the Health Inspectors there are 72 Health Assistants in the District. The Block-wise distribution of Health Assistants' Office is given below:—

Block	No. of Officers
Ettumanur	5
Lalom	5
Vazhoor	5
Arudai	7
Devicolam	5
Pallom	8
Uzhavoor	5
Erattupetta	5
Kanjirappally	6
Pampady	4
Kaduthuruthy	6
Vaikom	6
Madapally	5

Private Hospitals

There are a number of well equipped private hospitals in this District. Brief accounts of some of the Hospitals which furnish the relevant information for this Chapter are given below:—

C. S. I. Mission Hospital, Kanakkary, Ettumanur

This hospital is located about a mile and a half from Ettumanur. It was started by Dr. Miss. Jesser S. Davis in August 1948 in her room in the Mission premises. As the number of patients increased, a thatched shed was put up on 6th November 1948. The mission house consisting of two rooms was used to accommodate the in-patients. Later the old church building was used as the ward for the in-patients. It was intended to provide 20 beds. In the meantime, the Medical Board, Diocese of Central Travancore, built an out-patient dispensary a tiled building with 4 rooms. In 1953 a labour room was also constructed. In September 1955 a donation of Rs. 10,000 was received from the Government of India. Two new hospital buildings consisting of 4 rooms were constructed with this donation. It was also used for the purchase of equipments and instruments as well as for electrification. The

number of beds increased to 34. On April 1, 1960 a donation of Rs. 2,000 was received from the N. E. S. Block, Uzhavoor. 15 iron beds were bought with this money in addition to some other equipments. On March 5, 1956 Dr. Jesser S. Davis left the hospital to work abroad, leaving the institution in the charge of an Indian Doctor. The staff of the hospital now consists of one Doctor, 4 Nurses, 1 Laboratory Technician and two Female Attenders. The hospital has a bed strength of 49. Mostly maternity cases are attended here. The number of patients treated in 1963-64 came to 16,417 of which 15,683 were out-patients and 734 in-patients.

Immaculate Heart of Mary Hospital, Bharananganam

This hospital was started in 1948 with 12 beds. With the help of the public and the Government it has since developed into a 130 bed hospital with X-ray and Laboratory facilities. In 1960 a Nurses Training School was started here, and it provides training to 40 students. The staff of the hospital consists of 4 Doctors, 1 Graduate Nurse, 3 Sister Tutors, 1 Public Health Nurse, 15 Staff Nurses, 2 Pharmacists, 2 Laboratory Technicians, 2 House keepers, 1 Dietician and 7 Orderlies. There are also Specialists in E. N. T. and Surgery at the hospital. The special facilities include X-ray and Laboratory. The number of in-patients treated in 1963-64 came to 5,135 patients.

Kadamapuzha Hospital Kanjirappally

Started as a dispensary in 1938 by Dr. K. E. Eapen in a hired building, it was shifted to a newly constructed building in 1945. In 1957 it had provision for 12 in-patient beds. The bed strength was increased to 48 in 1958 and again to 66 in 1959 with the construction of separate maternity and surgical blocks. Another surgical block was erected in 1962 and the bed strength rose to 100. The staff of the hospital consists of three doctors, two compounders, two X-ray technicians, fifteen nurses, one bill collector, two laboratory technicians, two watchers and two sweepers. The special facilities here include X-ray, clinical laboratory, operation theatre, labour room, and anaesthesia. The number of patients treated during 1963-64 came to 54,000.

C. S. I. Mission Hospital, Melukavumattom

This hospital started work on October 19, 1964 with a doctor and 5 assistants (Nurses etc.) under the auspices of the C. S. I. Mission. There were no medical facilities for Melukavu at that time. The hospital functioned till November 31, 1961, but was then closed, only to be re-opened on August 7, 1963. The staff consists of 1 Doctor, 1 Nurse and a Sweeper. The bed strength is 17. The number of patients (in-patients and out-patients) treated during the year 1963-64 came to 5,804.

St. Anne's Clinic, Anthinad

This hospital which was started as a consultation room in March 1953, is run as a hospital of 30 beds. It is situated 3 miles north of Palai on the Palai-Thodupuzha road side. The staff consists of one Doctor, four Nurses, one Sweeper and one watcher. The bed strength is thirty. In 1963-64, 24,747 out-patients and 630 in-patients were treated.

Little Lourdes Mission Hospital, Kidangoor

This hospital was started on November 21, 1956 and belongs to the Diocese of Kottayam. It is run by the qualified Nurses among the Religious Sisters of the Visitation Congregation. Situated on a small hillock in between the St. Mary's High School, Kidangoor and the Meenachil river, the hospital is just one furlong from the Kidangoor-Manarkad junction on the main route to Palai. There are two Doctors, male and female, working here to serve both sexes. Nurses and Compounders totalling 14 are all Religious Sisters. The hospital has a bed strength of 30 only. The special facilities include a small laboratory with microscope and equipments and a small operation theatre. There were altogether 17,149 out-patients and 7,218 in-patients in this hospital during 1963-64.

Caritas Hospital, Thellakom

This hospital belongs to the Diocese of Kottayam and Rev. Dr. Thomas Tharayil, the Bishop of Kottayam is the initiator thereof. It is situated in a healthy hillock in Thellakom, between Ettumanoor and Kottayam, at the 160th K. meter in the M. C. Road from Kottayam to Ettumanoor. This is a hundred bed hospital with facilities for more patients to be admitted and it consists of general wards and private rooms. The Chief Medical Officer is a Doctor from W. Germany and there are three Indian Doctors to assist him including a Lady Doctor in charge of the maternity section. The hospital has a well-equipped Laboratory and powerful X-ray plant with qualified technicians to man them. The equipments have all been got down from Germany and they are of the latest model. The number of in-patients treated in 1963-64 was 4,766 and the number of out-patients 19,375.

Mary Queen's Mission Hospital, Kanjirappally

The Mary Queen's Mission Hospital, Kanjirappally, was established on the 22nd of August 1957. It is owned and managed by the Carmelite Fathers of Mary Immaculate. The nursing is done by the Carmelite Sisters. As far as possible free accommodation and treatment is given to the poor and the needy. In 1962 the hospital received a lump sum grant of Rs. 12,500 from the Central Government for purchase of equipments and Rs. 18,950 from the State Government for

the maternity ward and its equipments. It has in its staff 4 doctors (two males and two females), five staff nurses and 16 auxiliary nurses and one compounder. The bed strength is 100. There are specialists in E. N. T. and Gynaecology. The hospital has a fully equipped clinical laboratory, an X-ray plant and a well-equipped operation theatre. In 1964 24,951 out-patients and 2,758 in-patients were treated here.

D. S. Ayurveda Hospital, Velliappally

The D. S. Ayurveda Hospital, Velliappally (Meenachil Taluk) was started as D. S. Ayurveda Dispensary in June 1910 by a private Ayurvedic medical practitioner and it was raised to a Hospital in 1939. It has on its staff 3 doctors, 3 nurses and one compounder. The bed strength is 46. In 1963-64, 742 in-patients and 26,845 out-patients were treated here. It is a special feature of this hospital that mental patients are treated here.

Tiruvalla Medical Mission Hospital, Vazhoor

The Vazhoor Hospital functions as a branch of the Tiruvalla Medical Mission established in 1940 as a Charitable institution under the Dewan Bahadur V. Varghese Hospital Trust. The staff consists of 3 doctors, 13 nurses, 3 compounders, 1 laboratory technician, 1 X-ray technician and 9 others. The bed strength is 100. The hospital provides facilities for treatment in several branches of medicine such as General Surgery, Obstetrics and Gynaecology and X-ray etc. The hospital has also a laboratory which is well-equipped. 1,610 in-patients and 26,742 out-patients were treated here in 1963.

Medical Trust Hospital, Mundakayam

With the growth of Mundakayam as the centre of the rubber producing area of the District, the need was felt for a modern hospital at the place. In this context K. L. Kershaw, Director and General Manager of the Travancore Rubber and Tea Company and Jose A. Kallivayalil, a prominent planter, took the initiative in the formation of the Mundakayam Medical Trust in 1960 as a charitable organisation with the object of building and equipping a modern hospital. Soon after the registration of the Trust efforts for the construction of a hospital also started. The trust received financial support from public spirited men and firms. The Government of Kerala blessed the scheme by granting timber at concessional rates. The plantations in Kanjirappally, Mundakayam, Peermade and Vandiperiyar donated large amounts to the project. Work started at the site on January 4, 1961 by a voluntary Sramadan in which over one thousand people participated. The inpatient departments started functioning on September 30, 1965 when five patients were admitted.

The newly-built hospital which was opened in October 1965 has 175 beds with another 20 for children. It is planned

and built to provide all modern hospital services. It has a team of medical and surgical staff including some foreign experts and adequate number of trained nurses. The area of the hospital building which is designed into the shape of a cross is 67,00 sq. ft. and is divided into four main blocks. One novel feature of the construction is the privacy secured through adopting the interior corridor system for all movements. The landscape is so planned as to provide for gardens in front of all wards. The entire equipment for the hospital came as a gift from the Missereor, Germany, through the Medical Mission Sisters, Kottayam. Till October, 1965 the Trust had collected and spent about Rs. 8.5 lakhs on the project. The total cost is estimated at Rs. 18.5 lakhs. The hospital is run and controlled by the Medical Mission Sisters, a charitable organisation dedicated and trained to run such hospitals. This is the fourth hospital run by the Mission Sisters in Kerala.

Tuberculosis Sanatorium, Koovapally

The idea of a T. B. Sanatorium at Koovapally, near Kanjirappally, was first conceived by Dr. K. E. Eapen, a successful private Medical Practitioner and a leading planter of the locality. He was moved by the plight of the numerous poor T. B. Patients and the absolutely inadequate arrangements made for their treatment. His feelings were shared by his brother K. E. Mathew, another leading planter and a few other leading men of the locality. Dr. K. E. Eapen approached the Holy Cross Sisters at Kottiyam and they generously responded to his call for help. The scheme also received the blessings of the Archbishop of Changanacherry. The trustees of the local Forane Church at Kanjirappally gifted 15 acres of land at Koovapally-Erumely road side in February, 1954. This was followed by very generous financial and other forms of help by the people of the locality.

The Sanatorium stands on the slope of a fairly high hill, commanding a panoramic view of the ever verdent hills around. The foundation stone for the first building, a male-ward, was laid on the 21st of November 1954. On 12th February 1956 a ward with 8 beds, and a Sisters' Quarters with Chapel were formally opened. In October 1957 a small out-patient block was built by donations from the Rubber Estates around. Further progress was made, when the Rubber Board, Kottayam, donated the money for a Female-ward with 14 beds. A ward with 8 beds for ecclesiastics was built at the same time. With donations from the religious institutions of the Diocese of Changanacherry and Palai. In September 1958 an X-ray Unit was installed with a grant of Rs. 30,000 given by Government of India. A small building "Hermitage" was constructed for the Residential Chaplain, appointed in February 1958. With the donation made by the "Evangelischen Kirchenbund" of Germany a central water supply scheme, with well and overhead tank, was taken up in the year 1962. The staff of the

Sanatorium consists of 1 Medical Superintendent, 3 Nurses, 1 Compounder and 12 others. The bed strength is 20 for males and 24 for females. One Siemens 100 MA X-ray Unit capable of all types of X-ray work, including screening is provided here. A laboratory is also attached to the institution. 126 in-patients and 10,227 out-patients were treated here in 1964.

The number of medical institutions and beds for 1968-69 and 1969-70 in the District is given below:—

Years	No. of Institutions	No. of beds
1968-69	53	1407
1969-70	53	1775

It may be noted that the bed population ratio in the District in 1969-70 comes to 79 per lakh of population.

Indigenous Medical Hospitals and Dispensaries

The Department of Indigenous Medicine maintains 4 Government Ayurvedic Hospitals and 16 Government Ayurvedic Dispensaries in this District in 1967-68.¹ The hospitals are located at Kottayam, Changanacherry, Meenachil and Vaikom. The hospitals at Kottayam, Changanacherry and Meenachil have three physicians each on their staff and that at Vaikom two. The Hospitals have a total bed strength of 50 for treatment of in-patients. In 1967-68 a total number of 87,088 patients were treated in these hospitals. The hospitals at Changanacherry and Palai have Visha Vaidya sections attached to them. In 1967-68 these sections treated 145 cases of snake bite and 3481 cases of other bites. The total number of patients treated in the grant-in-aid Visha Vaidyasalas in 1967-68 was 10,859.

The Government Ayurvedic Dispensaries are located at Kuravilangad, Nattakam, Munnar, Vazhoor, Kallar, Neendoor, Manjoor, Kattappana, Kidangoor, Erumeli, Meenadam, Kaduthuruthy, Nedumkunnam, Marangattupally and Moozhoor and Rajakkad. Each of the Dispensaries is in the charge of a Physician. The total number of patients treated in the Dispensaries in 1967-68 came to 656856.

In addition to the Ayurvedic Hospitals and Dispensaries there are also 39 Grant-in-aid Ayurvedic Institutions in this District. Of these 6 belong to Grade I and 33 to Grade II. The former get a monthly grant of Rs. 75 and the latter Rs. 65. The total number of in-patients and out-patients treated by the grant-in-aid Ayurvedic Dispensaries and subsidised dispensaries in the District in 1967-68 came to 154,714.

This District has a full-fledged Government Homoeopathic Hospital at Kurichi and a Government Homoeo Dispensary at

1. The number of hospitals rose to 5 and dispensaries 21 in 1969-70.

Kottayam. Both the institutions are under the Director of Indigenous Medicine and a Medical Officer is in immediate charge of each. The Kurichi Hospital is attached to the Homoeo Medical College, Kurichi. It has a bed strength of 100 and is the only Government institution of its kind in the State offering facilities for in-patient treatment. In 1967-68 a total of 1467 persons were treated here as in-patients. During the same year a total of 145,205 persons were treated as out-patients in both the institution.

Maternity and Child Health and Family Planning

The activities connected with maternity and child welfare and family planning were attended to by two separate wings of the Health Services Department till April 1, 1964. On this date the family planning programme was integrated with the maternity and child health centres. A Taluk-wise list of Primary Health Centres, in this District is given at Appendix III to this Chapter.

According to the re-organised set-up, the District Medical Officer of Health is in over-all charge of the entire family planning activities in the District. The Family Welfare Sub-centres function under the Primary Health Centres. The staff attached to the Sub-centres attend to maternity and child health activities and give advice on family planning. There are 13 rural Family Planning Units with headquarters at the Primary Health Centres of each N. E. S. Block. Also there are two urban Family Planning Units with Headquarters at Medical College Hospital, Kottayam and Government Hospital, Changanacherry. There is a District Family Planning Medical Officer in the District Headquarters. In addition, there are two District Extension Educators, one male and one female for Family Planning education in the District. There is also a mobile surgical unit functioning at District Headquarters with an Assistant Surgeon and one male Nurse to aid theatre etc. They are provided with a mobile surgical van. Their duty is to perform vasectomy operations in various Hospitals in the District. This unit is under the administrative control of the District Medical Officer of Health.

Health Education

A regional Health Education Unit is functioning with headquarters at Ernakulam. The Kottayam District is also under the jurisdiction of this unit which is doing all the Health Education work in the District. Materials such as wall posters, pamphlets, leaflets, cinema slides, films etc. are used for health education work. The health education wing of the Health Services Department takes part in the exhibitions organised by the Municipalities and N. E. S. Blocks. The programmes connected with the celebration of national functions such as National Cleanliness day, Children's

Day, Family Planning Day, Anti-Leprosy Day, World Health Day, etc. are directed and co-ordinated by the Department.

Drugs Control Administration

In Kerala State Drugs Inspectors appointed under Chapter IV of the Drugs and Cosmetic Act 1940 are functioning as District Officers under the control of the Drugs Controller who is the Head of the Department at the State Level. There is a Drugs Inspector for Kottayam. The Drugs Inspector has to enforce the following laws and rules framed thereunder.

Drugs and Cosmetic Act and Rules 1940.

Poisons Act 1919 and the Kerala Poisons Rules 1960.

Drugs and Magic Remedies (objectionable Advertisement) Act 1954.

Dangerous Drugs Act 1930 limited to the Narcotic Policy of Government of India.

The Drugs Inspector collects applications for grant of renewal of licenses and forwards them to the Licensing Authority (Drugs Controller) along with his remarks and recommendations. His main duty is, however, to conduct inspections of premises wherever Drugs or Poisons are manufactured, stocked, sold or distributed in the District. All licensed premises have to be inspected twice a year by the Drugs Inspector. He draws samples of Drugs at regular intervals and sends them for analysis to the Government Analyst. On receipt of orders from the Drugs Controller, he freezes Drugs which are declared as misbranded or not of standard quantity.

URBAN WATER SUPPLY SCHEME

There are two urban water supply schemes in this District viz., Kottayam Water Supply Scheme and Vaikom Water Supply Scheme.

Kottayam Water Supply Scheme

The scheme was taken up for execution during the Second Five Year Plan under the National Water Supply and Sanitation Programme, and the foundation stone was laid by Dr. Rajendra Prasad, the President of India, on 4th February 1956. It is designed for an ultimate population of 136,000 obtaining in 1991. The rate of supply is at 20 gallons per head per day with a summer allowance of 27 gallons per head per day. The scheme was commissioned on March 1, 1965. The distribution system was handed over to the Kottayam Municipality on that date. The Municipality maintains the distribution system and collects revenue at of the supply of water. The expenditure for the scheme up to the end of March 1968 was Rs 81.94 lakhs.

Under this scheme water is tapped from an infiltration gallery 100 ft. long laid about 20 ft. below the bed of the Meenachil river at Peroor, 4 miles upstream of Kottayam town. The site has been so selected that it is beyond the ingress of saline water in the river. The water from the gallery is collected in a well situated on the southern side of the river.

Water from the infiltration gallery is found to contain an excess of iron. This requires removal. Further the yield from the infiltration gallery may not be sufficient to meet the demands of the town, in which case surface water has to be tapped. Provision has been made in anticipation of such a contingency. The water from the infiltration gallery and surface water requires purification. Therefore, a purification plant incorporating aeration, lime, and alum dosing sedimentation, filtration and chlorination has been constructed at Peroor. This plant is located on the Peroor Hills to which water is pumped by means of 61 cm. C. I. pipe, 30,000 cms. long from the collecting well. Owing to the acute scarcity of water in the town, the infiltration water is pumped into the town after sterilising the water with chlorine. After purification, water is taken to Kottayam by means of 61 cms. C. I. gravity Main about 6.44 Kms. long. This discharges into the low level reservoir at Kottayam.

In view of the variations in levels within the Kottayam town, the area is divided into two zones for the purposes of effective distribution of water i. e. upto + 90 catered to by the low level reservoir and above + 90 by the high level reservoir. The low level reservoir has a capacity of 4,248 cubic metres and high level reservoir 1,848 cubic metres providing 6 hours capacity. Water from the reservoir is supplied through a network of distribution mains varying from 24" to 2" in size. The total length of distribution pipes is about 64.4 Kms.

Vaikom Water Supply Scheme

The main source of water supply in Vaikom has been the eight Municipal wells provided at different centres in the town in addition to private wells. A protected water supply scheme for Vaikom town was taken up in 1963. It is intended to supply water to Vaikom Municipal town. This town has been divided into two Zones. The total cost of the scheme is estimated to be Rs 10.12 lakhs. The works in Zone I has been completed in 1967. Since the source is found inadequate the work of Zone II has not been taken up. The total expenditure for the scheme upto March 1968 came to Rs 8.69 lakhs.

In Palai town there is no protected water supply scheme. The Council has requested the Government to take early steps for the introduction of such a scheme and the matter is under the consideration of Government. The supply of water during the summer months is now done by storing it in water tanks constructed in ten different parts of the town with the help of the Municipal lorry maintained for the purpose.

In Changanacherry town the Municipal Council maintains 15 Public wells at different places of which 11 are used solely for drinking purposes by the public. Drinking water is supplied by means of covered tanks and also by a municipal lorry during hot months. The Council also maintains five public tanks in the town of which one is reserved for the use of washermen.

Rural Water Supply Schemes

The Rural Water Supply schemes to Marayoor, Ayarkunnam, Panachikal, Njalikuzhy, Neelamperur, Kurichi, Kanjirappally, Peruvanthanam, Parampuzha, Kumaranalloor, Kumarakom, Thekkumbhagom, Kattachira etc. have been completed. A separate scheme for providing water supply to the tribal colony, Kumily has also been taken up and completed out of the funds from Harijan Welfare Department.

Village Water Supply Scheme

Village Water Supply Schemes are taken up for execution year after year. In 1967-68 about 29 village Water Supply schemes were undertaken by the Public Health Engineering Department in the District.

Slum Clearance

No scheme for slum clearance has been taken up so far by any of the Municipalities. There is scope for taking up such schemes particularly in Kottayam town.

Drainage & Urban Sanitation

There is no comprehensive underground drainage system anywhere in the District. In Kottayam town the Municipal Council has constructed open type masonry drains, emptying themselves in the nearby paddy fields and canals. The drains in all the Municipal towns are cleaned everyday.

The Sanitation of the Municipal towns is attended to by the Public Health staff. The Kottayam town is kept in a fairly good sanitary condition. The town refuse and nightsoil are used for the manufacture of compost. The council has a trenching ground situated just outside the town limits. The refuse and nightsoil collected are being transported to the trenching ground by means of 2 lorries and one tractor. There is demand for good compost. The council maintains 15 public urinals and 9 latrines, besides conserving 990 houses. 568 E. S. P. type latrines have been constructed in the various parts of the town by house owners.

The Palai Municipal Council employs 1 Health Inspector, 1 Sanitary Overseer, 7 Scavengers and 11 Sweepers for sanitation work. The town is being swept daily and the scavengers are in charge of the cleaning of the public septic

tank latrines, slaughter house, market, bus stand etc. There is no private scavenging service in the Municipal area. This is a very great handicap in the proper sanitation of the town. With the very limited staff, the sanitation work is done almost satisfactorily.

The Changanacherry Municipality maintains 7 public latrines and 6 urinals in the towns. Rubbish filth and nightsoil are collected and removed to the trenching ground and manufactured into compost manure.

In Vaikom town almost all houses are provided with pit latrines. The Municipal Council maintain one public latrine and has also taken steps to introduce E. S. P. type latrines. The street sweepings and rubbish are daily collected and used to fill low-lying areas.

APPENDIX I

Statement of Diseases and Deaths in Hospitals, 1953

Sl. No.	Causes	I.P.	O.P.	Death (I.P.)
1.	Tuberculosis of the Respiratory system inclusive of all other forms	262	12,166	14
2.	Syphilis of all causes	17	192	12
3.	Typhoid including para-typhoid	763	887	8
4.	Scarlet fever	55	3,645	..
5.	Dysentery of all forms	1,693	48,696	15
6.	Sore-throat	36	5,059	..
7.	Diphtheria	11	12	1
8.	Whooping cough	147	7,343	..
9.	Meninococcal infections	21	28	4
10.	Tetanus	12	18	..
11.	Rabies	24	2,146	..
12.	Infective Hepatitis	637	18,223	3
13.	Typhus and its Allied forms	4	33	..
14.	Malaria	5	54	..
15.	Filariasis	44	4305	..
16.	Ankylostomiasis	223	10,093	18
17.	Other diseases due to helminthus	514	27,200	13
18.	All other diseases classified as infective and parasitic	461	20,226	1
19.	Malignant Neoplasm all forms	2	7	..
20.	Diabetics Mellitis	174	3,159	2
21.	Antiamionosis, and other deficiency diseases	554	39,764	10
22.	Anaemia	1,862	1,29,427	13
23.	Allergic disorders	165	12,994	2
24.	Inflammatory diseases of eye	31	11,486	..
25.	Rhumatic fever	527	14,466	16
26.	Chronic Rhumatic-heart disease	78	711	2
27.	Other diseases of heart	70	845	8
28.	Diseases of the circulatory system	298	3,587	7
29.	Influenza	621	82,203	..
30.	Pneumonia	144	509	..
31.	Bronchitis	1,290	70,653	1
32.	Abces of lung and plensity	51	1,489	..
33.	All other respiratory diseases	622	1,17,040	..
34.	Other Diseases of dygestive system	3,430	87,338	2
35.	Diseases of the urinary system	1,128	19,197	8
36.	Complication in pregnancy and child birth including abortions	2,862	14,174	29
37.	Diseases of the skin and muscles skeletal system	1,550	60,778	..
38.	Injuries, accidents etc.	373	8,756	2

APPENDIX I-A
S. E. T. Centres in Kottayam District

Name of Centre	Existing population	No. Examined	Cases detected		Prevalence rate	Contracts under observation	No. of cases attending the clinic from outside the project area		Total
			Lepro-matous	Non-lepro-matous			Lepro-matous	Non-lepro-matous	
1. Vaikom	17,510	12,227	2	25	27	0.2%	131	40	57
2. Thalayolaparambu	18,622	15,075	5	20	25	0.1 %	53	32	37
3. Sachivothamapuram	23,628	16,410	12	24	36	0.2 %	210	15	31
4. Changanacherry	17,239	12,933	1	8	9	0.07%	40	17	19
5. Ettumanoor	18,147	13,691	3	10	13	0.09%	48	6	8
6. Kuravilangad	12,051	7,637	3	14	17	0.2 %	31	8	8
7. Athirumpuzha	20,380	15,289	4	9	13	0.08%	32	5	9
8. Pampady	17,927	11,620	1	5	6	0.05%	106	7	23
9. Vakathanam	17,078	11,717	3	19	22	0.19%	104	12	13
Total:	161,582	116,599	34	134	168	0.13%	755	151	205

3/3718/MC.

APPENDIX II

Statement of Hospitals, Dispensaries etc., in Kottayam District
with details of Staff-bed-strength etc., as on 31-12-1967

Sl. No.	Name of Institutions	Sanctioned Bed strength
1.	Medical College Hospital, Kottayam	559
2.	Government Hospital, Vaikom	88
3.	do. Palai	120
4.	do. Kanjirappalli	92
5.	do. Changanacherry	58
6.	do. Mundakayam	40
7.	do. Kuravilangad	24
8.	do. Chithirapuram	8
9.	do. Ramapuram	36
10.	do. Thottakkad	28
11.	Government Dispensary, Sachivothanapuram	50
12.	do. Devicolam	9
13.	do. Marayoor	..
14.	do. Kallar Colony	66
15.	do. Kumily	4
16.	do. Vandiperiyar	..
17.	do. Peermade	4
18.	do. Kootikkal	..
19.	do. Manimala	8
20.	do. Pampady	16
21.	do. Parathanam	4
22.	do. Parampuzha	6
23.	do. Kuruppumthara	..
24.	do. Brahmamangalam	6
25.	do. Kadaplamattom	24
26.	do. Erattupetta	12
27.	do. Poonjar	22
28.	do. Vakathanam	8
29.	Bi-weekly Dispensary, Santhampara	..
30.	do. Vandanmedu	..
31.	do. Kallar	..
32.	do. Kalaketty	..
33.	do. Peruva	..
34.	Primary Health Centre, Thalayolaparamba	22
35.	do. Uzhavoor	16
36.	do. Paika	..
37.	do. Edayazham	6
38.	do. Arunoottimangalam	6
39.	do. Koodalloor	12
40.	do. Ullanadu	6
41.	do. Ettumanoor	16
42.	do. Adimali	6
43.	do. Upputhara	18
44.	do. Erumeli	12
45.	do. Kumarakom	14
46.	do. Mundanakunnu	..
47.	do. Karukachal	8
48.	do. Edayirikapuzha	..
49.	do. Athirampuzha	17
50.	do. Edamaruku	6

APPENDIX III

Taluk-wise list of Primary Health Centres--Kottayam as on
March 31, 1967

Sl. No.	Taluk	Primary Health Centre
1.	Changanacherry	1. Edayarikkappuzha 2. Karukachal
2.	Devicolam	1. Adimali
3.	Kanjirappally	1. Erumeli
4.	Kottayam	1. Mundanakunnu 2. Ettumanoor 3. Kumarakom 4. Athirampuzha 5. Paika
5.	Meenachil	1. Uzhavoor 2. Koodalloor 3. Edamaruku 4. Ullanada
6.	Peermade	1. Upputhara
7.	Vaikom	1. Edayazham 2. Arunoottimangalam 3. Thalayolaparamba

CHAPTER XVII

OTHER SOCIAL SERVICES

The labour welfare measures are implemented in Kerala by the Department of Labour and the Chief Inspectorate of Factories and Boilers. The former is responsible for the administration of most of the labour laws while the latter administers the Factories Act 1949, the payment of Wages Act 1936 in respect of Factories, the Kerala Maternity Benefit Act (1957) and the Indian Boilers Act 1923. In addition, the Chief Inspectorate of Plantations which has its headquarters at Kottayam attends particularly to the enforcement of the Kerala Plantations Labour Act (1951) in this District.

The District Labour Officer, Kottayam is the head of the Labour Department in the District. He is assisted in his work by two Deputy Labour Officers who have their headquarters at Peermede and Munnar respectively and 6 Assistant Labour Officers who have their headquarters at Palai, Kottayam, Changanacherry, Mundakayam, Vandiperiyar, and Munnar. The activities of the Labour Department are directed mainly towards maintenance of healthy and cordial employer-employee relations, contributing thereby to the internal peace of the District. The officers of the Department function as Liaison Officers between labour and management and succeed in a large measure in preserving industrial peace. The District Labour Officer and the Deputy Labour Officers are Conciliation Officers under the Industrial Disputes Act, 1947. They start conciliations, contributing thereby to the internal peace of the District bringing about settlement of disputes. The Assistant Labour Officers are not vested with conciliation powers. They try to settle disputes by mediation and by joint discussions and on their failure to achieve a settlement the matter is referred to the concerned Deputy Labour Officer or the District Labour Officer. The District Labour Officer, the Deputy Labour Officers and the Assistant Labour Officers also function as Inspectors under the Payment of Wages Act 1936, the Minimum Wages Act 1948, the Employment of Children's Act 1938 and the Industrial Establishment (National and Festival Holidays) Act 1958. The statement of work done by the Labour Department in the District with details of the number of disputes that arose and were settled, the number of strikes and lock-outs, the number of mandays lost, and the number of cases of

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adjudication during each of the years from 1958 to 1968 is given below:—

Particulars of work done by Labour Department from 1958-59 to 1967-68

Year	No. of disputes that arose in the District	No. of disputes settled	No. of strikes	No. of lockouts	No. of Mandays lost	No. of cases referred for adjudication
1958-59	1,291	1,169	36	Nil.	649,907	42
1959-60	743	698	26	Nil.	16,556	20
1960-61	1,021	977	17	Nil.	13,429	15
1961-62	1,015	944	18	Nil.	21,804	12
1962-63	958	912	15	Nil.	8,429	22
1963-64	825	654	24	Nil.	67,681	35
1964-65	557	515	61	Nil.	120,272	41
1965-66	518	459	80	4	262,963	25
1966-67	665	580	143	3	182,594	23
1967-68	623	534	17	Nil.	76,217	18

Functions of the Inspectorate of Factories & Boilers

The Chief Inspector of Factories & Boilers conducts inspections of factories within the State. The Deputy Chief Inspector of Factories & Boilers assists the Chief Inspector of Factories & Boilers in the inspection work and administration of Factories Act and the Payment of Wages Act (1936) in respect of factories, the Maternity Benefit Act (1957) in respect of factories and the Indian Boilers Act. The Medical Inspector of Factories visits factories within the State and gives instructions and advise to the occupiers of factories on matters relating to the safety and health of workers and suggests measures for protection against industrial hazards. The Regional Inspectors of Factories and the Inspectors of Factories conduct inspections of factories, within their respective jurisdictions which come under Sec. 2 (m) of the Factories Act (major factories) and enforce the provisions of the Factories Act and Payment of Wages Act and the rules framed thereunder. The Additional Inspectors of Factories inspect factories within their respective jurisdictions, which come under Sec. 85 of the Factories Act (minor factories) and enforce the provisions of the the Factories Act and Payment of Wages Act and the rules framed thereunder. The Inspectresses of Factories for Women Welfare attend to the enforcement of the provisions of the Maternity Benefit Act 1957 and also certain provisions of the Factories Act & Rules relating to employment and welfare of women and children. The regional Inspectors of Factories and Additional Inspectors of Factories within the region.

The Chief Inspector of Factories & Boilers also conducts casual or check inspections of boilers, economisers, and steam pipes installed in the State. The Deputy Chief Inspector of Factories & Boilers assists the Chief Inspector of Factories & Boilers in the inspection work and administration of the Boilers Act 1923. The Inspectors of Boilers inspect boilers economisers and steam pipe installed in various factories and other installations within their jurisdiction and enforce the provisions of the Boilers Act and the Rules and Regulations framed thereunder.

THE CHIEF INSPECTOR OF FACTORIES AND BOILERS

The details of officers having jurisdiction in the Kottayam District are given below:—

1. Factory Inspectorate:

Regional Inspector of Factories, Kottayam	Taluks of Kottayam, Changanacherry, Vaikom, Meenachil, Peermede, Kanjirapally and Udumbanchola.
Additional Inspector of Factories, Kottayam (Factories notified under Section 85 of the Factories Act.)	do.
Inspector of Factories, Alwaye, (Factories coming under Section 2 (m) of the Factories Act).	Devicolam Taluk
Additional Inspector of Factories, Alwaye. (Factories notified under Section 85 of the Factories Act).	do.
Inspectress of Factories for Women Welfare, Alwaye	The whole of Kottayam District excluding Devicolam Taluk.
2. Boiler Inspectorate:	
Inspector of Boilers, Alwaye	Taluks of Vaikom, Devicolam and Udumbanchola.
Inspector of Boilers, Quilon	The whole of Kottayam District excluding Taluks of Vaikom, Devicolam and Udumbanchola.

Inspectorate of Plantations

In view of the existence of a large number of plantations in this District the Office of the Chief Inspector of Plantations, Kerala State functions with its headquarters at Kottayam. It is composed of the Chief Inspector of Plantations and 13 Inspectors of Plantations with officers in various places throughout the State. Out of the 13 Inspectors only six are full-time Inspectors of Plantations. They have their offices at Vandiperiyar and Munnar in this District, Pathanamthitta in Quilon, Palghat in Palghat District, Kalpetta in Kozhikode and Manantoddy in Cannanore. In other places the Assistant Labour Officers are notified as Inspectors of Plantations. The primary function of the Inspector is the enforcement of the

Plantations Labour Act and the rules made thereunder. The Inspectors of Plantations are also vested with powers to administer the Payment of Wages Act and Kerala Maternity Benefit Act in plantations. The Inspectors of Plantations are also provided with two Welfare Assistants to assist them in their work. The Inspectors of Plantations inspect the plantations in the respective jurisdiction and see that every planter provides to his workers free housing and medical facilities, facilities for free primary education to the workers' children and other welfare measures mentioned in Kerala Plantation Labour Rules 1959. The facilities provided to plantation workers under these rules include canteens, creches, recreational facilities such as provision for in-door and out-door games, reading rooms and libraries, rest and tiffin rooms and weather protective. The Inspectors of Plantations have also a duty to ensure that every deserving worker gets sickness and maternity benefits and is also provided with adequate quantity of pure drinking water. The workers are also entitled to harvest their crops in kitchen gardens on termination of employment. An appeal against the orders of the Inspector of Plantations lies with the Chief Inspector of Plantations and that against the order of the Chief Inspector with the State Government. There are also 2 Advisory Boards viz., Plantation Labour Housing Advisory Board and Medical Advisory Board constituted for the purpose of discussing various problems relating to housing and medical facilities. The decisions of the Board are enforced by the Inspectorate of Plantations after getting the due approval of the Government.

The following statistics will give a clear idea about the welfare measure in force in the plantations of Kottayam District as a whole in 1965-69.

Number of plantations	182
„ Canteens	145
„ Schools	145
„ Creches	201
„ Reading rooms and libraries	47
„ houses of approved standard	12,607
„ Garden hospitals	40
„ Group hospitals	8
„ Dispensaries	67

The industrial labourers in this District enjoy several social security benefits and other amenities. The Kerala Maternity Benefit Act, 1957, the Workmen's Compensation Act 1923, the Employees Provident Fund Act 1952, and the Employees State Insurance Act 1948, ensure some measure of social security to the working class besides certain provisions in the Factories Act 1948, Shops and Establishments Act, 1960, Minimum Wages Act, 1948, Plantation Labour Act 1951, and

Industrial Disputes (Kerala Amendment) Act 1961. The details of the benefits that are enjoyed by the labourers of this District under some of these enactments are dealt with separately in this section. The Department of Labour is directly concerned with the organisation of the labour welfare activities of a general nature. Most of the major industrial concerns including plantations have their own canteens, rest and tiffin rooms, creches, reading rooms and libraries. The principle of giving free medical aid to the employees and their dependents has been expected by the employees. In all the factories first aid boxes are provided. In many of the major industrial concerns including plantations there are dispensaries or group hospitals. Educational facilities are provided to workers' children in areas where there are no Government or Government recognised schools. Primary Schools exist in a number of estates throughout the District. There are well-run High Schools in Munnar, Peermede and Makkady. All residential labourers are provided with housing facilities on the estates. There are Welfare Officers in certain plantations and factories of this area, Eg:—K. D. H. P's Company Ltd., Munnar and Travancore Cements Ltd., Kottayam. Minimum wages have also been fixed in a large number of scheduled establishments.

Welfare Measures in Tea Plantations

The tea plantation industry under K. D. H. P. C. in the High Range is the most important industry in this District which employs the largest number of workers. In addition to a minimum wage determined by Government on the basis of the workers' needs many amenities are enjoyed by the estate workers in High Range consequent on the enforcement of the Plantation Labour Act 1951 and the rules made thereunder. Of these the most important is free housing. There are nearly 10,000 workers quarters in the Finlay Estates in the High Range. These consist of an enclosed verandah, a living room, a kitchen, and a bathroom, having a total floor area of 272½ sq. ft. There is a very large building programme in progress at present, and by 1968 every family will have an entire set of rooms to itself. Piped water is supplied free to all quarters, and each set of quarters is being provided with a set of aqua seal type latrines. A Rs. 3 lakh programme is in progress for supplying filtered water to all workers' houses.

All workers receive free medical care, sickness benefit and maternity benefit. Their families are also given free medical care. There is one doctor for every 1,490 workers, one nurse for every 687 workers, and 19 hospital beds for every 1,000 workers. In addition to many estate Hospitals group Hospitals and dispensaries there is one General Hospital for the Finlay Estate. The General Hospital has a good clinical laboratory, facilities for all types of radiological investigations, and a very well-equipped operation theatre. Over 1,000 major and minor operations of all types are performed annually at the General Hospital.

