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Institution of Foresters Kerala

COMPREHENSIVE STUDY ON SACRED GROVES OF KERALA

REPORT No. 4
Thrissur District

Submitted to

Chairman
Kerala Forest Development Fund
Kerala Forest & Wildlife Department

DECEMBER 2016

PREFACE

Institution of Foresters Kerala (IFK) is a society registered in the year 1987 under the Travancore Literary, Science and Charitable Societies Act 1955 with its Central office at Thiruvananthapuram. Later it has established two Regional Chapters one at Thrissur and another at Kozhikode. One of the objectives of IFK is to undertake studies on topics useful in Forest Management and Biodiversity conservation. Accordingly a Project- "A comprehensive study on the socio-economic and cultural aspects of sacred groves in the whole of Kerala" was prepared and submitted to Kerala Forest Department in June 2012. This project was examined and discussed by the Kerala Forest Development Fund Research Committee in its meeting held on 18th August 2012 and it was approved for implementation. The project envisages a detailed study of Sacred Groves (SGs) in all the 14 districts of Kerala one by one.

To start with Thiruvananthapuram District was allotted and IFK completed the study and submitted the report in November 2013. Subsequently Kollam district was taken up for similar study and it was completed and report submitted in 2015. In the meeting of the KFDF Research Committee which met on 17-04-2013 Kozhikode District was allotted for the study and the final report was submitted in June 2016

A team headed by a retired Section Forest Officer carried out the data collection by inspecting each sacred grove. Their activity was supervised by an Asst. Conservator of Forests (Retd). The data collection was checked in the field at random by senior members of IFK Executive Committee on different occasions. The field team had a laborious task before them to reach the SGs in remote areas and to visit the same SGs on different times to complete the data collection. Dr. N. Sasidharan, Expert on Botany (Ex-KFRI) joined us in detailed identification of flora in selected 35 SGs distributed over all the six taluks.

IFK record its immense gratitude to Kerala Forest Department in entrusting this glorious task with it. We also thank Shri. S.C.Joshi IFS (PCCF-D) and Sri. L.K.Vashney IFS, Addl.PCCF and Chairman KFDF for their guidance and promptness in removal of impediments in the most appropriate manner in the

beginning and we completed the study in the best possible way. Sri. K.G.Mohanlal IFS (PCCF-D) and Sri.Pramod Kumar Pathak,IFS (APCCF-Chaiman KFDF) who subsequently took over also deserve our gratitude for the support rendered to us in completing this voluminous work. Our thanks are due to the members of the KFDF Research Committee for their positive attitude in IFK's activities. The presentation of draft report was made during the KFDF Research Committee on ------Finally we express our thanks in no small measure to other officers and staff at Forest Headquarters, particularly Shri. Santhosh K John IFS (DCF Development) and his assisting team in extending fair approach to IFK to make this activity hassle free.

This study report may serve as the valid document on the status and distribution of Sacred Groves in the district. It is our modest expectation that it forms the basis for future planning on the conservation of this precious eco-system

It will be our pleasure to clarify any of the details included in this report to all those concerned. We also welcome suggestions for improvement and also our omissions in the listing from readers.

19 -12-2016

M.S.Nair (President)
Institution of Foresters Kerala

ACKNOWLEDGEMENT FOR SERVICES RENDERED

This project report is the result of the sincere and hard work contributed by a number of members of IFK and a few other experts from outside. On behalf of IFK, I take immense pleasure in extending deep gratitude to them. The nature of work contributed by them is acknowledged as below:-

Field Enumeration & Data Collection	**Sri. Aravindakshan,** Section Forest Officer (Rtd)
Field supervision & Field coordination	Sri. S. Shaji (ACF Rtd)
Flora identification	**Dr. N. Sasidharan**. (Ex. KFRI Peechi)
Field checking	**Sri. M.S.Nair** **Sri. Patric Gomez**
Data entry	**M/s. Jaicom Facility Centre**
Verification of data entry & Compilation	**Sri. M.S.Nair** **Sri. Patric Gomez** **Sri. B.R.Vijayakumar**
REPORT PREPARATION	
Review of literature	**Sri. M.S.Nair** **Sri. C.K.Karunakaran**
Result of Study	**Sri. Patric Gomez**
List of Plants in selected groves	**Dr. N.Sasidharan**
Frequency distribution of flora	**Dr.N.Sasidharan**
Ecological status	**Sri.M.S.Nair and Dr. C.P.Shaji**
Socio-Cultural aspects	**Sri. Patric Gomez & Dr. Ajitkumar**

All other chapters	**Sri. M.S.Nair**
Photographs contributed	**Sri. M.S.Nair , Dr. N.Sasidharan & Sri.Shaji.S**
Editing & Finalization of the Report	**Sri. M.S. Nair** (Principal Investigator of the project) **Sri. Patric Gomez** (Chief Coordinator of the project)

Also, I take this opportunity to sincerely acknowledge the cooperation, and valuable suggestions contributed by the Executive Committee members of IFK from time to time to accomplish this task at the best of our ability.

19-12-2016

M.S.Nair (President)
Institution of Foresters Kerala

EXECUTIVE SUMMARY

Name of Project: **A COMPREHENSIVE STUDY ON THE SOCIO-ECONOMIC & CULTURAL ASPECTS OF SACRED GROVES IN KERALA**

Report No.4 - Thrissr District

General

Sanctioning Authority	-	Addl.Principal Chief Conservator (Development) and Chairman, KFDF Research Committee.
Implementing Agency	-	Institution of Foresters Kerala
Principal Investigator	-	M. S. NAIR
Date of Agreement	-	09-06-2013
Area of Study	-	Thrissur District.
Geographycal extent	-	3032 sq.km
Forest area	-	992 sq.km
No. of Taluks	-	Six

PART I

Chapter . I

INTRODUCTION

Objectives

- Arrive at an exhaustive list of Sacred Groves in the District.
- Detailed study of flora and fauna
- Documentation of geographical and legal details.
- Study on Socio-economic and cultural aspects
- Recording ecological status as observed & reported.

Uniqueness

- Exhaustive inventory of Sacred Groves.
- Creation of a databank on geographical and legal status of sacred groves.
- Detailed study on flora.
- Documentation of Socio-economic and Cultural aspects.
- Mapping SGs providing Id numbers.

Methodology

Described steps followed in data collection (through publicity , word of mouth etc.) and documentation including mapping.

Chapter II : Results of Study

Total numer of SGs district wise, Taluk wise, distribution under different size categories.management details.

THRISSUR DISTRCT

Sl. No.	Name of Taluk	No. of Sacred Groves	Extent (Cents)
1	Chalakudy	40	583 (2.36 ha.)
2	Kodungallur	51	553.5 (2.24 ha)
3	Mukundapuram	37	252.5 (1-020 ha.)
4	Chavakkad	248	2604 (10.54 ha)
5	Thalappally	374	2425 (9.89ha.)
6	Thrissur	220	1620.75 (6.55 ha.)
	Total	**970**	**8039 (32.54 ha.)**

Management

Five main categories identified-

i. Devaswam Board.

ii. Public trust-

iii. Public Committee,-

iv. Private- (- Kudumbakavu & Kudumba Trust)-

Id Numbers to Sacred Groves.(SG)

Id numbers have been provided taluk wise-

The list of all the SGs have been given serial numbers coming in each taluk and details from name, ownership up to North and East co-ordinates.

A Statement giving all other information including management category has been attached.

Mapping

Separate map for each taluk has been prepared showing the location and Id numbers of SGs.

Chapter III : Composition of Vegetation.

Occurrence of important species have been described and rare species seen in the SGs have been listed out noting conservation status

Trees-, Shrubs- , Climbers-.Herbs-

Chater IV: List of flora in Selected Sacred Groves.

In all 35 .SGs falling in the three regions low land, middle land and high land- have been inspected and prepared by an expert on Botany and Taxonomy . The important species identified are tabulated SG wise.

Chapter V: Frequency distribution of flora.

The distribution of plant species in various sacred groves has been analysed and tabulated in 27 categories of varying frequency of occurrence. .

Chapter VI: Ecological Status

Vegetation-	Plant diversity with rare Invasive species, Keystone species, Natural regeneration, nature of occurrence of species region wise,
Soil condition-	Result of soil tests and analysis, soil and water conservation discussed.
Faunal significance-	Useful and harmful role of bats, termites, peafowl, fish varieties etc.as could be collected with their habitats.

Chapter VII : Social Dimensions of Sacred Groves.

Sacred Groves falling in different regions totalling 35 numbers were selected and the social conditions in relation to the Sacred Groves have been studied. Mainly five stake holders have been identified such as, i-Local people, ii. Custodians, iii, Priest hood, iv. Shop keepers and v. younger generation. Representatives belonging to all the above categories have been contacted with suitable questionnaire and analyzed their views.

Study revealed that there is a strong network of social system centred around sacred groves built with faith on God, observance of customs, social harmony and flow of income. It is estimated that the following is the minimum effect on socio-economic condition annually.

Communal harmony and social harmony.
Development of strong trend in protection of vegetation due to fear of God/environmental benefits.
Employment-Mandays -34140 ..

Total amount generated through various sources-Rs. 575 lakhs.

Other shop vendors depending on SGs for their livelihood – very few.

Chapter VIII : Socio-Cultural Aspects of Sacred Groves

This study has covered the belief entertained by devotees on various deities, the rituals performed during worship, and different cultural programmes being organized in festivals. The role of Astrologers predominant in this region is pointed out. Various prominent folk arts like kolangal, kavoottu, Thirayattam, Theyyam are described with illustrations.

Chapter IX : Threats

Regarding threats, intention showed by a few to reduce extent by shifting deity, encroachment, disputes on ownership, dumping waste etc. are discussed with examples.

Chapter X Recommendations

Main recommendations

i. Awareness programmes including suggestions to prevent dumping solid waste

ii. Arrangement for fair distribution of grant to deserving custodians,

Iii.Production of quality seedlings of selected species,

iv.Interference by government to be cautiously done.

v.Conducting research on ecology and carbon sequestration in Sacred Groves

Pictures on various sites, activities and plants- 72 Pictures..

PART II

Maps of SGs with Id numbers- taluk wise.

Detailed statements on Management & Geographical details of SGs - talukwise.

CONTENTS

Report No.4

Study on

SCRED GOVES in THRISSUR DISTRICT

CHAPTER I

INTRODUCTION

The existence of sacred groves in India dates back to ancient pre-agrarian hunter gathering era and their presence has been documented since early 1800's. Believing that trees are the abode of deities and ancestral spirits, many communities set aside sanctified areas of forest and established rules and customs to ensure their protection prohibiting felling trees, killing animals etc. The prevailing belief among devotees is that the presiding deities administer punishment to individuals or entire community in the form of diseases or crop failure if in case they violate the established customs. As a result of such restrictions and strict adherence to the accepted customs by the devotees, several endemic and endangered plant and animal species have survived in the sacred groves for so many years since. Sacred groves attain religious and holy significance all over.

The Earth Summit of 1992 emphasized the immediate need for protection and conservation of biodiversity. Following that, the approach to biodiversity conservation gained revamping image all over the world. Protection with veneration provided to these patches of forest as Sacred Groves from generations to generations all over the world is significant in the sense that the principles of bio-diversity conservation had been inbuilt in their management. In India the Biological Diversity Act enacted in 2002, stressed the need for implementing various measurers for bio-diversity conservation.. In the mean while, the Kerala Forestry Project (1998-2003) stressed the need for biodiversity conservation and constituted a Biodiversity Cell in Forest Department. The Kerala Forestry Project (1998) proposed the need for long term conservation of sacred groves by taking up ecological survey and inventory of sacred groves. In addition the project provided for lump sum allocation of grants to local communities and religious groups to improve awareness, demarcation, protection and enhancement of local practices in Sacred Groves. But even after 17 years on completion of the project implementation a clear picture as to the spread of area under vegetation and the related inventory about the sacred groves was lacking.

However, the present trend of Kerala Forest Department (KFD) in complying with the objectives by imbibing the theme is worthy of appreciation.

Protection and Conservation of Sacred Groves is one among the schemes and KFD is providing grant to various selected sacred groves under this scheme. For implementing such a scheme a database covering inventory with all relevant details is very essential in order to obtain financial assistance in the full measure from Central Government. Though studies have been undertaken and reports published on sacred groves of Kerala by various individuals and organizations, such reports do not cover all the relevant details and they cover only part of some aspects, that too in incomplete form. It is in this context this project receives warm acceptance at all levels concerned.

This study is aimed at building a data base on the existence of sacred groves in Kerala. The work on Thiruvananthapuram District has been completed and report submitted in 2013. Against earlier anticipated 100 numbers of sacred groves (SG) it finally turned out to be 452. The report on Kollam district submitted in 2015 gives the list of 895 against 100 and odd anticipated earlier. In the same manner in Report No.3 on Kozhikode District submitted in June 2016 the total number of sacred groves comes to 1231 against the earlier reported figure around 100. Besides taking an inventory on the number of SGS available, information on the extent of land under vegetation, ownership, legal status, geographical location including GPS data, assigning Id number and such other important information find a place in this report. The impact of such information on these patches of vegetation which have been surviving since long and its socio-ecological scenario would amply help policy makers establish guidelines and launch schemes for conservation without interfering with the freedom of the custodians. **The absence of such information in the earlier available data base over the state qualifies this study a unique venture.**

This report is presented in two parts. Part 1 contains inventory details, study on vegetation, ecological aspects and Socio-cultural studies, along with photographs of important sacred groves and plants. Part II comprises statements consisting location, ownership, extent, management details and Id numbers computed for each sacred grove taluk wise. Maps showing the location of all the SGs Taluk wise are also included.

As already explained, this report is unique in its objectives.

Objectives

- A comprehensive inventory of sacred groves in Kozhikode District with location
- List of flora with analysis on distribution of plant species,
- Identification of important and rare plant species in detail by an expert with regard to selected sacred groves.
- Ecological status based on field observations and reported facts.
- Assigning ID numbers to all the SGs.
- Preparation of a data base on folklore and folk arts.
- Assess impact of the sacred groves in socio-economic scenario.
- Providing photographs of all important species existing in the SGs
- Mapping SGs taluk wise showing the location of SGs based on GPS readings.
- Locate the threats being confronted in conservation of sacred groves.
- Recommendations

METHODOLOGY

Area of Study

This report covers Thrissur district. The district stretches along the shore of Arabian Sea for a total area of 1036.20 sq km holding a population of 29.74 lakhs. There are six taluks such as Thrissur, Chavakkad, Thalappally, Kodungallur, Chalakudy and Mukundapuram. Chavakkad and Kodungallur are along the coastal belt. Annual rainfall is 350 cm. Mean and max. Temperature is 22^{0c} and $35.5^{0\ c}$ respectively. This area lies between Latitudes **N** 10^0 10' and 10^0 50' & Longitudes **E** 76^0 0^0 and 76^0 50' .

As regards soil is concerned, in most of the area soil is derived from laterite rock. In the rest of the area it is reddish and particularly in the coastal belt sandy loam is predominant.