Many other amenities are given to estate workers. Among them are (1) rice at cost prices, (2) free grazing for worker's cattle, (3) free cattle-keepers, (4) free kitchen gardens, (5) free creches for workers' children, (6) workers' canteens, (7) workers' clubs, (8) football grounds, (9) free primary education, (10) paid holidays, (11) way expenses to homes, (12) protective clothing, (13) retiral gratuity, (14) provident fund, (15) bonus, (16) free issue of hot tea, (17) firewood at cost price, (18) scouting and cubbing, (19) annual sports, (20) workers' educational courses and (21) training for Supervisors.

Maternity Benefit Act

The labourers in this District are benefitted by the provisions of the Kerala Maternity Benefit Act 1957. A statement showing details of the Maternity Benefits enjoyed by women workers in factories in this District in each of the years from 1958-59 to 1967 is given below:

Benefit under the Kerala Maternity Benefit Act (1958-63)

Year	Total number of female workers employed in factories submitting returns	Total number of female workers excluding children covered under the Maternity Act	Number of claims accepted	Number of miscarriages	Amount of Maternity Benefit paid Rs.
1958-59	11,276	11,276	1,330	98	99,643.03
1959-60	10,423	10,423	2,501	102	1,93,778.84
1960-61	12,710	12,810	2,878	57	1,35,475.49
1961-62	14,778	14,778	3,051	98	1,70,080.44
1962-63	16,024	16,924	3,014	104	1,69,715.48
1964-67	N.A.	N.A.	N.A.	N.A.	N.A.

Employees Provident Fund Act

The Employees Provident Fund Act 1952 which is applicable to 86 classified industries and establishments is in force in this District. Any establishment which has completed 3/5 years of existence and employs 15/20 workers as the case may be and which is engaged in any of the 86 notified industries is covered by the Act. The Act can also be extended to any establishment under Section 1 (4), if the employers and the majority of the employees jointly request for such an extension. In this District only 19 industries satisfy the requirements for coverage, 226 establishments with an employment strength of 68,384 workers had been brought under coverage of the Employees Provident Fund Act in the Kottayam District in October 1964. Of these 57,676 workers were contributing to the Provident Fund. There is a Provident Fund Inspector at Palai to enforce the provision of the Employees Provident Fund Act.

Industry-wise statement of Establishments covered by the Employees Provident Fund Act, 1964-65

Industry	Number of establishments	Number of employees	Number of subscribers
Rubber and Rubber Products	6	620	469
Saw Mills	3	139	139
Printing	7	686	641
Road Motor Transport	13	708	552
Cement	1	528	526
Heavy and Fine chemicals	4	170	108
Automobile repairing & Servicing	6	320	173
Tiles	1	36	36
General Engineering	3	53	50
Tea Factories & Plantations	87	56,973	47,829
Rubber Plantations	27	4,542	4,042
Mixed Plantation	7	1,181	1,093
Generation & Distribution of Electricity	4	192	176
Trading and Commercial Establishment	6	367	162
Coffee Plantation	2	64	32
Plywood	5	469	450
Hostels & Restaurants	3	126	103
Cardamom Plantations	35	1,180	922
Cinema Theatres	2	67	67
News paper establishments	1	121	121
Section 1 (4)	3	45	45

It may be noted that the contribution payable to the Employees Provident Fund by the employer is 6½ per cent of the basic wages, dearness allowance and retaining allowances paid to each of the employees. The employee's contribution is fixed as being equal to the contribution paid by the employer in respect of him. But in respect of certain industries the rate of contribution is 8 per cent. However, an employee can contribute over and above the statutory minimum, provided the employer agrees to pay those administrative charges for such enhanced rate also. The following non-refundable advances are also given to the members of the Provident Fund under certain conditions:—(1) advance for payment towards insurance policies, (2) advance for house construction, (3) advance for purchase of shares of consumers co-operatives, (4) special advance for temporary closure of establishment and (5) advance for illness in certain cases.

Employees State Insurance Scheme

The Employees State Insurance Scheme was implemented in this District with effect from July 29, 1961. The number of employees covered by the Employees State Insurance Scheme in Kottayam District in September 1964 was 2,867. As

factories employing 20 or more and using power only come under the purview of the Employees State Insurance Act the employees of such establishment only are covered the scheme. The details of the centres where the scheme was functioning, the date of implementation of the scheme and the number of persons covered in each centre are given below:

Centre	Date of implementation	Number of persons covered
1 Kottayam	July 29, 1961	21,361
2 Ettumanoor	"	196
3 Changanacherry	"	310

In 1964-65 three Employees State Insurance Dispensaries were functioning in this District, viz., Employees State Insurance Dispensary, Kottayam. Employees State Insurance Part-time Dispensary, Ettumanoor, part-time Dispensary, Changanacherry. A statement of the staff facilities provided for each of the Dispensaries is given below:

Name of Dispensary	Doctor	Mid-wife	Clerk	Compounder	Dresser	Class IV servants
E. S. I. Dispensary, Kottayam	1	1	1	1	1	2
Part-time Dispensary, Ettumanoor started only from 29-1-1964	1	..	..	1	..	..
Part-time Dispensary at Changanacherry	1	..	..	1	..	..

In addition, for inpatient treatment of insured workers 4 general beds and 1 maternity bed are reserved in the District Hospital, Kottayam and 2 beds for T. B. patients in T. B. Hospital, Pulayanarkotta, Trivandrum. Also the services of specialists in Medicine, Surgery, E. N. T. Gynaecology, T. B., Radiology, Orthopaedics and Pathology in the District Hospital, Kottayam are made available to the insured persons by appointing them as part-time specialists under the E. S. I. Scheme.

Social Welfare Schemes like Old Age Pension etc.

Since 1960-61 a number of novel social welfare schemes have been introduced in Kerala under the auspices of the State Government. The most important of these is the Old Age pension scheme under which all destitute persons of 70 years of age and above who are domiciled and are residing in Kerala for more than a year on the date of application for receipt of pension are entitled to get a monthly pension of Rs. 15. Another scheme is that of financial assistance to indigent T. B. patients. Under this scheme which was introduced in 1963-64 T. B. patients who have not been able to get admission in the T. B. clinics and Hospitals are given a monthly pension of Rs. 30 for a period of six months at a time. This assistance is liable to be renewed for another period of six

months in deserving cases. A scheme of monthly pension for destitute widows and physically disabled persons came into effect in Kerala with effect from January 1, 1964. Under this scheme a monthly pension up to Rs. 20 will be paid to destitute widows with children and up to Rs. 15 to those without children and to physically disabled or handicapped persons. A statement of the number of persons benefited under some of the above schemes in each of the Taluks of the District upto December 31, 1967 is given below:

Statement of the number of persons benefited by Old Age Pension and other Social Welfare Schemes as on December 31, 1967

Taluk	Number of persons benefited under		
	Old Age pension	Widow pension	Disability pension
Total	770	946	79
1. Kottayam	306	330	18
2. Changanacherry	133	155	11
3. Vaikom	186	329	20
4. Meenachil	82	69	19
5. Kanjirapally	46	12	3
6. Peermede	4	33	3
7. Udumbanchola	4	5	1
8. Devicolum	9	13	4

There were only 70 live beneficiaries under the T. B. patients Assistance Scheme as on December 31, 1967 in this District. No Taluk-wise list of beneficiaries under the scheme is available.

Prohibition

There is no restriction on consumption of liquor in the District. The District is completely wet.

ADVANCEMENT OF BACKWARD COMMUNITIES

The Department of Harijan Welfare attends to the ameliorative work among the Scheduled Castes and Scheduled Tribes. The District Welfare Office, Kottayam, started functioning in March 1957 with the District Welfare Officer as its head. He is assisted by eight Taluk Welfare Inspectors. In addition, there is an Industrial Supervisor to attend to the speedy implementation of the plan schemes and the better conduct of the training institution. There is also a District Advisory Committee to advise the Department in implementing the Plan Schemes. The District Collector is the Chairman and District Welfare Officer, the Convenor of this Committee.

The ameliorative measures take by the Department in the District are briefly described below:—

Co-operative Societies are being organised in important centres for the economic uplift of the Scheduled Castes and Scheduled Tribes. Till 1964-65 thirty-four Co-operative Societies had been formed for Scheduled Castes and four for Scheduled Tribes. Grants are also being paid to these societies towards share and working capital and payment of remuneration to the Secretaries. All the societies were till recently under the control of a Senior Co-operative Inspector at the District level and a Deputy Registrar at the State level, but they have been transferred to the regular Co-operative Department and brought under the control of the Registrar of Co-operative Societies with effect from March 1, 1965.

Drinking water facilities are also provided to the Scheduled Castes and Scheduled Tribes both in colonies established by the Department and also in centres where the Scheduled Caste population is considerable. Seventy three wells were sunk upto March 31, 1967 in this District.

Colonies have been established for providing house sites to the landless Harijans. Twenty-six colonies were established till the end of 1967 and they covered an area of 172 hectares. Almost all facilities are provided in these colonies. Ten per cent of the total house sites are reserved for communities other than Scheduled Castes and Tribes. Night Schools, libraries, common buildings, and burial grounds etc., have been provided in the colonies, wherever found necessary. The house sites provided to the Scheduled Castes are each 5 cents in extent in urban areas and 10 cents in rural areas. In certain cases the area allotted has been extended upto 50 cents.

Moreover, in order to settle the Scheduled Tribe families who were leading nomadic life three Colonisation Schemes were organised at Elamala, Champakad and Mannankandam in Devicolum Taluk. Houses were also provided for them. Financial assistance was given to Scheduled Caste and Scheduled Tribe families at the rate of Rs. 1,000 each for construction of houses. The number of houses sanctioned to Scheduled Castes and Scheduled Tribes and the amount paid to them from 1957-58 to 1966-67 are shown below:

Year	Scheduled Castes	
	No. of houses	Amount paid Rs.
1957-58	136	1,05,001.60
1958-59	60	47,040.00
1959-60	60	43,120.00
1960-61	56	47,600.00
1961-62	56	48,400.00
1962-63	62	57,500.00
1963-64	40	33,900.00
1964-65	45	41,300.00
1965-56	20	..
1966-67	20	..

Year	Scheduled Tribes	
	No. of houses	Amount paid Rs.
1957-58	59	43,600.00
1958-59	20	16,000.00
1959-60	41	20,320.00
1960-61	40	24,500.00
1961-62	12	9,600.00
1962-63	21	17,800.00
1963-64	20	15,100.00
1964-65	20	18,960.00
1966-67	10	..

Till 1966-67 twenty-nine burial grounds have been provided to the Harijans in this District. These are in colonies and in places where cremation of dead bodies is found difficult. Two common buildings were also provided for the Harijans for social gatherings. Medical facilities are extended to those who are settled under the Champakad and Mannankandam colonisation schemes. Two Ayurvedic Dispensaries were opened in 1961 since the tribals always depend upon medicinal herbs for treatment. Ayurvedic medicines costing Rs. 2,000 are being purchased and supplied every year from these Dispensaries.

With a view to providing drinking water facilities in the Tribal Settlements three water supply schemes were started in this District, viz., (1) Lift Irrigation Scheme at Champakad, (2) Pump House at Kumily, (3) Water Supply Scheme at Denucomb. The Lift Irrigation Scheme at Champakad colony which was taken up in 1960-61 has been executed at an estimated cost of Rs. 47,454. The Pump House at Kumily was constructed in the Tribal Settlement in 1961-62 at an estimated cost of Rs. 17,000. The water supply scheme at Denucomb was taken up during 1962-63 and the estimated cost of the same is Rs. 17,280. The work on the scheme is in progress.

Grants have been sanctioned to the technically trained hands among Backward Communities since 1959 onwards. The details of the number of beneficiaries and the amount spent from 1959 to 1963 are given below:

Year	Number of persons benefited	
		Amount spent Rs.
1959-60	1	375.00
1960-61	25	4,175.00
1961-62	6	1,040.00
1962-63	6	1,000.00

The above grants varied from Rs. 125 to Rs. 375 according to the nature of the work. Grants were paid to the various trades such as cutting and tailoring, weaving, basket making,

purchase of washing equipments, toy work, masonry, blacksmithy, carpentry, goldsmithy, etc., and for purchase of hair cutting equipments. The scheme was discontinued with effect from 1963-64.

Grants for the purchase of agricultural implements, seeds, seedlings etc., are being sanctioned to the Scheduled Caste families who possess lands, dry and wet, but are incapable of purchasing agricultural implements etc., on their own. This scheme was enforced in this District from 1960-61 onwards. The expenditure incurred during each year and the number of families benefited are as follows:—

Year	Number of families benefited	Amount spent Rs.
1960-61	10	3,360.00
1961-62	13	4,050.00
1962-63	3	2,400.00
1963-64	3	2,400.00
1964-65	10	3,000.00
1965-66	15	4,500.00
1966-67	12	3,600.00

With a view to promoting small industries and handi-crafts among the Scheduled Castes the Department has introduced a scheme for advancing interest free loans amounting to Rs. 2,000 repayable in 20 half-yearly equated instalments. This was first introduced in 1963-64 when an amount of Rs. 2,000 was paid to a member of the Scheduled Caste community in Palai. The scheme was not continued during the year 1964-65.

Another scheme introduced by the Department with effect from 1962-63 is the sanctioning of free grants to those who are put to difficulties due to inter-caste marriage. The rate of grant allowed per family is Rs. 500 and this grant is being paid to the couple, if one of them were to belong to the Scheduled Caste or Scheduled Tribe and the other to a forward community. The grant so far paid under this scheme and the number of families benefited are given below:

Year	Number benefited	Amount spent Rs.
1962-63	2	1,000.00
1963-64	2	1,000.00
1964-65	2	1,000.00
1965-66	1	500.00
1966-67	1	500.00

Some colonies are not having sufficient funds for their development. Hence a scheme was formulated in the III Plan for the improvement of such colonies. One of them was taken up in this District during 1964-65. Two thousand coconut

seedlings were distributed among the Harijans incurring an expenditure of Rs. 1,400. Improvement to the colony at Peroor was also taken up and the following items of work were proposed.

1. Construction of two seated Latrines at an estimated cost of Rs. 1,300.
2. Drainage scheme control in soil erosion, at an estimated cost of Rs. 1,000.

Public Trusts and Charitable Endowments Devaswoms

The Travancore Devaswom Board administers the Hindu Religious and Charitable Institutions in the erstwhile Travancore area of the State. There is the office of an Assistant Commissioner of Devaswoms at Vaikom. For purposes of administration the Devaswoms or temples are constituted into Groups each of which is under the charge of a Superintendent appointed by the Board. The Devaswoms in Kottayam District fall mainly within the following Groups viz., Vaikom, Ettumanoor, Kottayam and Mundakayam. The details of the number of Devaswoms in each of the Group are given below:

Group	Number of Devaswoms in the Group			
	Major	Minor	Petty	Personal Deposit
1. Vaikom	10	5	8	4
2. Ettumanoor	7	13	30	6
3. Kottayam	12	9	13	4
4. Mundakkayam	2	2	3	7

In addition to the temples the Devaswom Board is also running a few institutions like libraries, schools etc., in this District. It runs an Upper Primary School at Erumeli. The Sri Chitra Hindu Religious Libraries at Kottayam, Ettumanoor and Vaikom are also run by the Board in the District. The Devaswom Board also runs a special fund known as the Sabarimala Amenities Fund in order to provide amenities to the pilgrims who visit the Sastha Temple at Sabarimalai in this District.

Wakf Board

The Muslim religious and charitable institutions like mosques, Wakf properties etc., are administered by the Kerala Wakf Board which was set up on October 1, 1960 under the provisions of the Wakf Act 1954. There is a District Sub-Committee of the Wakf Board to superintend the administration of Muslim religious and charitable institutions in Kottayam. According to the Kerala Muslim Directory (1960) there are 104 mosques in this District.

District S. S. & A. Board

The District Soldiers, Sailors and Airmen's (S. S. & A.) Board, Kottayam started functioning in 1962. It has been set up exclusively for the purpose of attending to matters pertaining to the welfare of Ex-servicemen and families of the deceased and serving military personnel and has jurisdiction over the Revenue Districts of Kottayam and Ernakulam. The official members of the Board are:— (1) The District Superintendent of Police, Kottayam, (2) The District Employment Officer, Kottayam, (3) The Chairman of the Kottayam Municipality and (4) The District Educational Officer, Kottayam. While the non-official members are (1) An Ex-serviceman to represent the Army, (2) An Ex-serviceman to represent the Navy, (3) An Ex-serviceman to represent the Air Force, (4) A prominent lawyer, (5) An eminent Medical Practitioner and (6) A prominent businessman.

The District Collector, Kottayam is the Chairman of the Board and the Recruiting Officer of the area or his nominee its Vice President. The District S. S. & A. Board functions under the general control and supervision of the State S. S. & A. Board. Its affairs are attended to by a Secretary appointed by the State S. S. & A. Board from a panel of duly qualified candidates furnished by the District Employment Exchange. The Secretary has the status of a District Officer and he acts as a connecting link between the officials in the Defence Department and the ex-serviceman in general with regard to the settlement of pension cases, financial grants etc. The accounts of the Board are audited by the Local Fund Audit Department.

CHAPTER XVIII

PUBLIC LIFE & VOLUNTARY SOCIAL SERVICE ORGANISATIONS

Representation of the District in the State and Union Legislatures.

Till the General Elections of 1965 the Kottayam District was split up into 12 Assembly Constituencies, viz., Changanacherry, Vazhoor, Kanjirapally, Puthupally, Kottayam, Ettumanur, Meenachil, Vaikom, Kaduthuruthy, Devikolam, Poonjar and Puliyanur. Of these the Devikolam constituency was a double-member one and all others were single member constituencies. After 1960 the double-member constituency of Devikolam was split up into two new single member constituencies, viz., Devikolam and Peermede. The Kottayam District thus came to have 13 Assembly Constituencies. As per the delimitation of constituencies which preceded the General Elections of 1965 the Kottayam District is split up into 14 constituencies viz. Devikolam, Udumbanchola, Kanjirapally, Peermede, Vazhur, Changanacherry, Puthupally, Kottayam, Ettumanur, Akalakunnam, Kaduthuruthy, Poonjar, Palai, and Vaikom.

As regards representation in the Lok Sabha the voters in Kottayam District cast their votes in three parliamentary constituencies, viz., Kottayam, Tiruvalla and Moovattupuzha. Of these only the Kottayam Parliamentary constituency fell completely within this District while the other two viz., Tiruvalla and Moovattupuzha were inter-district constituencies. The Kottayam Parliamentary constituency comprised of the Assembly Constituencies of Palai, Akalakunnam, Puthupally, Kottayam, Ettumanur, Puliyanur, Kaduthuruthy and Vaikom. The voters in the Vazhur and Changanacherry Assembly Constituencies cast their votes in the Tiruvalla Parliamentary Constituency and those of Devikulam, Peermede, Kanjirapally and Poonjar in the Moovattupuzha Parliamentary Constituency.

Political Parties and Organisations

The major political parties in the District are the Indian National Congress, the Communist Party of India (Rightist), the Communist Party (Marxist or Leftist) and the Kerala Congress. The S. S. P. (formerly P. S. P.), the R. S. P. and the Muslim League have also the District units of their parties in

Kottayam. Of the above the Kerala Congress and the Communist Party (Marxist) contested the elections as independent Political parties in 1965. While the Kerala Congress is an organisation of dissident Congressmen, the Communist Party (Marxist) was formed by the extremist section which broke away from the Communist Party of India. The results of the general elections of 1957, 1960, 1962 and 1965 would throw light on the relative strength of the above political parties in the Kottayam District.

In 1957 all the political parties contested the elections independently without entering into any electoral alliances or adjustments. For the 13 Assembly seats from this District there were altogether 40 candidates in the field—13 Congressmen, 8 Communists, 4 Praja Socialists, 4 Revolutionary Socialists and 11 Independents. Out of a total 732,499 voters in the electoral list, 591,195 valid votes were polled. Out of this 280,773 votes (47.65%) were polled by the Indian National Congress, 186,082 (31.50%) by the Communist Party, 37,353 (6.10%) by the P. S. P., 15,574 (2.65%) by the R. S. P. and 71,413 (12.10%) by Independents. The Congress Party secured nine seats, the Communist Party three seats and the P. S. P. one.

In the General Election of 1960 which was held after the dismissal of the Communist Ministry (July 1959) there was a realignment of forces. The Congress and the P. S. P. entered into electoral alliances and they were supported also by the Kerala State Muslim League. The Communist Party fought the elections independently. For the 13 seats from this District there were 32 candidates in the field—11 Congress, 12 Communists, 2 Praja Socialists and 7 Independents. Out of a total of 833,536 voters, 873,289 valid votes were polled. Out of this 402,887 (45.13%) votes were polled by the Congress Party, 354,896 (40.63%) by the Communist Party, 106,142 (11.15%) by the P. S. P. and 29,374 (3.09%) by the Independents. Out of 13 seats in the Legislature the Congress got 10, the Communists 2 and the P. S. P. 1.

In the mid-term elections of 1965 there was a new alignment of political forces in Kerala. At the time of the dissolution of the Assembly in 1964 there were 4 recognised political parties, viz., the Indian National Congress, the Communist Party of India, the Praja Socialist Party and the Muslim League. A split in the Communist Party had brought into existence in 1965 another party which called itself the Communist Party of India (Marxist). Moreover, the Praja Socialist Party had merged itself with the Socialist Party and the new party that emerged had come to be known as the Samyukta Socialist Party. The fifteen Congress M. L. As. who had broken away from the Congress Party in the dissolved Assembly had now formed the Kerala Congress. The number of candidates sponsored by each political party in the District

and those who got themselves elected or forfeited their deposits in the General elections of 1965 are given below:—

Party	No. of candidates	No. elected	No. who forfeited deposits
Indian National Congress	14	1	4
Kerala Congress	13	7	2
Communist Party (Marxist)	6	4	2
Communist Party of India	10	1	5
Samyukta Socialist Party	2	1	1
Others	23	2	15

An analysis of the electorate and the votes polled in the elections is given below:—

No. of seats contested	14
No. of Men Electors	4,23,424
No. of Women Electors	4,49,213
Total No. of Electors	8,72,637
No. of Men Electors voted	3,43,923
Total No. of Electors voted	6,55,450
No. of valid votes polled	6,48,068
Percentage of electors voting	70.54

The Party-wise figures and percentages of voting were as follows:—

Party	Total No. of votes polled	Percentage
Indian National Congress	1,53,975	23.76
Kerala Congress	2,25,960	34.67
Communist Party of India (Marxist)	71,702	11.06
Communist Party of India	66,351	10.24
Samyukta Socialist Party	10,763	1.66
Others	1,19,317	18.41

As for the Elections to the Lok Sabha the Indian National Congress, the Communist Party and the S. S. P. contested the Kottayam Parliamentary seat in the election of 1957. They polled 148,235 votes (51.64%) 1,24,799 votes (43.47%) and 14,040 (4.89%) votes respectively. The seat was annexed by the Congress. In the election of 1962 there was a straight contest between the Congress and the Communist parties for the Kottayam seat. The seat was won by the Congress Party, the Congress candidate having polled 177,811 votes and the Communist candidate 112,525 votes. The other Parliamentary Constituencies are inter-District ones and hence their results are not analysed here.

In the General Elections of 1967, there was a new alignment of Political parties. The United front led by the Marxist Communist Party captured 117 seats out of 133 seats in

the State Legislature. The number of seats won by each political party, the votes polled by each party etc., in the District are given below:—

Party	No. of Candidates	No. elected	Votes polled	Total votes	Votes polled
I. N. C.	14	1	1,48,420	..	..
Communist Party (Marxist)	8	4	1,66,354	..	..
Kerala Congress	11	4	1,69,756	..	..
C.P.I.	4	4	97,654	..	..
S.S.P.	1	1	20,248	..	..
Independents	11	NIL	35,132	..	..
Total	49	14	6,37,564	8,82,596	6,57,803

The results of the Lok Sabha Elections for 1967 are given below:—

Party	Seats contested	Seats won
I. N. C.	3	NIL
C.P.I. (Marxist)	2	2
C.P.I.	1	1
Kerala Congress	3	NIL
Independents	..	..

Newspapers and Periodicals

The Kottayam District has a place of honour in the field of Malayalam journalism. Newspapers and periodicals were published from here even in the 19th century. The earliest periodical to be published from Kottayam was the *Gnananikshepam* which commenced publication in 1848. In 1864 the C. M. S. College, Kottayam, started a magazine called *Vidya Sangram* and in 1867 W. H. More published the *Sandishtavati* from the C. M. S. Press, Kottayam. The last of the journals mentioned above created a sensation as it carried several articles condemning the administration of Dewan Madhava Rao and its publication was therefore banned by the Government. Among the periodicals which came later may be mentioned the *Malayala Mitram* (1878) and the *Nasrani Deepika* (1887). The former was published from Kottayam and the latter from Mannanam. The *Malayala Manorama* was started on March 22, 1890 by the late Kandathil Varghese Mappila. It may however be stated that the *Malayala Manorama* (Private) Ltd., was started in 1888 itself.

There are seven newspapers which are being published from Kottayam District at present. All these dailies are published in Malayalam. They are: (1) the *Deepika*, (2) the *Malayala Manorama*, (3) the *Kerala Bhooshanam*, (4) the *Kerala Bhooshanam* (Evening Edition), (5) the *Keraladhvani*, (6) the *Pouradhwani*, and (7) the *Democrat*. The *Deepika*

was started by Syrian Carmelite Fathers from Mannanam in 1887 and it was shifted to Kottayam in 1939. It is perhaps the oldest of the present Malayalam dailies in the State. In 1967 it had an average circulation of 28,398 copies out of which 17,179 copies were in circulation in the Kottayam District itself. The *Malayala Manorama* which commenced publication in 1890 has the highest circulation among the newspapers published from Kerala. In 1967 it had an average circulation of 164,083 copies of which 42,156 copies were sold in this District. The *Kerala Bhooshanam* which commenced publication in 1946, had during the same period a circulation of 14,500 copies of which 6,548 were sold in this District. This newspaper also publishes an evening edition started in 1957 and it had a circulation of 1,266 copies in 1967. The *Keraladhvani* started publication in 1959. In 1967 it had a circulation of 3,500 copies of which 3,000 were sold in the Kottayam District alone. The *Democrat* and *Pouradhwani* are dailies with limited circulation. The former commenced publication in 1960 and had a circulation of 1,050 copies while the latter which was started in 1959 had a circulation of 800 copies. Apart from the above newspapers which are published from this District newspapers published from outside the District are also in circulation. Thus the *Kerala Kaumudi* (Trivandrum) had in 1967 a circulation of 8,332 copies in this District, the *Mathrubhoomi* (Ernakulam) 9,719 copies and the *Malayala Rajyam* (Quilon) 1,897 copies.

Kottayam is noted for its large number of periodicals and journals. Among the periodicals the *Malayala Manorama Weekly* which commands the highest circulation among the Malayalam journals deserves special mention. The other notable periodicals are *Cinema Masika*, a Malayalam monthly published from Kottayam town and *Sarasan*, another monthly in the same language, published from Changanacherry. A number of periodicals devoted to religion and philosophy are published by Christian Missions in this District. Detailed particulars regarding all such journals and periodicals with the figures of their circulation are given in the Chapter on "Education and Culture".

VOLUNTARY SOCIAL SERVICE ORGANISATIONS

Brief accounts of leading voluntary social service organisations are given below:

Gandhi Smarak Nidhi

The Gandhi Smarak Nidhi runs a Grama Seva Centre at Nattassery in this District. Established on November 1, 1958 the Centre is located in a two-acre plot on a beautiful hillock. It has organised village industries like soap making, paddy husking and carpentry, opened a Nursery School and started sewing and embroidery classes. In the days when the Government had not yet opened the primary Health Unit at this place

a dispensary was also being conducted in this centre with the help of the Rotary Club, Kottayam. The Centre has now extended its activities to Kummanam.

There are two Gandhi Tatwa Prachar Centres under the Nidhi one at Changanacherry and another at Kottayam. The former was started in 1958. It maintains a Gandhian Library, keeps itself in close touch with College students, arranges study-classes, discussions and meetings, and tries to persuade the younger generation live a life of simplicity and service. The Tatwa Prachar Centre in Kottayam town has been functioning since 1956. Here too a library has been set up. The activities mentioned above are being carried on by this Centre also.

Bharat Sevak Samaj

The Kottayam District branch of the Bharat Sevak Samaj started functioning in 1954. The activities were then centred round organising student and village youth camps. In course of time the activities developed in scope with the result that five Lok Karya Kshetras, one Night Shelter, one Ladies Hostel, one Bharat Music Club and Plan Information Centres came into being.

Institutions

The Lok Karya Kshetras are located at Thalayolaparambu, Stagbrook, Amaravathi, Pampady and Panachikad. These institutions are intended to act as a link between the Government and the people in community development programme. The areas were selected for intensive work to make the people plan-conscious.

The Night Shelter is in Kottayam town and is intended for the poor and homeless people such as rikshaw pullers, day labourers etc., who have no roof over them to sleep during nights. On an average twenty to twenty-five persons make use of the shelter daily.

The Working Girls hostel is intended for the benefit of the working women and girl students at a moderate rate and it is situated at Kottayam town.

The Bharat Music Club is one which has been recognised by the Government of India, Ministry of Information and Broadcasting and various programmes are conducted by the club in different parts of the District. There is a Kendra Kala Samithi at Thalayolaparambu which conducts drama competitions every year.

The Plan Information Centres are intended to disseminate information on Five Year Plans among the public by means of charts, book-lets, posters, newspapers, books etc., which are exhibited at the centre. These are widely used by

the public. All the Lok Karya Kshetras are having similar centres. Some of the units also are having such centres. Film shows, camps, one day seminars, fertiliser festivals etc. are also arranged by these centres. A good number of fertiliser festivals were organised in the District with the help of the F. A. C. T. Ltd., Agriculture Department and Five Year Plan Publicity Wing.

The Bharat Sevak Samaj Workers have rendered great services in times of flood and other natural calamities. Civil Defence activities were also carried out by the workers of the B. S. S. along with the Central and State Governments by collecting cash and kind. There are about 60 nursery schools run by B. S. S. branches and free food is distributed to the children whenever such foods are available from C. R. S. New Delhi.

There is a network of village units in 150 villages with 300 members. In all the Blocks there are Block level committees who co-ordinate the work of units. At the District level there is a District Committee headed by a Chairman. About 60 Mahila Samajams are also functioning attached to these village units.

Nair Service Society

The Nair Service Society which was founded at Perunna on October 21, 1914 by Mannath Padmanabhan and a band of zealous young men under his leadership is one of the leading voluntary Social Organisations of the State. It was organised on the pattern of the Servants of India Society of G. K. Gokhale and its motto has been service to the community in general and the Nairs in particular. With no monetary capital to boast of at its inception, it had in 1964 assets worth crores of rupees and a working capital of over Rs 50 million. There were about 4,000 officers and other ranks on its pay roll and over 25,000 active honorary field personnel under it. The annual emoluments of the N. S. S. employees came to Rs 54 lakhs. The growth of the Society which celebrated its Golden Jubilee in 1964 has been truly phenomenal.

In the early decades of this century the organisation provided the leadership to many a movement for social reform like the abolition of the barriers of sub-caste, the repudiation of decadent ways of living and mitigation of the evils of the joint family system. The Nair Regulation of 1924-25, the first major achievement of the N. S. S. changed the age-old law of inheritance by providing for the division of paternal and maternal property among all the children. Elimination of the evils of untouchability and removal of disruptive social tendencies were also some of the other fields in which the N. S. S. worked effectively.

From the very beginning the N. S. S. turned its attention to the educational field. Its first school was born at Karukachal. Since then the expansion of the educational activities of the N. S. S. had been spectacular and today it is easily the foremost non-governmental educational agency in the State. Eighty-five schools, five First Grade Arts and Science Colleges—most of them with Post-Graduate courses—four Junior Colleges, three Teachers' Training Colleges, one Co-operative College, a Polytechnic and an Engineering College catering to a total of 65,000 students and employing 2,500 teachers constitute the educational Wing of the Nair Service Society in its Golden Jubilee Year.

The N. S. S. has not confined its activities to the field of education alone. It has its medical Wing as well. The N. S. S. Medical Mission is an ambitious project estimated to cost several lakhs of Rupees. The objective of the Mission is to develop a full-fledged, well-equipped, modern medicine centre with a wide net-work of dispensing branches. The N. S. S. Medical Mission Hospital has been started at Pandalam and its branches function at Changanacherry, Kundara, Oachira, and Poonithura. An auxiliary nursing and midwifery training school attached to the mission was established in 1964-65.

The N. S. S. has entered the industrial field as well. The Mannom Sugar Mills, a Rs. 2 crore co-operative project, went into production at Pandalam early in 1964. The Society has acquired about 15,000 acres of garden lands, wet lands and high land estates. Coffee, cardamom, rubber, coconut, arecanut, pepper, paddy etc. are grown in its estates in Malabar. An experiment in colonisation has also been launched there by the Society. The scheme is to allot a thousand acres of arable land owned by the N. S. S. to be divided among 200 families from the Travancore area where the pressure on land is acute. Already 120 families had been rehabilitated by 1964. Work is in progress to develop the settlement into a modern township. Thus during its existence for more than half a century the N. S. S. has left its mark on the public life of Kerala as the premier social service organisations.

The Kerala Balagram, Manganam

The Kerala Balagram, Manganam is a Home for Destitute Children established as early as 1934. It is managed by the Society of St. Thomas and its affairs are looked after by an Advisory Committee of 17 and an Executive Committee of 7. In 1964-65 there were 64 inmates (destitute boys) in the Balagram out of which 15 were being trained in weaving and tailoring and 50 were in a Nursery School. There were 18 members on the staff of the orphanage. In 1963-64 it had assets worth Rs. 1,16,413 and an income and expenditure of Rs. 57,047 and Rs. 60,425 respectively. The expenses are met out of grants received from the Government and the Social Welfare Board and donations from the public.

Santhibhavanam, Kottayam

The Santhibhavanam, Kottayam is the District branch of the Vanchi Poor Fund. It was established in 1940 in order to put an end to mendicancy and vagrancy in Kottayam town by providing food, shelter etc. to the homeless and the destitute. The Managing Committee consists of 26 members with the Municipal Chairman as President. In 1964 there were 87 inmates in the Bhavan. They were provided with food, clothing and medical care and sent to the schools nearby. Instruction was also given in weaving at Santhibhavanam. Able-bodied inmates were given manual labour in the premises. During the year ending 31st December 1962 the receipts of the Bhavan amounted to Rs. 14,694.37 and the expenditure to Rs. 13,130.42. Among the receipts may be mentioned a sum of Rs. 2,500 as grant from the Municipality and Rs. 5,000 from the Inspector-General of Prisons for the Government of Kerala. The investment vested in the Treasurer of Charitable Endowments was Rs. 1,17,364.31 at the close of year 1962.

Y. M. C. A. Kottayam

The Y. M. C. A. Kottayam, was established in 1892. It aims at the all-round development of the youth of the town. The Association has chalked out a programme of activities designed to foster the spiritual, intellectual, social and physical well-being of its members. It is affiliated to the National Council of the Y. M. C. As. of India and Ceylon. The Governing Body which is called the Board of Directors consists of 12 full-time members. In 1964 there were 652 members on the rolls of the Association. The Y. M. C. A. carries on various religious, cultural and social activities. There is a Music and Dramatic Club under its auspices to provide entertainments to the members on special occasions. A Reading Room and Library is also run under its auspices. The Y. M. C. A. gives special attention to the sports and games. An annual Kerala Table Tennis Tournament is held under its auspices. The Y. M. C. A. Hostel consists of two buildings—the A. V. George Hostel and the Old Hostel. The former accommodates 12 persons and the latter 24. Distribution of gift supplies to the poor and the needy in and around the town of Kottayam has also been one of the major activities of the Y. M. C. A. The Kottayam Y. M. C. A. has formulated a scheme for the extension of its activities and it is estimated to cost Rs. 1,50,000. The scheme includes the construction of the A. V. George Memorial Boys Activity Centre at an estimated cost of Rs. 30,000, providing additional rooms and facilities to the hostel at a cost of Rs. 25,000 and buying a playground for Rs. 70,000.

The St. Joseph's Orphanage, Kottayam

Started in 1892, the St. Joseph's Orphanage, Kottayam is perhaps the oldest institution of its kind in Kerala. It is under the management of the Mother Superior of Mount

Carmel Convent, Kanjikuzhi. The Bishop of Vijayapuram Diocese is the Patron of the institution. The Orphanage is intended primarily for the protection of poor orphaned girls. In 1963-64 it had 85 inmates. Till the end of 1964 more than 2,200 persons had been taken care of by this Orphanage. The girls of the Orphanage are given school education and those who have aptitude are sent up for higher studies in the college. The expenses of the Orphanage are met mainly from the funds of the Convent and a Government grant. Even as early as 1899 the Maharaja of Travancore sanctioned an annual subsidy of Rs. 50 for the institution. This was increased to Rs. 100 in 1936 and to Rs. 275 in 1939. In 1963-64 the Government was giving a grant of Rs. 4,599 to the Orphanage. The Kottayam Municipal Council gives a monthly grant of Rs. 10. In 1963-64 the income and expenditure of the institution came to Rs. 13,954.32.

St. Joseph's Orphanage, Kuravilangad

This Orphanage was established on January 28, 1952. It is meant for poor school-going children. In 1963-64 it had 34 inmates. The expenditure during the year came to Rs. 7,741.06. This was met partly from the grants made available by the Government (Rs. 2,641) and partly the funds of the Convent.

St. Augustine's Orphanage, Ramapuram

The St. Augustine's Orphanage, Ramapuram, was established in 1931 under the auspices of the Diocese of Palai in order to give protection to orphaned girls. In 1963-64 it had 24 inmates. All of them were attending school and were also being trained in agriculture, gardening and needle work. The assets of the Orphanage included a one-acre plot, a building worth Rs. 7,000 and equipments worth Rs. 1,000. In 1963-64 it had an income of Rs. 8,850 and an expenditure of Rs. 8,842.71. The State Government gave a grant of Rs. 2,640 towards the expenses of the institution. The bulk of the expenditure was, however, met out of contributions from the management.

St. Joseph's poor home, Ramapuram

The St. Joseph's Poor Home, Ramapuram, was established in 1949 under the auspices of the Diocese of Palai. It was meant as a home for poor, aged and disabled people who have no one to support them. In 1963-64 there were 24 inmates in the Home. It is located in a 1½ acre site and has a building worth Rs. 9,000 and equipments worth Rs. 800. In the same year it had an income of Rs. 8,515.63 and an expenditure of Rs. 8,509.07.

St. Pius' Orphanage, Palai

St. Pius' Orphanage, Palai, was established in 1911 for the protection of orphaned girls. In 1963-64 it provided

accommodation for 24 girls. The orphans attended school and also got training in agriculture, gardening and needle work. The assets of the institution include a one acre site, a building worth Rs. 8,000 and equipments worth Rs. 1,000. In 1963-64 it had an income and expenditure of Rs. 8,317.49. The Government gave a grant of Rs. 2,400 to the Orphanage.

St. Joseph's Children's Home, Kummannur

The St. Joseph's Children's Home, Kummannur, was established in August 1953 under the auspices of the Diocese of Palai. Its aim is to look after orphaned children of five years and above who have lost their parents or whose parents are unable to support them due to poverty. In 1963-64 there were 25 orphans in this Home. All the children went to school and also practised agriculture, gardening and needle work. The assets of the Home include a 2½ acre site, a building worth Rs. 35,000 and equipments worth Rs. 2,000. In the same year the income and expenditure of the institution came to Rs. 7,947. The State Government gave a grant of Rs. 2,140 towards the expense of the Orphanage.

Indian Red Cross Society, Kottayam

The Kottayam District branch of the Indian Red Cross Society was set up in 1951. Its aim is to promote maternity and child welfare, to supply medical comforts to hospitals and other institutions, to assist in the training of nurses, midwives, health visitors and other health workers, to promote popular health education and to assist, above all, in the care of persons suffering from T. B., Leprosy, Cancer and mental diseases. In 1963-64 the Society had 77 members on its rolls—8 life members, 16 ordinary members, 52 associate members and 1 institutional member. Its assets include a building, furniture, first aid equipments etc. The Kottayam Red Cross Society has been carrying on manifold activities since its inception. The Drug Bank is one of its important achievements. In 1963 alone drugs worth about Rs. 4,410 were dispensed to 630 persons on the prescription of doctors. The St. John Ambulance work of teaching first aid and nursing is also another of its activities. The Society had organised Junior Red Cross activities in 19 Schools in the District. The Society also distributes medicines, tablets and clothings to charitable hospitals in the area. Its expenses are met mainly from donations from the public and grants received from the Government.

Poor Boys Home, Muttambalam

The Poor Boys Home, Muttambalam, Kottayam was started in 1960 with a view to providing accommodation for orphaned boys and bringing them up as worthy citizens of society. The institution tries to give the boys primary education and also training in industries and handicrafts. In 1963-64 the

Home had an income and expenditure of Rs 959.50. Expenses were met completely out of donations made by the public.

St. Thomas' Asylum and Orphanage, Kaipuzha

The St. Thomas' Asylum and Orphanage, Kaipuzha was established in 1925 in order to provide a home for mentally and physically handicapped women and orphaned girls. It is managed by the Religious Sisters of the St. Joseph's Convent, Kaipuzha. In 1963-64 there were 40 inmates in the institution. The income and expenditure for the year came to Rs 9,929.86. The State Government gave a grant of Rs 500 to the institution.

St. Joseph's Orphanage, Changanacherry

The St. Joseph's Orphanage, Changanacherry, established in 1924, is managed by the Archbishop of Changanacherry. It provides accommodation to orphaned boys and gives them school education as well as training in weaving, printing, composing, book binding etc. In 1964-65 there were 33 inmates in the Orphanage. The annual expenditure of the institution comes to about Rs 8,000. The Orphanage gets a grant from the Government at the rate of Rs 10 per mensem for each inmate. The rest of the expenses are met by the Archbishop.

Abhaya Bhavan, Kanjirapally

The Abhaya Bhavan, Kanjirapally, is owned by the Kanjirapally Social Relief Association registered in 1959 under the Literary, Scientific and Charitable Societies Act. It was started on January 1, 1960 and provided a home for the homeless and the destitute following the implementation of the provisions of the Travancore Prevention of Begging Act in Kanjirapally town. In 1964 there were 149 members in the Association and 33 inmates in the Abhaya Bhavan. The inmates of the Bhavan are given free food, clothing and medical aid. They are supplied daily with newspapers and magazines. There is a kitchen garden attached to the Abhaya Bhavan where tapioca, vegetables and bananas are grown. Mat weaving and bee-keeping are also carried on by the inmates of the Bhavan. The affairs of the institution are managed by a staff of 7 under a Superintendent. The Abhaya Bhavan is provided with a telephone and a radio. In 1963-64 it had assets worth Rs 23,774.27. It also owned a rubber estate (Changragiri Estate) at Mundakayam. In 1964 the Abhaya Bhavan had an income of Rs 13,959.77 and an expenditure of Rs 13,358.57. The expenses were met out of a grant of Rs 2,736 from the Government and another one of Rs 1,000 from the Panchayat, and a sum of Rs 7,015 subscribed by the members and of Rs 2,074.66 donated by the public. Visitors from various parts of India and abroad have recorded their high appreciation of the work done by the institution.

Y. W. C. A. Kottayam

The Y. W. C. A. Kottayam, was established in July 1933. It has been carrying on useful activities since its inception. In 1963-64 the Y. W. C. A. had 150 members on its rolls. One of its main activities is to run a Hostel which provides accommodation to college-going girls and working women. In 1963-64 there were 70 inmates of whom 35 were students.

The All India Women's Association, Kottayam

The All India Women's Association, Kottayam, functions as the Kottayam District branch of the All India Women's Conference. It is active in many fields of social work. There are several social welfare projects working under its auspices in this District. Brief accounts of the main projects are given below.

The Association conducts 10 Social Welfare Centres at the following places:—(1) Kuzhimattom, (2) Nattasserry, (3) Velloor, (4) Manganam, (5) Pulikuttissery, (6) Ettumanur, (7) Neendoor, (8) Kothanallur, (9) Manjoor and (10) Kallara. These centres started functioning with effect from April 1, 1961 and they are engaged in welfare activities for women and children. The activities conducted are *Balwadi* classes in all the 10 centres, craft classes in 5 centres and maternity aid in 5 centres. The paid employees include 10 Grama Sevikas 5 Craft Instructors and 5 Mid-wives. The scheme is sponsored and financed by the Central Social Welfare Board. In 1963-64 there were on an average 300 children in the Balwadis in these centres. At the same time 215 persons were attending to craft classes and 367 were being benefited from the social education programmes. In 1963-64 a total of 242 maternity cases were attended to at these centres and 3,985 prescriptions were issued. The total expenditure on all these centres came to Rs 27,706.77.

The Kottayam Mahila Samajam Garment Making Production Unit, Velloor is another institution functioning under the Association. It provides remunerative work to needy women. The Unit has 20 sewing machines and its main work is to make ready-made garments. It undertakes bulk orders from Government Departments and private institutions. On an average 15 women workers were employed in this unit in 1963-64. In 1963-64 it had an income of Rs 14,292 and an expenditure of Rs 10,438.64. The unit received a grant of Rs 11,500 from the Central Social Welfare Board for the purchase of machinery, equipment and furniture and another grant of Rs 36,100 towards working capital.

The All India Women's Association runs an Urban Welfare project in Kottayam town. This is also mainly intended for women and children. The following statistics of the number of beneficiaries from various activities of the project

will convey an idea of the work done by the project in 1963-64.

Baby creche	264 Children
Milk feeding	264 „
Rice feeding	264 „
Nursery	240 „
Craft	444 women
Balasamajam	528 children
Social education class	360 women
Library	252 „
Cooking class	360 „
Dance class	84 girls
Excursion	444 women & girls
Film show	1800 „ „

The Central Social Welfare Board sanctioned a total grant of Rs. 25,000 for this project for a period of three years from 1962-63 to 1964-65. In 1963-64 the total expenditure incurred on the project came to Rs. 8,107.48.

Another important institution under the Association is the Vanitha Kutil Vyavasaya Co-operative Society, Manganam. It was registered on July 3, 1962. In 1963-64 it had 32 shareholders and a share capital of Rs. 310. Twenty women were employed in this Society and they were engaged in the manufacture of lunch sets, hand-bags, purses with screw-pine mats etc. The society received a grant of Rs. 720 and a loan of Rs. 500 from the Industries Department.

Another important institution under the All India Women's Association is the Panachikkad Kasturba Mahila Samajam Handloom Training-cum-production Centre, Kuzhimattam. It started functioning on November 7, 1962. The centre provides facilities for teaching handloom weaving and cotton dyeing to 60 women. It has also organised a Handloom Co-operative Society for the trainees. The assets of the centre which include land, buildings, looms, furniture etc., are worth Rs. 38,786.50. In 1963-64 the centre had an income of Rs. 3,750 and an expenditure of Rs. 7,500. The Central Social Welfare Board gave a grant of Rs. 27,000 for the construction of buildings and payment of stipend to trainees. The All India Handloom Board paid Rs. 13,275 for purchase of accessories, dyeing equipments etc. Rs. 8,975 for purchase of yarn, dyes and chemicals, Rs. 9,000 for payment of stipend to trainees and Rs. 12,500 for payment of salaries to the staff. The Government of Kerala also paid a sum of Rs. 5,400 towards the payment of stipend to the trainees. The Centre was engaged in the production of bed sheets, towels, lungies, coatings, shirtings, dhothies etc. The total value of sale effected in 1963-64 came to Rs. 8,802.83.

CHAPTER XIX

PLACES OF INTEREST

Anamudi (Devikulam Taluk)

Anamudi, 2,693.98 metres high, is the highest peak in South India. The thickly wooded peak in the High Range in the north-eastern parts of the District spreads itself like a wheel round its axis. Anamudi is the elephant crown of the Anamalai, the Elephant Hills, as the High Range is often called. The Kannan Devan Hill Produce, Co., Ltd., has an Ibex Sanctuary at Rajamalai Estate on the slope of the Anamudi Hills. There are elephants and bison also in this private wild life sanctuary.

Anchanad (Devikulam Taluk)

Anchanad comprises a valley and a hill range. The name Anchanad is derived from the fact that the valley is constituted of five villages, viz., Vattavada, Kottakombur, Kanthallur, Keezhamthur and Marayur villages. There are extensive tea and coffee plantations in the valley. In Marayur village there is an extensive megalithic burial site consisting of dolmens and cists. The site is situated about 3.2 Kms. south of the 42nd Kilometre from Munnar on the Munnar-Udumalpet Road. At Kovilkadavu, on the boundary between Marayur and Kanthalur, is the Tenkassiswaram Koil dedicated to Siva. There are some lithic records here. The population of Tamil speaking persons is considerable in Anchanad.

Bharananganam (Meenachil Taluk)

Bharananganam, situated four kilometres east of Palai on the Kottayam-Erattupettah road, is one of the most important centres of Christian pilgrimage in this District. The place began to attract Christian pilgrims from all parts of India and even outside after the internment here of the mortal remains of Sister Alphonsa (1916-1946). The Sister who was a member of the Clarist Convent of Bharanangamam (Diocese of Palai) died "a victim of love and suffering" and was interned in a Chapel adjacent to the local St. Mary's Church which is almost 1000 years old. The tomb of Sister Alphonsa whom the Catholics revere as a Servant of God has developed in recent years into a great centre of pilgrimage and many stories are current about the favours received by her devotees. The Grotto of Virgin Mary kept at the entrance of the St. Mary's Church is a particularly attractive one.

In addition to the St. Mary's Church and sister Alphonsa's tomb, Bharananganam has a Krishna temple. The temple renovated in January 1965 is a modern building quite different from the usual Kerala temples. Cement concrete rather than wood has entered largely in its construction. The annual festival in this temple starts on the last day of *Dhanu* (December-January) and lasts for seven-eight days. The minor deities here are Bhagavathi, Nagakanyaka, Nagayakshi and Sastha.

Changanacherry (Changanacherry Taluk) (9° 25' North Latitude and 76° 30' East Longitude)

Changanacherry, the Taluk Headquarters and one of the four Municipalities in the District, is a place of historical, cultural and commercial importance. It has an area of 13.26 sq. Kms. and a population of 42,352 (1961 Census). The town was once the capital of the principality of Tekkumkur. The Raja of Tekkumkur allied himself with the Chempakasseri and Kayamkulam Rajas against Marthanda Varma (1729-1758). The latter sent an army against Changanacherry and annexed the territory to Travancore, the Raja having fled from his kingdom.

The Lakshmipuram palace in Puzhavathu kara within the municipal town limits is connected with the royal house of Travancore, but the beautiful palaces and forts of the old Rajas of Tekkumkur no longer exist at the place. The Tekkumkur Raja's palace known as "Neerazhi kottaram" is believed to have stood on the spot where the Taluk Office and other Government Offices are now located. The ancient temple of Kavil Bhagavathi built by one of the Tekkumkur Rajas may still be seen in Puzhavathu village. Within a few yards from the temple are located a Roman Catholic Church (Metropolitan Cathedral) and an old mosque (*Pazhayapalli*) built with assistance from the same ruler. The existence of the temple, church and mosque in close proximity to one another is proof of the communal harmony that has prevailed among the people of the area from very early days. It is said that the Tekkumkur Rajas used to witness the festivals in both the church and mosque from their palace.

In addition to the Kavil Bhagavathi temple referred to earlier, there are a few more important temples in Changanacherry town and suburbs. The Siva temple at Vazhapally is the most important of these. According to local tradition the idol of Siva installed here belonged originally to the Neelamperoor temple. It is said that the Namboothiris who left Neelamperoor to escape from the local Buddhist influences carried with them the idol of Siva and consecrated it at Vazhapally. Though the main deity is Siva, it is the worship of Ganapati consecrated in the temple premises that is more popular here. The temple contains some important lithic records of the reign of Rajasekhara Varma Kulasekhara (820-844 A. D.). It has also some fine wood carvings. The *utsavam* in this temple falls in *Meenam* (March-April) every year. The

main *Vazhipadu* here is the *appam* offered to Ganapathi. The Vazhapally *appam* is as famous as Ambalapuzha *palpayasam* and Thiruvapur *usah*. The Vettadi Bhagavathi temple situated about 2 Kms. from the Changanacherry *Kavala* (junction) on the western boundary of the municipal town is another of the important temples. It is owned by an ancient Brahmin family of the locality by name Kumaramangalathu mana. It is said that one of the elderly members of this family during a visit to Trivandrum undertook to rescue the Travancore ruler from the troubles he was experiencing from the spirits of the Ettuveetil Pillamar. Consequently, he removed the mortal remains of the Pillamar from Trivandrum and deposited them in the eastern courtyard of the above temple, where they are still kept. It may be mentioned here that it was almost a convention with the erstwhile Travancore Maharajas not to visit Changanacherry. The other important temple is the Subramoniaswami Koil, Perunnai, which is situated about 1 Km. to the west from the Main Central Road in the southern limits of the Municipal town. The annual *utsavam* here falls in *Vrischikam* (November-December) and one of its highlights is what is known as *Vallivetta*. The temple belongs to the Kidangoor Devaswom. Another important temple is the Santhanagopalakrishna temple adjacent to the Lakshmipuram palace.

There are two important Roman Catholic Churches in the town. The St. Mary's Metropolitan Cathedral, to which reference has already been made is famous for its tower. One can have a beautiful view of the paddy fields of Kuttanad and the whole of Changanacherry town and its suburbs from the top of this tower. This church has often the unique privilege of having the Archbishop himself to lead the prayers. There are two *Perunnals* here which fall in the months of August and January. The Parayil Palli is another Catholic Church situated about 1.5 Km. east from the *kavala* on the Changanacherry-Vazhoor Road. A large number of people assemble in this church during the festival which falls on the 8th of December. The sale of furniture, household utensils, vegetables etc., is an important feature in connection with the festival. The palace of the Archbishop of Changanacherry is situated on the way from the *kavala* to this church.

There are two important mosques in the town. The Pazhayapalli, referred to earlier, is situated about 1 Km. to the south-west from the *kavala*. It is one of the most important of its kind in Central Travancore. The Chandanakudam festival in this mosque which falls on the 10th and 11th of *Dhanu* (December-January) every year attracts enormous crowds from all parts of the locality. Caparisoned elephants take part in the processions held in connection with the festival and several drum-beaters also take part in it. The processions start from such key centres of the town as the Market, the Nair Service Society Headquarters and the Taluk Office. An outstanding item of this process is the playing of Nagaswarams by experts

in the field. The procession ends with the display of fireworks. In addition to this mosque, there is another one within a short distance of the junction on the eastern side of the Main Central Road. The *Chandanakudam* festival here is also held on the same days as in the Pazayapalli.

Another notable institution of the place is the Anandasramam in Vazhapally which is an important centre of the social and religious activities of the Ezhavas. The institution founded by Sri Narayana Guru was christened Anandasramam by Mahatma Gandhi more than four decades ago. The Samadhi of Swami Satyavrata, a Nair disciple of Sri Narayana Guru, is located here. The Asramam and its institutions which include a Lower Primary School, a Public Library, a Guru Mandiram and a Cemetery are located in a 5 acre plot. The Asramam building was erected by Swami Narayana Tirthar.

One of the biggest markets in Kerala State functions in Changanacherry. It was formally opened in 1805 by Velu Thampi Dalava and it is interesting to note that the first item of merchandise transacted here was an elephant. The centenary of this famous market was celebrated in 1905 in a fitting manner. All kinds of hill produce, vegetables and fish arrive in the Changanacherry market on Wednesdays and Saturdays. These are brought by hundreds of bullock-carts, lorries and boats of different sizes. Tapioca and fish are sold here in large quantities. Merchants from various parts of the State come here regularly to buy them after which they are sent to Alleppey, Kottayam, Ernakulam and Trichur by water, rail and road. The completion of the Changanacherry-Alleppey road and the canal which run parallel through Kuttanad has added to the commercial importance of Changanacherry by reducing the distance between Changanacherry and Alleppey by more than 24 Kms. Moreover, one can reach Alleppey now within an hour by boat through the newly constructed canal. The towns and suburbs have also acquired industrial importance in recent times. In Vazhapally is located the Ruby Rubber Works. The place is also famous for the manufacture of bronze-ware and metal works. About 3 Kms. east of Kavala is situated the Industrial Estate for rubber and plastic based industries.

Changanacherry has a cosmopolitan population. The Nairs, Syrian Catholics and Muslims are the three predominant communities in the town. The Nair Service Society founded in 1914 and the Syrian Catholic Archdiocese of Changanacherry have both their headquarters in this town. There are a number of educational institutions in Changanacherry. The St. Berchman's College, Changanacherry are owned by the Archbishop of Changanacherry. The Nair Service Society has under its management the Nair Service Society College, Changanacherry and also a Training College. The Nair Service Society Medical Mission has a branch at Changanacherry.

The civic affairs of the Changanacherry town are managed by a Municipality. The Municipality maintains a Municipal

Park in front of the St. Berchman College. There are also a Police Station, a Head Post Office, a Telephone Exchange, a Railway Station and a Boat Jetty here. Changanacherry has a Rest House by name Kuttanad House maintained by the P. W. D.

Chitrapuram (Devikulam Taluk)

Chitrapuram is a picturesque new town which has taken shape in the High Ranges in the wake of the execution of the Pallivassal Hydro-Electric Project. It is located about 11.3 Kms. west of Munnar and 4 Kms. from the Power House of Pallivassal. It is 1182 metres above sea level and is surrounded on all sides by hills and valleys and thick forests which provide a very attractive scenery. There are a Hospital and a Police Station at Chitrapuram. The offices and the quarters for the staff employed in connection with the Pallivassal Hydro-Electric Project are located at the place. It may also be mentioned here that Chitrapuram has been named in honour of Sri Balarama Varma Chitra Thirunal, the last Maharaja of Travancore, who visited the place on the 1st March 1935.

Devikulam (Devikulam Taluk) (10° 00' North Latitude and 77° 05' East Longitude)

Devikulam, often called the "Queen of Hill Stations" consists of two parts—the old and the new. The old Devikulam lies 16 Kms. south-east of Munnar and is connected with it by a motorable road. The journey en-route is a fascinating one in so far as it feasts the eye with an enchanting view of colour and scenery. The place takes its name from an idyllic lake situated in old Devikulam at a distance of about 5 Kms. from the new township. Legend has it that Sita Devi took her bath in this lake. A tree believed to be of great antiquity may be seen inside this lake. Old Devikulam was formerly the headquarters of the Cardamom Department, but the commercial activities have since shifted to Munnar and the place now remains a sanctuary for the lover of nature. Ideal weather prevails here throughout the year.

The new Devikulam is the headquarters of the Devikulam Taluk and is situated in a valley near the summit of the High Ranges. The Sub Collector of the Devikulam Revenue Division has also his headquarters here. There is a Sastha Temple at the place which is under the control of the Travancore Devaswom Board. There is an old Palace at Devikulam which is now being used as the Rajbhavan for the accommodation of the Governor and distinguished guests during their visit to the High Ranges. There is also a Travellers Bungalow at the place which is under the control of the P. W. D.

Edapalayam (Peermade Taluk) (8° 55' North Latitude and 77° 05' East Longitude)

Edapalayam stands in the midst of the beautiful forests surrounding the Periyar Lake. A Tourist Bungalow is being

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run here by the Tourist Department. The place has a lovely climate and charming environment and affords facilities for excellent sport. The Edapalayam Bungalow is surrounded on three sides by a 4 metre deep trench while the front rises steeply from the shores of the lake. Situated in the heart of the catchment area of the Periyar Lake, the place forms an excellent base for the lake which extends to about 2.7 sq. Kms.

Erattupetta (Meenachil Taluk) (9° 40' North Latitude and 76° 45' East Longitude):

Erattupetta, 11 Kms. east of Palai, is situated at the confluence of two tributaries of the Meenachil river. There are two bridges here opened in 1957 over the respective tributaries in order to facilitate easy communication between Erattupetta and other parts of the District. The place is of considerable commercial and religious importance. In ancient days Erattupetta flourished as a centre of caravan trade with Tamilnad and it continued to be so till the 18th century. There is a sizable Muslim population here and hence there are three mosques. The *Chandanakudam* festival celebrated in the new mosque (*Puthenpalli*) in *Kumbham* (February-March) is an important local festival of the Muslims. The only notable Hindu temple of the place is an *Ammankoil*.

Erattupetta has become famous as a centre of Christian pilgrimage because of the location here of the magnificent Aruvithura Church dedicated to St. George, the warrior saint. The annual *Perunnal* in this church which is celebrated on April 22, 23 and 24 by all people of the locality, irrespective of creed or community, attracts at least a lakh of pilgrims from all parts of Kerala. This church is said to be the one which gets the largest income in cash by way of *Nercha* among the churches of Kerala during the festival season. At least a sum of Rs. 50,000 is obtained by way of *Kanikka* alone during the *perunnal* days. It is the common belief among the Christian devotees who throng to the place that participation in the *Perunnal* at Aruvithura would help to exorcise evil spirits and cure patients complaining of ailments due to alleged poison. Many stories are current among the local people about the miraculous recovery of persons who were suffering from incurable diseases, after praying in the St. George's Church at Aruvithura.

The Aruvithura church is associated in local Christian tradition with St. Thomas, the Apostle. The Christians of the locality claim it to be one of the seven churches founded by the Apostle in 52 A. D. It is said that St. Thomas came to this place which was known as "Erapuzha" in ancient days and that he converted several Hindus to the religion of Jesus Christ. But this view is not accepted by all writers. This church was founded in 500 A. D. Till the 16th century it was dedicated to St. Mary. It came to be called St. George's Church after the image of St. George. The Church was rebuilt in 1942 at a cost of Rs. 4 lakhs, and it is today a fine specimen of modern

ecclesiastical architecture. There are some lithic records in Vattezhuthu which are preserved on the walls of this church.

Erattupetta has a bi-weekly market which is held on Wednesday and Saturdays.

Erumeli (Kanjirapally Taluk) (9° 25' North Latitude and 76° 50' East Longitude)

Erumeli, about 13 Kms. South-east of Kanjirapally, is an important centre of Hindu pilgrims in this District. Situated on the Manimala river, the place is noted for its famous Sastha temple and the nearby "Vavar Mosque". Thousands of Hindu pilgrims who go to Sibarimala year after year for the *Makaravilakku* come to Erumeli before they start on the arduous journey through dense forests towards the Sastha shrine at the hill top. The *Petta thullal* of the *Kanni Ayyappans* (i.e., those pilgrims who go to Sabarimala for the first time) which takes place at Erumeli in early Dhanu (December-January) is an important festival connected with the annual pilgrimage to Sabarimala. The pilgrims get all the vegetables and other essential items for the trek from the local fair at Erumeli. These things are tied up in bundles and suspended from both sides on a pole carried on the shoulders of the pilgrims. They then apply green, yellow and red paints lavishly all over their body and take a *pradakshinam* (circumambulation) around the Sastha temple dancing and chanting with intense devotion '*Ayyappan Thinthakathom*' '*Swami Thinthakathom*' etc. Musicians playing on instruments are also engaged by the parties who take part in the dance. This is the famous *Petta thullal* which is the highlight of the festival at Erumeli. According to tradition the ceremony commemorates the arrival of Sri Ayyappan at Erumeli at the head of his army before commencing his march against the Marava contingents of Udayana who resided in the fortress of Kari-mala. The *Petta thullal* is usually conducted on a group basis by the Ayyappans coming from different parts of the State. The last of the *Petta thullals* are conducted by those coming from Ambalapuzha and Alangad *yogams* respectively. By convention the former would start their *thullal* only if a *Krishnaparunthu* (Kite) is sighted in the sky. It is the firm belief of the devotees that Sri Krishna himself arrives at Erumeli on Garuda to witness their celebration. Similarly, the Alangad group would start their *petta thullal* only after they have sighted a star in the sky at noon. In addition to the above, there are also special *Petta Thullal* organised by such parties as the Devaswom, the Police, etc. It is a unique peculiarity of the celebrations at Erumeli that the Ayyappans also visit the local 'Vavar Mosque' where the *Chandanakudam* festival is also held on the same days. The pilgrims pay

homage in the form of *Dakshina* to Vavar, who is believed to have been a close friend of Ayyappan. An old Muslim receives the gifts and gives pepper as *prasada*. It may be mentioned that at Sabarimala too a representative of Vavar receives *dakshina* from the pilgrims. A visit to the Vavar mosque at Erumeli and offering of *Dakshina* are obligatory for the Kanni Ayyappans who go to Sabarimala. The Erumeli festival is thus unique in so far as it assumes a non-communal and national character, with members of all creeds and communities participating in it. It may be no exaggeration to say that in other part of India can one find such a spectacular demonstration of communal harmony as at Erumeli on the occasion of the *Petta thullal*.

Ettumaur (Kottayam Taluk) 9° 40' North Latitude and 76° 30' East Longitude)

Ettumanur, 13 Kms. north of Kottayam town on the Main Central Road, is one of the most important centres of Hindu pilgrimage in this District. The famous Siva temple situated here is visited by Hindu devotees in their thousands from all parts of the State throughout the year. There are many legends about the origin of this temple. According to local tradition the site where the temple now stands was once a jungle known as Harinapuram and a Siva *lingam* consecrated here by Khara lay hidden in this jungle for hundreds of years until at last it was discovered and duly installed in a temple at the present site by Vilvamangalam Swamiar. It is said that the original temple was a small one and the locality around it was thinly populated. The deity of the temple was dreaded by the people. The erection of a second temple dedicated to Sri Krishna close by, however, appeared the deity in the former temple and people began to settle in the area in larger numbers. The temple and the surrounding areas prospered in course of time. It may be mentioned that in addition to Siva and Krishna, there are also deities of Bhagavathi, Sastha, Ganapathi, Dakshinamurthi and Yakshi in the Ettumanur temple.

The temple of Ettumanur is a good specimen of the indigenous Kerala style of temple architecture and it has been assigned to the sixteenth century on the evidence of an inscription in its central shrine which records that repairs to the temple were effected in 1542 and the consecration ceremony was performed in 1545. "Its central shrine is circular with copper plates with a *stupa* of copper gilt at the top. In front of the *garbhagraha* is a raised platform, the *mukhamandapa* (front pavilion), square in form, where the Brahmins sit for prayer and perform prostrations and where the image of Nandi (bull) is placed. Beyond it are corridors or pillared halls all round the *garbhagraha* and the *Mukhamandapa*. The whole edifice is rectangular in shape, and on its

exterior has columns of lamps fixed on a wooden frame work covered with metal trelliswork. Just beyond the flag-staff, or in a line with it, and a few feet away from the place for lights, is the circumambulatory path, paved with stones, for taking the image of the God in procession round the temple building and for the worshippers to take their devotional rounds. Mid-way between the flag-staff and the *gopura* is a covered shed known as the *anakottil* where the elephants take their stand in a line on occasions of temple procession".¹ The temple also contains some notable examples of wood sculpture, in which the figures have a dignified look. The whole of the *Ramayana* story is beautifully carved round the central shrine. There are also scenes from the *Santanagopala*, *Krishnaleela* and the *Bhagavata*. The Ettumanur carvings noted for their singularly clear-cut and beautiful style show the Kerala craftsmen at their best. In addition to wood carvings, there are mural paintings on the *Gopuram* of the temple. One of these has for its theme Siva as Nataraja trampling under foot the spirit of evil represented by a demon. Dr. Coomaraswamy has called this "the only old example of Dravidian painting". It is 3.6 metres in length and 2 metres in height. Among the other mural paintings may be mentioned those depicting *Garuda*, *Ananthasayana*, *Darika Vadhom*, Ettumanur deity, *Balagopala*, etc. Both the wood carvings and the mural paintings may also be assigned to a period not later than the 16th century.

The Ettumanur temple possesses a great wealth of jewellery of which "seven and a half golden elephants" (*Ezhara Ponnana*) and a bunch of arecanuts made of gold are the most notable. The deity, it is believed, is fond of silver and gold as distinguished from the one at Vaikom whose delight is in the feeding of Brahmins. Worship in this temple is believed to be efficacious in removing the influence of evil spirits, and in curing physical ailments considered to be incurable. A princess of the Zamorin's family by name Madhavi who had an incurable ulcer in the head and got cured by the favour of the deity of Ettumanur made an extensive grant of landed properties for a special daily *puja* in this temple. This *puja* which is known as *Madhavipalli puja* is still a daily feature. It is said that the properties gifted by Madhavi were confiscated to the State by Marthanda Varma, of Travancore (1729-1758) when the principality of Vadakkumkur was annexed by him and that the royal family was subjected to untold sufferings in later years as a result of this action. The *Ezhara Ponnana* and the bunch of arecanuts in gold were offered to the temple in 964 K. E. (1789) by the Dharma Raja (1753-98) as an act of atonement for the sinful action of his predecessor. The bronze figure of *Vrishabha* (Bull), filled with grains of paddy inside, kept in the *Mandapam*

1. *Arts and Crafts of Travancore*. Cousins and others, pp. 38-39.

of the temple was donated by a Chempakasseri Raja who got a chronic stomach ache cured by the favour of the Ettumanur deity. The big lamp kept inside the temple at the entrance was donated long ago by a poor but devout Moosari and it has been kept burning round the clock since then with the oil offered for the purpose by the visiting pilgrims. The black substance resembling eye tex obtained from the upper portion of the lamp is very much in demand among devotees for application in their eyes for treatment of eye diseases. Another wonder associated with the temple is the granite *Nagaswaram* which can successfully be played by expert Nagaswaram players.

The annual *utsavam* in the Ettumanur temple falls in *Kumbham* (February-March). It lasts for ten days, the last day i. e., *Arat* falling on the day of Thiruvathira asterism. The *Sankrama* day in *Makaram* (January-February) the Vishu day in *Medam* (April) and the *Sankrama* day in *Karkadakam* (July-August) are also important days in this temple when the influx of pilgrims is great.

Ettumanur is an important centre of communication in the District as several roads meet here. It is also a Railway Station on the Kottayam-Ernakulam Railway line. An Industrial Estate and a Government of India Production Centre are located at Ettumanur.

Kaduthuruthi (Vaikom Taluk) (90° 45' North Latitude and 76° 30' East Longitude)

Kaduthuruthi is situated on the way from Ettumanur to Vaikom and is almost equidistant from both the places. The place was once the capital of the Rajas of Vadakkumkur and it is celebrated in the famous Malayalam poem, *Unnuneelisan-desam*, composed by an anonymous author in the 14th century. The remains of the palace of the Vadakkumkur Rajas may still be seen here. The place is believed to have been named after the idol of Siva consecrated in the local temple situated on a hillock. According to tradition the idol of Siva in Kaduthuruthi temple was installed by Khara simultaneously with those of the temples of Vaikom and Ettumanur. But as he held the other two idols in his hands, he held this in the mouth and as he wished to instal the three idols at the three spots at the same auspicious moment, he placed it on the appointed spot directly from his mouth and hence the place came to be called '*Kadichiruthi*'. The present Kaduthuruthi is believed by some to be a popular modification of this. The place was regarded as polluted on this account. There is yet another legend in regard to the origin of the name of this place. Kaduthuruthi is believed to have been an island (*turuthu*) in the sea (*kadal*) which extended to the surrounding places in by-gone days. After sometime the sea receded and the place became part of the mainland. This would make Kaduthuruthi a compound of the words *Kadal* and *thuruthu*.

The Kaduthuruthi Siva temple is usually visited on the same day by those who worship at Vaikom and Ettumanur. The *Sivarathri* day in *Kumbhom* (February-March) is particularly important here. The festival at Kaduthuruthi Temple is run in *Dhanu* (December-January) concluding on 'Thiruvathira'. It lasts for ten days. Mention may also be made here of the temple dedicated to Aditya, the Sun God, at Adityapuram near Kaduthuruthi. As temples dedicated to the Sun God are very rare in the country, the Adityapuram temple assumes particular importance. The first and last Sundays in Vrischigam (November-December) and Medam (May-June) attract huge crowds to the Adityapuram temple. A *Bhajana Madhom* is attached to the temple.

Kaduthuruthi is an important Christian centre from very early days. There are two Syrian Catholic Churches here. The older church known as Valiapalli comes within the jurisdiction of the Kottayam Diocese and belongs to the Sudhists. It is believed to have been founded about 500 A. D. There are some interesting stone sculptures in this Church. At the very entrance to the Church compound may be seen a huge Cross carved out of single rock—perhaps one of the biggest of its kind in the world. The 2.44 metres high granite platform on which the Cross is erected contains several interesting carvings of images and scenes which are reminiscent of their counterparts in Hindu temples in point of style and design. There are scenes of hunting, fighting and dancing which have been vividly depicted in stone on this platform. The figures of Virgin Mary and Infant Jesus have also been carved beautifully in stone. In the premises of the church may be seen several epitaphs and on its walls several old *Vattezhuthu* inscriptions. There are two Persian Crosses fixed on the walls of this church. There is a huge bell here which was installed as early as 1647. The sound of this bell could be heard even in such distant places as Kuravilangad, Kudamalur etc. In spite of its continued use for over three centuries one does not find any traces of wear and tear in this bell even today, though the 'tongue' had to be changed frequently. The alloy with which the original bell was made is still a mystery. The church itself seems to have been rebuilt in 1599 during the period of Portuguese ascendancy over the affairs of the Malabar church. The Kaduthuruthi church was visited by Alexis De Menezes in the course of his tour of important centres of Kerala to extirpate Nestorian heresy and to Latinise the Malabar church.

The other Church at Kaduthuruthi is known as Putiyapalli. It is also called "Thazhathupalli". Established in 1009 A. D. it is dedicated to St. Mary and comes under the Diocese of Palai. There is also another important church at Muttuchira in the neighbourhood. Established in 1400, this church also belongs to the Diocese of Palai. There are some inscriptions and other items of archaeological importance in this church.

Kanjirapally (Kanjirapally Taluk) 9° 30' North Latitude and 76° 45' East Longitude)

Kanjirapally, the headquarters of the Kanjirapally Taluk is situated about 38 Kms. from Kottayam on the Kottayam-Kumili Road. In the past it formed part of the old principality of Tekkumkur. Kanjirapally was for centuries a channel of trade and communication between the neighbouring District of Madurai and Kottayam District. The trade potential of the area attracted to Kanjirapally the Chetti community of Tamilnad in large numbers. The members of this community co-operated with the local Vellalas and built, with the consent of the Tekkumkur rulers, the local Ganapathiar Koil which is now in ruins.

The most important Hindu temple in Kanjirapally is what is called the Madurai Meenakshi temple. It is about 400 metres north of the town situated on the Kanjirapally-Erattupetta Road. The annual *utsavam* here falls in the month of Dhanu (December-January). The *Sasthampattu* which is held on the day of *Uthram* asterism in Meenam (March-April) is another important celebration in this temple. The Ganapathiar Koil, referred to above, is no longer a place of worship as it is in ruins. Its relics may be seen at the place. The dilapidated *Sree Kovil* and the fallen granite pillars with interesting carvings cannot fail to excite the curiosity of any visitor. Very near to the Ganapathiar Koil is another shrine dedicated to Sastha which is also in ruins. Two important temples in the vicinity of Kanjirapally are the Siva temple at Chirakadavu and the Bhagavathi temple at Cheruvalli. Both are visited by the pilgrims to Sabarimala. The *Mandalam* festival in the latter during the month of Dhanu (December-January) is particularly important. Yet another temple is the Mahakalipara temple at Themapalakad which is about 5 kilometres to the north of the town. The *Utsavam* here falls in the month of *Meenam*.

Kanjirapally is an important centre of the Syrian Catholics. In early days the Aruvithura Church at Erattupetta catered to the spiritual needs of the community. In 1449 A. D. was established the old church at Kanjirapally which is now known as the Pazhayapalli. It is believed to have been set up with the assistance of the Tekkumkur Rajas. One of the richest churches of the State, it has been constructed exclusively with granite stones and is even today a striking monument of old style ecclesiastical architecture. The other church established later is known as *Puthenpalli*. The *Perunnals* in both the churches attract Christian devotees from all parts of the Taluk.

Kanjirapally is one of the centres in the District which has a sizeable Muslim population. It is believed that the first batch of the Muslim immigrants reached the place from Madurai in the latter half of the 14th century. This was followed

by the arrival of fresh batches from other centres as well. While the Christians concentrated in the area known as 'Angadi', the Muslims concentrated themselves at 'Pettah'. There is a mosque at the place. An Arabic College is also functioning nearby where students are given free boarding, lodging and tuition.

The annexation of Tekkumkur by Marthanda Varma in 1749 brought Kanjirapally within the orbit of the State of Travancore. The rise of Alleppey towards the end of the century and the opening of the Quilon-Shencotta Road diverted the trade of this area through new channels and the commercial importance of Kanjirapally steadily declined. However, the opening of the Kottayam-Kumily Road and the establishment of Tea-cum-Rubber plantations in the area in the 19th century brought a large population to Kanjirapally. The formation of the Kanjirapally Taluk in 1956 with Kanjirapally as headquarters and the establishment of the Kanjirapally N. E. S. Block in 1957 also helped to invest the place with additional importance.