Culture- Thrissur has a rich history of cultural heritage which justifies the name – **"Cultural Capital of Kerala"** The three religions-Hinduism, Islam and Christianity have their own contributions in earning this recognition. The famous *Vadakkumnatha Temple (siva)* where Pooram is celebrated, *Sree Krisna Temple at Guruvayur*, *The*

Cheraman Juma Masjid (in the shape of Hindu temple and the church *of Our Lady of Dolors* do play their role in retaining the culture developed long before.

Collection of available data

The probable list of sacred groves has been collected through office records, publicity in the press and word of mouth as was done in earlier cases. In this district only one team was available headed by a Retired Forester. Hence it took quite a long time to complete the work. Recording details also was done in the same format as in previous cases along with GPS Readings. Supervision was done by one Retired ACF and random checking, by senior members from Head Office. Taxonomist covered 35 sacred groves to prepare the detailed list and frequency of plant species. Regarding ecological status a specialist was engaged to know the availability of part of the fauna like fish and birds. The legal status, address of custodian and extent are gathered from persons holding possession of the SGs based on available records and the information passed on by them. The extent of each SG is assessed by the field team who have experience in judging the area and utmost care has been taken to see that the extent is not exaggerated at any cost.

Review of literature-

An exhaustive statement on review of literature has been given in all our previous three reports (Chapter II) giving the global scenario, prevalence of customs relating to sacred groves among different communities etc. Hence it is not proposed to include those details in this report to avoid repetition. One issue namely the number of sacred groves specific to Thrissur district has to be reiterated here. As in the case of other districts in Thirssur also the actual number arrived at on identification is very much more than recorded in any publication. While Dr. Induchoodan's report covers only 16, ENVIS (Govt. of India) mentions only 62 numbers. In a recent report published in Global Journal for Research Analysis in 2015, by a Research team on the survey on Sacred Groves in Coastal Belt of Thrissur District the number is stated to be 261 which include some with one to two cents. At the same time this report gives a list of 970 SGs with authority.

CHAPTER II

RESULT OF STUDY.

The study reveals that there are in all 970 sacred groves in this ditrict.Out of this almost 73 % are of and below 5 cents in extent.Unlike other disricts there are only seven numbers which are above one acre in extent.Chalakudy is the larget taluk.But SGs are only very few. At the same time Thalappally at the nortern end and Chavakkad along the coastal area supports much more. This is a peculiarity here. Even the extent is small , there is the will among the custodians to maintain and worship the deity.

AREA WISE DISTRIBUTION OF SACRED GROVES IN THRISSUR DISTRICT

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents (Minor category)	195 Nos.	271.50 Cents
2	2.5 Cents to 5 Cents	510 Nos.	1872.50 ,,
3	6 Cents to 10 Cents	155 Nos.	1304.00 ,,
4	11 Cents to 25 Cents	64 Nos.	1154.00 ,,
5	26 Cents to 50 Cents	26 Nos.	901.00 ,,
6	51 Cents to 100 Cents	13 Nos.	880.00 ,,
7	Above 100 Cents	7 Nos.	1656.00 ,,
	Total	**970 Nos.**	**8039.00 Cents (80.39 Acres) (32.54Ha)**

TALUK WISE DISTRIBUTION

CHALAKUDY TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents(Minor category)	nil	
2	2.5 Cents to 5 Cents	28 Nos.	103.00 ..
3	6 Cents to 10 Cents	8 Nos	60.00 ,,
4	11 Cents to 25 Cents	1 No	15.00 ,,
5	26 Cents to 50 Cents	1No	30.00 ,,
6	51 Cents to 100 Cents	1 No	75.00 ,,
7	Above 100 Cents	1No	300.00
	Total	**40 Nos**	**583 Cents (5.83 Acres) (2.36 Ha.)**

KODUNGALLUR TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents (Minor category)	nil	--
2	2.5 Cents to 5 Cents	32 ,,	118.50
3	6 Cents to 10 Cents	9 ,,	75.00
4	11 Cents to 25 Cents	6 ,,	94.00
5	26 Cents to 50 Cents	3 ,,	93.00
6	51 Cents to 100 Cents	nil	
7	Above 100 Cents	1 ,,	173.00
	Total	**51 Nos**	**553.5 Cents (5.53 Acres) (2.24 Ha)**

MUKUNDAPURAM TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents (Minor category)	2 Nos	3.00 Cents
2	2.5 Cents to 5 Cents	24 ,,	90.50 Cents
3	6 Cents to 10 Cents	5 ,,	47.00 ,,
4	11 Cents to 25 Cents	6 ,,	112.00 ,,
	Total	**37 Nos**	**252.50 Cents (2.52 Acres) (1.02 Ha.)**

CHAVAKKAD TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents (Minor category)	30 Nos	42.50 Cents
2	2.5 Cents to 5 Cents	136 ,,	483.25 ,,
3	6 Cents to 10 Cents	45 ,,	403.25 ,,
4	11 Cents to 25 Cents	23 ,,	402.00 ,,
5	26 Cents to 50 Cents	9 ,,	335.00 ,,
6	51 Cents to 100 Cents	2 ,,	155.00 ,,
7	Above 100 Cents	3 ,,	783.00 ,,
	Total	**248 Nos.**	**2604 Cents (26.04 Acres) (10.54 Ha)**

THALAPPALLY TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 Cents (Minor category)	92 Nos	113.50 Cents
2	2.5 Cents to 5 Cents	193 ,,	689 ,,
3	6 Cents to 10 Cents	59 ,,	488.75.00 ,,
4	11 Cents to 25 Cents	17 ,,	343.00 ,,
5	26 Cents to 50 Cents	6 ,,	221.00 ,,
6	51 Cents to 100 Cents	6 ,,	370.00 ,,
7	Above 100 Cents	1,,	200.00 ,,
	Total	**374 Nos.**	**2425.25 Cents (24.25 Acres) (9.89 Ha)**

THRISSUR TALUK

Sl. No.	Area class	No. of Sacred Groves	Extent (Cents)
1	Less than 2.5 cents (Minor category)	71 Nos.	112.50 Cents
1	2.5 to 5 cents	97 Nos.	368.25 ,,
2	6 Cents to 10 Cents	29 ,,	230.00 ,,
3	11 Cents to 25 Cents	11 ,,	188.00 ,,
4	26 Cents to 50 Cents	7 ,,	242.00 ,,
5	51 Cents to 100 Cents	4 ,,	280.00 ,,
7	Above 100 Cents	1 ,,	200.00 ,,
	Total	**220 Nos.**	**1620.75Cents (16.20 Acres) (6.55 Ha)**

ABSTRACT SHOWING
CUSTODIAN/MANAGEMENT OF SACRED GROVES
IN THRISSUR DISTRICT
Out of 970 sacred groves, 950 are in possession of private ownership.

Sl. No.	Ownership/Custodian	No. of Sacred Groves	Extent (Cents)
1	Sacred Grove Owned by Government	1	5.00
2	Sacred Groves Managed by Devaswam Board	5	215.50
3	Sacred Groves Managed by Public Trust/ Public Committees	14	184.00
4	Sacred Groves Managed by Individuals/ Family/Family Trust	950	634.50
	Total	**970**	**8039.00**

CUSTODIAN / MANAGEMENT OF SACRED GROVES

Taluk wise distribution

CHALAKUDY TALUK

Sl. No.	Ownership/Custodian	No. of Sacred Groves	Extent (Cents)
1	Sacred Grove Owned by Government	Nil	nil
2	Sacred Groves Managed by Devaswam Board	Nil	nil
3	Sacred Groves Managed by Public Trust/ public Committees	4 Nos	55 Cents
4	Sacred Groves Managed by Individuals/ Family/Family Trust	36 Nos.	528 Cents
	Total	**40 Nos.**	**583 Cents**

KODUNGALLUR TALUK

Sl. No.	Ownership/Custodian	No. of Sacred Groves	Extent (Cents)
1	Sacred Grove Owned by Government	Nil	nil
2	Sacred Groves Managed by Devaswam Board	1 No.	5.00 Cents
3	Sacred Groves Managed by Public Trust/ Public Committees	3 Nos.	46.00 Cents
4	Sacred Groves Managed by Individuals/ Family/Family Trust	47 ,,	502.50 Cents
	Total	**51 Nos.**	**553.50 Cents**

MUKUNDAPURAM TALUK

Sl. No.	Ownership/Custodian	No. of Sacred Groves	Extent (Cents)
1	Sacred Grove Owned by Government	Nil	nil
2	Sacred Groves Managed by Devaswam Board	Nil	nil
3	Sacred Groves Managed by Public Trust/ Public Committees	3 Nos.	52 Cents
4	Sacred Groves Managed by Individuals/ Family/Family Trust	34 Nos.	200.50 Cents
	Total	**37 Nos**	**252.50 Cents**

CHAVAKKAD TALUK

Sl. No.	Ownership/Custodian	No. of Sacred Groves	Extent (Cents)
1	Sacred Grove Owned by Government	1 No.	5.00 Cents
2	Sacred Groves Managed by Devaswam Board	1 No.	1.50 Cents
3	Sacred Groves Managed by Public Trust/ Public Committees	1 No.	5.00 Cents
4	Sacred Groves Managed by Individuals/ Family/Family Trust	245 Nos.	2592.50 Cents

	Total	**248 Nos.**	**2604.00 Cents**

THRISSUR TALUK

Sl. No.	**Ownership/Custodian**	**No. of Sacred Groves**	**Extent (Cents)**
1	Sacred Grove Owned by Government	Nil	nil
2	Sacred Groves Managed by Devaswam Board	3 Nos.	209.00 Cents
3	Sacred Groves Managed by Public Trust/ Public Committees	2 Nos	21.00 Cents
4	Sacred Groves Managed by Individuals/ Family/Family Trust	215 Nos.	1390 .75 Cents
	Total	**220 Nos**	**1620.75 Cents**

THALAPPALLY TALUK

Sl. No.	**Ownership/Custodian**	**No. of Sacred Groves**	**Extent (Cents)**
1	Sacred Grove Owned by Government	Nil	nil
2	Sacred Groves Managed by Devaswam Board	Nil	nil
3	Sacred Groves Managed by Public Trust/ Public Committees	1 No.	5.00 Cents
5	Sacred Groves Managed by Individuals/ Family/Family Trust	373 Nos ,,	2420.25 Cents
	Total	**374 Nos**	**2425.25 Cents**

CHAPTER III

COMPOSITION OF VEGETATION

The vegetation consists of mostly evergreen types. The peculiarity about the vegetation in Thrissur district is the diversity among tree species. The number of species of trees in a sacred groves ranges from 13 to 29 and generally it is around 20. In Kozhikode, climbers predominate. Certain families such as Euphorbiaceae, Rutaceae, Rubiaceae and Fabaceae are represented by many species of trees, shrubs and climbers. Among them there are species which are rare and threatened as per IUCN Red list. Sacred groves abode many species which are used in Ayurvedic preparations or as folk medicine. The analysis made on frequency of various species reveal that as many as 68 species were noticed only in any of the one SG out of 35 studied. Some of them are Hiptage benghalensis, Hopea ponga, Calophyllum calaba, Drypetes elata, Syzygium lanceolatum etc. The most common species are Caryota urens, Macaranga peltata and Pothos scandens. Some of the important species are described below:-

TREES

Among the dominant trees most common are Vateria indica, Holigarna arnottiana, Calophyllam calaba, and Hopea ponga.Putranjiva roxburghii and Sterculia belanghas occur together in many SGs exhibiting an affinity towards each other.A very large Alstonia scholaris in Udalakavu in Adat village and very tall Ailanthus triphysa in Mekkattu Nagakavu are worth to be mentioned in this context. Streblus asper having many medicinal uses is seen in 18 SGs.

Calophyllum calaba (Cherupunna)

Family - Guttiferae. ***Picture 8***

The tree is with dense crown. The tender leaves are reddish in colour and appear as flowers from a distance.

This in IUCN Red list. The fruits are edible.

Euodia lunu-ankenda (Kanala)

Family - Rutaceae ***Picture-24***

This is in IUCN Red list.

Pterospermum reticulatum (Malayooram)

Family - Sterculiaceae. ***Picture***- 28

This is a rare and threatened species, included in the Vulnerable category of IUCN Red list. The flowers are showy, white. Its population is declining since the seedlings, flowers and fruits are preyed upon by beetle larvae, ants and grass hoppers.

Stem and bark used as tribal medicine.

Putranjiva roxburghii (Aeranji) Picture-30

Family - Euphorbiaceae

Flowers are dioecious. Leaves and fruits have medicinal uses. The fruits are drupes. Necklace is prepared and worn out of these nuts with the belief that it would prevent harm to the one wearing it. This plant is used in medicines for treating infertility and the tree takes the name after this medicinal property. It is seen in Malayathu Sarpakavu.

Ficus trees

These trees are mostly keystone species in sacred groves. The flowers provide a safe haven for wasps which help in the pollination. There are quite a number of Ficus species seen in these sacred groves. Out of them seven described below.

Ficus amplissima (Chela) Picture 12

Family – Moraceae

The large deciduous tree is with nearly white smooth bark. It is capable of growing initially as epiphyte or lithophytes. It usually kill the host tree with its jacket like root formation around the host tree. The leaves and root are medicinal. Used for snake bite /arthritis etc.

Ficus virens (Chela)- Picture-17

Family – Moraceae

This is a strangler fig initially. Its seeds can germinate on other trees which grow fast and finally kill the host. Its leaves are used as vegetable for cooking. This is a very rare one and seen only in Kozhiparambil kavu.

See picture.-

Ficus religiosa (Arayal) Picture 16

Family – Moraceae

This species is considered as the most sacred among the Ficus species and is common in temple premises. The bark is medicinal and is one of the 'Nalpamara' in Ayurveda

Ficus racemosa (Athi)- Picture-15

Family – Moraceae

This is known as cluster fig tree. The fruits are clustered on the trunk and main branches. This was seen in only four sacred groves. The bark is one of the 'Nalpamara' in Ayurveda

Ficus benghalensis (Peral, Vadavriksham)Picture-13

Family – Moraceae

This large tree is with spreading crown, the branches produce prop or pillar roots and generally spread to a large area. The bark is medicinal and is one of the 'Nalpamara' in Ayurveda

Ficus callosa (Kadapilavu)- Picture-14

Family – Moraceae

This is a large very fast growing tree without any aerial roots. The fruits are large compared to other Ficus species seen in the Sacred groves. It is of rare occurrence in Thrissur and noted only in the Kaliyath kavu.

Ficus tsjahela (Chela)- Picture-18

Family – Moraceae

This Ficus is capable of growing initially as epiphyte or lithophytes. It usually kill the host tree with its jacket like root formation around the host tree. This species was noted in the Kozhiparambil kavu

Miliusa tomentosa (Kanakaitha) Picture-25

Family - Annonaceae

SHRUBS

Ecbolium virde (Odiyamadantha) Picture- 37

Family - Acanthaceae

This has light flower and the sepal is like tongue.

Eranthemum capense .