In addition to the Taluk Office, there are a few other public offices also in Kanjirapally or suburbs. The District Educational Office is located in nearby Ponkunnam. Along the courts may be mentioned the Munsiff Court and the Sub-Divisional Magistrates Court, the Labour being at Ponkunnam. There is a Rest House at Kanjirapally under the Public Works Department. A Telephone Exchange functions at Ponkunnam. There is a Junior College, and an English Medium School at Kanjirapally. The Janatha Arts Club, a local cultural society, runs a private museum. The Abhaya Bhavan is an important social service institution where old and infirm men who are in indigent circumstances are accommodated and looked after. There is public market at the place.

Kidangoor (Meenachil Taluk) 9° 35' North Latitude and 76° 35' East Longitude).

Kidangoor, situated midway between Palai and Ettumanur on the Meenachil river, is famous for its temple originally belonged to the *Naduvazhi* known as *Manayil* Adiyodis who had Subramonia as their family deity. It is said that when the Namboothiris of Panniyoor Gramam settled at Kidangoor they sought to acquire the temple and its surrounding areas. As the Adiyodis had to leave Kidangoor for North Kerala for political reasons, the administration of the temple and the surrounding areas came to be vested fully in the hands of the Namboodiris. It is said that a gallows had been installed at a place called Kavalipuzha very near to the temple on its eastern side in order to hang those persons who had been sentenced to death on murder charge. The Kidangoor temple is still under the management of Namboothiri families. The most important festival here is *Thypooyam* in the month of

Makaram (January-February). The *Kavadi Abhishekam* is an important offering on this day. The annual *utsavam* in this temple takes place in *Kumbham* (February-March) and the *Kavadi Abhishekam* is held on this occasion also. The *Koothambalam* in the Kidangoor temple is considered to be one of the best in the whole of Kerala. It is a fine piece of architecture and is decorated elaborately with many a wooden carving of puranic deities and themes. A *Yakshi* is supposed to be residing within this *Koothambalam* and the local tradition is that she came along with the timber brought for the construction of the temple.

There is also another temple known as *Sasthamkotta* at Kidangoor on the northern bank of the Meenachil river. The deities enshrined here are *Guruvayur Appan* and *Sabarimala Sastha*. The site where the temple now stands was known as *Chalaikunnu* in olden days. It came to be called *Sasthamkotta* after the consecration of the *Sastha* image in this temple. It is believed that the oil used for the *Abhishekam* of the deity here is a sure remedy for rheumatism. The temple is under the control of the Devaswom Board.

Kottayam (9° 35 North Latitude and 76° 30 East Longitude):

Kottayam, the District Headquarters, enjoys among the towns of Kerala, a measure of importance far in excess of its actual size or population. The area of this municipal town is only 16 square Kms. and its population 52,685 according to the 1961 census. According to the provisional figures of 1971 census, Kottayam occupies the seventh position among the major towns of Kerala with a population of 59,718. It is said of Kottayam that it is "a city that is set on a hill and as such cannot be hid". Geographically, it is situated in the centre of a region which provides access to some of the most attractive tourist centres in the High Ranges. There are also several places in and around the town which offer to a visitor the most exciting view of the rising mountains in the east and the watery valleys in the west. The Meenachil river flows along its northern bank and then takes a turn to the south to border its western boundary in Thazhathangadi. In the south also the town has a watery boundary in the Kodur river which is a branch of the Meenachil river. The Meenachil river has been of great navigational advantage to the town for centuries, being connected to the ports of Alleppey and Cochin through the Vembanad lake. It has in no small measure contributed to the growth of Kottayam as a commercial centre. It would be no exaggeration to call Kottayam the gift of the river Meenachil.

The antiquity of Kottayam is a matter of conjecture. There is a view that in ancient days it was a sea-port town from where the pepper, produced in Palai and other places in Meenachil, made its way to the countries of the west. Some

scholars have sought to identify the Koreoura of Ptolemy with Kottayam and his Bakare with the present Vayaskara landing place, though there is not much evidence in support of this view. It is suggested that the Arabian sea receded to its present boundary in the course of several centuries. If this assumption is correct, Kottayam must have been a centre of maritime trade and a meeting place of ancient civilisations. The town was undoubtedly the meeting ground of all the three great religions of the land, viz., Hinduism, Christianity and Islam as is evidenced by the large number of ancient temples, churches and mosques in the area. The existence of the religious shrines of different communities in close proximity to one another is proof of the glorious tradition of religious toleration and communal harmony that prevailed in this part of the country from time immemorial. The Rajas of Tekkumkur who had their capital for a time in Kottayam before the annexation of the kingdom to Travancore by Marthanda Varma (1729-1758) were great champion of religious toleration.

There are about 50 temples in and around Kottayam town. Side by side with the remnants of the old palaces and forts of the Tekkumkur Rajas at Thazhathangadi in the western outskirts of Kottayam may be seen the ancient Thaliyil Siva temple. Within the premises of this temple is the Cheruvallikavu wherein the family deity of the Tekkumkur Rajas is enshrined. The most important of the temples in the town is the Thirunakkara Mahadevar temple, a separate account of which is given elsewhere in this section. To the east of the Thirunakkara temple is the Keralapuram temple dedicated to Krishna and to its south is the Palliputhukavu Bhadrakali temple at Kodimatha. The *Patham Udayam* in *Medam* (April-May) is the chief celebration of the latter temple. The *Kumbha kudam* and *Garudan Thookkam* are the two important festivities connected with this celebration. To the north-east of the Thirunakkara temple is the Iranjal Devi temple where a *Yakshi* too is enshrined. The Ambalakadavu Devi temple where the *Arat* of the Thirunakkara deity is held is another notable temple in the town. The Mariapally Mahadevar temple situated south-east of the Thirunakkara temple was for long under the joint trusteeship of the chiefs of Tekkumkur, Vadakkumkur and Edapilli. In addition to Siva consecrated by the Tekkumkur chief, there are also the idols of Krishna and Ganapathi here consecrated by the Vadakkumkur and Edapilli chieftains respectively. About a mile to the west of the Thirunakkara temple is the Eruthikkal Karthiayani temple. An idol of Sri Krishna has also been installed here by a Tekkumkur Raja and the main *utsavam* in this temple is the *Ashtami Rohini* in *Chingam* (August-September). The Thiriguthamapuram Sri Krishna temple situated on a small hillock to the east of the Thirunakkara temple is also famous for its annual *Ashtami Rohini*

celebration. The Bhadrakali temple at Parappadam, two miles west of Thirunakkara, is also an important temple of the place. The annual festival here in Meenam (March-April) lasts for eight days, the *Arat* being held on the day of *Bharani* asterism. The Sri Venkateswara Swami temple belonging to the Gowda Saraswaths in Thazhathangadi and the temple founded by Sri Narayana Guru in Nagambadam may also be mentioned among the notable temples of the area.

In view of the special importance of the Thirunakkara temple and its annual festival to the public of Kottayam, a separate account of the same is given here. The origin of this temple, situated in the heart of the town, is lost in obscurity. According to tradition it was built by one of the Tekkumkur Rajas who was a devotee of Siva. The story goes that the Raja used to visit the temple of Vadakkunnathan at Trichur every month. When he became old, he found it difficult to travel all the way to distant Trichur every month for worship. Therefore the chief prayed to Siva to take his life so that he might not have to remain without worshipping Him at Trichur. Siva heard his prayer and appeared before him at night and said that He would visit him at Nakara Kunnu (Nakara Hill), Kottayam. The king then built the temple on the Nakara Hill and consecrated in it a Siva *Lingam* which had appeared there in the meantime. In course of time, Nakara became Thirunakkara. The Thirunakkara temple has been built in the indigenous Kerala style of architecture. The *Koothambalam* here is one of the best in the whole State. The temple has also a wealth of painting on its walls. These were repainted in 1956 and kept afresh.

The Thirunakkara shrine attracts a very large crowd of devotees for its annual festival, *Surya Samkramam* or *Phalguna utsava*, which comes in the third week of March every year. A Hindu Convention and an Art Festival form integral parts of this festival. Politicians, religious dignitaries and artistes take part in the various programmes. Selected representatives of every conceivable fine art in South India assemble here in pleasant harmony. One can hear and see the best among the *Nagaswara Vidwans*, veteran *Kathakali* players, *Thullal* artistes and the Karnatak musicians who converge here. The beautiful art gallery specially erected in front of the temple and illuminated with multi-coloured bulbs for the occasion itself presents a pleasing spectacle to the eyes. For those seeking peace and solace, there are learned religious discourses. Recitations from the *Geetha*, *Ashtapadi*, the *Bhagavatha* and the like are a regular feature. The Municipality of Kottayam has been conducting an All-India Industrial Exhibition every year in connection with the Thirunakkara temple festival. A welcome feature of the festival is the whole hearted co-operation it receives from the public of Kottayam, irrespective of caste or religion.

In addition to temples, there are several churches and mosques too in and around Kottayam. The town has been the headquarters of more than one section of the Syrian Christian community from very early days. Some of the ancient churches of Kottayam are of special interest to the visitors. The *Valia palli* in Thazhathangadi belonging to the Knanaya Orthodox Syrians which was set up in 1550 in the days of the Tekkumkur Rajas is famous for its Persian Cross and the Pahalavi inscription on it. The Chingavanam Bishop of the Orthodox Syrian Church has jurisdiction over this church and 34 other churches spread all over Kerala. Mention may also be made of the *Cheriapalli*, the Old Seminary, the Mannarkad and the Puthupalli churches which too belong to the Orthodox Syrians. The chief ecclesiastical dignity of the Orthodox Syrian Church, H. H. the Catholicos of the East, has his headquarters in the Devalokam Aramana at Muttambalam in Kottayam. The Catholic Church has its ancient churches in nearby Kudamalur and Athirampuzha. Two of their Diocesan Bishops, viz., those of Kottayam and Vijayapuram, have their headquarters in Kottayam. The Cathedral of Christ the King in Kottayam town belongs to the Knanaya Syrian Catholic Bishop of Kottayam and the Cathedral of the Immaculate Heart of Mary, Vimalagiri, Kottayam belongs to the Latin Bishop of Vijayapuram. The Archbishop of Changanacherry, who follows the Syro-Malabar rite, has under him the Kottayam Lourde's Church near the Collectorate and another church at Thazhathangadi. The Marthoma Syrian Church has its Jerusalem Church and the Mar Thoma Seminary here. The Bishop of the Church of South India has his palace and the Central Cathedral in Kottayam.

In addition to Hindu temples and churches, Kottayam has its mosques as well. The old mosque in Thazhathangadi had its origin in the days of the Tekkumkur Rajas. It stands in the vicinity of many temples and churches as a symbol of communal harmony.

It was with the advent of the Church Mission Society Missionaries in the early 19th century that Kottayam entered an era of educational progress and enlightenment. With the possible exception of Calcutta, English education started in Kottayam much earlier than in any other place in India. It was the C. M. S. School started by the Missionaries in 1816 that developed into the present C. M. S. College. The C. M. S. Press established in 1820 is one of the oldest of its kind in the State. The educational and cultural progress of Kottayam has been spectacular since then. There are eight High Schools and a Poly-technic here. In addition to the C.M.S. College, there are the Bishop Chulaparamba Memorial College for Women, the Mar Basaleous Training College, the Mar Basaleous Memorial Junior College and the Nair Service Society Co-operative College in Kottayam town. A Govern-

ment Medical College is functioning in its suburbs. The Kottayam Public Library, established in 1881, is one of the oldest and the best in the State and it is housed in an imposing building in memory of the late A. V. George, a former Municipal Chairman and philanthropist of Kottayam. Kottayam has also been a rendezvous of literary men and scholars. The *Basha Poshini Sabha*, the earliest organisation of the writers in the Malayalam language, was started here in the latter half of the 19th century. Among the well-known writers and poets of Kerala associated with Kottayam special mention may be made of Kerala Varma Valia Koil Thampuran, Kandathil Varghese Mappillai, Panthalam Krishna Varrier, Kattakayam Cherian Mappilla and Kottarathil Sankunni. The Sahitya Pravarthaka Sahakarana Sanghom, one of the best run-Co-operative Societies in the State, has now its headquarters at Kottayam. An organisation of the writers of Kerala, it runs the National Book Stall, Kottayam and renders great services to the Malayalam language through its manifold activities. Today Kottayam has the unique distinction of publishing 8 dailies and a dozen of weeklies and periodicals. The *Malayala Manorama* deserves special mention in this context in view of its large circulation.

Kottayam has a proud tradition in the field of medical treatment. Vayaskara Moose and Olassa Moose, two of the *Ashta Vaidyans* of Kerala, belong to this place. There is a well-equipped Government Hospital in the town, viz., the Medical College Hospital. There are also about a dozen well-run private dispensaries in Kottayam and suburbs. The town has also an Ayurvedic Hospital and a Homoeopathic Dispensary run by the Government.

Kottayam is a key centre in the communication system of the State. It is very conveniently situated commanding the route to the High Ranges. It is connected to the northern and southern parts of Kerala by road and rail. The Ernakulam-Trivandrum rail route passes through Kottayam. There are regular bus services from Kottayam to all parts of the District and outside. There are also regular boat services between Kottayam on the one side and Quilon, Alleppey, Vaikom, etc., on the other. Kottayam has a Head Post Office and Telephone Exchange. It is estimated that one out of every eight houses in the town owns its own telephone. Kottayam has a Tourist Bungalow, a Rest House and a Municipal Sathram.

Kottayam is also a commercial centre, one of the biggest markets in the State being in this town. The Thirunakkara market situated in the heart of Kottayam is held on Mondays and Thursdays. The main industries in the town and suburbs are cement, plywood, rubber and printing. There is a cement factory at Nattakam nearby. The Malayala Manorama Press, Kottayam, and the India Press, Nattakom, belonging to the Sahitya Pravarthaka Co-operative Society are important printing concerns of Kottayam.

The civic affairs of Kottayam town are managed by a Municipality. The Municipality maintains a public garden in front of the Municipal building and 3 parks in other parts of the town. The Thirunakkara Maidan is the nerve centre of all public activities in the town. The M. C. Mathew Memorial Gate built at a cost of Rs. 25,000, the Hassan Rowther Memorial Gate built at a cost of Rs. 15,000 and the Mannom Sathabhisheka Smaraka Mandapam built at a cost of Rs. 23,000 in the Thirunakkara Maidan are among the public endowments made to the Municipality. The industrial, agricultural and art exhibition held every year under the auspices of the Municipality so as to coincide with the Phalguna festival in the Thirunakkara temple is held in this Maidan. Among the other festivities of Kottayam may be mentioned the *Chathayam Vallamkali* (boat race) at Kumarakom and the *Uthrittathi Vallamkali* at Thazhathangadi. The Mammon Mappila hall is the venue of important public meetings in the town.

Being the District Headquarters, Kottayam has a number of public offices and courts of law. The detailed list of such offices is given in Chapter X. Most of these are housed in the Civil Lines, an imposing building which is one of the landmarks of the town. The headquarters of the Rubber Board set up by the Government of India is located at Kottapura near Puthupally, about 8.5 Kms. east of the town. The administrative offices and the research laboratories stand in the Experimental Station of about 33 hectares. The Rubber Research Institute of India is also located here.

Kudamaloor (Kottayam Taluk)

Kudamaloor situated about 5 Kms. northwest of Kottayam town is a place of historical importance. The palace of the Rajas of Chempakasseri was situated here. Even though the Chempakasseri Rajas ruled with their capital at Ambalapuzha, they used to come and reside at Kudamaloor occasionally. The ruins of the old palace and fortifications may still be seen at Kudamaloor. There is an important temple at the place which is called Vasudevapuram. It is said that this temple was established by the Chempakasseri Rajas in order that they might worship Lord Krishna even during their absence from Ambalapuzha. The main offering in this temple is *Appam*, usually twelve in number at a time. The annual festival here which lasts for seven days ends with *Arat* on the day of *Thirunam* asterism in *Kumbham* (February-March). Kudamaloor has an ancient church dedicated to St. Mary. It comes under the Archbishop of Changanacherry. The church was patronised by the Rajas of Chempakasseri. A Raja of Chempakasseri who had no children is said to have made a *Palpayasa nercha* in this Church for the first time in 1515 A. D. The *Palpayasam* has since then been an important offering in the church in the same way as in the Sri Krishna temple, Ambalapuzha.

Kumarakom (Kottayam Taluk) (9° 35' North Latitude and 76° 25' East Longitude)

Kumarakom on the Vembanad lake is situated about 10 Kms. west of Kottayam town. The place is noted for its natural charm and has immense scope for development as a tourist centre. There is a sailing club at Kumarakom. One of the notable institutions of the place is the Kumarakom Lime Shell Co-operative Society Ltd., No. 1782. It is one of the best run co-operative societies in the District and lime shell produced here which is famous by the name "*Kumarakom Kakka*" is very much in demand in all parts of the State. There is a famous Sastha temple at Kumarakom which is a major Devaswom in this area. There is an *Ottakkal Mandapam* here. In addition, Kumarakom has a Catholic church which was established in 1760 and belongs to the Archdiocese of Changanacherry. There is also another Syrian Catholic church here established in 1841. It comes under the Diocese of Kottayam whose jurisdiction extends over the Suddhist Catholics in the whole of Kerala.

Kumaranellur (Kottayam Taluk)

Kumaranellur, situated about 5 Kms. north of Kottayam, is famous for its ancient temple which is under the management of the Namboothiris. The name of the place would seem to suggest its association with Lord Subramonia, but the presiding deity is actually Bhagavathi. There is an interesting story regarding the origin of the temple and the consecration of Bhagavathi here. An old devout priest of the Madurai temple was accused of stealing the nose-diamond of the Goddess there. The goddess appeared before the devotee one night and asked him to follow her. Eventually they reached Kumaranellur where a temple was being built for Subramonia. The Priest pleaded with the authorities to dedicate the temple to the goddess Bhagavathi since she had visited it. The authorities proceeded with their arrangements to consecrate Subramonia with the contemptuous remark that if what the priest said were true the goddess herself would tell them. The party set out to fetch the idol of Subramonia but were soon surrounded by a thick mist and were unable to proceed. The old priest said that the mist was created by the goddess to prevent them from reaching Subramonia and when the authorities promised to dedicate the temple to the goddess the mist cleared itself as if by a miracle. Moreover, to their astonishment they found an image of the Goddess for consecration in an old well, as made known to the old priest in a mysterious vision. Consequently the temple named after Subramonia came to be really dedicated to Bhagavathi. The Kumaranellur temple is famous all over Kerala for its annual festival which takes place on the day of *Karthika* asterism in the month of *Vrischikam* (November-December). The celebration attracts Hindu devotees from all parts of the District and outside. There are some

interesting wood carvings on the outer walls of the *Sreekoil*. The temple contains some lithic records and mural paintings too. A compound lying to the north of the temple premises is believed to have been the original home of the Chempakasseri Rajas before they shifted to Kudamaloor.

Kumili (Peermade Taluk) (9° 35' North Latitude and 77° 10' East Longitude)

Kumili stands on the road from Peermade to Periyakulam in Madurai District across the ghat. The Kumili ghat is 11 Kms. long. The boundary around provides ample facilities for hunting, as there are dense forests here abounding in rich game. Many hill tribes inhabit the locality. According to one school of thought Kumili may be identified with Kuzhumur which was the capital of the ancient Cheras before they started on their career of northward expansion.

Kuravilangad (Meenachil Taluk) (9° 45' North Latitude and 76° 30' East Longitude)

Kuravilangad is a place of considerable importance in the history of the Kerala Church. One of the oldest churches in the State is located here. Believed to have been established in 335 A. D., it is dedicated to St. Mary. Kuravilangad was almost the headquarters of the Kerala Church during the period prior to the coming of the Portuguese. The church was represented by six persons in the Synod of Diamper (1599). It returned decisively to the Syrian fold after the Oath of the Coonan Cross (1653). The Kuravilangad church is an imposing edifice which cannot fail to arrest the attention of those who travel by the Main Central Road from Kottayam to Moovattupuzha. The church building seems to have undergone several repairs since the Portuguese period, but the church has preserved to this day several relics of historical value. There is an old bell here which contains an inscription in an undeciphered script. The bell is not used, but kept on the floor as a show piece. While some would consider it as having been made in Portugal, others look upon it as the handiwork of local artisans. A stone image of Virgin Mary and a 15 Metre high granite Cross are among the other interesting objects here. The platform upon which the Cross is installed contains some attractive stone sculptures including a Crucifix. A wooden model of a ship used by the Portuguese who came to Kerala in the 15th century is also preserved here and it has also an attractive painting on it. This is taken out only on the occasion of the *Perunal* in the church. There is a perennial natural spring in the church compound which never dries up even in the hot summer. Thousands of people visit the place every year.

Kuravilangad is now more than a religious centre. It has a First Grade College, the Deva Matha College, started in

1964-65. The Agricultural Research Station, Kozha and a Seed Farm are also located in this village.

Manarkad (Kottayam Taluk)

Manarkad, situated 10 Kms. east of Kottayam is the seat of one of the most important churches of the Orthodox Syrians in this District. This church dedicated to St. Mary is famous for its eight day retreat and fast (*Noimbu*) which begins every year on September 1 and the *Perunal* which falls on September 8 and 9. Those who participate in the retreat stay in the church itself and spend all the eight days in fasting and prayer. The highlight of the celebration is the opening of a small room where a beautiful Italian painting representing Virgin Mary, holding the Infant Jesus in her hands, is kept. The painting is believed to have been kept here in the place of an old piece of sculpture presented by the passenger of a ship who had a miraculous escape from death thanks to the favours of the Virgin. The room is opened for pilgrims only two days a year, viz., September 7 and 8.

There is a tank and a Cross in the church premises which are considered specially sacred. Only those devout pilgrims who have observed all the rules of the fast during the 8 days from September 1 to September 8 would dare to take a dip in the tank, for it is the firm belief that those who violate the rules would be bitten by a divine serpent which is supposed to be residing in it. The Cross is installed at a distance of only about 8 or 10 yards from the church in its front. Those who are supposed to be under the evil influence of spirits offer special prayers before this Cross in order to get themselves exorcised of these Spirits. It is a common sight to see such persons engage themselves in hysterical dancing and then fall unconscious before this Cross. The pilgrims circumambulate themselves on their knees around the Cross. Circumambulation in bullock carts is also another *nercha* here.

The Manarkad church is only 4 centuries old. It stands on a plot of land donated by a Tekkumkur Raja. The period of its establishment has been assigned to 725-755 K. E. (1550-1580). It was visited by Alexis De Menezes after the Synod of Diamper (1599), but the church remained decisively in the Syrian fold after the Coonan Cross Oath of 1653. During the period of co-operation between the C. M. S. Missionaries and the Jacobite Syrians in the 19th century the former objected to the observance of the annual *noimbu* and the ceremonies connected with it as unnecessary, but the Syrians stood steadfast by their old beliefs and practices. During the period of the schism between the Marthomites and the Jacobite Syrians, the Manarkad church was for a time under the Marthoma Church, but it was later regained by the Jacobite Syrians. The *Cheriapalli* here was built during the period of the schism

for the observance of their religious rites by the Jacobite Syrians. The present imposing church building at Manarkad was built after the old church came back to the Jacobite Syrian fold. Manarkad is today a major centre of Christian pilgrimage.

Mannanam (Kottayam Taluk)

Mannanam, five miles north-west of Kottayam, is an important centre of the Syrian Christians. The St. Joseph's Monastery here is an old institution and it is associated with the name of Fr. Kuriakose Elias of Chavara (1805-71), one of the saintly figures in the history of the Syrian Catholic church of Kerala. The remains of Fr. Kuriakose whom the Catholics regard as a "Servant of God" are housed in this monastery and this has made Mannanam an important centre of Christian pilgrimage. Another notable institution of the place is the St. Joseph's Press established in 1844. It is one of the oldest printing presses in Kerala and it was from here that the *Nasrani Deepika*, one of the oldest newspapers of Kerala and the forerunner of the present *Deepika* daily of Kottayam, started publication in April 1788. Mannanam has in recent years developed into an educational centre as well. The St. Joseph's Training College stands on the north-east margin of the summit of a beautiful hill in Mannanam. The St. Ephraem's High School, Mannanam celebrated its diamond jubilee in 1962. A First Grade College—Kuriakose Elias College—affiliated to the University of Kerala is functioning here from 1965 onwards.

Mundakayam (Kanjirappally Taluk) 9° 30' North Latitude and 76° 50' East Longitude)

Mundakayam is a prosperous little town that has grown in the very heart of the rubber region and is situated on the Kottayam-Kumili road where it meets the Manimala river. It is also the starting point of the Ghat section of the Kottayam-Kumili Road. One of the important institutions of the place is the Mundakayam Medical Mission Trust Hospital opened in 1965. There are a number of Rubber Estates around the place and tea Estates beyond.

Munnar (Devikulam Taluk) 8° 30' North Latitude and 77° 05' East Longitude)

A hill station about 1524 metres above the sea level, the lovely little town of Munnar is the centre of the tea planting area, the rendezvous of British planters and a splendid health resort for the people from the plains in the hot months of summer. The place derives its name from its location at the confluence of three rivers called Kantala Ar, Kanni Ar, and Nallathanni Ar. In addition to these three rivers, many other small streams also flow through this town making it an enchanting spot. On every side of Munnar the green hills

soar to majestic heights, with little rivulets tumbling down their sides to the rhythm of their own music and the broader rivers flowing by, serene yet fast.

Munnar owes its birth and growth out of virgin forests to the pioneering spirit of the British planter. It is a beautifully laid out town nestling among the hills and has a population of 2,938 (1951 census)*, besides a small colony of European planters working for the Kannan Devan Hills Produce Company whose tea, coffee and cardamom estates lie all around. The Company is said to have taken its name from Kannan Devan, a tribal chieftain who once ruled over this hill country. The Kannan Devan Hill Produce Company has its head office at Munnar.

Munnar is connected to the Cochin Port by a good motorable road that passes through important places like Neri-mangalam and Kothamangalm. Such through communication was rendered possible only by the construction some years ago of the 96 Kms. Neri-mangalam-Pallivasal Road through dense forests. Prior to the opening of this road the usual way out from Munnar and the surrounding High Range areas was the Northern outlet Road which led to Coimbatore through Udumalpet and Pollachi. The entire produce of the High Range used to be sent out and supplies taken in by a number of aerial rope ways of which only two survived till recently. One covered 16 Kms. from Munnar to Kundalay and the other a distance of 4 Kms. rises 866 Metres in elevation from the plains in the east to the Top Station. Since May 1939, the State Transport Department has also been operating a lorry service between Munnar and Willingdon Island in the Cochin Harbour for transporting the produce of the Kannan Devan Hill Produce Company. Munnar is also connected now with Madurai through Kumili as a result of the completion of the Munnar-Kumili Road.

There is a Subramonia temple in the heart of Munnar town. The *Karthika* festival here is an important local celebration. Among the churches in the town the most important is the Catholic church dedicated to "Our Lady of Mount Carmel" which comes under the Latin Diocese of Vijayapuram. In addition, Munnar has its own Jacobite, C. S. I. and Marthoma churches also.

Munnar has an Indian and a European Club, a High School, a Bazar, a Hospital and other amenities. There are a Tourist Bungalow and a Rest House for the accommodation of visitors. Several places of tourist interest are located in and around Munnar. Four miles from Munnar is the Pallivasal Falls, the principal source of Hydro-Electric power in the State. In the picturesque little settlement of Chitrapuram are the quarters and offices of those employed at the Hydro-Electric Station. Above Munnar are the Mattupetty and Kundalay dams which support the Pallivasal hydro-electric project. At Mattupetty is located the Indo-Swiss Pro-

* In 1961 Census Munnar had been declassified as rural.

ject for the development of livestock. The Top Station in the neighbouring District of Madurai is about 40 Kms. from here. It is the highest station in the High Ranges having facilities of transport and communication. There is the Ropeway station of the Kannan Devan Hill Produce Company Ltd., located at this place. From the Top Station one can have a panoramic view of the beautiful Ghats and glimpses of some of the villages located at a distance in Madras territory.

Palai (Meenachil Taluk)

The headquarters of the Meenachil Taluk, the municipal town of Palai has an area of 16 sq. Kms. and a population of 170,521 (1961 Census). The town is an important centre of the Syrian Christians. The Bishop of Palai has his headquarters here. The premier church in the town is the Cathedral Church known as Valiapally. Established in 1502 or even earlier in the name of St. Thomas, this church is situated on the Southern bank of the Meenachil river. It may be mentioned here that the Valiapally was established by four prominent Syrian Christian families of the area with the assistance of the local chieftains, the Meenachil Karthas. In addition, there are two more churches in Palai town, viz., the Old and New churches at Lalom. The former established in 1663 is dedicated to St. Mary and the latter established in 1821 is dedicated to St. George.

There are two important temples in Palai. The Lalom temple dedicated to Siva is situated in the heart of Palai town. The annual festival in this temple falls in Dhanu (December-January) and lasts for 10 days. The Kadappattur Mahadevar temple located on the banks of the Meenachil river is a recently consecrated one. The deity installed here was obtained under sensational circumstances while felling a tree in the compound of a Syrian Christian family and it was subsequently installed at the place. It has been identified with the one originally worshipped by the Meenachil Karthas, the chieftains of the locality. The Kadappattur shrine attracts a large number of pilgrims from all parts of the District and outside. The temple built in the North Indian style at a cost of Rs. 1 lakh is different from other Kerala temples in its architectural features. It has been so built that a worshipper can have *darshan* of the deity from all the four sides. All sections of people, irrespective of caste or religion may enter the four walls of the temple and offer worship. This is one of the major temples in the State where non-Hindus are allowed to enter and worship the deity.

The civic affairs of Palai town are managed by a Municipality. There are several public offices here. Eg., the District Educational Office, Office of the Deputy Superintendent of Police, Meenachil, Police Station etc. Among the

courts in Palai may be mentioned the Munsiff's Court, Additional First Class Magistrate's Court and Sub-Magistrate's Court. The St. Thomas College, Palai the St. Thomas Training College and Alphonsa College for Women are the main educational institutions. There are four High Schools and a Junior Technical School in Palai. The Municipal Library and Reading Room is an important institution of the place. There is a Telephone Exchange at the place.

Panachikkad (Kottayam Taluk)

Panachikkad, situated about 3 Kms. east of Chingavanam on the Changanacherry-Kottayam route, is noted for its famous shrine dedicated to Saraswathi, the Goddess of Learning. The idol of the Goddess here is invisible as it is installed in a pit submerged in water. A small rivulet flowing from a hillock nearby falls into this pit and continues its flow eastwards to join a sheet of water. The idol of the Goddess is hidden from the human eye also by a creeper which grows wild at the place. There is a regular influx of pilgrims to Panachikkad during the Navaratri season. On the Vijayadasami day hundreds of children are brought here for the Vidyarambham, viz., the formal initiation into the letters of the alphabet. Kathakali and such other temple arts are also staged in the temple premises on Navaratri days. The temple is under the trusteeship of the local Namboothiris. As in the famous temple of Mookambika in South Canara (Mysore State), the main *nivedyam* here too is *Trimadhuram*.

Peermede (Peermede Taluk) 9° 20' North Latitude and 76° 55' East Longitude)

Situated about 89 Kms. north-east of Kottayam and 1066 metres above sea level, Peermede, the headquarters of the Peermede Taluk, is noted for its lovely climate and is used as a summer resort. Peermede literally means, "Hill of the Peer." An interesting story is told about the origin of the name of the place. It is said that a saintly Muslim by name Peer Muhammed who was held in great regard by people of all creeds lived here in ancient days. The Peer's tomb may be seen at Kuttikanam, four miles from Peermede proper, and the local people, irrespective of religion, strongly believe that the Peer's beneficent influence survives him still and that prayers offered at his tomb have the result of warding off evil and conferring good.

Peermede has a sizeable Tamil population the bulk of which is employed in the tea estates and factories around the place. The only notable Hindu religious institution in Peermede Town is the Krishnaswami temple, situated near the Taluk Office. It is only about four decades old. There are two Catholic churches and a Jacobite church in Peermede.

The business of Peermede town is in the hands of Muslims. There is a mosque at Pambanar, 5 Kms. from Peermede, on the way of Vandiperiyar.

In addition to the Taluk Office, there are a few more Public Offices at Peermede. An additional First Class Magistrate's Court is functioning in this town. A Great Trigonometrical station is located at Amritamedu near Kuttikanam.

The Periyar Lake and the Game Sanctuary at Thekkadi are only within a few miles from Peermede. Tourists to Peermede can accommodate themselves at the local Tourists' Bungalow or at the P. W. D. Inspection Bungalow or Travellers' Bungalow at near by Kuttikanam. There are two palaces of the Maharaja of Travancore at the place. In one of these is put up the Hotel International, a private hotel being run for the sake of tourists.

Ponkunnam (Kanjirappally Taluk)

Ponkunnam is a town of Kanjirappally Taluk. Many Government offices are located here. There are a Bhagavathy temple, a church and a mosque at Ponkunnam. It is an important trading centre and a stronghold of the Christian Community.

Poonjar (Meenachil Taluk) 9° 40' North Latitude and 76° 45' East Longitude)

Poonjar is a village which stands on the Meenachil river and it has a temple dedicated to Sastha. The palaces of the Poonjar Rajas, an ancient *Edavaka* now defunct, are situated here. The members of the family have had matrimonial relations with the Travancore Royal Family. There are temples dedicated to Sastha and Madurai Meenakshi at Poonjar and this testifies to the Tamil origin of the Poonjar Rajas. Poonjar has a High School and a Telephone Exchange. There is a biweekly market here which is held on every Tuesday and Friday.

Puthupally (Kottayam Taluk)

Puthupally, 8 Kms. east of Kottayam, is the seat of the famous St. George's church which is a centre of pilgrimage for the members of the Malankara Orthodox Syrian Church. The Church was built more than 300 years ago on a plot of land donated by the Tekkumkur Rajas. Its annual festival which falls in May attracts big crowds from all parts of the locality. The highlight of the festival is the grand feast in which at least 10,000 people participate. Generally 250 *paras* of rice are cooked on this occasion. The devotees evidently believe that this rice has medicinal effect. Even the fuel used for cooking is brought in procession. It is noteworthy that Puthupally church is surrounded by five Hindu

temples—a clear proof of the communal harmony that has prevailed from very early days among the people of this area which is essentially a centre of Syrian Christians. Situated about 5 kms. east of Puthapalli is Vennimala which was for a time the capital of the Tekkumkur Rajas. There is a famous temple at Vennimala which is dedicated to Sri Rama and Lakshmana. A feature of the temple is that there are two separate flag staff here.

Ramapuram (Meenachil Taluk) (9° 45' North Latitude and 76° 40' East Longitude)

Ramapuram, situated on the Palai-Koothattukulam road, is a prosperous little village noted for an ancient temple and an ancient Catholic church. The temple is dedicated to Sri Rama and has given its name to this village. It is under the management of the local Namboothiri Illoms. The annual *utsavam* in the temple which falls in the month of Meenam (March-April) lasts for eight days. The *Sri Rama Navami* is another important annual celebration here. It is interesting to note that within a radius of two miles from this temple are situated the temples of Koodappalam, Amanakara and Melthiri dedicated to Lakshmana, Bharatha and Satruguna respectively.

The church at Ramapuram is dedicated to St. Augustine and comes under the Diocese of Palai. It stands on a plot of land donated by a local Nair chieftain. The image of St. Augustine which has been set up on the specially constructed altar in front of the *madbaha* of the church is said to have been made in Rome. According to tradition it was brought to Cochin in a ship and several churches vied with one another in obtaining possession of it. At last a lot was drawn and it came into the possession of the Ramapuram church. There is also another tradition that the image was made in Africa and installed in the present church after failure to do so at Edacochin. Whatever be the truth in this tradition it is a significant fact that hundreds of pilgrims from the Shertallai-Cochin region come to Ramapuram every year for the Perunnal in January. There are many stories current among the people about the miracles said to have been worked by St. Augustine in this church, whom the pilgrims devoutly call 'Muthappan'. The *Perunnal* starts on December 29 and ends on January 1. The highlight of the festival is the exhibition of a Cross and necklace which are believed to have been presented by a Portuguese king to an ancient Bishop and now adorn the image of St. Augustine in this church. *Urul nercha* and crawling on the knees are also important offerings by the pilgrims in this church. Thousands of Christian devotees from all parts of Kerala take part in the *Perunnal* at Ramapuram. The mortal remains of Paremakal Thoma Kattanar (18th century) who has written the *Vorthamana Pusthakam* the first travel accounts in Malayalam are kept in this church.

Ramapuram is also famous as the birth place of Ramapurathu Warriar, the author of the *Kuchelavirtham* and one of the greatest figures in the history of Malayalam literature. There is a library at the place named after the great writer.

Sabarimala (Peermede Taluk) (9° 25' North Latitude and 76° 55' East Longitude)

A well-known pilgrim centre of Kerala lying 191 kms. north of Trivandrum and 121 kms. south of Kottayam, Sabarimala attracts tens of thousands of Hindu Pilgrims to its ancient and holy shrine of Lord Sastha or Ayyappan situated 914 metres above sea level amidst dense forests in the rugged terrains of the Western Ghats. The railway station nearest to this temple is Kottayam. The three important routes by which pilgrims can reach Sabarimala are via Erumeli, Vandiperiyar and Chalakkayam. Though the last one is the easiest, the traditional route via Erumeli is preferred by those who go on pilgrimage for the first time. This route also suits those pilgrims who want to enjoy the splendours of natural scenery combined with mythological importance.

Sabarimala Ayyappan, the favourite deity of the Malayalees, is believed to be the scion of Siva and Vishnu disguised as Mohini. Lord Ayyappa or Sastha is looked upon as the guardian of mountainous tracts and there are several shrines dedicated to Him all along the Western Ghats. According to *Keralolpathi*, Parasurama with the object of guarding the newly created country is said to have established several temples dedicated to Sastha along the Ghats and several others to Goddess Bhagavathi along the coast. The chief temples of Sastha are those at Achenkovil, Kulathupuzha and Aryankavu in Quilon District and Sabarimala in this District.

The concourse of pilgrims surging towards the temple at Sabarimala during the two annual festivals—the *Mandala puja* and the *Makara Vilakku*—is ever on the increase. The pilgrimage to Sabarimala is one of the most strenuous in the whole of India. Before going on pilgrimage the pilgrims are expected to observe rigorous fast and penance to foster the proper atmosphere for the pilgrimage. Purity in body and mind has to be achieved by the practice of strict *Bramacharya*. Usually this extends over a period of forty-one days beginning with the first day of *Vrischikam* (November-December). In order to maintain the sanctity and dignity of this great temple and to keep up its past traditions the Ayyappans—so are the pilgrims to Sabarimala usually called—who do not observe the usual vows as well as women between the ages of ten and fifty-five are prohibited from approaching the precincts of the temple by climbing up the flight of steps called the *Pathinettampati*. The pilgrim takes all the necessary food along with him in a bundle including ghee in a sealed tin or dried copra shell for *abhisheka* in the Sabarimala temple. In a special ceremony called *Kettu nira*

the pilgrim selects a Periya Swami or Guru to guide him in his pilgrimage. While the votaries of Sabarimala Sastha are called *Ayyappans*, those who go there for the first time are called *Kanni Ayyappans* who are under the strict tutelage of the Guruswami. The conventional itinerary takes the pilgrims to such important centres as Erumeli, Azhutha, Pamba and at last, Sabarimala. While ascending and descending the *Pathi-nettampati* (eighteen steps) the pilgrims hurl down coconuts and break them on the steps. Ghee and camphor are offered to the Sastha and coconuts to Lord Ganapathi. A holy bath at the *Ura Kuzhi Thirtham* is followed by a grand feast among the pilgrims.

The *Mandala puja* commences on 1st *Vrichikam* (November) and terminates in *Dhanu* (December). The temple will be closed thereafter. It is re-opened when the *Makara Vilakku* festival commences on 1st *Makaram* (January). The festival lasts for seven days. It is an inspiring sight to watch the surging mass of devotees clad in blue or black uniform with a til on their head, climbing up to the crest of the hill, chanting all the while '*Saranam Ayyappa*' after treading their way through the thick forests infested by wild beasts. Ghee and *panchamrita abhisheka* are the two important rites performed by the devotees. *Appam* and *aravana payasam* available at reasonable prices from the temple, are also well known. Moreover, the pilgrims make very lavish offering of rupees and images of gold and silver to the deity. It was estimated that during the *Makara Vilakku* festival in January 1963 about 136 head loads of coins and currency notes valued at about 10 lakhs of rupees were obtained as offerings from the pilgrims. Of these 136 head loads, 18 were of currency notes and the remaining of coins. Each head load weighed about 27 kilograms. From the offerings made in kind (excluding gold and silver articles) an estimated amount of Rs. 1,81,000 was received by the temple authorities for the same festival. The above statistical data would give an idea of the magnitude of the *Makara Vilakku* festival. Yet another chance for the devotees to have *Swami-Darsan* is on the Vishu day which falls on 1st *Medam* (April). When these festivals are over the area around the temple becomes completely deserted, almost an isolated wilderness haunted only by wild animals. However, there is *puja* every month either on the first or on the last day.

With the rising influx of pilgrims to Sabarimala the Government, the Devaswom authorities and the Voluntary Organisations like the Ayyappa Seva Sangham have established improved facilities for the pilgrims. The Ayyappa Seva Sangham has recently undertaken the construction of a building to provide shelter and house and hospital for the pilgrims.

An unfortunate incident took place in May 1950 when the Sabarimala temple was set on fire by some vandals. The temple was, however, renovated later.

Thekkadi (Peermede Taluk) (10° 25' North Latitude and 76° 45' East Longitude)

Thekkadi, the headquarters of the Periyar Wild Life Sanctuary, situated 193 Kms. from Cochin, 257 Kms. from Trivandrum and 145 Kms. from Madurai, is the most important tourist centre in Kerala. The sanctuary is located in the High Ranges at an altitude varying from 914 metres to 1828 metres above sea level. Established in 1933 by the erstwhile Travancore Government, it has an area of 777 sq. Kms. of forests of various types ranging from the dense tropical moist evergreen, moist deciduous and mixed evergreen to open grass lands. It consists of a main sanctuary and two annexes. There is an artificial lake inside it formed in 1895 by the construction of the Periyar Dam by the Madras Government. The lake area which is 26 sq. Kms. has been leased out to that Government for a period of 999 years as per the Periyar Lease. The longest distance that can be traversed in this lake is nearly 39 Kms. The lake is situated more or less in the centre of the sanctuary. Amidst this enchanting scenery can be seen a large number and variety of wild life peacefully grazing on the edges of the Periyar Dam built out of lime, surki and granite which is one of the oldest in India and is an engineering achievement that arrests the attention of every visitor.

The Office of the State Wild Life Preservation Officer is located at Thekkadi to render to the tourists all possible help in the enjoyment of this area. There are three motor boats available for hire with the Assistant Wild Life Preservation Officer and his staff, each having a carrying capacity of 12. Since boats are few in number, they are usually reserved in advance by the tourists by remitting the requisite fee (Rs. 10 per boat) by money order to the Assistant Wild Life Preservation Officer, Thekkadi. All information regarding the sanctuary is also supplied to the tourists by the Assistant Wild Life Preservation Officer at Thekkadi in his office. Moreover, the Tourist Department of the Government of Kerala runs the Hotel Aranya Nivas at Thekkadi and a Tourist Bungalow at Edapalayam. These two establishments are meant for first class tourists who prefer western style service and accommodation. High quality Indian food is also available here. In addition, the Tourist Department also runs a Second Class Tourist Bungalow (Periyar House) at Thekkadi where Indian type food and service on moderate charges are made available. All these establishments are within the sanctuary limits and conveniently located. For those tourists who want to enjoy the thrill of camping close to the wild life in their natural habitat, the Wild Life Department has constructed three Rest Houses, each of which is fully furnished with two suits of rooms and is in the charge of a cook-cum-watcher. Only nominal fees are charged for the occupation of these rooms. As no catering service is provided, the tourists have

invariably to carry provisions with them and take advantage of the cook provided. The three Rest Houses are located at Thannikudy, Mullakudy and Manakavalai in picturesque sites and are approachable only by boat. The Assistant Wild Life Preservation Officer at Thekkadi is in charge of wild life and for interested tourists who wish to observe the game, especially the nocturnal animals, from close quarters, observation cabins built on tall pillars and surrounded by elephant trenches are provided in places close to water-holes and salt-licks. These cabins provide folding cots, benches and cupboard facilities. A tourist with his equally interested wife or friend can carry pack dinner and sleeping bags to these cabins and spend a night in these enchanting locations absolutely secure from the wild life. It may be mentioned that boats for cruise in the Periyar lake are also available for hire with the Manager, Aranya Nivas Hotel, Thekkadi. The Honorary Secretary, Peermede Wild Life Preservation Society, Stakbrock Estate, Peermede, also hires out two of their boats in the lake.

A Nature Park had been formed at Thekkadi for the enjoyment of the tourists. Picnic spots are laid out with bench-tables, hearth, garbage-cans etc. in this Park. Herds of wild elephants, bison, sambhar, an occasional tiger, leopard, wild pigs, barking deer and sloth bear can be seen while cruising in the lake. It is learnt from experience that the best time to view the animals is in the early morning between 6.30 a. m. and 10 a. m. and in the evening between 4 p. m. and 7 p. m. and the best season for a visit to Thekkadi is from February to May. The animals may be seen grazing on the lake-edges, or on hill tops and slopes, resting under cover or playfully bathing in the lake or swimming across creeks. Birds like Indian Darter, egrets, herons, white necked storks, etc., are also seen in the lake. Black langur monkey, the lion tailed monkey, malabar squirrel and an occasional Iguana are seen on tree-tops. Large numbers and varieties of land-birds are seen in the forests. A bird watcher cannot fail to appreciate the great wealth of species and numbers of these birds. The Great Hornbill often times makes the place shudder by its noise when in flight. No matter how long one stays in the Periyar Sanctuary one is not likely to find his moments dull. One may either fish or swim, or go boating and bird watching or take picture or study wild life or identify the plants. Accompanied by a Wild Life Guard one can go for a hike, climb hills and go for canoeing. When going out into the Sanctuary the tourists wear only light clothing with the requisite foot wear. Clothings that are gaudy and disturbing to the wild life are discarded as wild life would then carry on, without any apparent irritation, in the presence of the stranger and the tourist can enjoy them as close as possible.

The famous Indian game fish the "Mahseer" is available in plenty in the Periyar lake and in the Periyar river above

the lake. Periyar lake is one of the least fished lakes in the world and so would be the most attractive for an interested sportfisherman. The Rest House at Thannikudy is otherwise called a fishing hut. Plenty of sportsmen go and stay there for fishing in the deep pools in the Periyar river above the lake. Fishing in the lake is also done. Fishing licence for the lake is issued free to the tourists who stay in the Aranya Nivas Hotel by the Assistant Wild Life Preservation Officer, Thekkadi. Fishing licenses are issued for the river above Thannikudy by the Honorary Secretary, Peermede Wild Life Preservation Society. It may also be mentioned here that an entrance fee of 50 pies per head is levied from all adult visitors to the Sanctuary and half this rate from children and students. The tourists are expected to purchase the entrance tickets before they embark on their cruise in the lake.

Thousands of tourists, both Indian and foreign, come to Thekkadi every year from all directions to see the wild life, enjoy the pleasant weather and appreciate the beauty of the land-scape. Very good black-topped road is available to the land-scape. Very good black-topped road is available to Thekkadi from Cochin, Trivandrum and Madurai. These places are also linked by air with all major cities of India. They are connected by rail as well. The railway station nearest to Thekkadi is Kottayam. Buses and taxis ply from all these places to Thekkadi. Nearly 45,000 visitors are estimated to have come here in 1963-64. More and more facilities are being provided in recent years for the tourists visiting Thekkadi. The Government of India through the Indian Wild Life Board has accorded sanction to upgrade the Periyar Wild Life Sanctuary into a National Park. A team of engineers is at present engaged in preparing a Master Plan for the National Park.

Thirumanivenkitapuram (Vaikom Taluk)

Situated about 5 Kms. south-east of the famous Vaikom temple on the eastern banks of the Vembanad lake, Thirumanivenkitapuram is the seat of a famous temple dedicated to Sri Rama. According to tradition the place has derived its name from the fact that the image of Sri Rama installed here was brought from Thirupati in Andhra Pradesh. The place is also known as *Thrinayankudam* or *Thrinayankulam* after Siva, the three-eyed deity installed in Vaikom temple who is said to have his bath in the tank here. In village records the place is known as 'Kannukettisserikara'. This name is said to have been derived from the fact that the thieves who in ancient days used to haunt the place in the night with the object of stealing the rich treasures kept in the temple used to become blind on actually reaching the temple premises and had to roam about aimlessly till day-break.

3/3718/MC.

The image of Sri Rama installed in the temple was brought to the place by the Gowda Saraswath Brahmins who had to leave Cochin for political reasons. They approached the local Vadakkumkur Raja with the request that they be assigned a suitable place to instal their deity. The present site was consequently chosen by the Raja for the construction of the temple and he also gave all facilities to the Gowda Saraswaths to settle around the new shrine. The temple was placed under the trusteeship of the Namboothiri Brahmins and the deity itself came to be worshipped in due course almost as a family deity by the Vadakkumkur Rajas.

The Thrinayankudam temple is noted for its archaeological peculiarities. The *Sree Koil* is a three-storeyed structure which measures 8½ metres in length and 8½ metres in breadth and is 12 metres in height. Each of the three storeys contains exquisite wood carvings. The scenes from the *Ramayana* and *Mahabharatha* are carved in wood on the outer walls of the second and third storeys of the *Sree Koil*. The *Navagrahas* and a lotus carved in wood above the *Sree Koil* are good specimens of wood carvings. Outside the *Sree Koil* are the extensive *Nalambalam*, *Balikkalpura* and *Anapandal*. In addition to the wood carvings, there are also some interesting stone sculptures in the temple. The lateral balustrades of the steps leading to the *Sree Koil* have beautiful sculptures of Lakshmi and Vishnu with the cylindrical head dress, broad *Yajnopavita* (sacred thread), etc., which could be dated to the 12th or 13th century. The *balikkal* also contains similar stone sculptures of puranic figures with some *kudu* ornaments having lion heads. These may also be assigned to the same period. The wood carvings, however, seem to be of a later period (17th and 18th century) on stylistic evidence. The *Digpalakas* on the ceiling of the *Balikkalpura* are profusely ornamented indicating a more recent origin for the wood carvings. The stone sculptures of the *Dwarapalakas* on either side of the entrance to the *Sree Koil* are also of a later period.

One of the miracles associated with the Sri Rama temple is the cure of patients suffering from the poisonous effects of rat bite. There is a tank in a compound lying to the east of the temple which is locally called "Elikulam". It is an astonishing fact that even though the tank is connected to the *Kayal* by a small *thodu* (channel) and saline water intrudes into it during seasons of flood and heavy rains, its water has never been known to be saltish. The water of this tank is believed to possess medicinal properties and is considered a sure antidote to rat poison. Persons from all parts of the State visit the temple, irrespective of religion or creed and use the water of this tank after undergoing such formalities as *Bhajan*, offering of *Vazhipadus*, a dip in the temple tank etc., duly prescribed by the temple authorities. Chronic diseases arising from the dreadful effects of rat poison are known to have been cured by drinking the water

from this tank and taking a bath by pouring the water all over the body. The annual festival (*utsavam*) at Thrinayankudam temple starts on the day of *Choli* asterism in Meenam (March-April) and ends with *Arat* on *Chatayam* day. The transport facilities provided to pilgrims to reach the temple are extremely unsatisfactory.

Thiruvarpur (Kottayam Taluk) 9° 30' North Latitude and 76° 25' East Longitude).

Thiruvarpur, situated about 8 Kms. west of Kottayam town, is the seat of a famous temple dedicated to Vishnu in the form of Santhanagopala. The image of Santhanagopala consecrated here is believed to have been the one worshipped by the Pandavas. It was obtained from a *Varpu* (a big bronze vessel) in the Vembanad Lake and hence the name of the temple "Thiruvarpur". The daily *pujas* in this temple are different from those in other temples of Kerala. They commence in the early hours of the dawn. The *usha puja* at Thiruvarpur temple is famous and the *usha payasam* is noted as much for its sweetness as for its sanctity. The annual *utsavam* in the temple falls in the month of Medam (April-May). The highlight of the festival is a ceremony called *Vilakkeduppu*. Unmarried young maidens, dressed in the best of cloths and adorned with the richest jewellery, are assembled in a row in front of the procession with lighted lamps in their hands. This is a customary *vazhipadu* (offering) to the deity and almost every girl in the locality is expected to have participated in this ceremony before she is married. The Thiruvarpur temple attracts Hindu pilgrims from all parts of the District in view of the paucity of major shrines dedicated to Vishnu in this area.

In addition to the Vishnu temple, Thiruvarpur has four more temples dedicated to Bhagavathi, Siva, Sastha and Narasimhamurthi respectively. The Narasimha temple belongs to the Thekke Madhom, Trichur, which has its branch in Thiruvarpur. The Swamiyar of this Madhom who resides near the Thiruvarpur temple is in charge of the *Pushpanjali* in this temple every day at 5 a. m.

Thrikkodithanam (Changanacherry Taluk)

Thrikkodithanam, situated about 5 Kms. east of Changanacherry, is the seat of one of the few important Vaishnava temples of the District. According to tradition this is one of the five temples of Central Travancore where the original Vishnu images said to have been worshipped by the Pandavas were consecrated by them on their own initiative. The Thrikkodithanam temple has in it the Vishnu image consecrated by Sahadeva, those of Yudhishtira, Bhima, Arjuna and Nakula having been set up at Trichittat, Tirupuliyur, Thiruvananthapuram and Thiruvananthapuram (all in Alleppey District) respectively. It

is one of the 13 *Divyadesams* of Kerala held sacred by the Sri Vaishnavites. In addition to the image of Vishnu, there are also the idols of Siva, Narasimha and Sastha in the temples.

The temple of Thrikkodithanam is of great archaeological interest. The compound wall of the temple is a fairly extensive and solid one. The *Sree Koil* or inner sanctuary is an impressive edifice in *vesara* shape which has the appearance of a two storeyed structure. There are some interesting wood carvings and mural paintings on its walls which have been assigned to the period from the 16th to the 18th century. The mural paintings are not in a good state of preservation, but one of them which represents Vishnu or serpent is specially noteworthy. There are wood carvings also on the ceilings of the *Mukha Mandapam* and *Balikkolpura*. The temple also contains some important lithic records of the age of the Second Chera Empire (800-1102). The image of Narasimha in this temple is believed to have been installed by a ruler of Vijayanagar.

The *Deepam* festival celebrated on the 9th day of the annual *utsavam* which falls in the month of *Vrischigam* (November-December) is an important celebration in Thrikkodithanam temple. The stems of the plantain trees are arranged in the form of funeral pyres and small torches are inserted into them. They are then soaked in oil and lighted. This is the *Deepam* festival. The temple is visited by Hindu pilgrims throughout the year.

Udayanapuram (Vaikom Taluk)

Udayanapuram, situated about 2.5 Kms. to the north of the famous Siva temple at Vaikom, is noted for its temple dedicated to Sri Subramonia. The name Udayanapuram is the corruption of the word "Udayanayakipuram"—the abode of Udayanayaki, a synonym for Goddess Bhagavathi. It has already been mentioned in an earlier section of this Chapter that the idol of Subramonia consecrated here was the one originally intended for installation at Kumarnelloor. Owing to certain circumstances the builders were forced to exchange the idol of Bhagavathi for that of Subramonia for installation here. The temple was still named after the idol originally intended for it. The Udayanapuram temple is noted for the interesting wood carvings and stone sculptures in its *Sree Koil*, *Mandapam*, etc.,. The murals here are also equally famous for their high level of artistic excellence. Ganapathi, Siva and Parvathi with Ganapathi and Subramonia, Nataraja dance, Sastha on horse back and Vishnu in *Santhanagopalam* are the most outstanding of the Udayanapuram murals. These murals which have been assigned to the latter half of the 16th century and the early half of the 17th century are reckoned among the finest examples of Mural Art in Kerala. The *Arattu* of Udayanapurathappan takes

place on the next day of *Trikarthika*. at Vaikom, Arattukulam. After the *arattu* there will be special *Pooja* in the Vaikom Temple for which the deity of Udayanapurathappan will be placed by the side of the 'Siva Lingom' in the Vaikom temple. This *pooja* is known as *Koodipooja*. After this, there will be another *pooja* on the *Mandapam* in front of the Sanctom Sanctorum for which deities of Siva and Subramonia will be seated face to face. After *pooja*, Udayanapurathappan will depart to Udayanapuram in a procession for which also 'Vaikathappan' idol will accompany 'Udayanapurathappan' till the northern gate. The *Niviedyam* for this *Koodipooja* will be distributed to the public for 'Annaprasan' of their children. Pilgrims who visit Vaikom temple during the *Ashtami* festival usually worship at the Udayanapuram temple also. The *Thypooyam* in Makaram (January-February) is also an important celebration in this temple. The main offering to the deity on this day is *Kavadi Abhishekam*. *Agnikkavadi* is also an important *Vazhipadu* (offering) in this temple, but owing to the risks involved, it is offered only very rarely.

Vaikom (Vaikom Taluk) (9° 40' North-Latitude and 76° 20' East Longitude).

Vaikom, situated on the eastern shore of the Vembanad lake, is the headquarters of the Taluk of the same name and one of the four municipal towns of this District. It has an area of 8.72 sq. Kms. and a population of 17,410 (1961 census). It was once the capital of the Vadakkumkur Rajas who were subdued by Travancore in 925 K. E. (1750).

The importance of Vaikom rests mainly on its great temple dedicated to Siva, the place being sometimes known as *Dakshina Kasi*. The installation of the deity here is attributed by tradition to the Rakshasa Khara. According to tradition Khara, an ardent devotee of Siva, was doing *tapas* at the Chidambaram temple when Nataraja, pleased with his devotion, revealed himself to him and gave him three *lingams* enjoying him to consecrate them at such places as he deemed fit. Khara carried one of them in his right hand, and the other in his left hand and the third tucked underneath his chin and pressed against the neck. He travelled southwards, but arriving at the place now called Vaikom felt the *lingam* in his right hand to be so unbearably heavy that he dropped it. When he tried to lift it up again he could not. Suddenly, an aerial voice (*Asarivakku*) was heard to the effect that he need not pick up the one he had already dropped. He might, it was directed, consecrate the others at places a *yojana* apart from one another going southward. The place where the first *lingam* was dropped is Vaikom, the second Kaduthuruthi and the third Ettumannur. Contemporaneously with Khara, another sage by name Vyaghrapada was performing penance at Chidambaram. On his entreaty to the

deity to point out a *lingam* for his daily *pooja* till the end of his earthly career, he was also directed southwards, and on his coming to Vaikom, Khara requested him to take charge of the *lingam* he had dropped, which Vyaghrapada accordingly did. The name Vaikom is believed to be the corrupted form of the *Vyaghrapadapuram* or the city of Vyaghrapada.

The temple at Vaikom is itself said to have been constructed by Parasurama, the legendary founder of Kerala. The story goes that he found the sacred *lingam* submerged in shallow water on the shore of the Vembanad lake removed it to the present spot and built a temple there. The sage is said to have stayed here for one whole year performing the ceremony of *Sahasrakalasam* and feeding daily a number of Brahmins. The tradition established by Parasurama at Vaikom of performing *Sahasrakalasam* and feeding the Brahmins daily is continued even to this day, the devotees defraying the expenses in fulfilment of vows previously made. The ceremonies which last 12 days and the sumptuous feasts that accompany them cost many thousands of rupees. The *pooja* in connection with *Sahasrakalasam* is performed by the *Tantri* (officiating priest) on the *mandapam* in front of the *sanctum sanctorum*. He sits in front of a golden pot surrounded by a hundred silver pots, all filled with holy water, and utters, along with other learned priests, sacred mantras. The pots are then taken into the *sanctum sanctorum* to the accompaniment of loud chanting of hymns, beating of drums and singing of song and the water is poured over the image. On the twelfth day of the *Sahasrakalasam*, *pooja* is conducted from morning till evening in the temple of Subramonia (son of Mahadeva) at Udayanapuram, two miles north of Vaikom. A sumptuous feast is also held.

The Vaikom temple is noted for two *Ashtami* festivals held annually, one in the month of *Kumbham* (February-March) and the other in the month of *Vrischikam* (November-December). Of these the latter festival is the more important. A vast concourse of pilgrims and devotees from all over Kerala and the Districts of Madras State come to Vaikom to have *drashan* of Lord Mahadeva on the *Ashtami* day. These festivals are celebrated in commemoration of the fact that Siva appeared to the Sage Vyaghrapada and granted him the boons he desired, at day-break on the *Ashtami* or eighth day after full moon. The celebration lasts for 12 days and closes with *Arat* at Udayanapuram, on the next day of *Ashtami*. On the day of *Arattu* of Vaikyathappan, there is also *koodipooja* at Udayanapuram Temple.

The festival reaches the climax on the *Ashtami* day. The image of the deity is taken in procession on the back of a beautifully caparisoned elephant, while several other elephants,

also magnificently caparisoned, form an escort. The procession goes the usual rounds to the accompaniment of music, drums and cymbals. In addition to the procession, *Ottam*, *Thullal*, *Patakom*, *Kathakali*, *Velakali*, *Bharatha natyam*, music performances and religious discourses are also held. At night a grand procession starts from the temple of Subramonia at Udayanapuram and joins the procession at Vaikom. Mahadeva and Subramonia, Father and Son, meet and greet each other and then part, to meet again on the next *Ashtami* day. The parting scene is a very impressive one. The two elephants bearing the image of the two Gods stand facing each other. A conch is sounded as the parting call and the elephant carrying the image of Mahadeva lifts its trunk up, as though in blessing. The two elephants then go, one behind the other, a few yards in the direction of Udayanapuram. The conch sounds once more and Mahadeva's elephant raises his trunk once more and does so thrice. It then returns while Subramonia proceeds to his own temple.

The offerings (*Vazhipadu*) to Vaikathappan is called 'Prathal' (Feast) and the deity is by that reasons known as 'Annadanaprabhu'.

The Vaikom temple is a typical specimen of the Kerala style of architecture. The spread-umbrella like *garbhagriha* (Holy of Holies) with the golden *stupa* at the top and the 19.5 metres high golden staff in the front, towering over the surrounding landscape, are the two salient features of the Vaikom temple. A few damaged specimens of a group of paintings are seen on the outer wall of the *garbhagriha*. The temple chronicles relating to the year 1539 prove that there was a fire in the temple between 1529 and 1539 and that it was afterwards rebuilt and consecrated. The paintings may therefore be taken to belong to a period between the 14th and the 16th century. There are 20 paintings of about 40 puranic figures which retain, to some extent, their ancient charm in spite of their being retouched. The Siva *lingam* in this temple is itself about 1 metre high. The *Oottupura* at Vaikom is a huge two storeyed edifice which is 305 metres long. In 1963, the 'Kinattupura' in Vaikom temple caught fire. As a penalty of this 'the Vadakkupurathu pattu' (*Pooja* of *Kali*) which was not being celebrated for a long time was celebrated in 1965. The paintings in the temple have been repainted in 1965 along with the creation of a 'Kalamandapam' in memory of 'Vadakkupurathu pattu'.

Vaikom has figured prominently in the recent history of Kerala as the venue of the famous *Satyagraha* offered in 1925, with the blessing of Mahatma Gandhi, for getting the temple thrown open to the Harijans. The immediate result of the incident was that the *Sanketam* limits were delimited and the roads beyond them were thrown open to all classes of people.

The affairs of Vaikom town are managed by a Municipality. The place is connected by rail, road and water. The nearest railway station is Vaikom Road. There are regular bus services to Vaikom from Ernakulam and Kottayam. The Vaikom Boat Jetty is very near to the temple on its western side. The main offices in Vaikom are the Taluk Office and the Police Station. A Munsiff's Court and Additional First Class Magistrate's Court function here. The Vaikom Rest House located near the Boat Jetty is under the Public Works Department.

Vandiperiyar (Peermede Taluk) 9° 30' North Latitude and 77° 05' East Longitude)

Vandiperiyar lies between Peermede and Kumili on the Kottayam-Kumili road. An excavation in the Thengakal Estate near Vandiperiyar a few years back resulted in the discovery of large dolmens and menhirs which throw considerable light on the burial customs of the people of the pre-historic age in Kerala. Vandiperiyar and surrounding areas are full of tea plantations. The forests are dense beyond Vandiperiyar and many hill tribes live in the heart of these forests. The place has acquired importance in recent years as a result of the execution of Sabarigiri Hydro Electric Project because it lay on the route from Kottayam to the Pamba Dam site through the Periyar Wild Life Sanctuary. One of the three routes chosen by the pilgrims who go to the Sastha shrine at Sabarimala also passes through this place. Vandiperiyar has a Pentacost, a Jacobite and a Latin Catholic Church. The last mentioned one belongs to the Vijayapuram Diocese. The place has also got a beautiful mosque in the heart of the town.

Vechoor (Vaikom Taluk) (9° 40' North Latitude and 76° 25' East Longitude)

Vechoor is situated 12 kms. south of the Vaikom on the banks of the Vembanad Lake. The Dutch East India Company had a warehouse here. Vechoor is now an important centre of Christian pilgrimage. There is a very ancient Catholic church here (Established in 1463) dedicated to 'Our Lady' popularly called "Vechoor Muthiamma". The annual feast here falls on September 8 and thousands of devout pilgrims throng to the place from all parts of Kerala. A picture of 'Our Lady' believed to be the replica of the one painted by St. Juke is kept here. The Vechoor church comes under the Archdiocese of Ernakulam.

Vedavyasagiri (Kottayam Taluk)

Vedavyasagiri (Vedagiri) in Athirampuzha village is an important Hindu pilgrim centre in Kottayam District. It is a small beautiful hill situated about 6 Kms. north-west of the

famous Ettumanur temple. The place derives its name from sage Vedavyasa who is said to have set up his hermitage here and conducted a Gurukula for the instruction of the Pandavas during their Vanavasa. According to local tradition Vedavyasa had also established a Vishnu and Bhagavattul temple each at the place. Though there is no regular temple building or shrine at the top of the hill at present, there are about half a dozen granite stones here which are said to represent Vyasa and the five Pandavas. There is also a view that these stones are only megaliths called menhirs. There are three natural springs at the top of the hill which are believed to represent the rivers Ganga, Yamuna and Godavari whose waters were used by Vedavyasa for the conduct of *pooja* in the temple. At the slope of the hill is a huge tank called *Moksha thirtham*, with a Sastha temple nearby.

Vedagiri attracts Hindu pilgrims from all parts of the State on *Amavasi* (New Moon) days in *Thulam* (October-November), *Kumbham* (February-March) and *Karkatakam* (July-August) and also during the *Navaratri* days the visitors perform *Vavu bali* to propitiate the mains of deceased ancestors. In the *Navaratri* season children are initiated into the letters of the alphabet (*Vidyarambham*) at the top of this hill, believed to be hallowed by the foot-prints of Sage Vedavyasa. In addition, the place is visited by pilgrims on all Sundays and New Moon days also for offering *bali*. A branch of the Ayyappa Seva Sanghom is functioning here.

APPENDIX I

TABLE I

Talukwise list of Firkas and Villages in the District

<i>Taluk</i>	<i>Firka</i>	<i>Villages</i>
1 Changanacherry	1 Changanacherry	1 Changanacherry
		2 Trikodithanam
		3 Vazhapally East
		4 Vazhapally West
		5 Kurichi Village
	2 Karukachal	6 Karukachal
		7 Vazhoor
		8 Vellavoor
		9 Nedumkunnam
		10 Kangazha
		11 Vakathanam
		12 Madappallay
	3 Kottayam	13 Kottayam
		14 Vijayapuram
		15 Kumarakom
		16 Thiruvvarpu
	4 Puthupally	17 Puthupally
		18 Nattakam
		19 Panachikad
		20 Manarkad
		21 Pampady
2 Kottayam	5 Ettumannur	22 Ettumannur
		23 Athirampuzha
		24 Aymanam
		25 Perumbaikad
		26 Kaipuzha
		27 Onamthuruthu
	6 Anicad	28 Akalakunnam
		29 Ayarkunnam
		30 Eliculam
		31 Kooropada
		32 Anicad
	7 Vaikom	33 Vaikom
		34 Nadavila
		35 Vadakkemuri
		36 Chempu
		37 Kulasekharamangalam
		38 Thalayazham
		39 Vechoor
3 Vaikom	8 Kaduthuruthy	40 Kaduthuruthy
		41 Manioor

		42 Njeezhoor
		43 Mulakulam
		44 Velloor
		45 Vadayar
		46 Kallara
4 Meenachil	9 Meenachil	47 Kadanadu
		48 Bharananganam
		49 Lalam
		50 Vallichira
		51 Puliannur
		52 Meenachil
		53 Poovarani
	10 Uzhavoor	54 Kidangoor
		55 Kanakkari
		56 Kuravilangad
		57 Elackadu
		58 Kurichithanam
		59 Uzhavoor
		60 Veliyannur
		61 Ramapuram
		62 Vellilapally
	11 Poonjar	63 Poonjar Nadubhagam
		64 Poonjar Thekkekara
		65 Poonjar Vadakkekara
		66 Kondoor
		67 Thalapalam
		68 Melukavu
5 Devikulam	12 Munnar	69 K. D. Hills
		70 Marayoor
		71 Manthallur
		72 Keezhanthoor
		73 Vattavada
		74 Kottakumboor
	13 Pallivasal	75 Pallivasal
		76 Mannankandom
		77 Vellathooval
6 Udumbanchola	14 Vandanmettu	78 Chakkupallam
		79 Vandanmettu
		80 Aiyappancoil
		81 Pampadumpara
	15 Udumbanchola	82 Kalkuthal
		83 Parathodu
		84 Udumbanchola
		85 Chathurangapara
	16 Santhampara	86 Santhampara
		87 Chinnakanil
		88 Majakkad
		89 Konnathady

7 Peermede	17 Elappara	90 Peruvanthanam
		91 Elappara
		92 Passuppara
	18 Vandiperiyar	93 Peermede
		94 Periyar
		95 Mlappara
8 Kanjirapally	19 Kanjirapally	96 Mundakayam
		97 Kanjirapally
		98 Chirakkadavu
	20 Manimala	99 Manimala
		100 Erumely
		101 Cheruvally

TABLE 2
Normals and extremes of Rainfall

Station	No. of years of data	January	February	March	April	May	June	July	August
Chinnar	43 a b	39.1 1.6	4.3 0.5	13.7 0.7	28.7 2.8	46.0 3.9	37.6 3.6	41.7 3.9	38.3 3.
Marayur	35 a b	54.6 3.1	8.9 1.0	22.3 1.5	70.6 5.1	95.5 7.0	135.1 9.8	185.4 12.4	128.10.
Munnar	35 a b	18.5 1.5	21.6 1.8	36.8 2.9	121.7 9.4	239.3 12.6	782.1 24.7	1122.7 27.4	705.24.
Devikulam	46 a b	20.3 1.8	23.9 2.0	48.3 3.9	124.5 9.5	211.8 12.3	528.6 23.4	712.2 25.6	441.21.
Vandanmettu	22 a b	24.6 1.8	17.0 1.6	47.2 2.5	111.5 7.5	160.5 8.2	384.8 22.5	449.1 24.9	321.19.
Vaikam	50 a b	22.9 1.4	23.1 1.2	49.3 2.7	91.4 5.7	287.5 11.5	723.4 23.8	634.0 23.3	409.18.
Palai	50 a b	34.3 1.6	38.3 1.9	123.2 6.4	253.2 12.3	347.7 14.1	729.2 25.0	739.1 25.5	508.22.
Ettumazhur	50 a b	26.7 1.4	14.2 1.0	60.5 3.6	145.0 8.2	280.9 11.4	694.7 24.8	650.5 24.4	437.20.
Kumili	43 a b	51.6 2.6	25.7 1.4	37.6 2.3	92.5 6.0	111.3 5.9	280.7 16.5	333.0 18.8	175.12.
Kottayam	50 a b	30.2 1.6	26.4 1.5	55.4 3.3	134.1 8.0	303.0 11.7	717.8 24.0	642.1 24.2	419.20.
Peermede	50 a b	24.1 1.4	41.1 2.5	59.9 4.7	137.4 10.1	320.3 13.2	1104.7 26.8	1277.6 27.5	861.25.
Kanjirapally	46 a b	33.0 1.9	55.6 2.4	160.3 7.5	279.7 13.8	404.6 15.2	731.3 24.4	715.3 24.1	523.22.
Changanacherry	50 a b	25.4 1.6	23.9 1.5	63.7 3.8	157.5 9.2	320.8 13.0	683.3 24.3	565.1 23.2	386.18.
Santhanpara	43 a b	43.2 2.4	38.1 2.8	54.9 3.5	118.6 7.7	131.6 8.0	256.3 16.1	279.4 17.4	171.11.
Kottayam (District)		32.0 1.8	25.9 1.7	59.5 3.5	133.3 8.2	232.9 10.6	556.4 20.7	592.2 21.6	395.18.

September	October	November	December	Annual	Highest annual rainfall as % of normal year**	Lowest annual rainfall as % of normal year**	Heaviest rainfall in 24 hours* Amount (mm)	Date
44.7 3.6	142.2 8.4	135.6 7.9	76.7 4.7	649.2 45.2	265 (1922)	16 (1926)*†	230.6	January 26, 1934
106.4 8.3	221.5 12.9	219.5 12.3	100.3 6.1	1348.9 89.6	169 (1924)	55 (1917)	245.1	July 15, 1924
341.4 17.5	248.9 15.3	137.4 9.7	40.4 3.4	3815.9 150.6	137 (1933)	66 (1945)	330.2	July 17, 1924
281.9 17.4	303.3 17.7	170.2 11.4	51.3 4.0	2917.5 150.2	174 (1943)	62 (1934)	483.9	July 17, 1924
198.9 15.3	243.1 15.6	168.1 11.7	68.6 4.9	2194.7 136.0	135 (1933)	71 (1934)	134.4	November 16, 1945
268.5 14.3	308.6 13.5	193.8 9.3	47.0 2.8	3059.2 128.4	154 (1919)	33 (1912)*†	254.0	May 15, 1927
325.1 15.8	444.0 17.3	340.9 13.0	101.3 4.8	3985.3 159.7	151 (1924)	66 (1907)	213.4	August 10, 1947
273.8 13.9	293.4 14.5	185.2 9.8	60.5 3.1	3123.0 136.4	173 (1933)	58 (1941)	258.6	November 17, 1939
116.8 8.8	212.3 12.8	190.7 10.3	93.2 4.7	1720.7 102.8	189 (1924)	28 (1949)*†	217.2	July 16, 1924
299.7 14.1	357.9 14.9	200.9 9.8	74.4 3.4	3261.5 136.9	140 (1933)	72 (1935)	286.3	May 26, 1932
522.0 20.2	492.5 19.7	255.8 11.9	67.6 3.5	5164.8 167.3	149 (1933)	68 (1934)	313.7	July 15, 1924
326.1 15.1	515.6 18.1	326.9 13.2	84.6 4.3	4156.5 162.4	132 (1924)	20 (1947)*†	228.6	July 6, 1929
285.5 14.9	383.0 16.1	220.7 13.3	73.7 3.9	3188.7 141.5	136 (1933)	47 (1907)	234.9	May 7, 1939
128.0 9.2	334.0 16.4	224.0 11.8	79.8 5.3	1861.1 112.7	164 (1933)	62 (1928)*†	255.3	July 17, 1924
251.3 13.5	321.5 15.2	212.1 11.0	78.8 4.2	2888.9 130.0	143 (1924)	79 (1934)		

*† These figures are very doubtful.

(a) Normal rainfall in mm (b) Average number of days (days with rain of 2.5 mm or more)

*Based on all available data upto 1957. ** Years given in brackets.

TABLE 3
Frequency of Annual Rainfall in the District

(Date 1901-1950)

Range in mm.	No. of years	Range in mm.	No. of years
2201-2400	3	3201-3400	5
2401-2600	4	3401-3600	5
2601-2800	6	3601-3800	3
2801-3000	15	3801-4000	0
3001-3200	7	4001-4200	2

FLORA

Topographic and climatic conditions play an important part in the determination and distribution of the flora of a place. Hence a brief reference may be made to these two factors in regard to Kottayam District.

Based on physical features the district can be divided into three natural divisions.

- I. *The Low land*: which lies on the border of the Vembanad lake.
- II. *The Midland*, comprising of the undulating country lying to the east of the Lowland.
- III. *The Highland*, which lies on the extreme east covered by forests.

The Highland constitutes about 73% of the area of the district. It comprises of mountain ranges, valleys and the lower ground from which the mountains arise. These hills and the lower ground from which they arise together constitute *The High Ranges*.

The peaks of High Ranges are of varying elevations. The highest peak in Kerala (and the highest in India, next to the peaks of Himalayas) is *Anamudy* having an elevation of 2817.06 metres. It is situated in the High Ranges. From the high lands the land gradually slopes in three directions i.e., towards Anjanad Valley in the North east, to Kadampara Valley in the West and Cardamom Hills and Peermedu on the south. Devikulam is a small plateau lying to the west of Gudaramala with an average elevation of 1828 metres.

Ponmudi hills are at a considerable distance to the south of Peermedu and have an average height of 924.94 metres. One of the hills has an elevation of 1828 metres.