Family - Acanthaceae

This flowers throughout the year. Anti-inflammatory and considered to be folk medicine.

Calliandra haematocephala, Picture- 36

Family - Mimosaceae

This is an ornamental plant with both white and red flowers

Leea indica- (Njekku) Picture-41

Family - Leeaceae

Have medicinal properties. Leaves used for treating vertigo and root, in diarrhoea.

Flueggea virosa-. (Perimclavu). Picture-38

Family - Euphorbiaceae

Multi-stemmed fast growing shrub with thorny branches. Flowers creamy green. Fruits edible and liked by animals and birds. Also used in contraceptive, snake bite and venereal diseases.

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Morinda citrifolia (Noni) Picture-42

Family - Rubiaceae

This has remarkable health benefits like lowering BP, anti-oxidant, preventing diabetes.

CLIMBERS

Some of the large climbers are, Anodendron paniculatum, Connarus monocarpus, and Sarcostigma kleinii. The last one is seen overtopping all canopy trees in Malayathu kavu.There are a number of exotic and invasive climbers such as, Mikania macrantha, Eupatorium odaratum,Pueraria phaseoloides and Hibiscus hispidissimus which are smothering thetrees.Cassytha filiformis,(Moodilla thai) having high medicinal value is seen only in two SGs. Cayratia pedata (Corivally) is seen in 20 SGs.

Capparis zeylanica (Karthotti) Picture-46 & 47

Family - Capparidaceae.

This is a climbing shrub with spines. Root and bark are used as sedative.

Dalbergia horrida (Anamullu) Picture-54

Family - Fabaceae.

Woody climber- Root juice is medicinal

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Cissus heyneana (Kalnjarala) Picture-48

Family - Vitaceae

Medicinal.

Mucuna pruriens (Naikkurana) Picture-55

Family - Fabaceae

Medicinal in many respects. Seeds are sexual stimulant for men.

Strychnos minor (Cheru kanjiravally) Picture-57

Family - Loganiaceae

A rare endemic medicinal plant of South India. Has anti-oxidant potential.

Cassytha filiformis-

Family-Lauraceae.Parasite, Can climb over the host and even kill it.Traditonally used in Cancer treatment. –See picture below taken from net.Seen in kulathuparambathu kavu-Kdr.30.

Rourea minor (Kuriel) Picture- 60

Family - Connaraceae.

Flowering and fruiting throughout the year. Root decoction in small dose is emetic. In high dose acts as poisonous. Root used for external application in skin disease

HERBS

Dipteracanthus prostratus (Velipadakkam) Picture-64

Family - Acanthaceae

Herbal medicine, Anti-cancerous, used in treating gonorrhoea.

Justicia wynaadensis

Family - Acanthaceae

Medicinal.

Pupalia lappacea Picture- 68

Family - Amaranthaceae

Whole plant is medicinal, Leprosy, Urinary problems.

Pentanema indicum (Kammalchedi) Picture- 67

Family -.Asteraceae

Medicinal. Roots for abdominal pain. & throat disorder.

Tribal medicine.

Tragia involucrata (Kodithoova) Picture-70

Family- Euphorbiaceae

Used in skin diseases.

Sida beddomei Picture-69

Family – Malvaceae

CHAPTER IV

DETAILS OF FLORA

(a)-List of SGs visited.

Sl. no	Name of S.G	Taluk	Village	Extent (incent)	Id No
1	Kalathuparambathu, kaipamangalam,	Kodungallur	Kaippamangalam	30	Kdr 30
2	Sankukunlangara bhagavathi devasom temple, S.N puram	Kodungallur	Ala	173	Kdr 45
3	Ponathu kavu, P.S Asokan	Kodungallur	Edavilangu	10	Kdr 3
4	Kannikulangara Bhagavathi temple, konathu kunnu	Mukundapuram	Thekkumkara	25	Mkp 4
5	Kavanappilly-kaliarkunnu, Ashttamichira	Chalakudy	Vadakkumbhagam	75	Chd 4
6	Malayath sarppakkavu, mulangunnath kavu	Thrissur	Killanur	5	Tcr 209
7	Vadakkootu S.G, kuttancheri	Thalappilly	Nelluvayi	7	Tlp 310
8	Kakkattu S.G, Kuttancherry	Thalappilly	Nelluvayi	27	Tlp 214
9	Mekkattu naga, S.G	Thalappilly	vellarakkad	20	Tlp 137
10	Madassery, puliyanoor	Thalappilly	velur	20	Tlp 102
11	Marassery S.G, kulungattukara,peramangalam	Thrissur	peramangalam	60	Tcr 105
12	Kalari sarppakavu, peramangalam	Thrissur	Peramangalam	80	Tcr 107
13	Pathiyarkulangara bhagavathi kshetra,parappur	Chavakkad	Mullassery	30	Chv 225
14	Chukkath muthappan S.G,Puthur	Thrissur	Nadathara	31	Tcr 146
15	Kailath S.G, Dr.Madhavan nair	Thrissur	Kodannur	30	Tcr 169
16	Cheruvallikattil, pazhuvil	Thrissur	Kurumpilavu	60	Tcr 69
17	Palliyana S.G, kandassankadavu	Chavakkad	vadanappilly	217	Chv 45

18	Udalakkavu, Adat	Thrissur	Adat	25	Tcr 94
19	Cheruvakkara mana, Poovathur	Chavakkad	Pavaratty	5	
20	Ullanad mootha panicker vaka kalari,	Chavakkad	Venkitangu	133	Chv 214
21	Ullannur mana, Venkitangu	Chavakkad	Venkitangu	18	Chv 21
22	Ithikkat Kalapurakkal kalikshetra SG	Chavakkad	Vadanappilly	266	Chv 43
23	Kozhiparambil SG,Thrithallur	Chavakkad	Vadanappilly	15	Chv 49
24	Chithali Bhagavathy temple SG,Pampady	Thalappilly 366	Kaniyarkode	70	Tpl 367
25	Kattilkavu, Panjal	Thalappilly	Panjal	60	Tpl 272
26	Kuttikkattil SG, Panjal	Thalappilly	Panjal	36	Tpl 271
27	Odamplakkal SG, cheruthuruthy	Thalappilly	Cheruthuruthy	10	Tpl 266
28	Kizhakkethil Dharmasastha temple SG	Thalappilly	Varavoor	10	Tpl 239
29	Vachakil SG, Thali	Thalappilly	Thichoor	22	Tpl 223
30	Vellampparambu mana, Neelakandan namboothiri, Cherpu	Thrissur	Chowur	4	Tcr 163
31	Vellamparambu mana, Narayanan namboothiri, Cherpu	Thrissur	Chowur	10	Tcr 164
32	Kizhakke perumbadappu mana, Rishikeshan namboothiri, ollukara	Thrissur	Ollukara	10	Tcr 212
33	Amabalppilly mana, padinjattumuri , Sasthrasarman namboothiri	Thrissur	Cherpu	3	Tcr 130
34	Amabalppilly mana, padinjattumuri , Sasthrasarman namboothiri	Thrissur	Cherpu	2	Tcr 129
35	Chittoor mana , cherpu, Narayanan namboothiripad	Thrissur	Cherpu	7	Tcr 131

(B)- SG wise List of Plants

1. Kalathuparambathu Manoj Sacred Grove, Kaipamangalam, Thrissur
Area 30 cents Id.Kdr-30

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Anodendron paniculatum	Apocynaceae	
Asparagus racemosus	Liliaceae	Sathavari
Cansjera rheedei	Opiliaceae	
Cassytha filiformis	Lauraceae	Moodillathali
Cetrosema molle	Fabaceae	Kaattupayar
Cissus latifolia	Vitaceae	Chunnambuvalli
Cissus trifoliata	Vitaceae	Neelachunnambuvally
Connarus monocarpus	Connaraceae	Kooriel
Dioscorea alata	Dioscoreaceae	Katchil
Erycibe paniculata	Convolvulaceae	Erumathali
Gnetum edule	Gnetaceae	Karuthodal
Ichnocarpus frutescens	Apocynaceae	Parvalli
Pothos scandens	Araceae	Paruvakkodi
Uvaria narum	Annonaceae	Narumpanal
Shrub		
Bambusa vulgaris	Poaceae	Manjamula
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leeaceae	Njellu
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal

Memecylon randerianum	Melastomataceae	Kaikkathetti
Memecylon umbellatum	Melastomataceae	Kaasavu, Kayampoo
Syzygium zeylanicum	Myrtaceae	Poochapazham
Tree		
Aporusa cardiosperma (*Aporusa lindleyana*)	Euphorbiaceae	Vetti
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Calophyllum calaba	Clusiaceae	Cherupunna
Calopyllum inophyllum	Clusiaceae	Punna
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Casearia ovata	Flacourtiaceae	Malampavatta
Cinnamomum verum	Lauraceae	Kauva
Chrysophyllum cainito	Sapotaceae	Star apple
Garcinia gummi-gutta	Clusiaceae	Kodampuli
Holigarna arnottiana	Anacardiaceae	Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Syzygium caryophyllatum	Myrtaceae	Karinjaval
Vateria indica	Dipterocarpaceae	Vellappine

The dominant trees in the grove are *Vateria indica, Holigarna arnottiana* and *Calophyllum calaba*. *Anodendron paniculatum* and *Connarus monocarpus* are the large climbers. In general, the grove is with dense tree growth.

2. Sankarankulangara Bhagavathy Dewasom Temple Kavu, SN Puram, Thrissur.Area-1.73 Acrs./ Id.Kdr-45

Scientific name	Family	Common/ local names
Climber		
Abrus pulchellus	Fabaceae	Kattumuthira
Cansjera rheedei	Opiliaceae	
Cissus trifoliate	Vitaceae	Neelachunnambuvally
Connarus monocarpus	Connaraceae	Kooriel
Dalbergia horrida	Fabaceae	Anamullu
Dioscorea alata	Dioscoreaceae	Katchil
Erycibe paniculata	Convolvulaceae	Erumathali
Gnetum edule	Gnetaceae	Karuthodal
Ichnocarpus frutescens	Apocynaceae	Parvalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Morinda umbellate	Rubiaceae	Neyvalli
Pothos scandens	Araceae	Paruvakkodi
Strychnos minor	Loganiaceae	Vallikanjiram
Uvaria narum	Annonaceae	Narumpanal
Shrub		
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji

Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leeaceae	Njellu
Memecylon randerianum	Melastomataceae	Kaikkathetti
Memecylon umbellatum	Melastomataceae	Kaasavu, Kayampoo
Pandanus sp.	Pandanaceae	Kaitha
Phyllanthus reticulatus (*Kirganelia reticulata*)	Euphorbiaceae	Neeroli
Polyalthia korintii	Annonaceae	Koranti
Psilanthus travancorensis (*Coffea travancorensis)*	Rubiaceae	Pushkaramulla
Syzygium zeylanicum	Myrtaceae	Poochapazham
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Aglaia elaeagnoidea	Meliaceae	Punniyaha akil
Aphanamixis polystachya	Meliaceae	Chemmaram
Aporusa cardiosperma (*Aporusa lindleyana*)	Euphorbiaceae	Vetti
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Caryota urens	Arecaceae	Choondapana, Anapatta
Chrysophyllum cainito	Sapotaceae	Star apple
Cinnamomum verum	Lauraceae	Karuva
Evodia lunuankena	Rutaceae	Kanala
Ficus amplissima	Moraceae	Chela

Ficus benghalensis	Moraceae	Peral
Ficus drupacea. var. pubescens *(Ficus mysorensis)*	Moraceae	Chela
Ficus religiosa	Moraceae	Arayal
Garcinia gummi-gutta	Clusiaceae	Kodampuli
Gliricidia sepium	Fabaceae	Semakonna
Hibiscus tiliaceus	Malvaceae	Velipparuthi
Holigarna arnottiana	Anacardiaceae	Cheru
Hopea ponga	Dipterocarpaceae	Thambakam
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edana
Samadera indica	Simaroubaceae	Karinjotta
Strychnos nux-vomica	Loganiaceae	Kanjiram
Syzygium lanceolatum	Myrtaceae	Njaval
Vateria indica	Dipterocarpaceae	Vellappine
Vitex altissima	Verbenaceae	Myla, Mylellu
Herb		
Alternanthera braziliana	Amaranthaceae	Chencheera
Bulbophyllum sterile	Orchidaceae	
Colocasia esculenta	Araceae	Madantha
Cryptocoryne spiralis	Araceae	
Desmodium gangeticum	Fabaceae	Orila

In this grove *Hopea ponga* is the most dominant tree. There is heavy infestation by *Mikania micrantha.*

3. Ponathu kavu Kodungallor, Thrissur. Area-10 cents /Id. KDR-3

Scientific name	Family	Common/ local names
Climber		
Dioscorea alata	Dioscoreaceae	Katchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Mikania micrantha	Asteraceae	Dhrirastrapatcha
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kuriel
Smilax zeylanica	Smilacaceae	Kareelanchi
Uvaria narum	Annonaceae	Narumpanal
Shrub		
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Areca catechu	Arecaceae	Adakka, Kamuku
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Calophyllum inophyllum	Clusiaceae	Punna
Cinnamomum verum	Lauraceae	Karuva
Ficus drupacea. var. pubescens *(Ficus mysorensis)*	Moraceae	Chela
Ficus tsjahela	Moraceae	Chela
Holigarna arnottiana	Anacardiaceae	Charu, Cheru
Gliricidia sepium	Fabaceae	Seemakonna
Mangifera indica	Anacardiaceae	Mavu

Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Swietenia macrophylla	Meliaceae	Mahagany

4. Kannikulangara Bhagavathy Temple Sacredgrove, Konathukunnu, Thrissur.Area-25 cents / Id. Mkp-4

Scientific name	Family	Common/ local names
Climber		
Cansjera rheedei	Opiliaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Centrosema molle	Fabaceae	Kaattupayar
Cyclea peltata	Menispermaceae	Padakizhangu
Erycibe paniculata	Convolvulaceae	Erumathali
Ichnocarpus frutescens	Apocynaceae	Parvalli
Merremia umbellata	Convolvulaceae	Koravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kooriel
Strychnos minor	Loganiaceae	Vallikanjiram
Uvaria narum	Annonaceae	Narumpanal
Shrub		
Antidesma acidum	Euphorbiaceae	Asaripuli
Canthium angustifolium	Rubiaceae	
Chassalia ophioxyloides	Rubiaceae	Vellakurinji

Chromolaena odorata	Asteraceae	Communistpatcha
Gomphia serrata	Ochnaceae	Valermani
Grewia microcos	Tiliaceae	Kottaka
Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leea indica	Njellu
Memecylon umbellatum	Melastomataceae	Kasavu, Kayampoo
Nothopegia travancorica	Anacardiaceae	
Syzygium zeylanicum	Myrtaceae	Poochappazham
Tree		
Alstonia scholaris	Apocynaceae	Ezhilampala
Anacardium occidentale	Anacardiaceae	Kasumavu, Cashew
Aporusa cardiosperma (*Aporusa lindleyana)*	Euphorbiaceae	Vetti
Artocarpus hirsutus	Moraceae	Anjily, Ayani
Carallia brachiata	Rhizophoraceae	Varangu, Vallabham
Caryota urens	Arecaceae	Choondapana, Anapatta
Ficua religiosa	Moraceae	Arayal
Holigarna arnottiana	Anacardiaceae	Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti

Lannea coromandelica	Anacardiaceae	Udhi, Karash
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Strychnos nux-vomica	Loganiaceae	Kanjiram
Vateria indica	Dipterocarpaceae	Vellappine

5. Kaliyarkunnel Kavu, Ashtamichira, Thrissur.Area 75 cents /Id. Chd-4

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Acacia caesia	Mimosaceae	Incha
Calycopteris floribunda	Combretaceae	Pullani
Derris scandens	Fabaceae	Poonjaly
Dioscorea sp.	Dioscoreaceae	Kattukachil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Piper nigrum	Piperaceae	Kurumulaku
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Shrub		
Breynia vitis-idaea *(Breynia rhamnoidea)*	Euphorbiaceae	Pavalapoola
Briedelia stipularis	Euphorbiaceae	Kanjikottam,

		Cherukapanachi
Caesalpinia pulcherrima	Caesalpiniaceae	Rajamally
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Chromaolaena odorata (*Eupatorium odoratum*)	Asteraceae	Communistpatcha
Clerodendrum infortunatum	Verbenaceae	Peruvelam
Ficus hispida	Moraceae	Parakam
Grewia microcos	Tiliaceae	Kottakka
Ixora finlaysoniana	Rubiaceae	Vellathetchi
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Acacia auriculiformis	Mimosaceae	Acacia
Acacia mangium	Mimosaceae	Mangium
Achras zapota	Sapotaceae	Sappota
Alstonia scholaris	Apocynaceae	Ezhilampala
Anacardium occidentale	Anacardiaceae	Cashew, Kasumavu
Caesalpinia sapan	Caesalpiniaceae	Chappangam
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Caryota urens	Arecaceae	Choondapana, Anapatta
Cassia fistula	Caesalpiniaceae	Kanikkonna
Delonix regia	Caesalpiniaceae	Gulmohar
Chrysophyllum cainito	Sapotaceae	Star apple
Ficus benghalensis	Moraceae	Peral
Ficus religiosa	Moraceae	Arayal
Macaranga peltata	Euphorbiaceae	Vatta
Mallotus philippensis	Euphorbiaceae	Sindhooram
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapoataceae	Ilenji
Plumeria rubra	Apocynaceae	Chempakappala, Arali
Polyalthia longifolia	Annonaceae	Aranamaram
Pterocarpus santalinus	Fabaceae	Raktachandanam
Pouteria campechiana	Sapotaceae	Egg fruit

Saraca asoca	Caesalpiniaceae	Ashokam
Simarouba glauca	Simaroubaceae	Lakshmitharu
Sterculia balanghas	Sterculiaceae	Thondi
Strychnos nux-vomica	Loganiaceae	Kanjiram
Syzygium cumini	Myrtaceae	Njaval
Syzygium jambos	Myrtaceae	Pananeer champa
Tectona grandis	Verbenaceae	Teak

In this Sacred grove, most of the species are planted, many of them are fruit yielding plants. The largest trees in the grove *are Acacia mangium* and *Acacia auriculiformis.* We were informed that, the timber yielding trees were cut earlier.

6. Malayathu Sarpakavu, Mulangunnathukavu, Area-5 cents ID.Tcr-209

Scientific name	**Family**	**Common/ local names**
Climber		
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea wallichii	Dioscoreaceae	Kattukatchil
Piper nigrum	Piperaceae	Kurumulagu
Sarcostigma kleinii	Icacinaceae	Vellodal
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Dipteracanthus prostratus	Acanthaceae	Velipadakkam
Achyranthes aspera	Amaranthaceae	
Shrub		
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Clerodendrum infortunatum	Verbenaceae	Paruvelam, Peruku
Chromolaena odorata (*Eupatorium odoratum*)	Asteraceae	Communist patcha
Grewia microcos	Tiliaceae	Kottakka
Leea indica	Leeaceae	Njellu, Njekku
Murraya koenigii	Rutaceae	Karivepu

Tree		
Annona reticulata	Annonaceae	Aatha
Caryota urens	Arecaceae	Anapatta, Choondapana
Ficus amplissima	Moraceae	Chela
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Polyalthia longifolia	Annonaceae	Aranamaram
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji

The notable feature of this sacred grove is the presence of the gigantic climber- Sarcostigma kleinii, which has climbed over all the trees in the grove.

7. Vadakkoottu Sacred grove, Kuttenchery, Mangad. Aea-7 cents Id-Tlp.

Scientific name	**Family**	**Common/ local names**
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Cissus latifolia	Vitaceae	Chunnambuvalli
Dalbergia horrida	Fabaceae	Anamullu
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Merremia vitifolia	Convolvulaceae	Manjavayaravalli
Pothos scandens	Araceae	Paruvakkodi
Tinospora sinensis	Menispermaceae	Pothamruthu
Toxocarpus kleinii	Asclepiadaceae	
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Ecbolium virde	Acanthaceae	Odiyamadantha

Piper longum	Piperaceae	Thippali
Sbrub		
Catunaregam spinosa	Rubiaceae	Malamkara
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Eupatorium odoratum	Asteraceae	Communist patcha
Glycosmis pentaphylla	Rutaceae	Panal
Ixora malabarica	Rubiaceae	Kattuchetchi
Leea indica	Leeaceae	Njellu, Njekku
Mussaenda frondosa	Rubiaceae	Vellila
Pedilanthus tithymaloides	Euphorbiaceae	Thathammachedi
Thevetia peruviana	Apocynaceae	Manjaruli
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Artocarpus heterophyllus	Moraceae	Plavu
Caryota urens	Arecaceae	Choondapana, Anapatta
Delonix regia	Caesalpiniaceae	Gulmohar, Poomaram
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mangifera indica	Anacardiaceae	Mavu
Naringi crenulata	Rutaceae	Narinarakam
Olea dioica	Oleaceae	Edana
Polyalthia longifolia	Annonaceae	Aranamaram
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Eranji
Pterospermum reticulatum	Sterculiaceae	Malayuram
Schleichera oleosa	Sapindaceae	Poovam

Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tectona grandis	Verbenaceae	Thekku
Tamarindus indica	Caesalpiniaceae	Valan Puli
Wrightia tinctoria	Apocynaceae	Thondappala, Vettupala

Note: This sacred grove is very close to the main road and there is lot of garbage. There are several trees of Pterospermum reticulatum and a large tree of Schleichera oleosa.

8. Kakkattu Sacredgrove, Kuttenchery, Area-27cents
Id. Tlp-214

Scientific name	**Family**	**Common/ local names**
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Alangium salvifolium ssp. Hexapetalum	Alangiaceae	Valliankolam
Dalbergia horrida	Fabaceae	Anamullu
Ichnocarpus frutescens	Apocynaceae	Parvalli
Mallots repandus	Euphorbiaceae	Mulamkumbam
Pothos scandens	Araceae	Paruvakkodi
Sarcostigma kleinii	Icacinaceae	Vellodal
Tinospora sinensis	Menispermaceae	Pothamruthu
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Eranthemum capense (*Eranthemum montanum*)	Acanthaceae	

Piper hapnium	Piperaceae	Thippali
Pupalia lappacea	Amaranthaceae	
Shrub		
Leea indica	Leeaceae	Njellu, Njekku
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Alstonia scholaris	Apocynaceae	Ezhilampala
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Caryota urens	Arecaceae	Choondappana, Anapatta
Chionanthus mala-elengi *(Linociera malabarica)*	Oleaceae	Mala-elengi
Cinnamomum malabathrum	Lauraceae	Ilavangam, Vayana
Delonix regia	Caesalpiniaceae	Gulmohar, Poomaram
Ficus exasperate	Moraceae	Therakam
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Schleichera oleosa	Sapindaceae	Poovam
Sterculia guttata	Sterculiaceae	Kavalam
Strychnos nux-vomica	Loganiaceae	Kanjiram

Tamarindus indica	Caesalpiniaceae	Valan Puli

Note: The most dominant tree in this kavu is Caryota urens with plenty of regeneration of other tree species.

9. Mekkattu Naga Sacred grove, Vellarakkad.Area-20 cents

Id-Tlp.137

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Anamirta cocculus	Menispermaceae	Pollakkai
Anodendron paniculatum	Apocynaceae	Kakkakodi
Calycopteris floribunda	Combretaceae	Pullani
Cissus latifolia	Vitaceae	Chunnambuvalli
Cyclea peltata	Menispermaceae	Padakizhangu
Merremia vitifolia	Convolvulaceae	Manja vayaravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Naravelia zeylanica	Ranunculaceae	Vathamkodi
Pothos scandens	Araceae	Paruvakkodi
Smilax zeylanica	Smilacaceae	Kareelanchi
Tinospora sinensis	Menispermaceae	Pothamruthu
Toxocarpus kleinii	Asclepiadaceae	
Herb		
Costus speciosus	Zingiberaceae	Channakoova
Justicia wynaadensis	Acanthaceae	

Pseudarthria vicida	Fabaceae	Moovila
Tragia involucrata	Euphorbiaceae	Kodithoova
Zeuxine longilabris	Orchidaceae	
Shrub		
Ixora brachiata	Rubiaceae	Marathetchi
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Glycosmis pentaphylla	Rutaceae	Paanal
Hibiscus hispidissimus	Malvaceae	Panichakam, Kalappoovu
Lantana camara	Verbenaceae	Poochedi
Leea indica	Leeaceae	Njellu, Njekku
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari
Tree		
Ailanthus triphysa (*Ailanthus malabarica*)	Simaroubaceae	Matti, Perumaram
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Caryota urens	Arecaceae	Choondapana, Anappatta
Chionanthus mala-elengi *(Linociera malabarica)*	Oleaceae	Mala-elengi
Ficus amplissima	Moraceae	Chela
Holigarna arnottiana	Anacardiaceae	Cheru, Charu
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Schleichera oleosa	Sapindaceae	Poovam

Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Pottakavalam
Strychnos nux-vomica	Loganiaceae	Kanjiram
Vitex altissima	Verbenaceae	Myla, Mylellu

Note: There is a very large tree of Alilanthus triphysa. The other dominant trees are Holigarna arnottiana and Mimusops elengi. The large woody climber Anodendron paniculatum is climbing over almost all trees in the grove, except Ailanthus triphysa.

10. Madasseri Sacred Grove, Puliyannur.Area-20 cents

Id-Tlp.102

Scientific name	**Family**	**Common/ local names**
Climber		
Argyreia populifolia	Convolvulaceae	
Capparis zeylanica	Capparidaceae	
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Hiptage bengalensis	Malpighiaceae	Madhavilatha
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Morinda umbellata	Rubiaceae	Neyvalli
Pothos scandens	Araceae	Paruvakkodi
Tinospora sinensis	Menispermaceae	Pothamruthu
Toxocarpus kleinii	Asclepiadaceae	
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali

Herb		
Blepharis maderaspatensis	Acanthaceae	Hemakandi
Costus speciosus	Zingiberaceae	Channakoova
Shrub		
Allophylus cobbe	Sapindaceae	Mukkannanperuku
Bambusa bambos	Poaceae	Mula, Illi
Briedelia stipularis	Euphorbiaceae	Kanjikottam
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ficus tinctoria ssp. parasitica	Moraceae	Kallithi
Fluggea virosa (*Securinega virosa*)	Euphorbiaceae	Perinklavu
Grewia microcosm	Tiliaceae	Kottakka
Leea indica	Leeaceae	Njellu, Njekku
Tabernaemontana heyneana	Apocynaceae	Kundalapala, Kunninpala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Caryota urens	Arecaceae	Choondapana, Anappatta
Ficus religiosa	Moraceae	Arayal
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippenis	Euphorbiaceae	Sindooramaram

Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Naringi crenulata	Rutaceae	Narinarakam
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Valan Puli
Tectona grandis	Verbenaceae	Teak
Trema orientalis	Ulmaceae	Amapotti, Aamathali

Note: Srychnos nuxvomica and Ficus religiosa are the larger and dominant trees.

11. Marasseri Family Sacred grove, Peramangalam. Area-60 cents

Id- Tcr.105

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Alangium salvifolium ssp. Hexapetalum	Alangiaceae	Valliankolam
Anamirta cocculus	Menispermaceae	Pollakai
Cayratia pedata	Vitaceae	Karikkodivally
Centrosema molle *(Centrosema pubescens)*	Fabaceae	Kattupayar
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Lygodium scandens	***	Naippalli
Pothos scandens	Araceae	Paruvakkodi
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Tinospora sinensis	Menispermaceae	Pothamruthu
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Shrub		
Breynia vitis-idaea	Euphorbiaceae	Kireethi
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Clerodendrum infortunatum	Verbenaceae	Paruvelam, Peruku
Ficus hispida	Moraceae	Parakam
Grewia microcosm	Tiliaceae	Kottakka
Hibiscus hispidissimus	Malvaceae	Panichakam, Kalappoovu
Hibiscus rosa-sinensis	Malvaceae	Chemparathi

Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leeaceae	Njellu, Njekku
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Alstonia scholaris	Apocynaceae	Ezhilampala
Anacardium occidentale	Anacardiaceae	Cashew, Kashuvandi
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Cassia fistula	Caesalpiniaceae	Kanikkonna
Caryota urens	Arecaceae	Anapatta, Choondappana
Ficus microcarpa	Moraceae	Itthi
Ficus religiosa	Moraceae	Arayal
Mangifra indica	Anacardiaceae	Mavu
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Olea dioica	Oleaceae	Idala
Oroxylum indicum	Bignoniaceae	Palakapayyani
Plumeria rubra	Apocynaceae	Chembakappala
Santalum album	Santalaceae	Chandanam
Saraca asoca	Caesalpiniaceae	Ashokam
Sterculia balangas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Pottakavalam
Streblus asper	Moraceae	Paruvamaram
Swietenia macrophylla	Meliaceae	Mahogani

12. Kalari Sarpa Kavu, Peramangalam.Area-80 cents

Id-Tcr.107

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Acacia caesia	Mimosaceae	Incha
Alangium salvifolium ssp. Hexapetalum	Alangiaceae	Valliankolam
Calycopteris floribunda	Combretaceae	Pullani
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Dalbergia horrida	Fabaceae	Anamullu
Dioscorea alata	Dioscoreaceae	Katchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Merremia umbellata	Convolvulaceae	Koravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Naravelia zeylanica	Ranunculaceae	Vathamkodi
Pothos scandens	Araceae	Paruvakkodi
Sarcostigma kleinii	Icacinaceae	Vellodal
Smilax zeylanica	Smilacaceae	Kareelanchi
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Tinospora sinensis	Menispermaceae	Pothamruthu
Uvaria narum	Annonaceae	Narumpanal
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi

Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Asystasia gangetica	Acanthaceae	Uputhali
Costus speciosus	Zingiberaceae	Channakoova
Eranthemum capense (*Eranthemum montanum*)	Acanthaceae	
Shrub		
Bambusa bambos	Poaceae	Mula, Illi
Briedelia stipularis	Euphorbiaceae	Kanjikottam
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ficus hispida	Moraceae	Parakam
Glycosmis pentaphylla	Rutaceae	Paanal
Hibiscus hispidissimus	Malvaceae	Panichakam, Kalappoovu
Ixora brachiata	Rubiaceae	Marathetchi
Leea indica	Leeaceae	Njellu, Njekku
Pedilanthus tithymaloides	Euphorbiaceae	
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Anacardium occidentale	Anacardiaceae	Cashew, Kashumavu
Aporusa cardiosperma (*Aporusa lindleyana*)	Euphorbiaceae	Vetti
Artocarpus heterophyllus	Moraceae	Plavu
Bombax ceiba	Bombacaceae	Poola, Mullilavu

(*Bombax malabaricum*)		
Borassus flabellifer	Arecaceae	Karimpana
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Caralia brachiata	Rhizophoraceae	Vallabnam, Vakkana
Cassia fistula	Caesalpiniaceae	Kanikkonna
Caryota urens	Arecaceae	Anapatta, Choondappana
Ficus amplissima	Moraceae	Chela
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mangifera indica	Anacardiacaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Naringi crenulata	Rutaceae	Narinarakam
Schleichera oleosa	Sapindaceae	Poovam
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Pottkavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Puli, Valanpuli
Tectona grandis	Verbenaceae	Thekku
Trema orientalis	Ulmaceae	Amapotti, Aamathali

13. Pathiyarkulangara Sacred grove, Parappur. Area-30 cents

Id-Chv-225

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Capparis zeylanica	Capparidaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cyclea peltata	Menispermaceae	Padakizhangu
Derris scandens	Fabaceae	Poonjali
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Mikania micrantha	Asteraceae	Dhrirastrapatcha
Merremia hederacea *(Merremia chryseides)*	Convolvulaceae	
Merremia umbellata	Convolvulaceae	Koravalli
Passiflora edulis	Passifloraceae	Passion fruit
Pothos scandens	Araceae	Paruvakkodi
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Tinospora sinensis	Menispermaceae	Pothamruthu
Uvaria narum	Annonacaee	Narumpanal
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Eranthemum capense (*Eranthemum montanum*)	Acanthaceae	
Shrub		
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji

Clerodendrum infortunatum	Verbenaceae	Paruvelam, Peruku
Chromolaena odorata *(Eupatorium odoratum)*	Asteraceae	Communistpatcha
Glycosmis pentaphylla	Rutaceae	Paanal
Grewia microcosm	Tiliaceae	Kottakka
Hibiscus hispidissimus	Malvaceae	Panichakam, Kalappoovu
Ipomoea carnea ssp. fistulosa	Convolvulaceae	Neivelikatta
Ixora malabarica	Rubiaceae	Kattuthetchi
Lantana camara	Verbenaceae	Poochedi
Mussaenda frondosa	Rubiaceae	Vellila
Pandanus sp.	Pandanaceae	Kaitha
Phyllanthus reticulatus	Euphorbiaceae	Neeroli
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Ailanthus triphysa (*Ailanthus malabarica*)	Simaroubaceae	Matti, Perumaram
Borassus flabellifer	Arecaceae	Karimpana
Caryota urens	Arecaceae	Anapatta, Choondappana
Holigarna arnottiana	Anacardiaceae	Charu, Cheru
Macaranga peltata	Euphorbiaceae	Vatta
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Pongamia pinnata	Fabaceae	Ungu
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Strychnos nux-vomica	Loganiaceae	Kanjiram

14. Chukkathu Muthappana Sacredgrove, Puthur, Area-31 cents.
Id-

Scientific name	**Family**	**Common/ local names**
Climber		
Asparagus racemosus	Liliaceae	Sathavari
Capparis zeylanica	Capparidaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Jasminum sambac	Oleaceae	Kudamulla
Maclura spinosa (*Plecospermum spinosum*)	Moraceae	Venninkodi
Merremia umbellata	Convolvulaceae	Koravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Piper nigrum	Piperaceae	Kurumulaku
Pothos scandens	Araceae	Paruvakkodi
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Trichosanthes tricuspidata var. tomentosa	Cucurbitaceae	Nepodal
Herb		
Aerva lanata	Amaranthaceae	Cherula
Spilanthes calva	Asteraceae	Akravu
Shrub		
Bauhinia tomentosa	Caesalpiniaceae	Manjamandaram
Breynia vitis-idaea *(Breynia rhamnoidea)*	Euphorbiaceae	Pavalapoola, Kireethi
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Clerodendrum infortunatum	Verbenaceae	Peruku, Peruvelam
Chromolaena odorata (*Eupatorium odoratum*)	Asteraceae	Commutistpatcha

15. Kailath Sacredgrove, Area-30 cents

Id. Tcr.169

Scientific name	Family	Common/ local names
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Capparis zeylanica	Capparidaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Piper nigrum	Piperaceae	Kurumulagu
Pothos scandens	Araceae	Paruvakkodi
Tinospora sinensis	Menispermaceae	Pothamruthu
Toxocarpus kleinii	Asclepiadaceae	
Shrub		
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ixora malabarica	Rubiaceae	Kattuthetchi
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Bambusa bambos	Poaceae	Mula, Illi
Corypha umbraculifera	Arecaceae	Kodappana
Ficus bengalensis	Moraceae	Peral
Ficus callosa	Moraceae	Kadapilavu
Ficus exasperata	Moraceae	Therakam
Ficus microcarpa	Moraceae	Itthi
Flacourtia montana	Flacourtiaceae	Kattuluica
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mangifera indica	Anacardiaceae	Mavu
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Naringi crenulata	Rutaceae	Narinarakam

Olea dioica	Oleaceae	Edala
Schleichera oleosa	Sapindaceae	Poovam
Sterculia guttata	Sterculiaceae	Pottakavalam
Zanthoxylum rhetza	Rutaceae	Mullilam

Note: In this grove there are several large trees. In the dense bamboo grove, a rare owl* is inhabiting. The grove is well protected with compound wall and is free from garbage.

16.Cheruvallikattil Sacredgrove, Pazhuvil West. Area-69

Id- Tcr.69

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Cayratia pedata	Vitaceae	Karikkodivally
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Mucuna pruriens	Fabaceae	Naikurana
Pothos scandens	Araceae	Paruvakkodi
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Tragia involucrata	Euphorbiaceae	Kodithoova
Shrub		
Allophylus cobbe	Sapindaceae	Mukkannanperuku
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Clerodendrum infortunatum	Verbenaceae	Paruvelam, Peruku
Glycosmis pentaphylla	Rutaceae	Paanal
Grewia microcos	Tiliaceae	Kottakka
Nothapodytes nimmoniana	Icacinaceae	Peenari

(Mappia foetida)		
Tabernaemontana heyneana	Apocynaceae	Kundalapala, Kunninpala
Tree		
Aphanamixis polystachya *(Amoora rohituka)*	Meliaceae	Chemmaram
Artocarpus hirsutus	Moraceae	Anjily
Caryota urens	Arecaceae	Choondapana, Anapatta
Ficus microcarpa	Moraceae	Itthi
Holigarna arnottiana	Anacardiaceae	Cheru, Charu
Litsea coriacea	Lauraceae	Pattuthali
Macaranga peltata	Euphorbiaceae	Vatta
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Olea dioica	Oleaceae	Edala
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Sterculia guttata	Sterculiaceae	Pottakavalam
Streblus asper	Moraceae	Paruvamaram
Trema orientalis	Ulmaceae	Amathali, Amapotti

Note: There is dense growth of Mikania micrantha and Ziziphus oenoplia. The tree growth is not dense.

17.Palliyana Sarpakavu, Naduvilkara, Kandassamkadavu

Area-2.17 Acs. / Id-Chv-45

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Anamirta cocculus	Menispermaceae	Pollakkai
Anodendron paniculatum	Apocynaceae	
Asparagus racemosus	Liliaceae	Sathavari
Cansjera rheedei	Opiliaceae	
Capparis zeylanica	Capparidaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cyclea peltata	Menispermaceae	Padakizhangu
Dalbergia horrida	Fabaceae	Anamullu
Derris scandens	Fabaceae	Poonjali
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Dioscora wallichii	Dioscoreaceae	Kattukatchil
Gnetum edule	Gnetaceae	Karuthodal
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum flexile	Oleaceae	Kattumulla
Merremia umbellata	Convolvulaceae	Koravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Mucuna pruriens	Fabaceae	Naikurana
Pothos scandens	Araceae	Paruvakkodi
Pueraria phaseoloides	Fabaceae	Thottapayar
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Smilax zeylanica	Smilacaeae	Kareelanchi
Tinospora cordifolia	Menispermaceae	Chittamruthu
Tinospora sinensis	Menispermaceae	Pothamruthu
Uvaria narum	Annonaceae	Narumpanal
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi
Zanonia indica	Cucurbitaceae	Peenarvalli
Shrub		
Breynia vitis-idaea	Euphorbiaceae	Pavalappoola

(Breynia rhamnoidea)		
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherupanachi, Kanjikottam
Canthium rheedei	Rubiaceae	Kattaramullu
k ophioxyloides	Rubiaceae	Vellakkurinji
Crotalaria pallida	Fabaceae	Kilukilikki
Eupatorium odoratum	Asteraceae	Communistpatcha
Grewia microcos	Tiliaceae	Kottakka
Hibiscus hispidissimus	Malvaceae	Panichakam
Leea indica	Leeaceae	Njellu
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari
Pandanus sp.	Pandanaceae	Kaitha
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Albizia saman (*Samanea saman*)	Mimosaceae	Raimtree, Urakkamthoogimaram
Aphanamixis polystachya *(Amoora rohituka)*	Meliaceae	Chemmaram
Aporusa cardiosperma (*Aporusa lindleyana*)	Euphorbiaceae	Vetti
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Caryota urens	Arecaceae	Choondapana, Anapatta
Ficus drupacea var. pubescens *(Ficus mysorensis)*	Moraceae	Chela
Holigarna arnottiana	Anacardiaceae	Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Lannea coromandelica *(Odina woodier)*	Anacardiaceae	Karash, Udhi
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Persea macrantha	Lauraceae	Kulamavu, Ooravu

(*Machilus macrantha*)		
Pongamia pinnata	Fabaceae	Ungu
Pterocarpus santalinus	Fabaceae	Takthachandanam
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Syzygium cumini	Myrtaceae	Njaval
Terminalia arjuna	Combretaceae	Neermaruthu
Trema orientalis	UlFmaceae	Amapotti, Aamathali
Wrightia tinctoria	Apocynaceae	Thondappala, Vettupala

Note: There is dense growth of exotic weeds like Mikania micrantha, Eupatorium odoratum, Pueraria phaseoloides and Hibiscus hispidissimus. The weedy climbers are smothering the trees in the grove.

18. Udalakavu, Adat, Area-25 cents

Tcr.94

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Cissus latifolia	Vitaceae	Chunnambuvalli
Ichnocarpus frutescens	Apocynaceae	Parvalli
Smilax zeylanica	Smilacaeae	Kareelanchi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Shrub		
Barleria prinotis	Acanthaceae	Manjakanakambaram
Grewia microcos	Tiliaceae	Kottakka
Mallots philippensis	Euphorbiaceae	Sindhooramaram
Phyllanthus reticulatus	Euphorbiaceae	Neeroli
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Anacardium occidentale	Anacardiaceae	Cashuvandi, Cashew
Alstonia scholaris	Apocynaceae	Ezhilampala
Artocarpus heterophyllus	Moraceae	Plavu
Briedelia retusa	Euphorbiaceae	Mulluvenga, Mullenkaini
Caryota urens	Arecaceae	Anapatta, Choondappana
Cassia fistula	Caesalpiniaceae	Kanikkonna
Ficus tsjahela	Moraceae	Chela
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Leucaena leucocephala	Mimosaceae	Ipilipil
Macaranga peltata	Euphorbiaceae	Vatta
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Santalum album	Santalaceae	Chandanam
Wrightia tinctoria	Apocynaceae	Thondappala, Vettupala

Note: The notable feature of this Kavu is the presence of a very large Ezhilampala.

19. Cheruvakkara Mana Sacredgrove, Poovathur, Area-5 cents
Id. Chv.

Scientific name	**Family**	**Common/ local names**
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea alata	Dioscoreaceae	Katchil
Gnetum edule	Gnetaceae	Karuthodal
Jasminum flexile	Oleaceae	Kattumulla
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kuriel
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Shrub		
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherukapanachi, Kanjikkottam
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ficus tinctoria ssp. parasitica	Moraceae	Kallithi
Grewia microcos	Tiliaceae	Kottakka
Leea indica	Leeaceae	Njellu
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Aphanamixis polystachya *(Amoora rohituka)*	Meliaceae	Chemmaram
Artocarpus hirsutus	Moraceae	Anjili, Ayini

Briedelia retusa	Euphorbiaceae	Mullenkaini
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Caryota urens	Arecaceae	Choondapana, Anapatta
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Erenji
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Vitex altissima	Verbenaceae	Myla, Mylellu

20. Ullanad Raman Moothapanicker Sacredgrove, Poovathor

Area-1.33 Acs./ Id. Chv .214

Scientific name	**Family**	**Common/ local names**
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Croton caudatus	Euphorbiaceae	
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Dioscorea pentaphylla	Dioscoreaceae	Chavalikizhangu
Dioscorea alata	Dioscoreaceae	Katchil
Gloriosa superba	Liliaceae	Menthonni
Gnetum edule	Gnetaceae	Karuthodal
Ichnocarpus frutescens	Apocynaceae	Parvalli

Piper nigrum	Piperaceae	Kurumulagu
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kuriel
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Shrub		
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherupanachi, Kanjikkottam
Caesalpinia pulcherrima	Caesalpiniaceae	Rajamalli
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Ficus tinctoria ssp. parasitica	Moraceae	Kallithi
Grewia microcos	Tiliaceae	Kottakka
Hibiscus rosa-sinensis	Malvaceae	Chembarathi
Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leeaceae	Njellu
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mussaenda frondosa	Rubiaceae	Vellila
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari
Nyctanthes arbor-tristis	Oleaceae	Pavizhamulla
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Aegle marmelos	Rutaceae	Koovalam
Annona reticulata	Annonaceae	Aatha, Seethapazham
Aphanamixis polystachya	Meliaceae	Chemmaram

(Amoora rohituka)		
Artocarpus heterophyllus	Moraceae	Plavu
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Azadirachta indica	Meliaceae	Aryaveppu
Bauhinia purpurea	Caesalpiniaceae	Mandhram
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Caryota urens	Arecaceae	Choondapana, Anapatta
Cinnamomum malabathrum	Lauraceae	Vayana
Delonix regia	Caesalpiniaceae	Poomaram, Gulmohar
Ficus callosa	Moraceae	Kadapilavu
Holigarna arnottiana	Anacardiaceae	Charu, Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Litsea coriacea	Lauraceae	Pattuthali
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edana
Polyalthia longifolia	Annonaceae	Aranamaram
Saraca asoca	Caesalpiniaceae	Ashokam
Schleichera oleosa	Sapindaceae	Poovam
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam
Stereospermum colais *(Stereospermum tetragonum)*	Bignoniaceae	Paathiri
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Swietenia macrophylla	Meliaceae	Mahagany
Tecoma stans	Bignoniaceae	Manja-arali