Anamudy, *Cardamom Hills*, *Peermedu*, *Devikulam*, *Munnar* and *Ponmudi* are places of great attraction for botanists.

Climate.—Kottayam district which experiences climatic variation shows great variation in the matter of vegetation also. For such a small

area its, vegetation is extremely varied exhibiting a number of different types of plant formations.

The district has a tropical humid climate; the hot season is oppressive in the plateaux but the climate is cool and pleasant in the High Ranges and Cardamom Hills.

The Western side of the chain of mountains receives the maximum atmospheric precipitation and consequently the slopes are clothed in a dense mass of vegetation characteristic of tropical rain forests. The rain fall is particularly heavy in the Cardamom Hills. There is a rapid decrease in the rainfall in the eastern slopes of these hills. There is rain fall for an average of 130 days in the year. The air is highly humid all round.

Zones of Vegetation: I *The Sub-tropical Zone with warm temperate climate*.

At Devikulam and neighbouring hills above 5000' (1524 metres) the climate is that of the temperate zone, but for the higher rainfall.

The plants here are mostly of the herbaceous types which are all pubescent hairy and often aromatic.

Trees like *Pinus sylvestris*, *Cupressus* and *Eucalyptus* are found here. These are not generally found at the lower elevations. Shrubby forms are rare, but many undershrubs, perennial herbs and grasses are met with. Bulbous plants as *Lilies*, and *Orchids* like *Habenaria*, *Peristylis*, *Satyrium* are found here.

Strongly scented species of *Labiatae* and several species of *Umbelliferae*, and *compositae* are the most common forms of vegetation.

Several ferns, shrubby species of *Rosaceae*, *Myrtaceae*, *Ternstroemiaceae*, epiphytic forms such as *Mnium*, *Lycopodium*, and *Selaginella* are also found in these localities.

The tea plant (*Camellia thea*) is extensively cultivated in these regions.

II. *The Sub-tropical Zone below 4600' (1402 metres) and above 300' (914 metres)*

The trees growing in this zone are adapted to a warmer habitate. Species of *Eucalyptus*, *Grevillia*, *Casuarina*, *Erythrina*, *Bombax* etc. grow here.

Species of *Rubus*, *Rosa*, *Memecylon*, *Ternstroemia*, *Alsophila*, *Peperomia* and *Sonerilla* are some of the plants found in this region.

III. *The Rain Forest Tract*.

The rain forest area is found in places where there is mean annual temperature, with a rainfall of over 80" (2.03 metres) evenly distributed throughout the year. The climate in such areas is warm and moist and the vegetation most luxuriant.

Giant trees ranging in height from fifty to one hundred feet or more are seen in this region. On the trunks of these trees could be seen *Orchids*, *Ferns*, and other forms of *epiphytes*.

Lianes (woody climbers) with their strange and curiously shaped climbing stems are very common in these tracts. Among the more important lianes are species of *Bauhinia*, *Entada*, *Cocculus*, *Combretum*, *Strychnos*, *Hugonia* and *Vitis*. Particularly striking are the climbing Aroids such as *Pothos*, *Philodendron*, *Monstera* etc. The decaying organic matter formed from fallen leaves and other vegetable debris affords an excellent substratum for the growth of the *Saprophytes* such as orchids and Fungi.

Plantations of Para rubber (*Hevea brasiliensis*) are seen in parts of the forest, which enjoy an average of 75-150" (1.91-3.82 metres) of well distributed rainfall.

IV. Zone with an elevation of 1500' to 2500' (457 metres 762.17 metres).

Tectona grandis (Teak and other tress like *Dalbergia latifolia* (Voetia), *Pterocarpus marsupium*, *Pterospermum reticulatum* etc. grow in this zone. Lianes and epiphytes also grow as sub formations. At lower elevations, are found *Cycas circinalis* while at still higher elevations are found *Angiopteris*, both of which are of interest to botanists.

V. Forest Swamps are found in forests. These areas are located at the bottom of the valley and are surrounded by hills on all sides. They never become completely dry. Several species of grasses, *Cyperus* and *Eriocaulon* form the predominate associations of these swamps.

VI. Zone comprising of Midland and low land.

The whole of this area is thickly populated and all the important food crops and other plants of other economic importance are cultivated in these regions.

In the low land the ground is moist, marshy or even covered with water during the major part of the year. In this area could be seen the submerged species of *Chara*, *Nitella*, *Ceratophyllum*, *Utrichlaria*, *Hydrilla* and *Potamogeton*. In shallow waters grow *Aponogeton*, *Ludwigia*, *Limnophylla*, *Marsilia*, *Myriophyllum*, *Hygrophila*, *Jussiaea*, *Neptunia*, *Nymphaea*, and *Limnanthemum*.

The Water Hyacinth (*Eichornia crassipes*) which is a native of S. America has during recent years penetrated successfully into most of our canals and waterways. It is an unwelcome guest and a very troublesome weed.

Salvinia or Water Fern is found in most places and has now become a real menace and source of trouble.

Along the margins of the backwaters is found Mangrove vegetation. Some of these plants show Xerophytic characters. The chief representatives of Mangrove formation are *Rhizophora* species, *Brugiera conjugata*, *Ceriops Candolleana*, *Sonneratia*, *Pandanus* etc.

Close behind the Mangrove break may be seen *Barringtonia*, *Cerbera odollum*, *Terminalia catappa*, *Calophyllum inophyllum*, *Pandanus* etc.

A General Account of Plants of Economic importance

I. Indigenous Grasses supplying food grains

1. *Oryza sativa*—Paddy—'Nellu'—This is the staple food of the inhabitants of the State.

2. *Eleusine coracana*—Ragi—Kel—veraku—There are several varieties of this millet under cultivation. The grain is highly nourishing.

3. *Panicum miliare*—Chama—It is cultivated in certain parts of the State as food for poultry, and men.

4. *Setaria italica* (Thena) This is another cereal which is generally grown as a rain fed crop.

5. *Zea mays* (Mokkacholam) This is cultivated on a limited scale in several gardens, as food grains.

6. *Pennisetum Typhoideum*—'Kambu' The grain is used as food for the poor.

II. Other Grasses of economic importance

1. *Saccharum officinarum*—'Karimpu' Sugarcane—A part of the States, supply of crude sugar is made from the juice of this plant.

2. *Andropogon*—'Ramacham' (രമാച്ചം). This is common in moist situations where it serves as an excellent sand binder. It is cultivated for its scented roots. The roots are used for making 'thatties', fans and mats for domestic use.

3. *Cymbopogon citratus*—C. Jexuosus Lemon grass.

The plants are excellent sand binders and therefore they check soil erosion, when grown along the edges of roads and paths. Lemon grass oil is distilled from the above mentioned species of *Cymbopogon*.

III. Other wild grasses growing on moist grounds.

1. *Cynodon dactylon*—Beli Karuka—(പെരികാ) It is a perennial grass with several creeping branches rooting at nodes. It is used in many religious rites of the Hindus.

2. *Panicum repens*—Perum Karuka—Inchippul—This is a perennial grass with stout underground rhizomes which send up stout aerial branches during the monsoons. This is an excellent soil binder.

3. *Panicum Galli stagnium*—Kavada (കവട) Chethaveru—This grows in moist localities, especially in rice fields where it occurs as a troublesome weed.

4. Other species of grass useful as fodder are:—

1. *Panicum colonum*
2. *Panicum prostratum*
3. *Eragrostis tenella*
4. *E. plumosa*
5. *Setaria indicus*
6. *Bromus asper*
7. *Chloris barbata* etc.

IV. The giant grasses (Bamboos)—consisting of several species form one of the striking features of forest growth. The bamboo plant

flower only at long intervals. The bamboo fruits are used as food grain. The bamboos and reeds are used for a variety of purposes. It forms one of the raw material for the Rayon industry.

1. *Bambusa arundinacea*—Mula—(മുള) illi (ഇല്ലി) Bamboos are used for building huts and branches are used for fencing. The stem is largely sued for rafts in floating heavy timbers.

2. *Dendrocalamus strictus*—Kallanmula (കല്ലൻമുള) This is the most useful of bamboos.

3. *Dendrocalamus giganteus*—This is the gigantic species of *Dendrocalamus*. The culms are very long and stout.

4. *Bambusa vulgaris*—(Swarnamula) (golden bamboo) This occurs as an ornamental plant. The culms are golden yellow or striped green and yellow.

5. *Ochalandra travencorica*—Itta (ഇത്ത) Iral (ഇരൾ) It grows in the forests at low elevations. The culms attain a height of 10'—20' (3.04—6.08 metres) and are only one to two inches in diameter.

6. *Ochalandra Rheedii* - Ottal or Kolanji

This grows in clumps mostly on the Banks of rivers at low elevations. The culms grow to a height of 15'—10' and (4.51—6.08metres) and is about 1"—2" (2.5—5 centimetres) in diameter.

V. *Cyperaceae*.—Plants of *Cyperaceae*—Some of the species of *Kyllinga* and *Cyperus* are used in medicine.

Kyllinga monocephala—is found in low grounds. The root stock is used in medicine.

Cyperus rotundus—Muthanga Kilangu (മുത്തങ്ങ) The root tubes are used in medicine.

VI. *Typhaceae*. Typha is the only genus belonging to the family. It is found growing luxuriantly in the neglected tanks, marshes and paddy fields.

VII. *Timber Trees*. Some of the important timber trees are the following.

1. *The Teak Tree*—*Tectona Grandis*—*Verbenaceae*. 'Thekku'—

This is a large deciduous tree growing to a height of one hundred and fifty feet. The heart wood is of a dark golden brown colour when fresh, turning dark brown with age. The wood is hard and durable and contains a valuable fragrant oil. Owing to the presence of this oil the wood is not attacked by white ants. As the wood does not warp or crack, it is considered to be one of the finest of known timbers.

2. *Dalbergia latifolia*—Family (Sub-fam) (Papilionacea) (Leguminosae)—'Rose wood'—(Veetti). This is another large deciduous tree growing in the forests upto an elevation of 4,000' (128.47 metres). The heart wood is dark purple with black streaks and is very hard and strong. The wood seasons well and takes polish very well. It is highly valued for furniture making.

3. *Tamarindus indicus*—Sub-family *Caesalpeneae* (*Leguminosae*) ('Pulimaram'). Large evergreen tree cultivated for its sweetish acid fruits. The heart wood is dark brown in colour and is hard and heavy.

4. *Artocarpus hirsula*—Ayani (അയണി) or Angili (ആഞ്ഞിലി) Family—*Moraceae*. This is a tall tree found in the forests upto a height of about 300' ; (91.44 metres) above sea level and also in plains. It yields valuable wood which is durable and moderately hard.

The yellowish red soft pulp surrounding the seeds is edible. The seeds yield an oil and are also roasted and eaten by poor people.

5. *Artocarpus integrifolia*—Family—*Moraceae*—The Jack Tree—'plavu'—This is a large evergreen tree growing in plains and also to a height of 4,000' (1218.47 metres) in the forests.

The wood is yellow in colour but darkens on exposure. The wood takes fine polish and does not warp or split and is easily worked. It is used for building purposes and for making furniture.

The fruit is nutritious and delicious. The variety 'honey Jack' or 'Varikla' produces particularly delicious fruits.

6. *Diospyros assimilis*—Korinthali—Malabar ebony Family—*Ebonaceae*—The trees are not very common. The wood is used for furniture, ornamental work, and in laying.

7. *Adina cordifolia*—'Manjakadambu' Fam—*Rubiaceae*. A tall deciduous tree. The wood is specially recommended for cots.

8. *Lagerstroemia lanceolata*—'Venthekkku' (വെണ്ടേക്കു) Fam—*Lythraceae*. This is a large tree commonly seen in forests upto an elevation of about 3,000' (914 metres) above sea level.

The wood is in great demand for boat-building though it does not stand much exposure. It can be used for furniture and house building but cannot bear much weight.

9. *Terminalia cremulata*—Karumaruthu (കരുമരുതു) Fam—*Combretaceae*. This is a deciduous tree occurring upto a height of 2,000' (610.04 metres) above sea level.

The timber is sued for house construction. The bark is used in dying and tanning.

10. *Pterocarpus marsupium*—Venga (വേങ്ങ) Papilionacea This grows upto an elevation of 2,500' (762.17 metres) above sea level. The wood is durable, it seasons well and takes a fine polish.

11. *Hopea parviflora*—Thamagam or Pongu - (പൊങ്ങ) This is a lofty tree growing upto a height of 3,000' (914 metres) The wood is used for bridges, buildings and boats.

12. *Dysoxylum malabaricum*—Vella Akil (വെള്ളഅകിൽ)—*White Cedar*—*Meliaceae*. This is a large tree which grows upto an elevation of 3,000' (914 metres) The wood is extensively used in the manufacture of oil casks, match boxes, and splints.

13. *Cedrela toona*—Madagiri Vembu and Red Cedar (Fam—Meliaceae). This is a large tree growing to a height of 4,000' (1218.47 metres). The wood resembles Mahogany and is highly valued for furniture, house-building and carving.

14. *Lagerstroemia Flos*—Regione—Nirmaruthu or Pumaruthu (നീർമരം or പൂമരം). The wood is durable under water. It is commonly planted in gardens and avenues.

15. *Bombax malabaricum* (മുളളുളവ) —Mullu Elavu—Fam—Malvaceae—This tree grows from sea level upto an elevations of 4,000' (1218.47 metres). The tree has no heartwood. The wood is soft and is used in making sea going boats. Plants made out of this wood are used for tea chests, toys and matches.

The cotton like floss obtained from the fruits is used for stuffing pillows.

16. *Xylia Xylocarpa*—Irumul or Irul (ഇരൂൾ)—Iron Wood—Fam—Leguminosae. This tree grows abundantly in forests and it grows upto an elevation of 2,000' (610.04 metres) above soil level. The wood is durable and lasts under water. It is used for house building, for making boats agricultural implement, tool handles etc.

17. *Mangifera indica*—Mavu (മാവ്)—Anacardiaceae. It grows abundantly upto an elevation of 4,000' (1218.47 metres). The timber is used for making small canoes, tea chests etc.

18. *Albizia procera*—Karintakara (കരിന്തകര) (Mimosae) Leguminosae. The wood is durable and is used for crushers, cart wheels, agricultural implements.

19. *Albizia lebbek* is known as 'Vaka' ('വാക്').

20. *Polyalthia longifolia* (Arana -അരാന) (Anonaceae) grows in the low country and is planted in gardens and avenues.

21. *Calophyllum inophyllum*—Punna—Alaxandrien launvel. The seeds yield an oil.

Calophyllum tomentosum—Kattupunna (കാട്ടുപുന). The seeds yield an oil and the wood is used for paperpulp.

VIII. Useful Palms (Palmae).

1. *Caryota urens*—Chundapana (ചുണ്ടപ്പന). This is a lofty palm growing upto an elevation of 3,000' (914 metres). The outerwood of the palm is strong and durable and is used for house-building fencing etc. The leaves yield a type of fibre called 'Kitul' fibre. From the soft pith of the stem a starchy edible material resembling sago is prepared. Sweet toddy is obtained from the palm from which coarse sugar is prepared.

2. *Borassus flabellifer*—Karumpana. This is another useful palm. The strong out wood is used for rafters. The hollowed stems are used conduits for conveying water and the leaves are used for thatching houses and for making fans, hats, mats and baskets. A sweet toddy obtained from the unfloriscencedrunk or converted into jaggery. Arrack is prepared from the termnted toddy.

3. *Corypha umbraculifera* (Kodappana). The leaves of this palm are used as thatching material for houses and for making fans, mats and umbrellas as well as for writing. A sago like starch which is obtained from the pith is nutritious.

4. *Areacatechu*—'Kavungu'—A palm widely cultivated in plantation scale and small scale for the sake of the fruits.

IX. Common Avenue Trees.

1. *Ficus bengalensis* or Peral or 'Almaram'—Moraceae. It is found growing wild in moist forests from sea level to 4,000' (1218.47 metres).

2. *Ficus religiosa*—'Arayal' or The Peepul (Moraceae). The trees are planted near temples. They are regarded as sacred trees by Hindus and Buddhists.

3. *Artocarpus integrifolia*—Plavu—Fam—Moraceae. This large tree is famous for its delicious fruits.

4. *Artocarpus hirsuta* 'Anjili' or Ayani.

5. *Eugenia jambolana*—'Naval' (ഞാമ്പൽ) Myrtaceae. This is a large tree growing to a height of about 80' (24.39 metres) and gives good shade.

6. *Thespesia populnea*—The Portia Tree 'Puvarasu' or 'Chilanthi'—Malvaceae. This is a useful avenue tree. The timber is strong, hard and durable. It resembles Mahogany.

7. *Tamarindus indica* - 'Pulimaram' - Caesalpinoideae. Leguminosae

8. *Lagerstroemia Flos*—Riginoe—'Maruthu'

9. *Calophyllum inophyllum* - Punna - The Laurel tree. An avenue tree with fragrant flowers.

10. *Pongamia galbra*—'Pungu'—Indian Beech. This is planted along the sides of roads. The seeds, the leaves, the oil and the bark are used in medicines.

11. *Albizia lebeck* - 'Vaka' 'Leguminosae' A common avenue tree.

12. *Poinciana Elata* Gold Mohur tree Leguminosae. This is a gorgeous tree bearing large panicles of bright scarlet flowers.

13. *Enterolobium saman*—The Rair tree (Urakkam thungi Maram.) A common avenue tree producing pink flowers.

14. *Pithecolobium dulce*—'Korukkapuli' Leguminosae. When planted close and kept cut down it makes an impassable hedge.

15. *Polyalthia longifolia* 'Arana'

16. *Azadirachta indica* (Veppu). A large evergreen avenue tree. The bark, the leaves, and the oil are useful in the preparation of medicines.

17. *Casuarina equisetifolia*—'Kattadi' or 'Chaukamaram' Casurina Fam—Casurinaeae. A common avenue tree.

18. *Grevillia robusta*—Proteaceae—Silver oak. This is an exotic tree planted in avenues. The trees provide shade for the tea plants in Tea estates.

19. *Vateria indica*—(Payin maram)—A common avenue tree Indian Copal tree—Fam—Diptero carpaea.

X. Hedge Plants

1. *Pandanus sp.* 'Kaith' Fam—Pandanaeae. The midrib of the leaf, and edges of the leaf are armed with spines. The leaves are used in the manufacture of baskets, mats, etc. 'Keora oil' is distilled from the fragrant bracts of the flower. The floral leaves are worn on the hair by women.

2. *Opuntia dillenti*—'Pathimullu' Prickly Pear Fam—Cactaceae. An excellent hedge plant.

3. *Ananans comosus*—'Pruthichakkai' or Kaithachakka. The pine apple plant. The fruits are delicious.

4. *Agave americana*—Simakattala—Fam—*Amaryllideae*.
5. *Saccharum arundinaceum*—Pekkarambu. When planted close it form a good hedge.
6. *Sesbania grandiglora* 'Agathi' *Leguminosae*.—A common hedge plant.
7. *Adathoda vasica*—Adalodakam—*Acanthaceae*.—A common hedge plant of medicinal importance.

XI. Tuberous plants.

1. *Ipomea batatas*—Mathurakilangu. A creeping plant producing sweet succulent tuberous roots.
 2. *Coleus parviflorus*—Chivakilangu or Kurka. Generally cultivated for its edible root tubers.
 3. *Amorphophallus campanulatus* - Chena.
- Elephant foot yam - Cultivated for the massive hemispherical underground stem.

4. *Colocasia antiquorum* - 'Chembu' Many varieties are cultivated for the stem tubers.

5. *Typhonium trilobatum* (Karana kilangu). The plant yields a tuber which is acrid.

6. *Dioscorea bulbifera* 'Kachil'. *Dioscorea alata* - 'Peruvalli Kachil'. Two common forms or yam cultivated extensively.

7. *Manihot utilisima* - (Marachini). Several varieties of tapioca are cultivated for the sake the edible nutritious root tubers. It is used as a good substitute for rice by the poor people.

8. *Curcuma angustifolia* - kuva - Arrow root. The tubers obtained from this plant form an important article of food.

XII. Plants producing edible Fruits.

1. *Mangifera indica* - Mavu - The Mango Tree.
- Anacardiaceae* - The tree yields one of the most popular fruits in the tropics.
2. *Psidium guajava* - Perakka or Koyyapazham (*Myrtaceae*) The fruits are edible.

3. *Punica granatum* - (Mathalam) *Lythraceae*. Owing to its medicinal properties the fruit is very popular in our country.

4. *Artocarpus integrifolia* - Plavu

5. *Artocarpus hirsuta* - 'Ayini' or 'Anjili'

6. *Carica papaya* - Papaya - or 'Omakkai'

Fam - *Caricaceae* The ripe fruit of Papaya is very popular.

7. *Garcinia cambogia* Kodampully *Guttiferæ*—The succulent shell of the ripe fruit is cut dried in the sun and preserved. It is used as a substitute for tamarind.

8. *Musa sapientum* - Vazha *Musaceae*—Several varieties of this plant are cultivated for the sake of the delicious fruits.

9. *Musa superba* - Wild Plaintain 'Kallu Vazha'. This grows in jungles. It is cultivated as an ornamental plant.

10. *Ananas comosus* - (Pine apple) - *Bromeliaceae*.—The fruits are sweet and juicy.

11. *Anona reticulata* - Athachakka - The Custard Apple *Anonaeae* The fruits are very popular.

12. *Achras sapota* - The Sapodilla Plum—The ripe fruit is delicious.

13. *Flacourtia intermis* - 'Love - Love Tree' 'Lallolika' The plant produces bright red berries which are exceedingly sour but which could be used in the preparation of jellies, pickles etc.

14. *Anacardium occidentale* - 'Parankimavu' - The Cashewnut. It is cultivated extensively for its fruits. The large swollen flower stalk is called the Cashew apple. It is juicy and has a peculiar acid taste. The small kidney shaped nut is found at the free end of the 'cashew apple'. The kernel is roasted and used. It is exported to Europe and America.

15. *Aegle marmelos* (Kuvallam) - The Bael tree. It is considered as a sacred tree by Hindus. The aromatic pulp of the fruit is edible.

16. *Eugenia jambosa* - Paninir Jamba.

Myrtaceae - The fruits are sweet. It possesses a peculiar aroma.

17. *Averrhoa bilimbi* - 'Bilimbi puli' or Iramban puli, *Oxalidaceae*.

19. *Averrhoa Carambola* - Pulinchi. The fruits are used in the preparation of curries and pickles.

20. *Cicca disticha* - Arienellika - The fruits are sour to taste.

21. *Embllica officinalis* - Nellikka - The fruits are sour to taste. So they are used in the preparation of pickles. The fruits are of medicinal value also.

XIII. Fibre Yielding Plants.

1. *Pandanus sp.*-Kaitha - ११११ The screw pine. Fam - *Pandanaceae*—The fibrous leaves of these plants after previous treatment are woven into mats, bags etc.

2. *Cargota urens* - Chundanpana *Palmae* - The leaf sheaths, flower stalks and stem yield a kind of fibre.

3. *Borassus flabellifer* - Kurimpuna - The fibre obtained from the petioles of the leaves of the tree is used for making brushes and brooms.

4. *Cocos nucifera* - 'Thengu' - *Palmae* The fibrous husk of the fruits yield an important fibre known as 'coir', used in the manufactures of ropes, doormats, carpets etc.

5. *Musa sp.* 'Vazha' - Plantain. The leaf sheaths yield a kind of useful fibre.

6. *Butea frondosa* - 'Plasu' *Leguminosae*. A coarsh fibre fit for making ropes is extracted from this plant.

7. *Sida sp.* - 'Karuntholty' *Malvaceae*. A strong white silky fibre can be extracted from this plant.

8. *Helictres isora* - 'Valampiri' (*Sterculiaceae*). The fibre is long, white and silky and is used for various purposes.

9. *Calotropis gigantic* -Erukku - Madar *Asclepiadaceae* - The plant yields a fibre of superior quality.

10. *Agave sisalana* - 'Anakkattala', *Amaryllidaceae* - A valuable fibre is obtained from this plant which is used in making cordage and tying 'bedies'.

XIV. Oil Yielding Plants.

1. *Cocos nucifera* - Thengu

Palmae - Coconut oil is obtained from the kernel of the fruit.

2. *Cymbopogon sp.* Lemon grass. A highly valuable medicinal oil is distilled from these plants. The oil is used in medicine, perfumery and soap industry.

3. *Azadirachta indica* Veppu - The seeds of the plant yield Margosa or Neem oil.

4. *Hydnocarpus wightiana* - 'Marotti' The seeds yield a valuable oil used for lighting purposes and in the treatment of Leprosy.

5. *Ricinus communis* - *Avanakku* 'The Castor' - The medicinal 'Castor Oil' is extracted from the seeds.

6. *Sesamum indicum* - *Gingelly* 'Ellu'. Gingelly oil is extracted from the seeds.

7. *Myristica fragrans* (*Jathikka* Maram) - The fruits and Mace of Jathi fruit yield an oil which is used in perfumery.

XV. Medicinal Plants.

Some of the important medicinal plants are listed here.

1. *Adathoda Vsika* *Adalodakam* ആടലോടകം.
2. *Coleus* sp. - *Panikurka* പനിക്കൂർക്ക
3. *Sida* sp. - *Kurumthotti* കുറുമത്തൊട്ടി
4. *Tinospora cordifolia* - 'Amrithu. അമൃതം'
5. *Ocimum sanctum* - *Thulasi* തുളസി
6. *Piper nigrum* - *Kurumulaku* (Pepper) കുരുമുളക്
7. *Murraya koenigii* - *Karuveppila* കരുവേപ്പില
8. *Aegle marmelos* - *Kuvalam* കുവളം.
9. *Myristica fragrans* - *Jathika* ജാതിക്ക
10. *Punica granatum* - *Mathala-Narakam* മാതളനാരകം.
11. *Vitex nigundo* - *Karinochi* കരിനൊച്ചി
12. *Ricinus communis* - Castor oil plant (*Avanakku*) ആവണക്ക
13. *Curcuma tonga* - *Manjal* (Turmeric) മഞ്ഞര
14. *Zingiber Offinialis* - *Ginger* 'Inchi' ഇഞ്ചി
15. *Desmodium* sp. *Orila* ഓരില
16. *Cassia fistula* - *Kanikonna* കണിക്കൊന്ന
17. *Saraca idica* - *Asokam* അശോകം.
18. *Tamarindus indicus* - *Pulimaram* പുളിമരം.
19. *Azadirachta indica* - *Veppu* Margosatree വേപ്പ്
20. *Oxalis corniculata* - *Puliyarila* പുളിയറില
21. *Cardiospermum halicacabum* - *Uzhinja* yellow wood sorrel ഉഴിഞ്ഞ അമ്പഴം.
22. *Spondias mangifera* - *Ambazham* - Hog Plum Tree അമ്പഴം.
23. *Lawsonia alba* - *Mailanchi* Henna shrub മൈലാഞ്ചി
24. *Coriandrum sativum* - *Kothamally* coriander കൊത്തമല്ലി
25. *Mimusops elengi* - *Elenji* ഇലഞ്ഞി
26. *Jasminum grandiflorum* *Pichakom* പിചകം.
27. *Nyctanthus arbor trisis* - *Pavizhamalli* പവിഴമല്ലി
28. *Holostemma annulare* - *Adapathian* അടപതിയൻ
29. *Solanum nigrum* - *Karuthakkali* കറുത്തക്കാളി
30. *Solanum Xanthocarpum* - *Kandan Kathiri* കണ്ടൻകത്തീരി
31. *Datura stramonium* - *Ummam* ഉമ്മം.
32. *Emblica officinalis* - *Nelli* നെല്ലി
33. *Asparagus racemosus* - *Sathavari* ശതാവരി
34. *Acorus calamus* *Vayambu* Sweet Flag വയമ്പ്
35. *Gynandropis pentaphylla* - *Kattukaduku* കാട്ടുകടുകു
36. *Tinospora cordifolia* - *Amrithavalli* അമൃതവള്ളി.
37. *Strychnos nuxvomica* - *Kanjiram* കാഞ്ഞിരം.
38. *Cassia angustifolia* - *Sunnamukki* ശുന്നമുക്കി
39. *Hydnocarpus wightiana* - *Marotti* മരൊട്ടി
40. *Samadera indica* - *Karinjotta* കരിഞ്ഞൊട്ട
41. *Holorrhena antidynterica* - *Kodaka-pala* കൊടകപാല

42. *Ruta graeolans* - *Aruha* or *Arratha* അരുത or അരത്ത
43. *Naregamia alata* - *Nila-narakam* നിലനാരകം.
44. *Hemidesmus indicus* - 'Nannari or *Narunandi* നന്നാരി or നറുനാണ്ടി
45. *Inchnocarpus frutesces* - *Palvalli* പാൽവള്ളി
46. *Cerebera odollum* - *Othalanga* തെളങ്ങ
47. *Alstonia* - *scholaris* - *Ezhilam pala* ഏഴിലംപാല
48. *Plumeria aculifolia* - *Ilachambakam* ഇലച്ചമ്പകം.
49. *Calotropis gigantea* - *Erukku* - *Madar* എറുക്ക
50. *Ionidium suffruticosum* - *Orilathamara* ഓരിലത്താമര
51. *Glycusmis pentaphylle* - *Panal* പാണൽ
52. *Cissus quadrangularis* - *Changalam peranda* ചങ്ങലംപരണ്ട
53. *Mollugo pentaphyla* - *parpadakappulu* പർപ്പടകപ്പുല്ല
54. *Ixora coccinea* - *Thechi* or 'Chethi' തെച്ചി or ചെത്തി
55. *Borreria hispida* - *Tharavu* താരാവ്
56. *Eclipta alba* - 'Kaiyanni' or 'Kaunni' കയ്യാനി
57. *Plumbago Zeylanica* - *Koduweli* കൊടുവേലി
58. *Herpestis* sp. - *Nirbrahmi* നിർബ്രഹ്മി
59. *Achyranthus aspera* - *Kadaladi* കടലാടി
60. *Gloriosa superba* - *Melthoumi* മേത്തോനി
61. *Daemia extensa* - *Velipparuthi* വേലിപ്പരുത്തി
62. *Trichosanthes cucumberina* - *Kattu padajalam* കാട്ടുപടവലം.

XVI Spices, Condiments and seasoning Herbs

1. "Elettaria Cardamom" - *Elam* Cardamom. The seeds are aromatic and used in confectionary in medicine and in the preparation of curries.
2. *Piper nigrum* - *Kurumulaku* - Black pepper. The black and white pepper of commerce is obtained from the same plant.
3. *Pipper longam* - *Thippali* - The fruit is used as a condiment and also in medicine.
4. *Piper betel* - *Vettilla*. It is cultivated for its aromatic leaves which are chewed with arecanut.
5. *Zingiber officinalis* - 'Inchi' The underground rhizomes furnish the ginger of commerce.
6. *Curcuma longu* - *Manjal* - Turmeric.
7. *Myristica fragrans* - *Jathikka* - Nut Meg.
The trees is cultivated for its seeds and arillus.
8. *Capsicum* sp. *Mulaku*. It is cultivated for the sake of the pungent fruit.

XVII. Plants with showy or scented flowers

1. *Michelia champaka* - *Champakam*. The flowers are sweet scented.
2. *Millingtonia hortensis* - *Maramalli*. The tree produces a profusion of long white fragrant flowers.
3. *Plumeria aculifolia* - *Elachampakam*. It produces white fragrant flowers.
4. *Nyctanthus arbor tristis* - *Pavizhamalli*. The tree produces sweet scented white flowers.

5. *Lawsonia alba* - Mailanchi - The flowers are sweet scented.
6. *Murraya exotica* - The China Box Plant. The flowers are white and sweet scented.
7. *Bauhinia acuminata* - Mantharam - The flowers are white and showy.
8. *Butea frondosa* - Plasu - The tree produces scarlet flowers.
9. *Cassia fistula* - Kanikonna - It produces pendulous racemes of bright yellow flowers which are in great demand on the Vishu day.
10. *Hibiscus rosa-sinensis* - Chemparathy. The flowers are large and showy.
11. *Ixora eoccinea* - 'Thechi' or 'Chethi' The plants produce white, cream or red flowers.
12. *Ervatamia coronaria* - Nanthiarvattam. These undershrubs produce white flowers with mild fragrance.
13. *Erythrina indica* - Murukku. The tree produces large showy scarlet flowers.
14. *Mussaenda frondosa* - Vellila - The shrub produces orange coloured tubular flowers which are made conspicuous by the enlargement of one of the calyx lobes of the flower.
15. *Saraca indica* - Asokam - The tree produces large clusters of bright yellow or scarlet flowers.
16. *Caesalpinia pulcherrima* - Rajamally - Peacock flower The shrub produces yellow or deep red flowers.
17. *Nerium odoratum* 'Arali, It produces showy pink, red or white flowers.
18. *Mirabilis jalapa* - Nalumanipoovu. The four 'O' clock plant. It produces flowers of various colours.
19. *Vinca rosea* - 'Savanari' 'Ushamanjari' Periwinkle. It produces violet or white flowers.
20. *Jasminum grandiflorum* - 'Pichakam' It produces fragrant tubular flowers.
21. *Bougainvillea spectabilis* - Flowers of various colours are produced by this garden plant.
22. *Allamanda cathartica* - 'Kolambi' or 'Odapoovu., Dark yellow flowers are produced.
23. *Cananga odorata* - yellow, sweet scented flowers.
24. *Alstonia scholaris* - Ezhilampala. produces dusters of sweet scented flowers.

XVIII. Beverage plants. In the high ranges, Coffee and tea are cultivated extensively as plantation crops. *Coffea arabica*-Coffee robusta Coffee is raised in many plantations and in house compounds. Coffee plantations are seen on the slopes of hills at an elevation ranging from 1000'-4000.' (304.17-1218.47 metres) above sea level.

Camellia Thea. a perennial plant which was introduced into India from China is now extensively cultivated in the subtropical zone with warm and temperate climate.

XIX. Para rubber - *Hevea brasiliensis*. Rubber plantations are seen in parts of the forest which enjoy an average of 75"-150" (1.91-3.82 metres)

of well distributed rainfall. The finest rubber in India is to be found growing in the Thodupuzha (Ernakulam district), Mundakayam (Kottayam district) and Ranni forests (Quilon District).

XX. Cardamom Plantations. At elevations above 2500' (762.17 metres) especially in the Cardamom Hills are seen the cardamom plantations. Where two distinct varieties known as Malabar and Mysore cardamoms are grown.

XXI. Plants of special Interest

1. *Antiaris toxicaria* - *Arei Anjili* (അരിആഞ്ഞിലി) *Moraceae*. The inner bark of the tree is used to make sacks bags and 'Maravuri' (മാവുരി). So the tree is also called 'Valkala Vriksha'.

2. *Drosera sp.* These plants are provided with devices for capturing insects. The insects thus captured are completely digested and absorbed. The leaves are covered with outgrowths which excrete the digestive fluid. The insects which come into contact with any of the tentacles of the leaf are disabled by the sticky digestive secretion. In their ineffectual struggle to disentangle themselves they are held more securely. The other tentacles also curve over the captured insect and keep them securely held till the fleshy matter of the body is completely absorbed.

Drosera peltata is believed to possess medicinal properties. It is reported that a paste made from the plant is used in the preparation of 'Thanka Bhasma'.

3. *The Bladder worts.* These belong to the genus *utricularia*. These plants generally grow in stagnant waters. The leaves are highly dissected some of which are modified into small bladders. The mouth of the bladder is protected by a 'trap door', which opens only inwards. Small insects find their way into the trap and they are prevented from going out. These insects are then digested and absorbed.

The bladder worts commonly occur as weeds in the paddy fields.

4. *Aomania baccifera* - (*Nirmel* - *Nerappu*) Sanskrit writers call the plant 'Agnigarbha' or the 'Plant pregnant with fire'. The juice of the plant when sprinkled on water is reported to give rise to a faint cloud probably of moisture. This may be the reason for the name 'Nirmel-Nerappu'.

5. *Holigarna Arnottiana* (*Charu*). The poisonous effluvium of the tree causes eutaneous (skin) eruptions on the bodies of people who approach it. The people thus affected are asked by the local physicians to go and implore the 'Thanni' tree to remedy the evil effects of the wrath of the Charu tree.

6. *Desmodium gyrans* - Indian Telegraph plant - (*Rama Nama Paccha*). The leaf has a 'pulvinus' which makes it possible for the lateral leaflets to move in a peculiar fashion.

7. *Strychnos nux vomica* - *Kanjiram*. The seeds are poisonous.
8. *Hydrocarpus wightiana* (*Morotti*). The seeds are used as fish poison.
9. *Cerebera odollum*. (*Odallum*). The fruit is poisonous.
10. *Datura stramonium* - (*Ummam*). The seeds are poisonous.
11. *Gloriosa superba* (*Melhommi*). The tuberous roots are poisonous.

12. *Abrus precatorius* - 'Kunni'. The seeds are poisonous.
 13. *Butea frondosa* - 'Plasu'. The bark of this tree is given with ginger in snake bite poisoning.
 14. *Erythrina stricta* - The flowers serve as an antidote for poisons.

PLANTS

1. <i>Michelia neelagirica</i> Magnoliaceae	Devicolam
2. <i>Goniiothalamus sp.</i>	Vandanmedu
3. <i>Unona viridiflora</i> - Anonaceae	Peerumede
4. " <i>pannora</i> "	Periyar
5. <i>Polyalthia coffeoides</i> "	Peerumede
6. " <i>cirasoides</i> "	Puliyara
7. <i>Cocculus laurifolius</i> - Menispermaceae	Devicolam
8. <i>Cyclea peltata</i> - Menispermaceae	Peerumede
9. <i>Capparis harrida</i> - <i>Capparidaceae</i>	Vaniyankulam
10. <i>Cleome</i> - monophylla "	common
11. <i>Alsodera zeylanica</i>	Peerumede
12. <i>Hydnocarpus whighiana</i> - Bixineae	do.
13. " <i>alpina</i> "	do.
14. <i>Pittosporum dasycaulon</i> - <i>Pittosporaceae</i>	Devicolam
15. <i>Cerastium glomeratum</i> - <i>Caryophyllaceae</i>	do.
16. <i>Hypericum mysorens</i> - <i>Hypericaceae</i>	Periyar
17. <i>Garcinia wightii</i> - <i>gustiferaceae</i>	Vandanmedu
18. <i>Mesua ferria</i>	Kottayam
19. <i>Calophyllum decipiens</i> - <i>gustiferaceae</i>	Peerumede
20. " <i>tomentosum</i> "	Peerumede
21. <i>Ternstroemia japonica</i> - <i>Ternstroemiaceae</i>	High Ranges
22. <i>Gordonia Obtusa</i>	Peerumede-Devicolam
23. <i>Camellia thea</i>	Munnar
24. <i>Hopea wightiana</i> - <i>Dipterocarpaceae</i>	Peerumede
25. <i>Dipterocarpus bourdillonii</i>	do.
26. <i>Abutilon polyandrum</i> - <i>Malvaceae</i>	do.
27. <i>Sida glutinosa</i> "	All places
28. " <i>carpinifolia</i> "	do.
29. " <i>humilis</i> "	Devicolam
30. <i>Oreana lobata</i> "	Peerumede
31. <i>Hibiscus abelmoschus</i> "	do.
32. " <i>vitifolius</i> "	common
33. " <i>furcatus</i> "	throughout
34. <i>Helicteres isora</i> - <i>sterculiaceae</i>	Changanacherry
35. <i>Sterculia foetida</i> - <i>sterculiaceae</i>	do.
36. <i>Heritiera ittoralis</i> "	Peerumede
37. <i>Pterospermum reticulatum</i>	do.
38. <i>P. hyneanum</i>	do.
39. <i>Leptonychia macuroides</i>	do.
40. <i>Grewia disperma</i> - <i>Tiliaceae</i>	do.
41. <i>Triumfetta rhomboidea</i>	Kanjirapally
42. <i>Elacocarpus tuberculatus</i>	Peerumede
43. " <i>Munroii</i> "	do.
44. <i>Impatiens acquetes</i> - <i>Balsamineae</i>	Kottayam

45. <i>Impatiens rivalis</i> - <i>Balsamineae</i>	Peerumede
46. " <i>klenii</i> "	do.
47. " <i>diversifolia</i> "	do.
48. " <i>pusilla</i> "	do.
49. " <i>tomentosa</i> "	do.
50. " <i>bellardii</i> (<i>bellardii</i>)	Devicolam
51. " <i>dasysperma</i> "	Peerumede
52. <i>Toddallia asiatica</i> - <i>Rutaceae</i>	Devicolam & Peerumede
53. <i>Zanthoxylum ovalifolium</i> "	Neriamangalam
54. <i>Clausena indica</i> "	Peerumede
55. <i>Glycosmis pentaphylla</i> "	Kottayam
56. <i>Murraya exotica</i> "	Peerumede
57. " <i>koenigii</i> "	Kottayam
58. <i>Brucea sumatrana</i> - <i>simarubaceae</i>	do.
59. <i>Lanrium anamalayanum</i> - <i>Meliaceae</i>	Peerumede
60. <i>Azaderachta indica</i> "	Changanacherry
61. <i>Walsura piscida</i> "	do.
62. <i>Dysoxylum Beddamei</i>	Peerumede
63. " <i>malabaricum</i>	Vandanmedu
64. <i>Heynea trijuga</i>	Peerumede
65. <i>Erythralium populifolium</i> - <i>olacineae</i>	Munnar
66. <i>Anaclosa densiflora</i>	Devicolam
67. <i>Gomphandra polymorpha</i>	do.
68. <i>Mappia foetida</i> "	do.
69. <i>Celastrus paniculata</i> - <i>Celastrineae</i>	Peerumede
70. <i>Kurrimia indica</i> "	do.
71. <i>Gouania microcarpa</i> - <i>Thamneae</i>	do.
72. <i>Zizyphus jujuba</i> "	Changanacherry
73. " <i>oenoplia</i> "	Peerumede
74. <i>Vitis repens</i> - <i>Ampelideae</i>	do.
75. " <i>discolour</i> "	do.
76. " <i>Leca sambucina</i>	do.
77. <i>Cardiospermum halicacabum</i> - <i>sapindaceae</i>	Changanacherry
78. <i>Harpullia imbricata</i> "	Vandanmedu
79. <i>Allophylus rheedi</i> "	Peerumede
80. <i>Maliosma wightii</i> - <i>Sabiaceae</i>	Udumbanchola
81. <i>Meliosma arnothiana</i> ,	Devicolam, Munnar
82. <i>Odina odier</i> , <i>Anacardiaceae</i>	Changanacherry
83. <i>Nothopegia dalzielii</i> "	Peerumede
84. <i>Anacardium occidentale</i>	Kottayam
85. <i>Spondias mangifera</i> "	do.
86. <i>Mangifera indica</i> "	do.
87. <i>Crotalaria albida</i> - <i>Papilionaceae</i>	Peerumede
88. <i>C. umbellata</i> "	Devicolam
89. <i>C. calcynia</i> "	do.
90. <i>C. restusa</i> "	do.
91. <i>C. heyneianum</i> "	Peerumede
92. <i>C. Quinquifolia</i> "	Kumarakom
93. <i>C. clarkii</i> "	Peerumede
94. <i>C. Fysonii</i> "	Devicolam
95. <i>Indigofera pedicellata</i> "	do.

96.	I. Pulchella Pappilionaceae	Peerumede & Neriamangalam
97.	I. cautreata "	Peerumede
98.	Milletia rubiginosa,	Udumbanchola
99.	Smithea capitata "	Peerumede
100.	Desmodium Venkobaroni "	Peerumede
101.	D. triquetrum "	Malayattur & Peerumede
102.	D. laxiflorum "	Peerumede
103.	D. polycarpum "	Kanjirapally & Peerumede
104.	D. Wynadensis "	Munnar
105.	Pycnospora hedysaroides	Peerumede
106.	Alysicarpus bupleurifolius	do.
107.	A. rugosus "	do.
108.	Leptodesmia congesta	do.
109.	Clitorea ternata "	Kottayam
110.	Phaseolus sublobatus	Kanjirapally
111.	P. calearatus "	Peerumede
112.	Vigna pilosa "	Kanjirapally
113.	Dunbarea heyneii "	do.
114.	Atylosia libeata "	Peerumede
115.	Flemingea stro bilifera	Periyar
116.	" Grahamina "	Peerumede
117.	F. Semialata	do.
118.	Sophora glauca	do.
119.	Derris uliginosa	Kottayam
120.	D. brevipes	Vandanmedu
121.	Pisum sativum	Munnar
122.	Cassia leschnaultii Caealpeneae	Devicolam
123.	Bauhinia malabarica "	Common
124.	Humboldtia bourdilliani "	Peerumede
125.	Acacia arabica Mimosae	do.
126.	A. melanoylon "	Devicolam
127.	A. dealbata "	do.
128.	Albizia lebeck "	Kottayam
129.	Acrocarpus fraxinifolius "	Vandanmedu
130.	Princeps utilis Rosaceae	Devicolam
131.	Parinari travencorium "	do.
132.	Pygeum wightianum "	do.
133.	Rubus ellepticus "	Peerumede
134.	Rubus racemosus "	Devicolam
135.	R. wightii "	do.
136.	R. micropetalus "	Devicolam & Peerumede
137.	Photinia notoniana "	Devicolam
138.	Drosera peltata Droseraceae	do.
139.	Termenalia catapa Combretaceae	Kottayam
140.	Quisqualis indica "	Erattupetta
141.	Eucalyptus globatus Myrtaceae	Munnar
142.	E. corymbosa	Peerumede
143.	Psidium guava "	everywhere
144.	Rhodomyrtus tomentosa "	Peerumede
145.	Eugenia lacta "	do.
146.	E. aronotiina "	do.

147.	E. Montana	"	Munnar
148.	E. jambolina	"	common
149.	E. Codyensis	"	Chempu
150.	E. bracteata	"	do.
151.	Osbeckia truncata Melastomaceae	"	Punalur Devicolam
152.	O. Leschnaultii	"	Peerumede
153.	Lagerstroemia lanceolata Lythraceae	"	do.
154.	L. Indica	"	Kottayam
155.	Jussiaea repens Onagraceae	"	Changanacherry
156.	Ludwigia parviflora	"	do.
157.	Homalium travencoricum Samydaceae	"	Peerumede
158.	Passiflora edulis Passifloraceae	"	Devicolam
159.	Luffa acutangula Cucurbitaceae	"	Common
160.	Cephalandra indica	"	do.
161.	Cucumis sativus	"	do.
162.	Momordica charantia	"	do.
163.	Trichosanthes angulatus	"	do.
164.	Mukia seabraella	"	Kottayam
165.	Sechium edule	"	Anamala
166.	Begonia malabarica Begoniaceae	"	Highranges
167.	Hydrocotyle asiatica Umbelliferac	"	Everywhere
168.	H. javonica	"	Peerumede & Parambikulam
169.	Pimpinella Candolleana	"	Devicolam
170.	P. pulneyensis	"	do.
171.	Heracleum zeycanicum	"	do.
172.	Peucedanum graveolans leschnaultii	"	Peerumede
173.	Lonicera leschnaultii	"	Munnar
174.	Caprifloaceae	"	Peerumede
175.	Wendlandia notoniana Rubiaceae	"	Peerumede
176.	Hedyotis auricularis	"	Neriamangalam
177.	Anotis leschnaultii	"	Devicolam
178.	A. decipiens	"	Peerumede
179.	Ophiorhiza mungos	"	do.
180.	O. pectinata	"	do.
181.	Diplospora apiocarpa	"	do.
182.	Knoxia mollis	"	Devicolam
183.	K. wightiana	"	Munnar
184.	Canthium umbellatum	"	Vandanmedu
185.	C. didymum	"	Kottayam
186.	C. rheedii	"	Devicolam
187.	Plectronia nilghirensis	"	Peerumede
188.	Ixora coccinea	"	Common
189.	Mussaenda frondosa	"	do.
190.	Oldenlandia corymbosa	"	do.
191.	Psychotria congesta	"	Munnar
192.	" elongata	"	Peerumede
193.	Galium asperifolium	"	do.
194.	Valeriana arnottiana Valerianaceae	"	Devicolam
195.	Centratherum mollis compositae	"	Peerumede
196.	Vernonia peninsularis	"	do.
197.	V. cinera	"	Devicolam
198.	V. Saligna	"	do.

198.	V. Arborea	Vandanmedu
199.	Ageiatum camysoides	Palai, Devicolam & Peerumedu
200.	Dicrocephala califolia	do.
201.	Erigeron mucronatus	Munnar
202.	Conyza stricta	Devicolam
203.	„ - barbata	Peerumedu
204.	Laggera alata	do.
205.	Anaphalis alata	do.
206.	A. travencorica	Devicolam
207.	Gnaphalium luterale	Peerumedu
208.	G. indicum	do.
209.	Helychrisum Hookerianum	Munnar
210.	Gynura nitida	Peerumedu
211.	Emelia souchifolia	do.
212.	Senecioia wightiana	Devicolam
213.	Cnicus wallichii	do.
214.	Crepis japonica	do.
215.	Tricholepis radicans	Peerumedu
216.	Sonchus oleraceus	Devicolam
217.	S. asper	Palai
218.	Helipta alba	Everywhere
219.	Blainvillia latifolia	Devicolam, Peerumedu
220.	Wedelia urticaefolia	Kanjirapally
221.	Bidens pilosa	Devicolam
222.	Lobelia nicotianaefolia Campanulaceae	do.
223.	Lobelia excelsa	Peerumedu
224.	Waltherbergia gracilis	Devicolam
225.	Rhododendron arboreum Ericaceae	do.
226.	Gaultheria fragrantissima	do.
227.	Maesa perrottetiana Myrsinac	do.
228.	Embelia ribes	Peerumedu
229.	Ardisia pauciflora	Vandanmedu
230.	Achras sapota Sapotaceae	Kottayam
231.	Mimusopa elengi	do.
232.	Isonandra lanceolata	Peerumedu
233.	Dichopsis elliptica Sapotaceae	do.
234.	Symplocos foliosa Styracae	do.
235.	S. villosa	do.
236.	Oleae dioica Oleaceae	do.
237.	Ligustrum Walkeri	do.
238.	L. Roxburghii	Vandanmedu
239.	Rauwolfia serpentina Apocynaceae	Peerumedu, Kanjirapally
240.	R. beddomei	Kottayam
241.	Vinca major	do.
242.	Wrightia tomentosa	do.
243.	Kopsia fruticosa	Changanacherry
244.	Cerebera odollum	do.
245.	Plumeria acutifolia	do.
246.	Thevetia Neviflora	do.
247.	Altemanda cathartica	do.

248.	Tabernaemontana dichotoma	Changanacherry
249.	Vallaris heyneii	do.
250.	Nerium odorum	do.
251.	Aganosma dichotoma	Kottayam
252.	Ichnocarpus frutescens	do.
253.	Asclepiaceae	do.
254.	Cryptostegia grandiflora	Aschlepiaceae do.
255.	Calotropis gigantea	do.
256.	Daemia extensa	Changanacherry
257.	Dregia volubilis	do.
258.	Hemidesmus indica	Peerumedu
259.	Ceropegia elegans	Devicolam
260.	C. tuberosa	Devicolam & Peerumedu
261.	C. bulbosa	Kottayam
262.	Asclepias curassavica	Peerumedu
263.	Strychnos nuxvomica	do.
264.	Fasraea obovata	do.
265.	Canscora decussata Gentinaceae	Periyar
266.	C. diffusa	Devicolam
267.	Exacum atropurpureum Genitinnaceae	do.
268.	Swertia angustifolia	Peerumedu
269.	S. trichotoma	Kottayam
270.	Ehretia canarensis Boraginaceae	Palai
271.	Heliotropium indicum Boraginaceae	Devicolam
272.	Gynoglossum furcatum	Kanjirapally
273.	Breweria cordata Convolvulaceae	do.
274.	Calceolaria mexicana	Changanacherry
275.	Solanum melongena Solanaceae	do.
276.	S. torvum	do.
277.	Lycopersicum esculentum	do.
278.	Physalis miniata	do.
279.	Datura stramonium	Devicolam
280.	Calceolaria mexicana Scrophularinac	Changanacherry
281.	Limnophylla heterophylla	Devicolam
282.	Torenia asiatica	do.
283.	Veronica javanica	Peerumedu
284.	Sopubia delphinifolia	do.
285.	Pedicularis zeylanica	Munnar
286.	Christisonia tubulosa Or obachiae	Peerumedu
287.	Utricularia coerulea Lentibulariaceae	do.
288.	U. reticulata	do.
289.	U. trifida	Devicolam
290.	Aeschynanthus perrotteitii Gesneraceae	Changanacherry
291.	Tecoma undulata Bignoniaceae	do.
292.	Millingtonia hortensis	do.
293.	Sesamum indicum Pedalinea	Malayatoor & Kottayam
294.	Asystasia coramandelina Acanthaceae	Peerumedu
295.	Andrographis paniculata	Kottayam
296.	Hygrophylla spinosa	Devicolam
297.	Diotacanthus albiflorus	Kottayam
298.	Juslicca simplex	do.

299.	<i>Rhia canthus communis</i>	„	Kottayam
300.	<i>Peristrophe montana</i>	Acauthaceae	Peerumedu
301.	<i>Prema coriacea</i>	Venbenaceae	Kottayam
302.	<i>Lantana indica</i>	„	common
303.	<i>Stachytarpheta indica</i>	„	do.
304.	<i>Tectona grandis</i>	Venbenaceae	Changanacherry
305.	<i>Vitex nigundo</i>	„	do.
306.	<i>Clerodendrom infortunatum</i>	„	do.
307.	<i>Ocimum sanctum</i>	Labiatae	common
308.	<i>Plectranthus wightii</i>	„	Peerumedu
309.	<i>P. nilgricus</i>	„	Devicolam
310.	<i>P. incanus</i>	„	Peerumedu
311.	<i>Pogostimon paludosus</i>	„	Devicolam
312.	<i>Dysophylba auricularia</i>	„	do.
313.	<i>Colebrookea oppositifolia</i>	„	Peerumedu
314.	<i>Salvia lantsea</i>	„	Devicolam
315.	<i>Calamintha umbrosa</i>	„	do.
316.	<i>Leucas angularis</i>	„	Peerumedu
317.	<i>L. aspera</i>	„	do.
318.	<i>L. vistata</i>	„	Kothamangalam
319.	<i>L. zeylanica</i>	„	Devicolam
320.	<i>L. Tenifolia</i>	„	do.
321.	<i>Plantago asiatica</i>	Plantaginac	do.
322.	<i>Boerhavia repens</i>	Nyctaginac	Kottayam
323.	<i>Celosia argentea</i>	Amaranteceae	do.
324.	<i>Amaranthus spenosus</i>	„	common
325.	<i>Aeru lanta</i>	„	do.
326.	<i>Achysanthus aspera</i>	„	do.
327.	<i>Gomphrena globosa</i>	„	do.
328.	<i>Basella rubra</i>	Chempodiocae	do.
329.	<i>Polygonum chinensis</i>	Polygnoceae	Devicolam
330.	<i>Bragantia wallichii</i>	Aristolochaeceae	do.
331.	<i>Peper negrum</i>	Peperaceae	common
332.	<i>P. brachystacheum</i>	„	Devicolam
333.	<i>P. betel</i>	„	Kumarakom
334.	<i>Peperomia portulacoides</i>	„	Peerumedu
335.	<i>P. reflexa</i>	„	do.
336.	<i>Chloranthus brachystachyus</i>	„	do.
	Chloranthaceae		
337.	<i>Myristica fragrans</i>	Myristicac	Kottayam & Changanacherry
338.	<i>M. beddome</i>	„	Vandanmedu
339.	<i>Cryptocarya bourdillori</i>	Laurinac	do.
340.	<i>Appollonias Arnottii</i>	„	Peerumedu
341.	<i>Cinnamomum zeylanicum</i>	„	do.
342.	<i>C. gracile</i>	„	Periyar
343.	<i>Phoebe lanceolata</i>	Laurinac	Peerumede
344.	<i>Actinodaphne hirsuta</i>	„	Vandanmedu
345.	<i>A. bourdillovii</i>	„	Peerumede
346.	<i>Litsea coriacea</i>	„	Vandanmedu & Kanjirapally
347.	<i>L. wightiana</i>	„	Udumbanchola
348.	<i>L. lanuganinosa</i>	„	Devicolam

349.	<i>Lasionisiphon</i> Sp.	Thymeliaceae	Peerumede
350.	<i>Loranthus obtusus</i>	Loranthaceae	Pamba
351.	<i>L. neelgherensis</i>	„	Vandanmedu
352.	<i>L. Boundillonides</i>	„	Devicolam
353.	<i>Santalum album</i>	Santalaceae	Thekkadi
354.	<i>Phyllanthus niruri</i>	Euphorbiaceae	Kottayam
355.	<i>P. emblica</i>	„	do.
356.	<i>P. lawii</i>	„	Periyar
357.	<i>P. simplex</i>	„	Peerumede & Kothamangalam
358.	<i>Glohiodon ellipaticum</i>	„	Peerumede
359.	<i>G. velutinum</i>	„	Kumili
360.	<i>Hemicyclea venusta</i>	„	Peerumede
361.	<i>Aporosa acuminata</i>	„	do.
362.	<i>A. fusiformis</i>	„	do.
363.	<i>Daphniphyllum glaucescens</i>	„	Devicolam
364.	<i>Croton malabaricus</i>	„	common
365.	<i>C. tigilium</i>	„	do.
366.	<i>Acalypha indica</i>	„	do.
367.	<i>A. paniculata</i>	„	Neriamangalam
368.	<i>Malottus philippinensis</i>	„	Kottayam
369.	<i>Macaranga indica</i>	„	common
370.	<i>Tragia involucrata</i>	„	Kottayam
371.	<i>Celtis tetrandra</i>	S. F. Ulmaeae (urticaceae)	Peerumede
372.	<i>Ficus gibbosa</i>	(moraceae s.f. urticaceae)	Peerumede & Kumili
373.	<i>F. benghalensis</i>	„	common
374.	<i>F. Beddomei</i>	„	Peerumede
375.	<i>F. religiosa</i>	„	common
376.	<i>F. arnottiana</i>	„	Peerumede
377.	<i>F. infectoria</i>	„	Periyar
378.	<i>Laportea terminalis</i>	(urticaceae s. f. urticaceae)	Peerumede
379.	<i>Pilea trinervea</i>	Urticaceae	do.
380.	<i>Pilea microphylla</i>	„	Kottayam
381.	<i>Artocarpus integrifolia</i>	„	common
382.	<i>A. incisa</i>	„	do.
383.	<i>Lecanthus wightii</i>	„	Thekkadi
384.	<i>Elatostema lineolatum</i>	„	Peerumede
385.	<i>Boehmeria malabarica</i>	„	do.
386.	<i>Pouzolzia wightii</i>	„	do.
387.	<i>P. Indica</i>	„	common
388.	<i>Villebrunea integrifolia</i>	„	Peerumede
389.	<i>Debregeasia velutina</i>	„	do.
390.	<i>Salix tetrasperma</i>	Salicinae	Vandanmedu
391.	<i>Oberonia wightiana</i>	orchedeae	Udumbanchola
392.	<i>O. brunoniana</i>	„	Peerumede
393.	<i>Dendrobium heterocarpum</i>	„	do.
394.	<i>Vanda Roxburghii</i>	„	Kottayam
395.	<i>Cleisostoma tenerum</i>	„	Vandanmedu
396.	<i>Spiranthes sinensis</i>	„	Devicolam
397.	<i>Epipogon mutans</i>	„	Udumbanchola
398.	<i>Habenaria travancorica</i>	„	Peerumede

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399.	<i>H. longicalcarata</i>	Salicinae	Devicolam & Peerumede
400.	<i>H. stenostachya</i>	"	do.
401.	<i>Satyrium nepalense</i>	"	do.
402.	<i>Curcuma longa</i>	(s. f. Zingiberaceae) Sutaminae	common
403.	<i>C. decipiens</i>	"	Ranni & Malayattur
404.	<i>Zingiber officinalis</i>	"	common
405.	<i>Elettaria cardamom</i>	"	Anamalais
406.	<i>Alpina galanga</i>	"	Ranni
407.	<i>Hedychium coronarium</i>	"	Devicolam
408.	<i>Canna indica</i>	s. f. (annaceae) Seitaninae	common
409.	<i>Musa sapientum</i>	s. f. Musaceae Seitaminae	do.
410.	<i>Hypoxis aurea</i>	Amaryllideae	Kottayam
411.	<i>Curculigo orchoides</i>	"	Changanacherry
412.	<i>Crinum asiaticum</i>	Amaryllideae	do.
413.	<i>Pancratium triflorum</i>	"	Kottayam
414.	<i>Dioscorea spicata</i>	Dioscoreaceae	common
415.	<i>D. oppositifolia</i>	"	do.
416.	<i>D. anguina</i>	"	do.
417.	<i>D. wallichii</i>	"	do.
418.	<i>D. aculeatus</i>	"	do.
419.	<i>Dioscorea alata</i>	Dioscoreaceae	do.
420.	<i>Smilax zeylanica</i>	Liliaceae	Peerumede
421.	<i>Asparagus racemosus</i>	"	Kottayam (common)
422.	<i>Dracaena terniflora</i>	"	Changanacherry
423.	<i>Chlorophytum malabaricum</i>	"	Devicolam
424.	<i>Dianella ensifolia</i>	"	Peerumede
425.	<i>Lilium neilgherrense</i>	"	Devicolam
426.	<i>Gloriosa superba</i>	"	Changanacherry
427.	<i>Cordyline terminalis</i>	"	Kottayam
428.	<i>Monochoria hastata</i>	Pontedericeae	Changanacherry
429.	<i>Xyres schoenoides</i>	Xyrideae	Devicolam
430.	<i>Commelane Benghaliensis</i>	Commelinaceae	Kottayam
431.	<i>Gyanoatis arachnoidea</i>	"	Peerumede
432.	<i>Aneilema scaberrimum</i>	"	do.
433.	<i>Juncus prismatocarpus</i>	Juncaceae	Devicolam
434.	<i>Areca catechu</i>	Palmee	common
435.	<i>Cocos nucifera</i>	"	do.
436.	<i>Pandanus fascicularis</i>	Pandaneae	Changanacherry
437.	<i>Colocasia antiquorum</i>	Aroideae	common
438.	<i>Alocasia indica</i>	do.	cultivated
439.	<i>Pistia stratiotes</i>	"	common
440.	<i>Amorphophallus campanulatus</i>	"	do.
441.	<i>Pothos scandens</i>	"	Kottayam
442.	<i>Arisaema leschnaultii</i>	"	Peerumede
443.	<i>Lagenandra toxicaria</i>	"	Kottayam
444.	<i>Theriophonum crenatum</i>	"	Changanacherry
445.	<i>Cyperus nutans</i>	Cyperaceae	Peerumede
446.	<i>C. squarrosus</i>	"	do.
447.	<i>Pycurus laterispicatus</i>	"	do.

448.	<i>Mariscus pictus</i>	Cyperaceae	Peerumede
449.	<i>Fimbristylis diphylla</i>	"	do.
450.	<i>F. tenera</i>	"	do.
451.	<i>F. miliacea</i>	"	do.
452.	<i>F. cyperoides</i>	"	do.
453.	<i>Bulbostylis capillaris</i>	"	Changanacherry
454.	<i>S. cirpus subcapitatus</i>	"	common
455.	<i>Kyllinga cylindrica</i>	Graminae	Peerumede
456.	<i>Paspalum compactum</i>	Graminae	do.
457.	<i>Eriochloa polystachya</i>	"	do.
458.	<i>Isachne Kunthiana</i>	"	do.
459.	<i>I. walkerii</i>	"	do.
460.	<i>Panicum nodosum</i>	"	do.
461.	<i>Setaria glauca</i>	"	do.
462.	<i>S. intermedia</i>	"	do.
463.	<i>Arundinella avenacea</i>	"	do.
464.	<i>A. mesophylla</i>	"	do.
465.	<i>A. agrostoides</i>	"	do.
466.	<i>A. tenella</i>	"	do.
467.	<i>A. fuscatus</i>	"	Peerumede
468.	<i>Ischaemum aristatum</i>	"	Changanacherry
469.	<i>Hygrorrhiza aristata</i>	"	common
470.	<i>Cynodon dactylon</i>	"	Vembanad
471.	<i>Diplachne fusca</i>	"	Peerumede
472.	<i>Phragmites karka</i>	"	do.
473.	<i>Eragrostis pilosa</i>	"	do.
474.	<i>E. gangetica</i>	"	Kottayam
475.	<i>Coix lachrymajob</i>	"	Changanacherry
476.	<i>Bambusa arundinaceae</i>	"	common
477.	<i>Oryza sativa</i>	"	Highranges
478.	<i>Ochlandra rheedii</i>	"	do.
479.	<i>Dendrocalamus strictus</i>	"	do.

FAUNA

Animals that may be found in the district

From the faunistic point of view the district is peculiar in having no sea front, which characteristic it shares to some extent with the Palghat District. However this District has the advantage of the presence of a large Inland Lake—the Vembanad Lake—which extends from North to South along the Western border of the District leaving just narrow strip of land along the sea coast that form part of the Alleppey District. The large lake so near the sea front attracts all types of marine birds and harbours an abundant brackish water fish fauna. The land fauna of the District is rich in all variations of the environment needed for different types of animals the low lying western strip including Vaikom Kumarakom, a middle strip with Ettumanoor, Kuravilangadu, Kanjirapally etc., slowly rising to Mundakayam and Peerumede where typical forest, animals and Jungle fauna mix. Further to the East the real mountain and forest areas of the old Kottayam District have now been separated as a new District called Idikki with the North Kallar, Udumbanchola Cardamom and Vandamedu Hills, all of which have been developed

into rich Rubber, Tea and Coffee Plantations but incidentally driving off much of the natural fauna further eastwards into the forests. Here again is the *Periyar Lake* with Thekkadi on its shores developed as a wild Animal Park one of the most attractive tourist spots in Kerala.

To give a systematic account of the animals occurring in those different areas is unnecessary as most of them have been described with reference to adjacent Districts. So it is deemed necessary only to enumerate the more important or conspicuous types in special environments.

Forests

In the forests the best known and dreaded animals are the larger cats—(Carnivora)—Carnivorous animals—beautifully adapted for catching living prey which they hunt, mostly singly, at night.

The *Panther* (*Panthera tigris*) is the largest, ones plentiful but now rather rare. A smaller type, more frequently met with is *Panthera pardus* the leopard. Occasionally they wander near human habitations forming a menace to livestock. The Black leopard occasionally met with, appears to be only a colour variety of the former.

In the forests also are the *Hyenas* true carnivorous animals attacking small game, and destroying them. Once they were quite abundant but now much reduced.

While the above mentioned Carnivora are of the cat tribe there are others of the Dog tribe exemplified by the Jackals (*canis auerus*) which inhabit jungles near human habitation doing much injury to poultry and small game. The sloth Bear (*Melursus ursinus*) is fairly common in Jungles and forests. A remarkable aquatic carnivora is *Luta vulgaris* the Otter. It lives near hill streams and feeds on fish. All these live and hunt in small or large packs.

Among the Hoofed animals (Ungulates) which are well represented are the Gaurs—commonly called India Bison (*Bibos gaurus*) seen in the dense forests, and many types of Deer. The latter include *Cervus—Cervus unicolor*, the large Kalaman or Sambur of sportsmen, and the small beautiful spotted deer (*Axis axis*), both occurring near water sources and shade.

The *Elephants* are true denizens of the forest along the eastern border descending lower during the monsoons where they often are very destructive to cultivation.

Typical Forest Birds are the Horbills (*Dichoceros bicornis*) Vultures (*Pseudo-gyps*) and the queer owl *Huhua nepalensis* with a frightening shrieking cry bursting out suddenly at dead of night. Being gifted with wings for easy aerial locomotion many of the Birds move from the forests to the hilly regions and even wander into the low lying plains.

In the Hilly tracts merging with the forest foot hills on the one hand and low lands on the other are many of the smaller mammals. Noteworthy among them are the Hedgehogs (*Paraechinus nudiventris*), the scaly antenter or the Indian Pangolin (*Manis pentadactyla*) squirrels

(*funambulus*) the ordinary palm squirrel and larger squirrels like the *Ratufa indica* more into the forests. Flying squirrels also occur—species of *Petaurista* of the forests often invade the lower plantations and are very destructive in coconut plantations.

Hystrix indica—the Porcupine seen in the hilly tracts often descending into the low country—so also the India Hare—*Lepus*. Many types of rats and mice are abundant in the hills and lowlands forming a nuisance to man.

In the hills bordering on the forests are the Monkeys (*Macaca radiata*) the Bonnet monkey : *Macaca silenus*, the Lion tailed monkey distinguished from all other monkeys by the name of long hairs around the face and a thick tip for the tail. The *Langurs* (*Kasi Johnii*) inhabit the denser forests and wander in small herds to the outskirts—but these are now getting very rare.

In the thick jungles and grass land, especially in the vicinity of streams are seen the jungle or wild cats (*Felis chus*). They often wander near human habitation at night and become a menace to poultry.

The *Civets* are better known and larger (*Moschothera Civetina*). These are often caught and kept in captivity for the sake of a kind of musk secreted by them which is highly valued as a medicine and a perfume.

A close ally of the Civets is the *Palm-Civet* or *Toddy Cat* (*Paradoxurus hermaphroditicus*) occurring in low lands and loving to dwell with humans. They have the habit of climbing palmyrah palms which are tapped for toddy and stealing the toddy that has collected in the tapper's pot. They are highly destructive in Coffee plantations and are a menace to poultry. In the towns and cities they have the habit of taking up their abode in the spaces between the roof and the ceiling and from there they cause considerable nuisance.

Mongoose (*Herpestis edwardsi*) and allied types, live in the hilly scrubby jungles adjoining the forests and extend to the low country with rocks and small vegetation. These animals have been, from time immemorial, regarded as beneficiaries to humanity since they destroy the dreaded snakes. They are to a great extent immune to snake venom but their safety when attacking snakes seems to be more in their extreme agility in movements and the erectile property of the long hair of their body which gives the snake a wrong idea of their size so that often when they strike, they miss.

Scrubby jungles fringing the forest have in addition the monkey and *Langurs* the small monkey like *Loris* which is distinguished by the complete absence of the tail. This weird looking animal is credited by the superstitious with many strange powers, eg. its skin, fur and blood are exposed in market-places as specifics, for many incurable diseases.

The jungles also harbour herds of wild boar (*sus cristatus*) which hide during the day and come out to feed at night. They do immense harm to forest cultivation of any type.

Birds are abundant. The most common are the ubiquitous crows (*Corvus*)—House crow almost domestic bird and the jungle crow a

little more stoutly built but with similar habits. The Tree-pies (*Dendrocitta*) and the Babblers or the seven sisters are common in any garden. The Bulbuls (*Pycnonotus*), Magpie Robins (*Copsychus*) the Paradise Tycatcher (*Tchitrea*), the king crow or Drongo (*Dicrurus*) are quite commonly met with near houses and in gardens. The well known Tailor Bird (*Orthotomus*) is a tiny bird with a loud voice and has earned great fame by the way in which it makes its strange nest, by stitching together the edges of a folded leaf if large enough or two smaller ones, stitching being done with cotton or any fibre which is made to pass through the holes made by the long and slender beak. Another remarkable nest-builder is the weaver bird (*Ploceus baya*) which collects straw pieces one by one from adjoining fields and actually weaves them into a fantastic large nest—a work of art! The small sub bird is one of the smallest of the Indian birds with resplendant colouration in the males while the females are sombre in colouration.

The well known Kuil—the Indian Cuckoo as called sometimes—is very common during the hot months when its noisy shrill calls—a cre-scend ku-il—kuil kuil can be heard unceasing from morning till evening. It does not make a nest for laying its eggs and bringing up the family but at the time lay eggs very skillfully in crow's nests making the latter to foster parents.

Birds of prey are fairly common in this area. The commonest in human surroundings are the kites—*Haliaster indus* (Krishna Parunthu) and *Milvus govinda*, the Pariah kite. *Astur badius* is the common Falcon and Pseudo gypes, the common vulture.

Nocturnal birds of prey are the owls eg. the small spotted owl *Athena brahma*, is the commonest. Larger species are sparsely found.

Aquatic and Marsh birds, permanent dwellers or migrants, are abundant along the western boundary of the District which is the Eastern shore of the large Vembanad lake—now much reduced by man's encroachment for cultivation. The Kadal Kaka (Terns, *Thalassus*), are abundant in one season. The Paddy Bird (*Ardeola grayi*) is found in inundated paddy fields. Ducks are represented by the Teals which are migratory coming to our shores in large numbers during the winter months.

Reptiles.—Many species of Lizards representing the Reptilia along with Snakes Crocodiles, Tortoises and Turtles. In and around Vaikom and Thalayolaparambu are niches where the ancient flying Lizards, *Draco*, live in small isolated and scattered groups. The Mugger, the great Crocodile, *Crocodilus porosus*—which once reigned supreme in the large brackish-water lake even in the memory of many old people of the generation that is rapidly passing, has become rare. Of the snakes which are quite abundant only a few species are poisonous—yet these carrying death in their fangs, have made the whole group much dreaded and feared by man and animals even! These are the Cobra (*Naia naia*) and King Cobra Hamadryad (*Naia hanna*) which are marked out by an expansible part of the body just behind the head and called the hood. When spread out it reveals a pair of "eye" marks and a connecting curved back mark. All these make these snakes terribly frightful to man. Another highly

poisonous snake is the Krait (*Bungares candidus*) which unfortunately likes to take its abode in human dwelling, thus being the source for all snake bite tragedies within homes. The viper (*Vipera russelli*) is the next type of highly poisonous snakes. All there are present in the low country as well as up-lands, but the cobras being the more old and exhibiting themselves in fury by expanding their hoods, are more commonly met with and recognised.

The Frogs and toads and cacilians represent the Amphibia. Frogs and Toads with two pairs of limbs swim in the water or hop about on land and are commonly seen. But the Cacilians are limbless and burrow in the banks of mountain or hill streams and are very often mistaken for snakes.

Fishes. Both edible and non-edible fishes are present in the backwaters, streams, rivers and tanks. With the exception of true marine fishes, all other types described in the adjoining Districts are present here too.

Invertebrates are a large assortment of different types of small animals but greater in numbers and in the variation of body patterns and most injurious to man and his industry, though not spectacular like the poisonous snakes. Among these it is the insects that claim primary attention for, it is they that form the largest in numbers, largest in variety of structure, ways of life and the largest in doing harm to humans and their activities, their cattle and their agriculture. The damage that some of them cause to field crops, stored products and the part some of them play in transmitting dangerous disease germs of man, cattle and plants are matters of no small importance.