21. Ullannur Mana Sacredgrove, Venkidangu.

Area-18 / Id- Chv.21

Scientific name	**Family**	**Common/ local names**
Climber		
Anamirta cocculus	Menispermaceae	Pollakkai
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea alata	Dioscoreaceae	Katchil
Dioscorea pentaphylla	Dioscoreaceae	Chavalikizhangu
Dioscorea alata	Dioscoreaceae	Katchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Ipomoea campanulata	Convolvulaceae	
Mikania micrantha	Asteraceae	Dhrirastrapacha
Pothos scandens	Araceae	Paruvakkodi
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Shrub		
Abutilon indicum	Malvaceae	Kaluram
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherukapanachi, Kanjikkottam
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Datura stramonium	Solanaceae	Ummam
Ficus tinctoria ssp. parasitica	Moraceae	Kallithi
Glycosmis pentaphylla	Rutaceae	Paanal
Grewia microcos	Tiliaceae	Kottakka

Leea indica	Leeaceae	Njellu
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari
Tree		
Annona reticulata	Annonaceae	Aatha, seethapazham
Aphanamixis polystachya *(Amoora rohituka)*	Meliaceae	Chemmaram
Caryota urens	Arecaceae	Choondapana, Anapatta
Cordia obliqua	Boraginaceae	Passakaimaram, Mookattapazham
Dalbergia latifolia	Fabaceae	Veeti
Ficus racemosa	Moraceae	Atthi
Holigarna arnottiana	Anacardiaceae	Charu, Cheru
Holoptelea integrifolia	Ulmaceae	Aaval
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Polyalthia longifolia	Annonaceae	Aranamaram
Pongamia pinnata	Fabaceae	Ungu
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Terminalia bellirica	Combretaceae	Thaani
Persea macrantha	Lauraceae	Kulamavu

22. Kalapurakkal Shri Ithikkat Kali Temple Sarpakavu

Area-2.66 Acs./ Id-Chv.43

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Mimosaceae	Kunnikkuru
Anamirta cocculus	Menispermaceae	Pollakkai
Asparagus racemosus	Liliaceae	Sathavari
Cansjera rheedei	Opiliaceae	
Cassytha filiformis	Lauraceae	Moodillathali
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Coccinia grandis *(Coccinia indica)*	Cucurbitaceae	Koval
Cuscuta chinensis	Convolvulaceae	
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Dioscorea oppositifolia	Dioscoreaceae	Chandanakizhangu
Dioscorea wallichii	Dioscoreaceae	Kattukatchil
Dioscorea alata	Dioscoreaceae	Kattukachil
Gnetum edule	Gnetaceae	Karuthodal
Hemidesmus indicus	Periplocaceae	Nannari, Naruneendi
Ichnocarpus frutescens	Apocynaceae	Parvalli
Ipomoea mauritiana (*Ipomoea palmata*)	Convovulaceae	Palmuthakku
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kuriel
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Smilax zeylanica	Smilacaceae	Kareelanchi
Tinospora cordifolia	Menispermaceae	Chittamruthu
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi
Herb		
Indigofera hirsuta	Fabaceae	
Shrub		
Breynia vitis-idaea *(Breynia rhamnoidea)*	Euphorbiaceae	Pavalapoola
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherupanachi, Kanjikkottam

Canthium rheedei	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Grewia microcos	Tiliaceae	Kottakka
Leea indica	Leeaceae	Njellu
Phyllanthus reticulates *(Kirganelia reticulata)*	Euphorbiaceae	Neeroli
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Aphanamixis polystachya *(Amoora rohituka)*	Meliaceae	Chemmaram
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Azadirachta indica	Meliaceae	Aryaveppu
Carallia brachiata	Rhizophoraceae	Vallabham, Varangu
Caryota urens	Arecaceae	Choondapana, Anapatta
Casearia ovata *(Casearia esculenta)*	Flacourtiaceae	Malampavatta
Chrysophyllum cainito	Sapotaceae	Star apple
Holigarna arnottiana	Anacardiaceae	Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Lannea coromandelica *(Odina woodier)*	Anacardiaceae	Karash, Udhi
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Olea dioica	Oleaceae	Edala
Pongamia pinnata	Fabaceae	Ungu
Quassia indica *(Samadera indica)*	Simaroubaceae	Karinjotta
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Valanpuli, Puli

23. Kozhiparambil Temple Sacredgrove, Vadanapally

Area-15 cents/ Id-Chv.

Scientific name	Family	Common/ local names
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Cansjera rheedei	Opiliaceae	
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Dioscorea pentaphylla	Dioscoreaceae	Chavalikizhangu
Gloriosa superba	Liliaceae	Menthonni
Gnetum edule	Gnetaceae	Karuthodal
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Momordica dioica	Cucurbitaceae	Kattupadavalam
Mucuna pruriens	Fabaceae	Naikkurana
Pothos scandens	Araceae	Paruvakkodi
Rourea minor	Connaraceae	Kuriel
Sarcostigma kleinii	Icacinaceae	Odappazham, Vellodal
Smilax zeylanica	Smilacaceae	Kareelanchi
Uvaria narum	Annonaceae	Narumpanal
Shrub		
Breynia vitis-idaea *(Breynia rhamnoidea)*	Euphorbiaceae	Pavalapoola
Briedelia stipularis *(Briedelia scandens)*	Euphorbiaceae	Cherupanachi, Kanjikkottam
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Cycus circinalis	Cycadaceae	Eenth
Grewia microcos	Tiliaceae	Kottakka
Ixora coccinea	Rubiaceae	Thetchi
Leea indica	Leeaceae	Njellu

Memecylon edule (*Memecylon umbellatum*)	Melastomataceae	Kashavu, Kayampoo
Mussaenda frondosa	Rubiaceae	Vellila
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Anacardium occidentale	Anacardiaceae	Cashumavu, Cashew
Artocarpus hirsutus	Moraceae	Anjili, Ayini
Butea monosperma (*Butea frondosa*)	Fabaceae	Plash, Chamatha
Careya arborea	Lecythidaceae	Pezhu
Ficus benghalensis	Moraceae	Peral
Ficus tsjahela	Moraceae	Chela
Ficus virens *(Ficus infectoria)*	Moraceae	Chela
Garcinia gummi-gutta (*Garcinia cambogia*)	Clusiaceae	Kodampuli
Holigarna arnottiana	Anacardiaceae	Cheru
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Lannea coromandelica *(Odina woodier)*	Anacardiaceae	Karash, Udhi
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Santalum album	Santalaceae	Chandanam
Sterculia balanghas	Sterculiaceae	Thondi
Syzygium caryophyllatum	Myrtaceae	Karinjara

24. Chithali Bhagavathi Temple Sacred Grove, Pambady,
Area-70 cents./ Id-Tlp. 20.12. 2014.

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cissus repanda	Vitaceae	
Dioscorea alata	Dioscoreaceae	Kachil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Ipomoea hederiiafola	Convolvulaceae	Theepporimulla
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Mikania micrantha	Asteraceae	Dhrirastrapachha
Pothos scandens	Araceae	Paruvakkodi
Tinospora sinensis	Menispermaceae	Pothamruthu
Herb		
Blepharis maderaspatensis	Acanthaceae	Hemakandi
Mimosa pudica	Mimosaceae	Thottavadi
Piper longum	Piperaceae	Thippali
Pupalia lappacea	Amaranthaceae	
Shrub		
Canthium angustifoliun	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Chromolaena odorata *(Eupatorium odoratum)*	Asteraceae	Communist pactha
Glycosmis pentaphylla	Rutaceae	Paanal
Leea indica	Leeaceae	Njellu
Tabernaemontana heyneana	Apocynaceae	Kundalappala,
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi

Albizia odoratissima	Mimosaceae	Kunnivaka
Albizia saman (*Samanea saman*)	Mimosaceae	Rain tree, Urakkanthoongimaram
Azadirachta indica	Meliaceae	Aryevepu
Briedelia retusa	Euphorbiaceae	Mullenkaini
Casearia tomentosa	Flacourtiaceae	Cherukanali
Caryota urens	Arecaceae	Choondapana, Anapatta
Cassia fistula	Caesalpiniaceae	Kanikkonna
Cleistanthus collinus	Euphorbiaceae	Odaku
Delonix regia	Caesalpiniaceae	Poomaram, Gulmohar
Ficus bengalensis	Moraceae	Peral
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Manihot carthaginensis ssp. glaziovii (*Manihot glaziovii)*	Euphorbiaceae	Kattu rubber
Miliusa tomentosa *(Saccopetalum tomentosum)*	Annonaceae	Kanakkaitha
Mimusops elengi	Sapotaceae	Ilenji
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Olea dioica	Oleaceae	Edala
Polyalthia longifolia	Annonaceae	Aranamaram
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Eranji
Santalum album	Santalaceae	Chandanam
Schleichera oleosa	Sapindaceae	Poovam
Streblus asper	Moraceae	Paruvamaram
Strychnos nuux-vomica	Loganiaceae	Kanjiram
Terminalia paniculata	Combretaceae	Maruthu
Zanthoxylum rhetza	Rutaceae	Mullilam

25. Kattilkavu Sacredgrove, Panjal.

Area-60 cents / Id-Tpl.272

Scientific name	**Habit**	**Common/ local names**
Climber		
Calycopteris floribunda	Combretaceae	Pullani
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cyclea peltata	Vitaceae	Padakizhangu
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Merremia vitifolia	Convolvulaceae	Vayaravalli
Phyllanthus reticulates	Euphorbiaceae	Neeroli
Pothos scandens	Araceae	Paruvakkodi
Spatholobus parviflorus *(Spatholobus roxburghii)*	Fabaceae	Adambuvalli
Tiliacora acuminata	Menispermaceae	Vallikknjiram
Tinospora sinensis	Menispermaceae	Pothamruthu
Tylophora indica	Asclepiadaceae	Vallippala
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Ziziphus rugosa	Rhamnaceae	Malamthodali
Herb		
Cyathula prostrata	Amaranthaceae	Cherukadaladi
Eranthemum capense (*Eranthemum montanum*)	Acanthaceae	
Sida beddomei	Malvaceae	Vallikurunthotti
Tragia involucrata	Euphorbiaceae	Kodithoova
Zeuxine longilabris	Orchidaceae	
Shrub		
Adhatoda zeylanica	Acanthaceae	Adalodakam
Antidesma acidum	Euphorbiaceae	Aripazha chedi

Caesalpinia sappan	Caesalpiniaceae	Chappangam
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Chromolaena odorata *(Eupatorium odoratum)*	Asteraceae	Communist patcha
Flacourtia indica	Flacourtiaceae	Aghori, Cherumullikkachedi
Hibiscus rosa-sinensis	Malvaceae	Chembarathi
Leea indica	Leeaceae	Njellu
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Aegle marmelos	Rutaceae	Koovalam
Ailanthus triphysa (*Ailanthus malabarica*)	Simaroubaceae	Matti, Perumaram
Albizia odoratissima	Mimosaceae	Kunnivaka
Annona reticulata	Annonaceae	Aatha, Seethapazham
Artocarpus heterophyllus	Moraceae	Plavu
Azadirachta indica	Meliaceae	Aryaveppu
Bauhinia purpurea	Caesalpiniaceae	Mandhram
Briedelia retusa	Euphorbiaceae	Mullen kaini, Mulluvenga
Caryota urens	Arecaceae	Choondapana, Anapatta
Casearia tomentosa	Flacourtiaceae	Cherukanali
Chrysophyllum cainito	Sapotaceae	Starapple
Dalbergia lanceolaria	Fabaceae	Kannanvaka, Velleeti
Dalbergia latifolia	Fabaceae	Veeti
Dillenia pentagyna	Dilleniaceae	Vazhapunna
Ficus bengalensis	Moraceae	Peral
Ficus religiosa	Moraceae	Arayal
Gmelina arbora	Verbenaceae	Kumizhu, Kumbil
Holarrhena pubescens *(Holarrhena antidysenterica)*	Apocynaceae	Kudagappala
Macaranga peltata	Euphorbiaceae	Vatta

Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mangifera indica	Anacardiaceae	Mavu
Mimusops elengi	Sapotaceae	Ilenji
Miliusa tomentosa *(Saccopetalum tomentosum)*	Annonaceae	Kanakkaitha
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Olea dioica	Oleaceae	Edala
Polyalthia longifolia	Annonaceae	Aranamaram
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Eranji
Saraca asoca	Caesalpiniaceae	Ashokam
Santalum album	Santalaceae	Chandanam
Schleichera oleosa	Sapindaceae	Poovam
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Syzygium cumini	Myrtaceae	Njaval
Terminalia arjuna	Combretaceae	Neermaruthu
Terminalia paniculata	Combretaceae	Maruthu
Tectona grandis	Verbenaceae	Thekku
Trema orientalis	Ulmaceae	Amathali, Amapotti
Zanthoxylum rhetza	Rutaceae	Mullilam

26. Kuttikkatil Janaki Amma Sacredgrove, Panjal.

Area-36 cents / Id-Tpl.271

Scientific name	**Family**	**Common/ local names**
Climber		
Alangium salvifolium ssp. hexapetalum	Alangiaceae	Valliankolam
Anamirta cocculus	Menispermaceae	Pollakkai
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cosmostigma racemosum	Asclepiadaceae	Kakkakodi
Dalbergia horrida	Fabaceae	Anamullu
Dalbergia volubilis	Fabaceae	
Dioscorea alata	Dioscoreaceae	Katchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Ipomoea campanulata	Convolvulaceae	Tamparavalli
Maclura spinosa *(Plecospermum spinosum)*	Moraceae	Venninkodi
Mallotus repandus	Euphorbiaceae	Mulamkumbam
Merremia vitifolia	Convolvulaceae	Manja vayaravalli
Mezoneurum cucullatum	Caesalpiniaceae	Verimullu
Mikania micrantha	Asteraceae	Dhrirastrapacha
Piper nigrum	Piperaceae	Kurumulaku
Pothos scandens	Araceae	Paruvakkodi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Shrub		
Adhatoda zeylanica	Acanthaceae	Adalodakam
Canthium angustifolium	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Chromolaena odorata	Asteraceae	Communistpacha

(Eupatorium odoratum)		
Ficus hispida	Moraceae	Parakam
Glycosmis pentaphylla	Rutaceae	Paanal
Leea indica	Leeaceae	Njellu
Tree		
Adenanthera panonina	Mimosaceae	Manchadi
Albizia lebbeck	Mimosaceae	Karivaka, Karimthakara
Annona reticulata	Annonaceae	Aatha, Seethapazham
Caryota urens	Arecaceae	Choondapana, Anapatta
Chionanthus mala-elengi *(Linociera malabarica)*	Oleaceae	Mala-elengi
Dalbergia lanceolaria	Fabaceae	Kannanvaka, Velleeti
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Edala
Pongamia pinnata	Fabaceae	Ungu
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Eranji
Sterculia guttata	Sterculiaceae	Pottakavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram

27. Odamplackal Sarpakavu, Cheruthuruthy.

Area-10cents / Id-Tpl.266

Scientific name	**Habit**	**Common/ local names**
Climbers		
Abrus precatorius	Fabaceae	Kunnikkuru
Anamirta cocculus	Menispermaceae	Pollakkai
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Ichnocarpus frutescens	Apocynaceae	Parvalli
Maclura spinosa *(Plecospermum spinosum)*	Moraceae	Venninkodi
Pothos scandens	Araceae	Paruvakkodi
Shrub		
Canthium rheedei	Rubiaceae	Kattaramullu
Chassalia ophioxyloides	Rubiaceae	Vellakkurinji
Leea indica	Leeaceae	Njellu
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Caryota urens	Arecaceae	Choondapana, Anapatta
Chionanthus mala-elengi *(Linociera malabarica)*	Oleaceae	Mala-elengi
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Lannea coromandelica *(Odina woodier)*	Anacardiaceae	Karash, Udhi
Macaranga peltata	Euphorbiaceae	Vatta
Olea dioica	Oleaceae	Edala
Pongamia pinnata	Fabaceae	Ungu
Putranjiva roxburghii *(Drypetes roxburghii)*	Euphorbiaceae	Eranji
Sterculia guttata	Sterculiaceae	Kavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Valanpuli, Puli

28. Kizhakkethil Dharmasastha Temple Sacredgrove, Varavur.

Area-10 cents / Id-Tpl.239

Scientific name	Family	Common/ local names
Climber		
Acacia torta	Mimosaceae	Kakkincha
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Cosmostigma racemosum	Asclepiadaceae	Kakkakodi
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Jasminum coarctatum *(Jasminum rottlerianum)*	Oleaceae	Kattumulla
Maclura spinosa *(Plecospermum spinosum)*	Moraceae	Venninkodi
Mallotus repandus	Euphorbiaceae	Mulamkumbam
Merremia vitifolia	Convolvulaceae	Manjavayaravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Pothos scandens	Araceae	Paruvakkodi
Smilax zeylanica	Smilacaceae	Kareelanchi
Tinospora cordifolia	Menispermaceae	Amruthu
Herb		
Alternanthera braziliana	Amaranthaceae	Chemcheera
Blepharis maderaspatensis	Acanthaceae	Hemakandi
Pupalia lappacea	Amaranthaceae	
Shrub		
Barleria prinotis	Acanthaceae	Manjakanakambaram
Chromolaena odorata *(Eupatorium odoratum)*	Asteraceae	Communistpatcha
Ixora brachiata	Rubiaceae	Marathetchi
Leea indica	Leeaceae	Njellu
Murraya koenigii	Rutaceae	Kariveppu
Mussaenda frondosa	Rubiaceae	Vellila
Naringi crenulata	Rutaceae	Narinarakam
Nothapodytes nimmoniana *(Mappia foetida)*	Icacinaceae	Peenari

Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Annona reticulata	Annonaceae	Seethapazham, Aathi
Antiaris toxicaria	Moraceae	Maravuri, Arayanjili
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Caryota urens	Arecaceae	Anapatta, Choondappana
Chionanthus mala-elengi *(Linociera malabarica)*	Oleaceae	Mala-elengi
Diospyros peregrina	Ebenaceae	Panachi
Flacourtia montana	Flacourtiaceae	Kattuluika
Ficus racemosa	Moraceae	Atthi
Grewia tiliifolia	Tiliaceae	Chadachi
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Lannea coromandelica *(Odina woodier)*	Anacardiaceae	Karash, Udhi
Leucaena leucocephala	Mimosaceae	Ipilipil, Subavul
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mimusops elengi	Sapotaceae	Ilenji
Olea dioica	Oleaceae	Idala
Pongamia pinnata	Fabaceae	Ungu
Psidium guajava	Myrtaceae	Pera
Santalum album	Santalaceae	Chandanam
Schleichera oleosa	Sapindaceae	Poovam
Sterculia guttata	Sterculiaceae	Pottakavalam
Spondias pinnata	Anacardiaceae	Ambazham
Tamarindus indica	Caesalpiniaceae	Puli, Valanpuli
Zanthoxylym rhetza	Rutaceae	Mullilam

29. Vachakil Unnikrishnan Kavu, Thali.

Area-22 cents / Id-Tpl.

Scientific name	**Family**	**Common/ local names**
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Cayratia pedata	Vitaceae	Karikkodivally
Cissus latifolia	Vitaceae	Chunnambuvalli
Dioscorea sp.	Dioscoreaceae	Kattukatchil
Ichnocarpus frutescens	Apocynaceae	Parvalli
Merremia vitifolia	Convolvulaceae	Manjavayaravalli
Mikania micrantha	Asteraceae	Dhrirastrapacha
Pothos scandens	Araceae	Paruvakkodi
Smilax zeylanica	Smilacaceae	Kareelanchi
Ziziphus rugosa	Rhamnaceae	Malamthodali
Herb		
Piper longum	Piperaceae	Thippali
Pupalia lappacea	Amaranthaceae	
Shrub		
Bambusa bambos	Poaceae	Mula, Illi
Barleria prinotis	Acanthaceae	Manjakanakambaram
Canthium angustifolium	Rubiaceae	Kattaramullu
Eupatorium odoratum	Asteraceae	Communistpatcha
Ixora brachiata	Rubiaceae	Marathetchi
Leea indica	Leeaceae	Njellu
Tabernaemontana heyneana	Apocynaceae	Kundalappala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Alstonia scholaris	Apocynaceae	Ezhilampala

Annona reticulata	Annonaceae	Seethapazham, Aathi
Antiaris toxicaria	Moraceae	Maravuri, Arayanjili
Artocarpus heterophyllus	Moraceae	Plavu
Borassus flabellifer	Arecaceae	Karimpana
Briedelia retusa	Euphorbiaceae	Mullenkaini, Mulluvenga
Caryota urens	Arecaceae	Anapatta, Choondappana
Delonix regia	Caesalpiniaceae	Gulmohar, Poomaram
Flacourtia montana	Flacourtiaceae	Kattuluika
Ficus amplissima	Moraceae	Atthi
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mallots philippensis	Euphorbiaceae	Sindhooramaram, Kurangumanjal
Mangifera indica	Anacardiaceae	Mavu
Morinda pubescens *(Morinda tinctoria)*	Rubiaceae	Manjapavetta, Manjanathi
Santalum album	Santalaceae	Chandanam
Schleichera oleosa	Sapindaceae	Poovam
Stereospermum colais	Bignoniaceae	Pathiri
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Pottkavalam
Streblus asper	Moraceae	Paruvamaram
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Puli, Valanpuli
Tectona grandis	Verbenaceae	Thekku

30. Vellamparambil Neelakantan Namboothiri Mana Sacred Grove, Cherpu, Area-4 cents/ Id-Trc.163

Scientific name	Family	Local name
Climber		
Acacia torta	Mimosaceae	Pei incha
Cayratia pedata	Vitaceae	Chorivalli
Cosmostigma racemosum	Asclepiadaceae	Vattuvalli
Derris scandens	Fabaceae	Poonjali
Dioscorea bulbifera	Dioscoreaceae	Katchil
Merremia vitifolia	Convolvulaceae	Manja vayaravalli
Momordica dioica	Cucurbitaceae	Kaippanpadavalam
Morinda umbellata	Rubiaceae	Neyvalli
Pothos scandens	Araceae	Paruvakkodi
Salacia fruticosa	Celastraceae	Ekanayakam
Tiliacora acuminata	Menispermaceae	Vallikanjiram
Tinospora sinensis	Menispermaceae	Pothamruthu
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Amorphophallus paeoniifolius	Araceae	Kattuchena
Costus speciosus	Zingiberaceae	Channakoova
Curculigo orchioides	Hypoxidaceae	Nilappana
Curcuma ecalcarata	Zingiberaceae	Kattumanjal
Ecbolium virde	Acanthaceae	Odiyamadantha
Pseudarthria viscida	Fabaceae	Moovila

Rauvolfia serpentina	Apocynaceae	Sarpagandhi
Sida cordata	Malvaceae	Vallikurumthotti
Shrub		
Barleria prinotis	Acanthaceae	Manjakankambaram
Briedelia stipularis	Euphorbiaceae	Kanjikottam
Canthium angustifolium	Rubiaceae	Kattaramullu
Capparia rheedei	Capparidaceae	Kakkamullu
Grewia microcos	Tiliaceae	Kottakka
Ixora malabarica	Rubiaceae	Kattuchethi
Leea indica	Leeaceae	Njallu, Maniperandi
Mussaenda frondosa	Rubiaceae	Vellila
Pandanus sp.	Pandanaceae	Kainari
Tabernaemontana alternifolia	Apocynaceae	Koonampala
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Annona reticulata	Annonaceae	Aatha, Sitapazham
Briedelia retusa	Euphorbiaceae	Mullenkaini
Butea monosperma	Fabaceae	Plash
Caryota urens	Arecaceae	Anapatta, choondapana
Corypha umbraculifera	Arecaceae	Kodapana
Delonix regia	Caesalpiniaceae	Poomaram, Gulmohar
Diospros candolleana	Ebenaceae	Karimaram
Diospyros assimilis	Ebenaceae	karimaram

Drypetes elata	Euphorbiaceae	Enikomban
Elaeocarpus tuberculataus	Elaeocarpaceae	Kara
Ficus benghalensis	Moraceae	Peral
Ficus exasperata	Moraceae	Paruvamaram
Ficus racemosa	Moraceae	Atthi
Ficus amplissima	Moraceae	Chela
Ficus tinctoria ssp. parasitica	Moraceae	Kallitthi
Flacourtia montana	Flacourtiaceae	Vayyamkaitha
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Litsea coriacea	Lauraceae	Pattuthali
Mangifera indica	Anacardiaceae	Maavu
Naringi crenulata	Rutaceae	Narinarakam
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalam. Pottakavalam
Strychnos nux-vomica	Loganiaceae	Kanjiram
Tamarindus indica	Caesalpiniaceae	Valanpuli
Vitex altissima	Verbenaceae	Myla, Mylellu
Wrightia arborea	Apocynaceae	Dhanthappala
Zanthoxylum rhetsa	Rutaceae	Mullilam

31. Vellamparambil Narayanan Namboothiri Mana Scared Grove, Cherpu, Area-10 cents/ Id- Tcr.164

Scientific name	Family	Local name
Climber		
Abrus precatorius	Fabaceae	Kunnikkuru
Alangium salvifolium ssp. s.sp hexapetalum	Climber	Valliankolam
Ampelocissus indica	Vitaceae	Chembaravalli
Calycopteris floribunda	Combretaceae	Pullani
Cissus latifolia	Vitaceae	Oonjalvalli
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Jasminum coarctatum	Oleaceae	Kattumulla
Mikania micrantha	Asteraceae	Dhrirastrapacha
Mimosa invisa	Mimosaceae	Anathottavadi
Momordica dioica	Cucurbitaceae	Kattupadavalam
Mukia maderaspatana	Cucurbitaceae	Mukkapeeram
Pothos scandens	Araceae	Paruvakkodi
Smilax zeylanica	Smilacaceae	Kareelanchi
Tinospora sinensis	Menispermaceae	Pothamruthu
Trichosanthes cucumerina	Cucurbitaceae	Kaippanpadavalam
Herb		
Aerva lanata	Amaranthaceae	Cherula
Biophytum reinwardtii	Oxalidaceae	Mukkuti
Colocasia esculenta	Araceae	Kattuchembu

Mimosa pudica	Mimosaceae	Thottavadi
Shrub		
Glycosmis pentaphylla	Rutaceae	Paanal
Urena lobata	Malvaceae	Uthiram
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Aporusa lindleyana	Euphorbiaceae	Vetti
Caryota urens	Arecaceae	Anapatta, choondapana
Corypha umbraculifera	Arecaceae	Kodappana
Ficus callosa	Moraceae	Kadapilavu
Ficus exasperata	Moraceae	Therakam, Paruvamaram
Ficus amplissima	Moraceae	Chela
Hymenodictyon excelsum	Rubiaceae	Perumtholi
Litsea coriacea	Lauraceae	Pattuthali
Macaranga peltata	Euphorbiaceae	Vatta
Olea dioica	Oleaceae	Edala
Putranjiva roxburghii	Euphorbiaceae	Poothilanji
Sapindus trifoliatus	Sapindaceae	Urulinchikai, Passakotta
Schleichera oleosa	Sapindaceae	Poovam
Sterculia balanghas	Sterculiaceae	Thondi
Sterculia guttata	Sterculiaceae	Kavalan

32. Kizhakkeperumbadappu Mana, Rishikesan Namboothiri, Cherpu, Area-10 cents / Id. Tcr.212

Scientific name	Family	Local name
Climber		
Ampelocissus indica	Vitaceae	Chembaravalli
Anamirta cocculus	Menispermaceae	Pollakai
Aristolochia indica	Aristolochiaceae	Garudakodi
Cissus latifolia	Vitaceae	Oonjalvalli
Cosmostigma racemosa	Asclepiadaceae	Vattuvalli
Dioscorea alata	Dioscoreaceae	Katchil
Pothos scandens	Araceae	Paruvakodi
Quisqualis indica	Combretaceae	Kulamarian chethi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Caladium bicolor	Araceae	Pullichembu
Curcuma ecalcarata	Zingiberaceae	Kattukoova
Impatiens flaccida	Balsaminaceae	Onappoovu
Shrub		
Chassalia ophioxyloides	Rubiaceae	Karutha-amalppori Vellakkurinji
Glycosmis pentaphylla	Rutaceae	Panal
Solanum torvum	Solanaceae	Chunda
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Annona reticulata	Annonaceae	Aatha
Aphanamyxis polystachya	Meliaceae	Chemmaram
Briedelia retusa	Euphorbiaceae	Kaini, Mullenkaini
Butea monosperma	Fabaceae	Plash
Caryota urens	Arecaceae	Anapatta, Choondappana
Cinnamomum verum	Lauraceae	Vayana, Karuva
Ficus exasperata	Moraceae	Parakam
Ficus racemosa	Moraceae	Athi
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Macaranga peltata	Euphorbiaceae	Vatta
Mangifera indica	Anacardiaceae	Mavu
Plumeria rubra	Apocynaceae	Chembakappala, Arali
Saraca asoca	Caesalpiniaceae	Ashokam
Sterculia balanghas	Sterculiaceae	Thondi
Strychnos nux-vmica	Loganiaceae	Kanjiram
Tetrameles nudiflora	Datiscaceae	Cheeni