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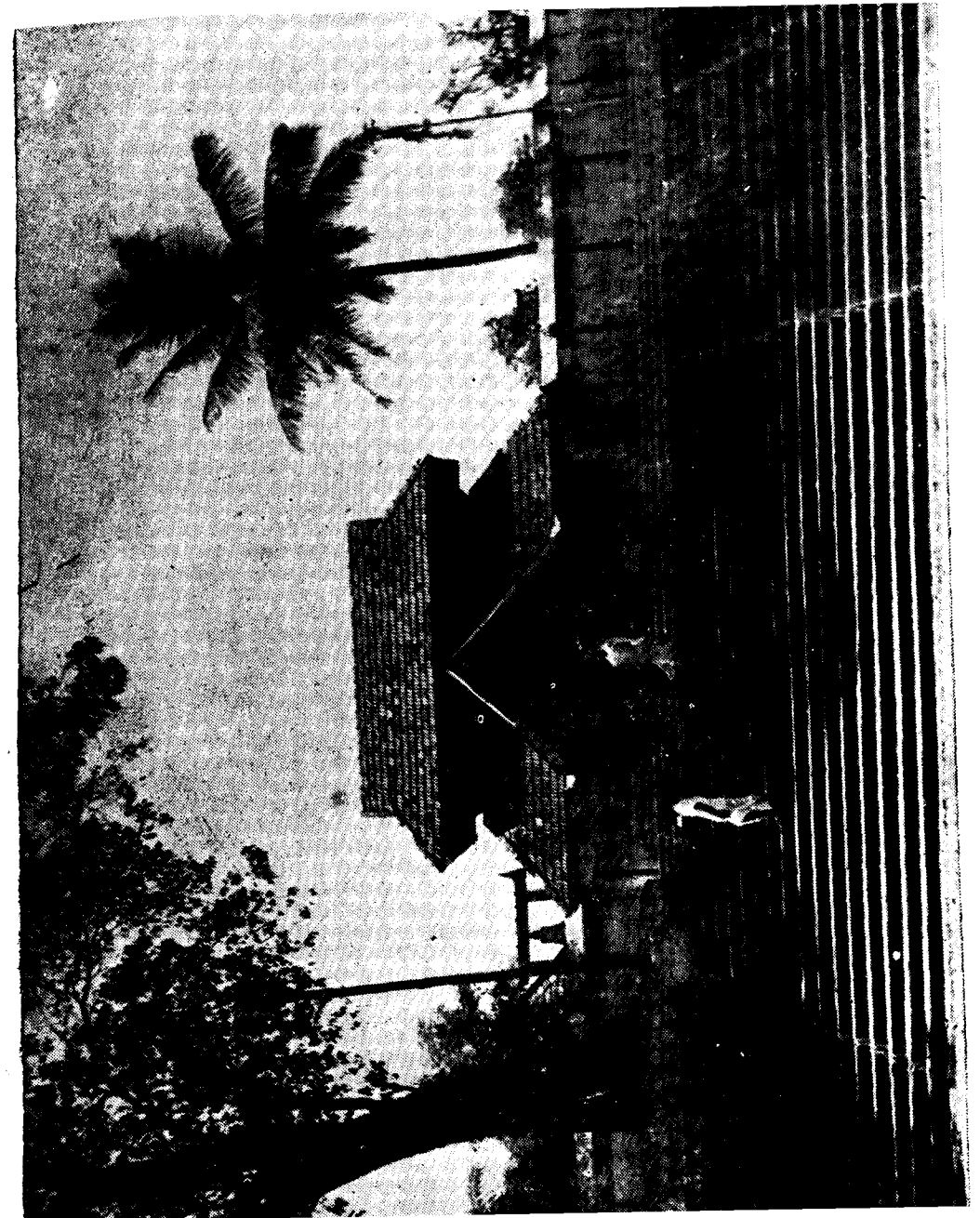
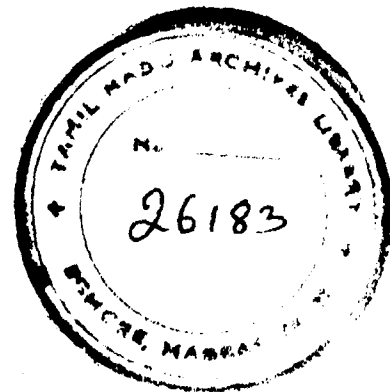
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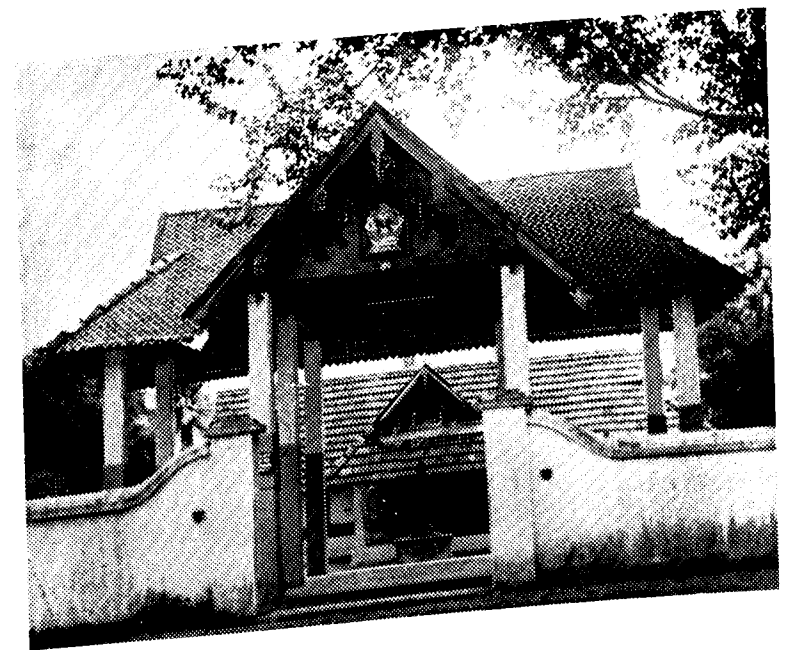
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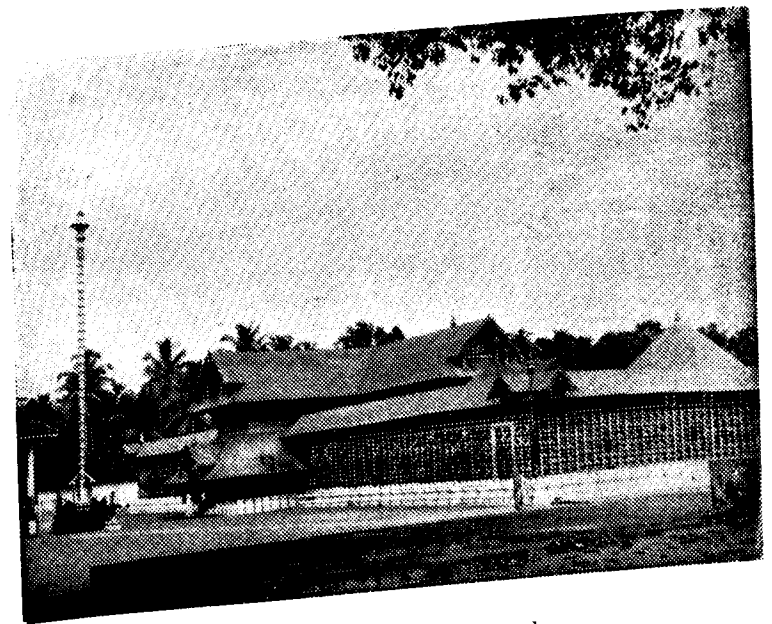
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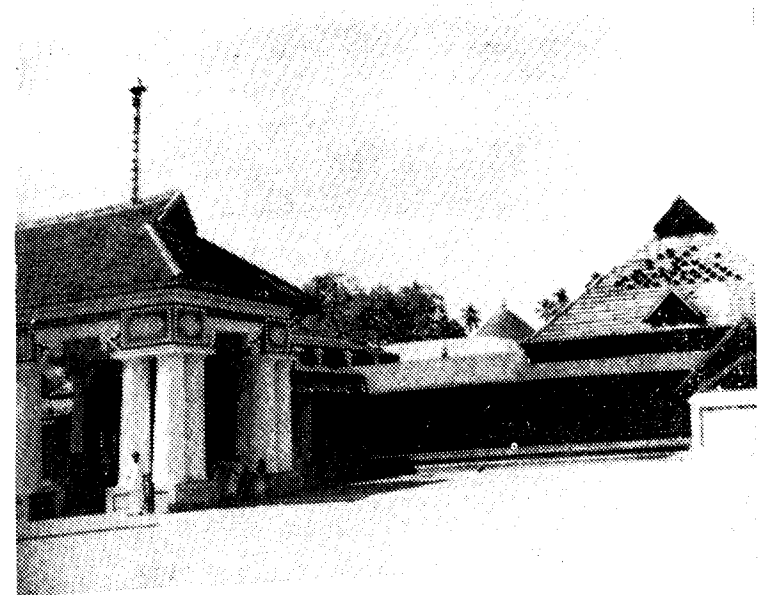
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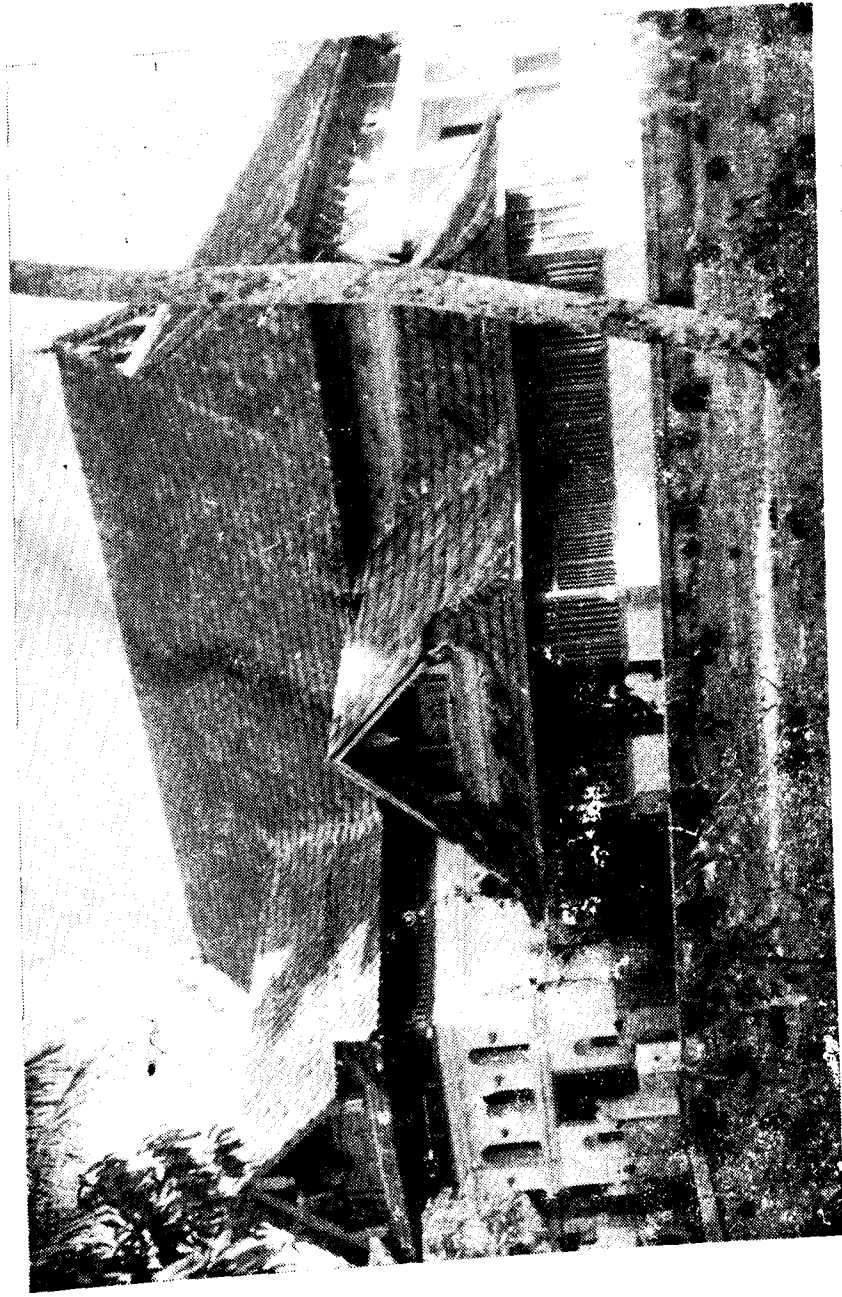
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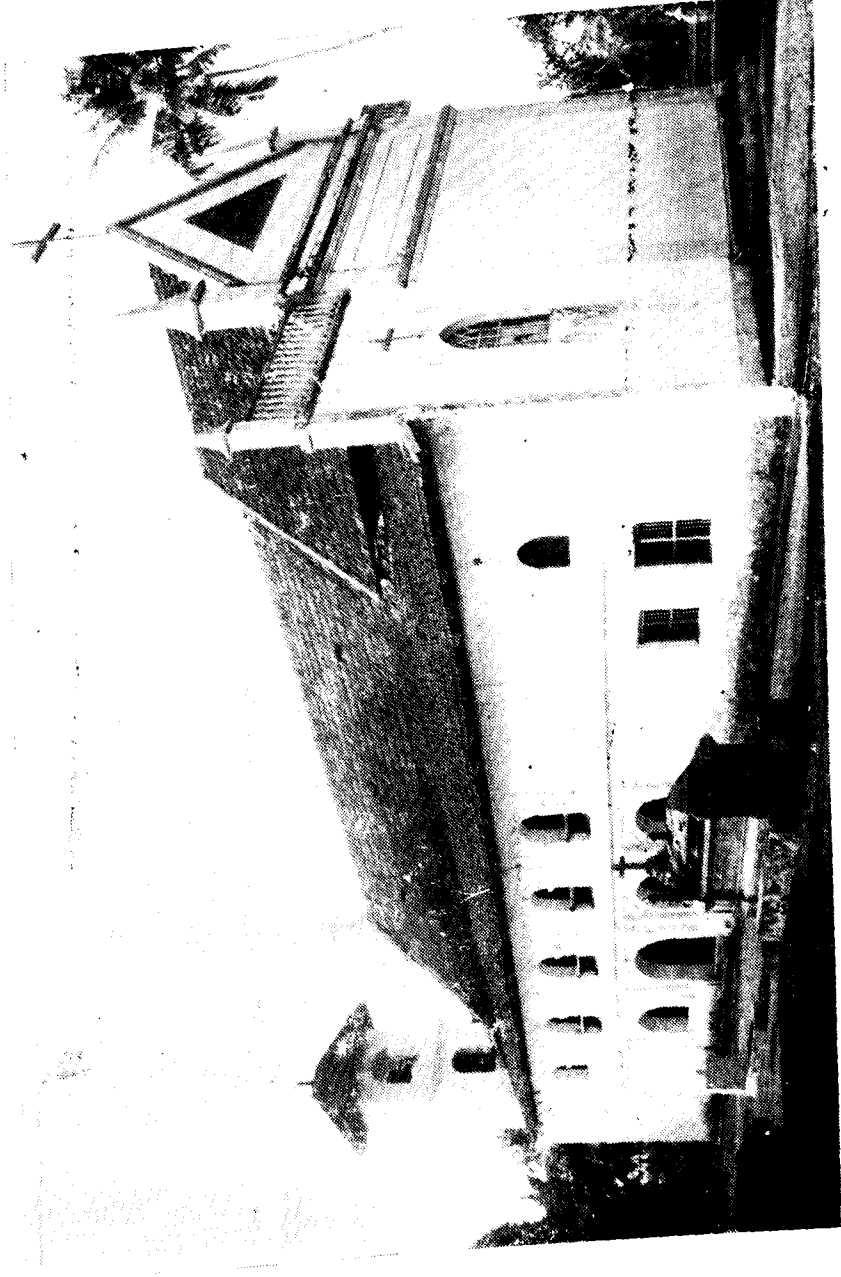
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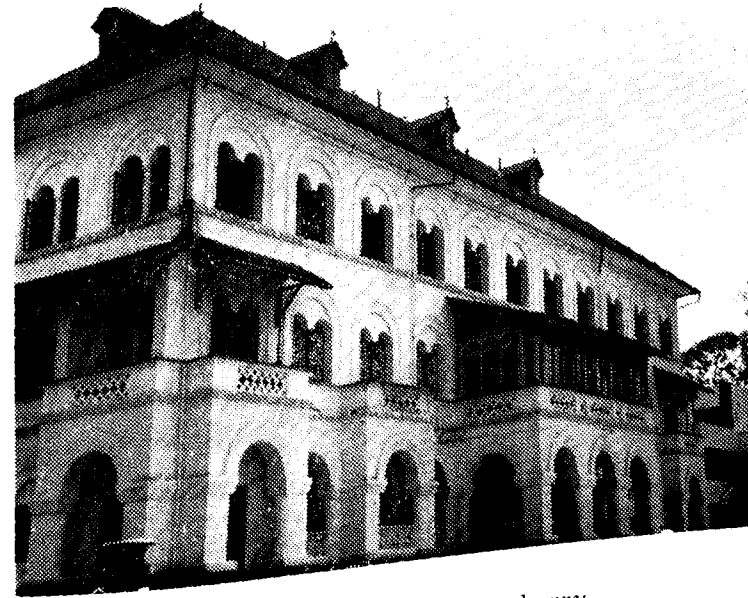
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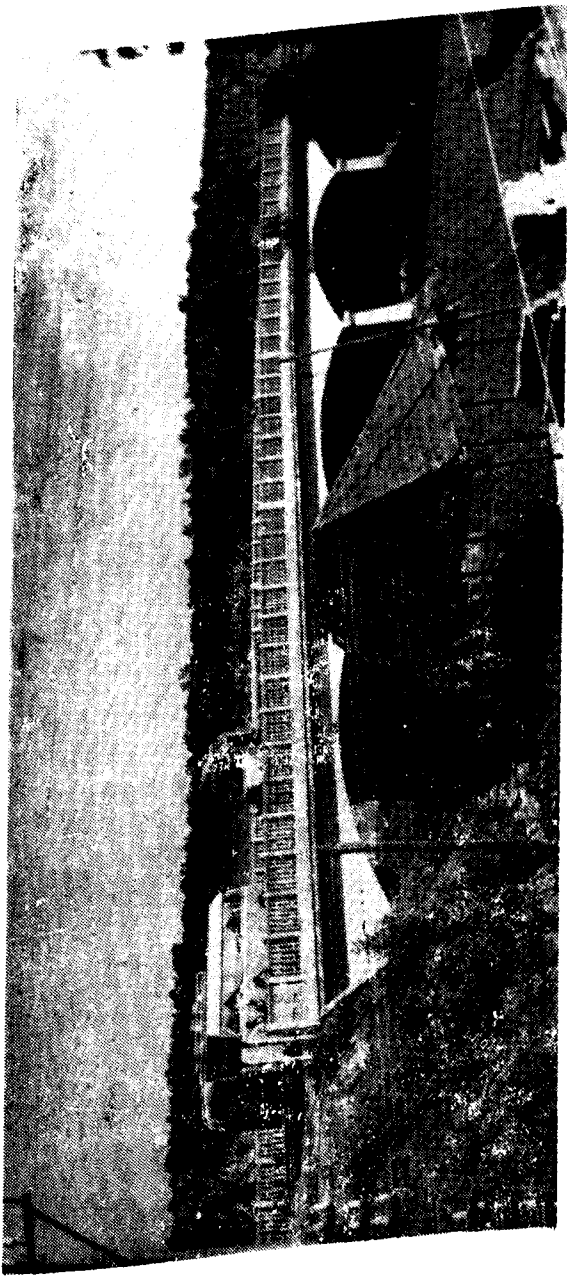
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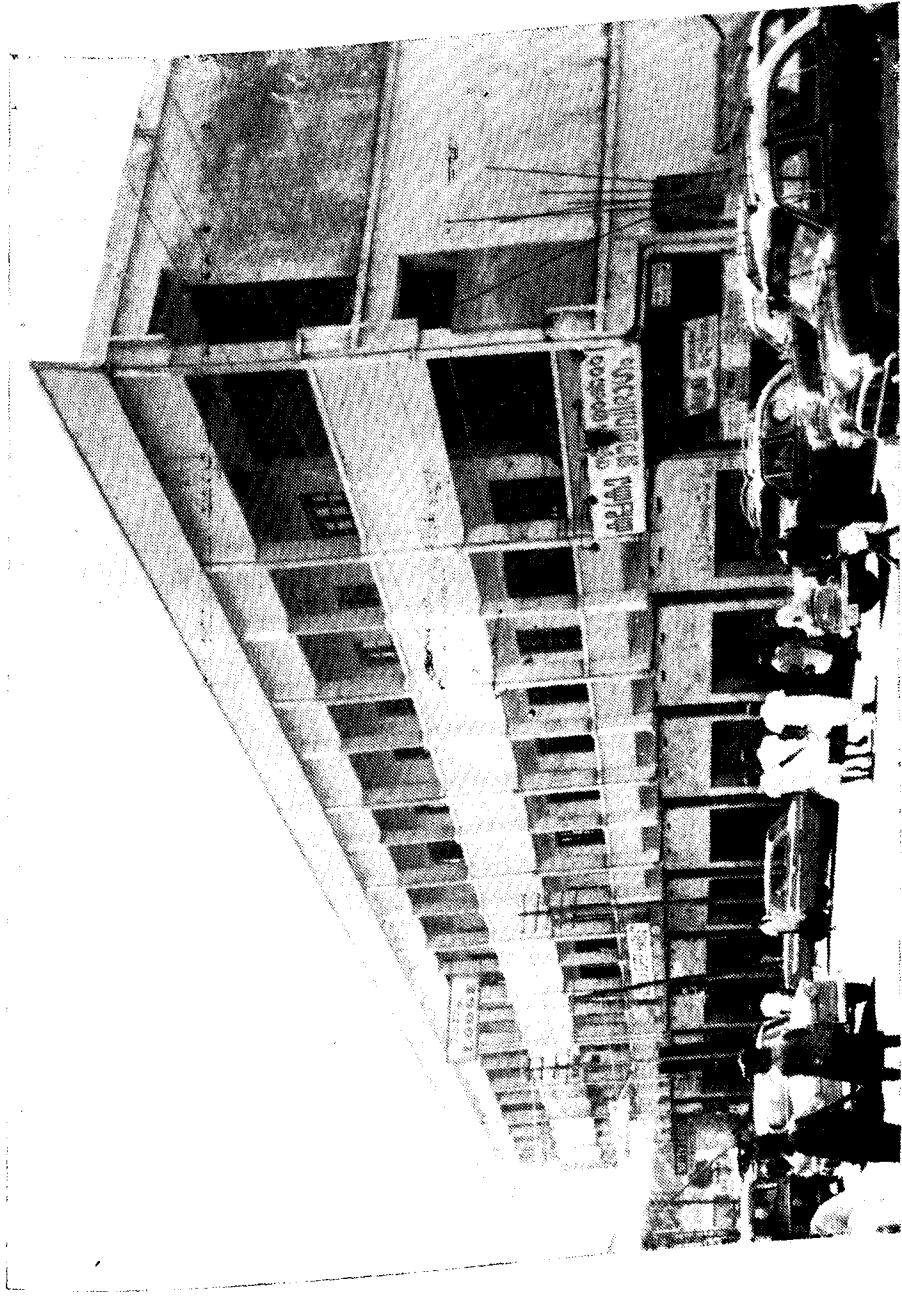
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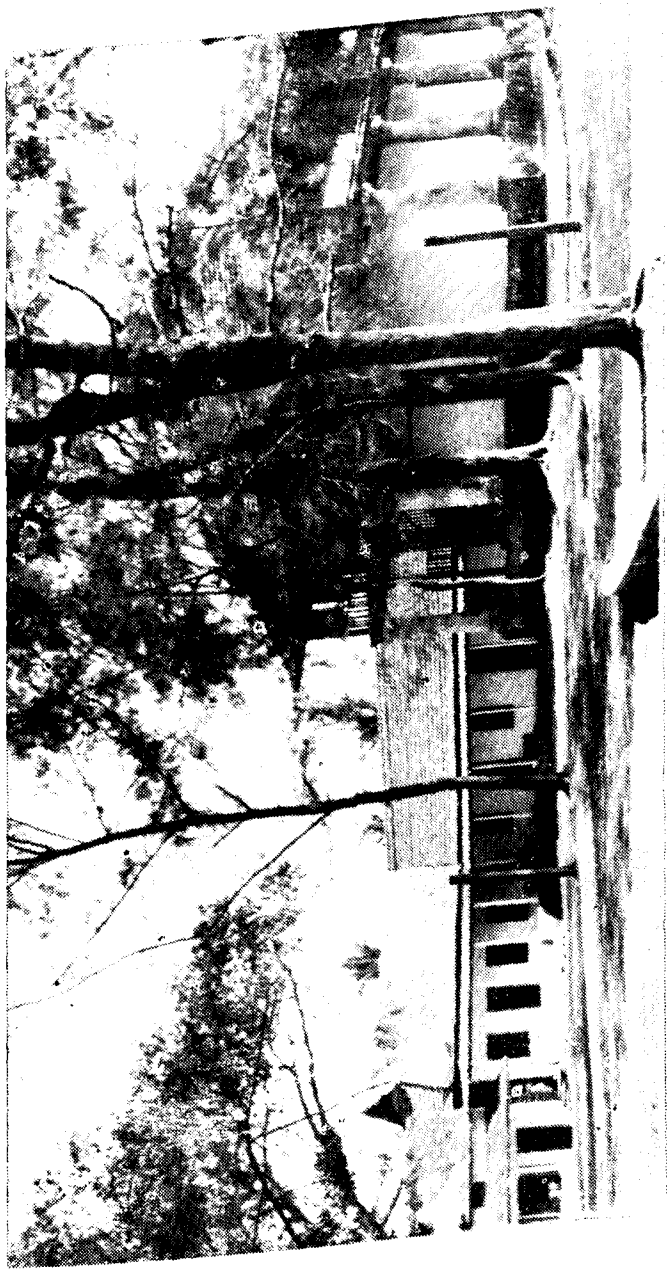
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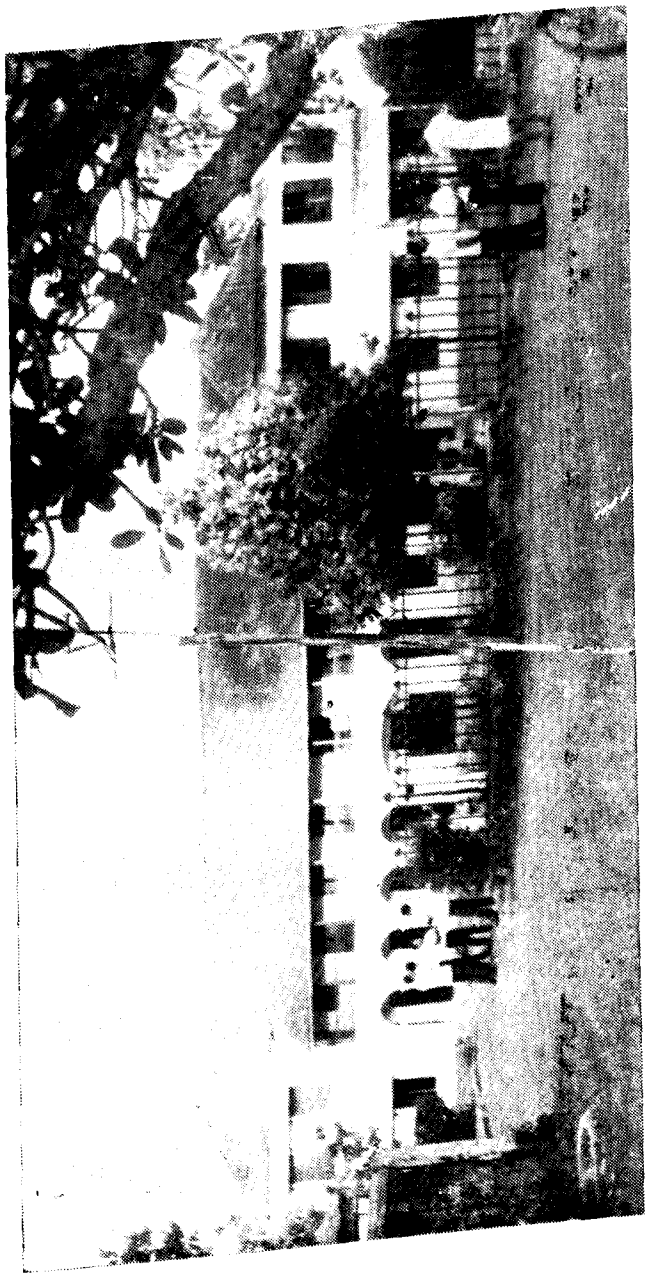
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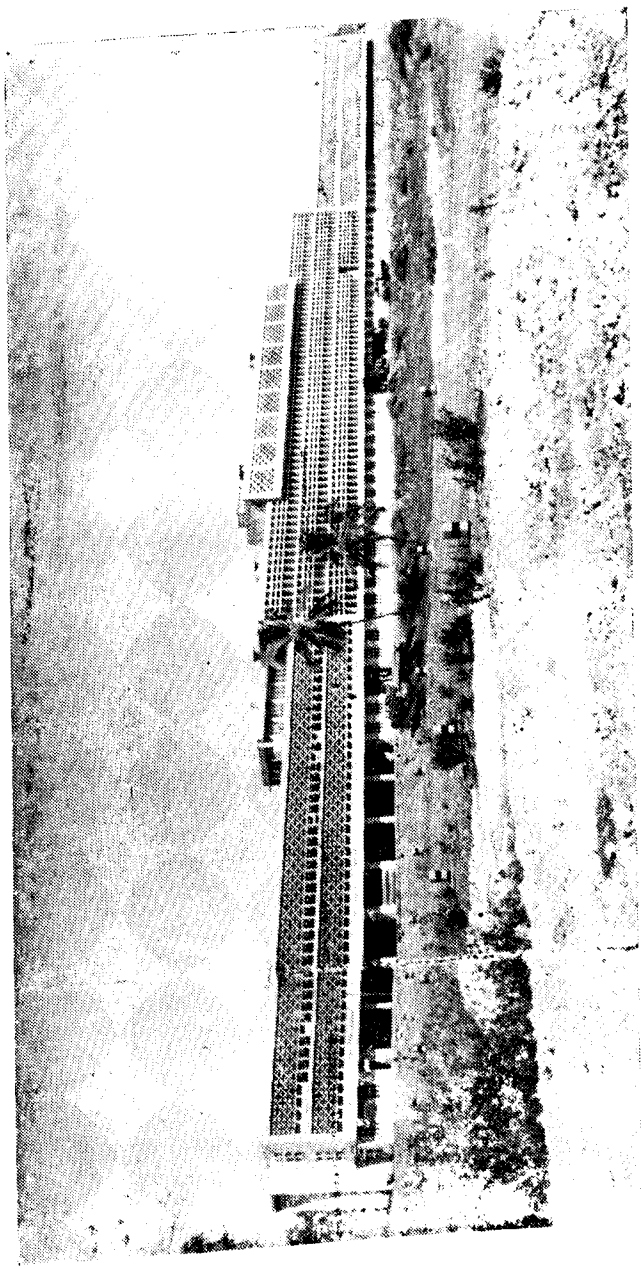
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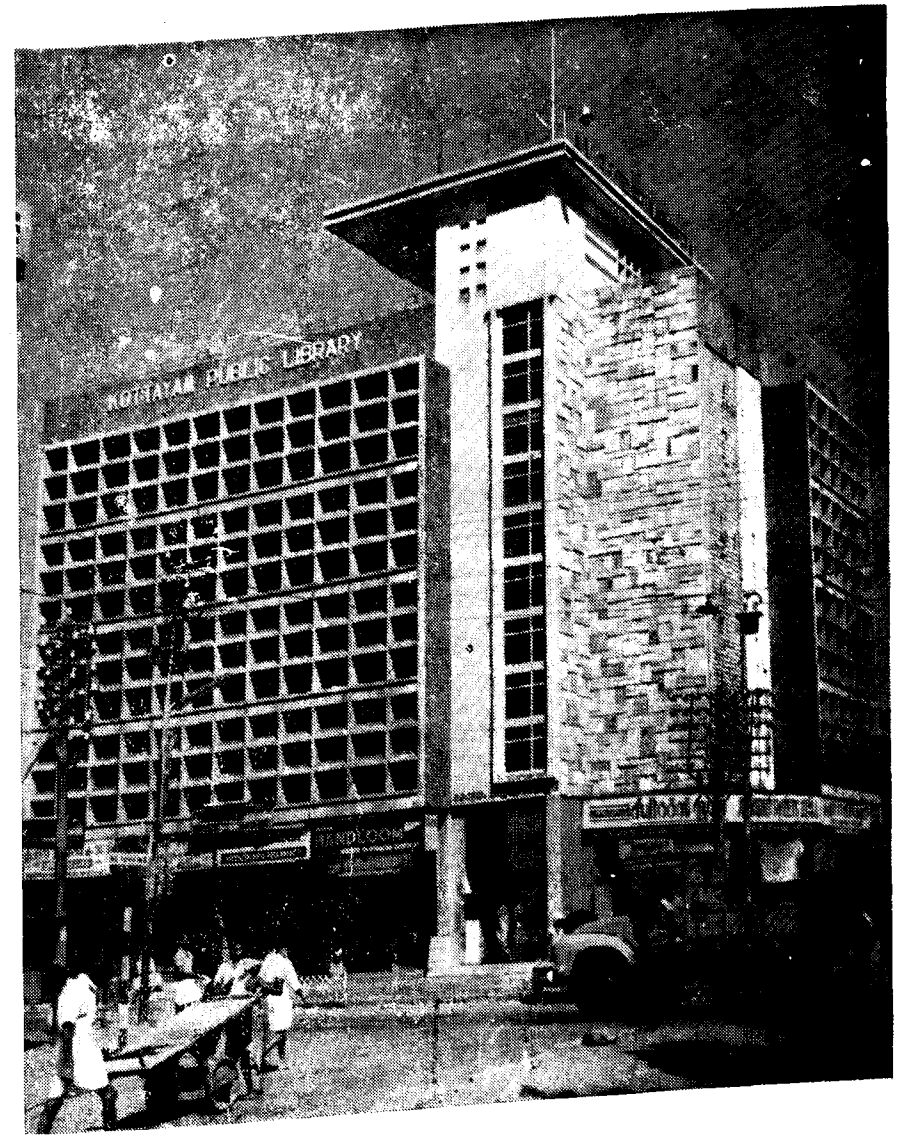
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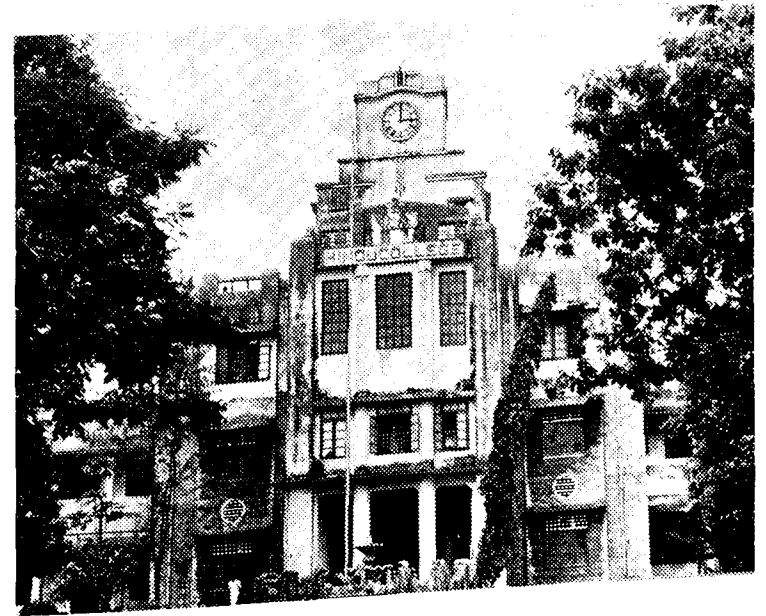
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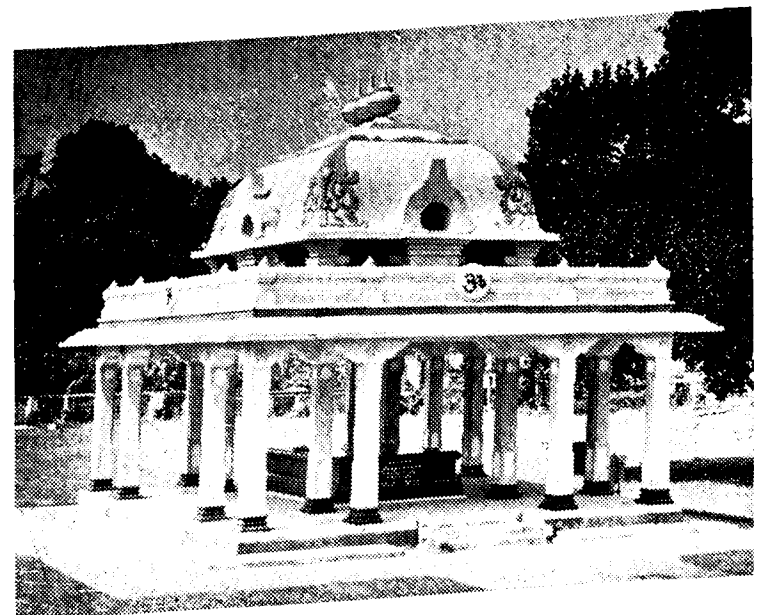
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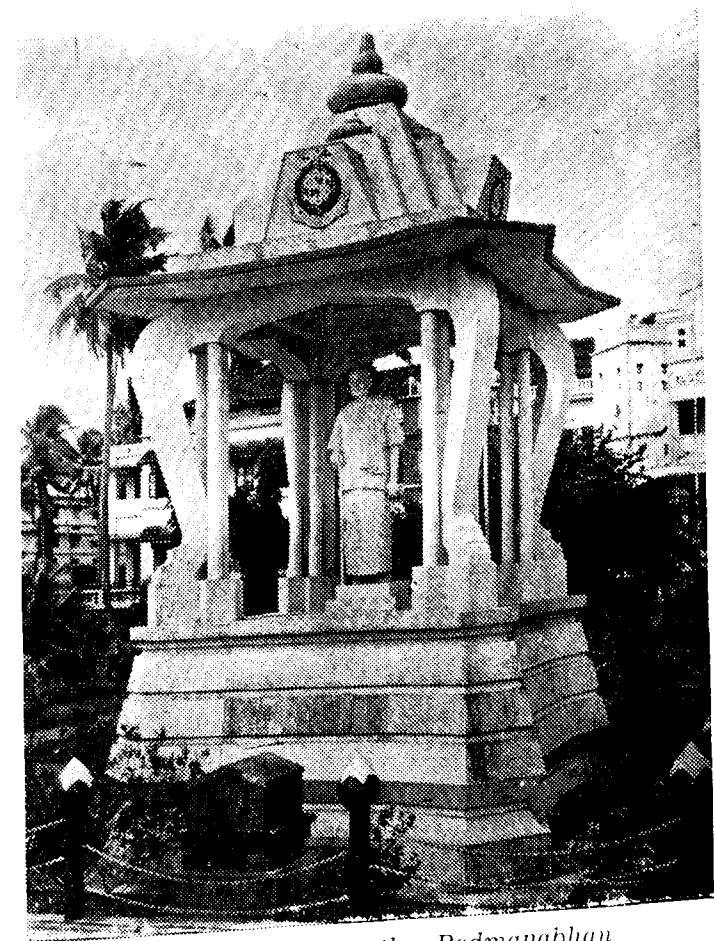
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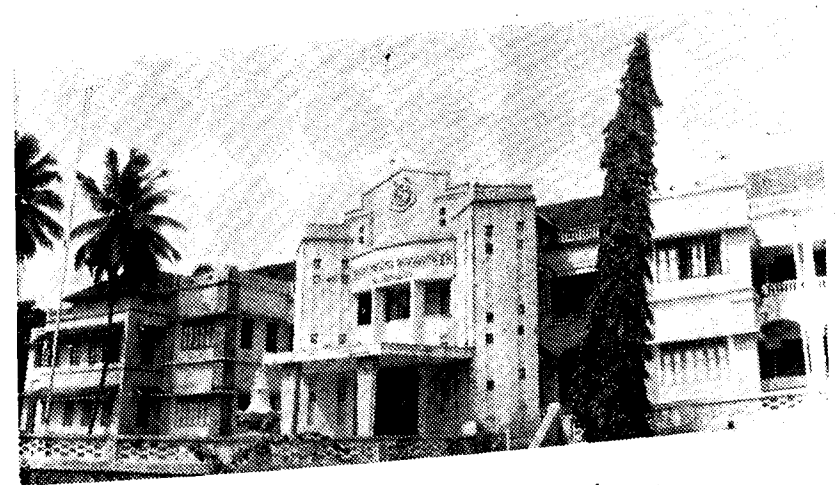
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Samadhi Mandapam of Mannathu Padmanabhan



Statue of Mannathu Padmanabhan



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