33. Ambalapilly Mana, Sastrasarman Namboothiripad, Cherpu, Area- 3 cents/ Id-Tcr.130

Scientific name	**Family**	**Local name**
Climber		
Anamirta cocculus	Menispermaceae	Pollakai
Asparagus racemosus	Liliaceae	Sathavari
Pothos scandens	Araceae	Paruvakodi
Herb		
Costus speciosus	Zingiberaceae	Channakkoova
Maranta arundinacea	Marantaceae	Koova
Rauvolfia serpentina	Apocynaceae	Sarpagandhi
Shrub		
Leea indica	Leeaceae	Maniperanda, Njallu
Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Caryota urens	Arecaceae	Anapatta, Choondappana
Chrysophyllum cainito	Sapotaceae	Star apple
Delonix regia	Caesalpiniaceae	Poomaram, Gulmohar
Diospyros candolleana	Ebenaceae	Karimaram
Ficus callosa	Moraceae	Kadapilavu
Garcinia gummi-gutta	Clusiaceae	Kodampuli
Mallotus philippensis	Euphorbiaceae	Sindhooramaram
Polyalthia longifolia	Annonaceae	Aranamaram
Saraca asoca	Caesalipiniaceae	Ashokam
Sterculia balanghas	Sterculaiaceae	Thondi

34. Ambalapilly Mana, Sastrasarman Namboothiripad, Bhagavathikavu, Cherpu, Area-2 cents / Id-Tcr. 129

Scientific name	**Family**	**Local name**
Climber		
Alangium salvifolium ssp. hexapetalum	Alangiaceae	Valliankolam
Anamirta cocculus	Menispermaceae	Pollakai
Asparagus racemosus	Liliaceae	Sathavari
Cosmostigma racemosum	Asclepiadaceae	Vattuvalli
Derris scandens	Fabaceae	Poonjali
Pothos scandens	Araceae	Paruvakodi
Sarcostigma kleinii	Icacinaceae	Vellodal
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Ziziphus xylopyrus	Rhamnaceae	Kotta
Herb		
Maranta arundinacea	Marantaceae	Koova
Shrub		
Psilanthus travancorensis *(Coffea travancorensis)*	Rubiaceae	Pushkaramoolam
Glycosmis pentaphylla	Rutaceae	Panal
Ixora malabarica	Rubiaceae	Kattuchethi
Leea indica	Leeaceae	Maniperanda, Njallu

Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Annona reticulata	Annonaceae	Aatha
Aporusa lindleyana	Euphorbiaceae	Vetti
Caryota urens	Arecaceae	Anapatta, Choondappana
Cassia fistula	Casesalpiniaceae	Kanikkonna
Chrysophyllum cainito	Sapotaceae	Star apple
Elaeocarpus serratus	Elaeocarpaceae	Kara
Garcinia gummi-gutta	Clusiaceae	Kodampuli
Hydnocarpus pentandra	Flacourtiaceae	Marotti
Mallotus philippensis	Euphorbiaceae	Sindhooramaram
Mangifera indica	Anacardiaceae	Mavu
Olea dioica	Oleaceae	Edala
Schleichera oleosa	Sapindaceae	Poovam
Sterculia balanghas	Sterculiaceae	Thondi
Streblus asper	Moraceae	Paruvamaram
Tectona grandis	Verbenaceae	Theku

35 .Chittoor Mana, Cherpu,
Area-7 cents / Id- Tcr. 131

Scientific name	Family	Local name
Climber		
Alangium salvifolium ssp. Hexapetalum	Alangiaceae	Valliankolam
Anamirta cocculus	Menispermaceae	Pollakai
Cissus latifolia	Vitaceae	Oonjalvalli
Derria scandens	Fabaceae	Poonjali
Dioscorea bulbifera	Dioscoreaceae	Kattukatchil
Jasminum coarctatum	Oleaceae	Kattumulla
Merremia vitifolia	Convolvulaceae	Manja vayravalli
Wattakaka volubilis	Asclepiadaceae	Vattakakkakodi
Ziziphus oenoplia	Rhamnaceae	Cheruthodali
Herb		
Costus speciosus	Zingiberaceae	Channakoova
Shrub		
Chassalia ophioxyloides	Rubiaceae	Karutha-amalppori Vellakkurinji
Glycosmis pentaphylla	Rutaceae	Panal
Hibiscua rosa-sinensis	Malvaceae	Chembarathi
Rauvolfia serpentina	Apocynaceae	Sarpagandhi
Leea indica	Leeaceae	Maniperanda, Njallu

Tree		
Adenanthera pavonina	Mimosaceae	Manchadi
Caryota urens	Arecaceae	Anapatta, Choondappana
Cassia fistula	Caesalpiniaceae	Kanikkonna
Chrysophyllum cainito	Sapotaceae	Star apple
Delonix regia	Caesalpiniaceae	Poomaram, Gulmohar
Ficus religiosa	Moraceae	Arayal
Mallotus philippensis	Euphorbiaceae	Sindhooramaram
Putranjiva roxburghii	Euphorbiaceae	Eranji
Schleichera oleosa	Sapindaceae	Poovam
Sterculia balanghas	Sterculiaceae	Thondi
Streblus asper	Moraceae	Paruvamaram
Swietenia macrophylla	Meliaceae	Mahogani
Tecoma stans	Bignoniaceae	Manja arali
Tectona grandis	Verbenaceae	Theku

CHAPTER V

FREQUENCY DISTRIBUTION OF FLORA

Abbreviations

Abbreviation	Name of SG	Abbreviation	Name of SG
VP	Vellampambil Neelakantan Namboothiri Mana	PS	Pathiyarkulangara Sacred grove
VN	Do. Narayanan Namboothiri Mana	CK	Chukkathu Muthappan kavu
KP	Kizhakkeperumbdappu Mana	KL	Kaliyathu Kavu
AM	Ambalappilly Mana	CV	Cheruvallikattil kavu
SS	Ambalapilly Bhagavathykavu	PY	Palliyana Sarpakavu
CM	Chittoor Mana	UK	Udala kavu
KM	Kalathuparambath Manoj	CR	Cheruvakkara Mana kavu
SB	Sankarankulangara Bhagavathy Devaswam Temple kavu	UR	Ullanad Raman Moothapanicker Kavu
PK	Ponathukavu	UO	Ullannur Mana kavu
KB	Kannikulangara Bhagavathy temple kavu	KA	Kalappurackal Shri Ithikkatu Kali Kavu
KK	Kaliyarkunnel kavu	KZ	Kozhiparambil Temple kavu
MS	Malayathu Sarpakavu	CB	Chithali Bhagavathy Temple kavu
VK	Vadakkottu Kavu	KT	Kattil kavu
KS	Kakkattu Sacred grove	JA	Kuttickal Janaki Amma Kavu
MN	Mekkattu Nagar kavu	OS	Odamplackal Sarpakavu
MD	Madasseri kavu	DT	Kizhakkethil Dharma Sastha Temple kavu
MR	Marasseri kavu	VC	Vachakil Unnikrishna kavu
KR	Kalari Sarpakavu		

Species distribution in the Sacred groves of Thrissur district.

Among the *Sacred groves (SGs) of the district, one time enumeration was carried out in 35 SGs based on the extant of area, vegetation type and location in the five Taluks viz. Thrissur, Kodungallur, Thalappilly, Mukundapuram and Chavakkad. For the analysis of the frequency of distribution and occurrence, perennial species like trees, shrubs and climbers alone were taken because enumeration was carried out only once in the Sacred groves. Further, it is observed that inside the typical groves herbs are rare and they are found in the peripheral areas and open areas outside. Inside the Sacred groves herbs are found where ever there is openings in the canopy. Herbaceous epiphytes enumerated includes *Acampe paremorsa, Bulbophyllum sterile, Drynaria quercifolia* and *Dendrobium ovatum*. The terrestrial herbs commonly found are *Costus speciosus* and *Zingiber zerumbet* and occasionally *Piper longum, Puppalia lapacea, Zeuxile longilabris, Desmodium triquetrum, Eranthemum capense* etc.Among the 276 species enumerated, 133 are trees, 87 climbers and 56 shrubs. With regards to the frequency of occurrence, the most widely occurring species are *Caryota urens* and *Pothos scandens*. They are occurring in 31 SGs; followed by *Chassalia ophioxyloidesthos* in 27 SGs; *Macaranga peltata* in 26 SGs; *Cissus latifolia, Adenanthera pavonina* and *Leea indica* in 25 SGs and *Ichnocarpus frutescens* in 24 SGs. No species is found occurring in all SGs. As many as 96 species are occurring in one SG; 48 species in two SGs; 26 species in three SGs and 16 species in four SGs. The frequency of occurrence of species in different sacred groves is provided in table 1-27 and figure1.

*the total number of Sacred groves in Thrissur district

Analysis of species occurrence shows that there are as many as 96 species which are unique to certain Sacred groves. Nine species enumerated from Sankaramkulangara kavu have not been recorded from other SGs; Chukkathu, Kaliyarkunnel and Vellaparambil *Neelakantan* has 7 species; Kattilkavu, Kalapurakkal and Vellamparambil Narayanan have 6 species each which are not recorded from other SGs. Among the unique species, 20 are exotics.

Table 1: **Species occurring in 1 Sacred grove**

Species	Name of Sacred grove
Ipomoea carnea ssp. fistulosa*	PS
Abrus pulchellus	SB
Abutilon indicum	UO
Acacia auriculiformis*	KK
Acacia mangium*	KK
Achras zapota*	KK
Aglaia elaeagnoidea	SB
Albizia chinensis	CK
Albizia lebbeck	JA
Areca catechu*	PK
Argyreia populifolia	MD
Aristolochia indica	KP
Bambusa vulgaris*	KM
Bauhinia tomentosa*	CK
Bombax ceiba	KR
Calophyllum calaba	KM
Capparis rheedei	VP
Careya arborea	KZ
Catunaregam spinosa	VK
Cissus repanda	CB
Cleistanthus collinus	CB
Coccinia grandis	KA
Cordia obliqua	UO
Crotalaria pallida	PY
Croton caudatus	UR
Cuscuta chinensis	KA
Cycas circinalis	KZ
Dalbergia volubilis	JA
Datura stramonium*	UO
Dillenia pentagyna	KT
Dioscorea oppositifolia	KA
Dioscorea pentphylla	UR

Diospyros assimilis	VP
Diospyros peregrina	DT
Drypetes elata	VP
Elaeocarpus serratus	SS
Elaeocarpus tuberculataus	VP
Evodia lunuankena	SB
Ficus virens	KZ
Flacourtia indica	KT
Fluggea virosa	MD
Gmelina arbora	KT
Gomphia serrata	KB
Grewia tiliifolia	DT
Hemidesmus indicus	KA
Hibiscus tiliaceus	SB
Hiptage bengalensis	MD
Holarrhena pubescens	KT
Holoptelea integrifolia	UO
Hopea ponga	SB
Hymenodictyon excelsum	VN
Ipomoea hederiiafola*.	CB
Ipomoea mauritiana*	KA
Ixora finlaysoniana	KK
Jasminum sambac	CK
Lygodium scandens	MR
Manihot carthaginensis ssp. glaziovii*	CB
Merremia hederacea	PS
Mezoneurum cucullatum	JA
Mimosa diplotricha*	VN
Mukia maderaspatana	VN
Nothopegia travancorica	KB
Nyctanthes arbor-tristis	UR
Passiflora edulis*	PS
Phyllanthus acidus*	CK
Phyllanthus emblica	CK

Polyalthia korintii	SB
Pouteria campechiana*	KK
Psidium guajava	DT
Pterospermum reticulatum	VK
Pueraria phaseoloides*	PY
Quassia indica	KA
Quisqualis indica*	KP
Rauvolfia serpentina	CM
Saccharum officinarum	CK
Salacia fruticosa	VP
Samadera indica	SB
Sapindus trifoliatus	VN
Simarouba glauca*	KK
Solanum torvum	KP
Spatholobus parviflorus	KT
Strychnos minor	SB
Syzygium jambos*	KK
Syzygium lanceolatum	SB
Tabernaemontana alternifolia	VP
Terminalia bellirica	UO
Tetrameles nudiflora	KP
Thevetia peruviana *	VK
Tragia involucrata	CV
Trichosanthes cucumerina	VN
Trichosanthes tricuspidata var. tomentosa	CK
Tylophora indica	KT
Urena lobata	VN
Wrightia arborea	VP
Zanonia indica	PY
Ziziphus xylopyrus	SS

*Exotic species

Table 2: **Species occurring in 2 Sacred groves**

Species	Name of Sacred grove
Acacia caesia	KK,KR
Acacia torta	VP,DT
Adhatoda zeylanica	KT,JA
Albizia odoratissima	CB,KT
Albizia saman	PY,CB
Allophylus cobbe	MD,CV
Ampelocissus indica	VN,KP
Antiaris toxicaria	DT,VC
Antidesma acidum	KB,KT
Aporusa lindleyana	VN,SS
Bauhinia purpurea	UR,KT
Caesalpinia pulcherrima	KK,UR
Caesalpinia sappan	KK,KT
Calophyllum inophyllum	KM,PK
Casearia ovata	KM,KA
Casearia tomentosa	CB,KT
Cassytha filiformis	KM,KA
Cinnamomum malabathrum	KS,UR
Cissus trifoliata	KM,SB
Connarus monocarpus	KM,SB
Dalbergia lanceolaria	KT,JA
Dalbergia latifolia	UO.KT
Dioscorea alata	UO,KA
Dioscorea pentaphylla	UO,KZ
Diospyros candolleana	VP,AM

Gliricidia sepium	SB,PK
Gloriosa superba	UR,KZ
Ipomoea campanulata	UO,JA
Jasminum flexile	PY,CR
Lantana camara	MN,PS
Leucaena leucocephala	UK,DT
Memecylon randerianum	KM,SB
Miliusa tomentosa	CB,KT
Murraya koenigii	MS,DT
Naravelia zeylanica	MN,KR
Oroxylum indicum	MR,CK
Pedilanthus tithymaloides	VK,KR
Persea macrantha	PY,UO
Psilanthus travancorensis	SS,SB
Pterocarpus santalinus	KK,PY
Spondias pinnata	CK,DT
Stereospermum colais	UR,VC
Syzygium caryophyllatum	KM,KZ
Tecoma stans	CM,UR
Terminalia paniculata	CB,KT
Ziziphus rugosa	KT,VC

Table 3: **Species occurring in 3 Sacred groves**

Species	Name of Sacred grove
Aegle marmelos	CK,UR,KT
Ailanthus triphysa	MN,PS,KT
Anodendron paniculatum	KM,MN,PY
Borassus flabellifer	KR,PS,VC
Butea monosperma	VP,KP,KZ
Canthium rheedei	PY,KA,OS
Centrosema molle	KM,KB,MR
Corypha umbraculifera	VP,VN,KL
Dioscora wallichii	PY,MS,KA
Erycibe paniculata	KM,SB,KB
Ficus drupacea var. pubescens	SB,PK,PY
Ficus microcarpa	MR,KL,CV
Ficus religiosa	SB,KK,MR
Ixora brachiata	MN,KR,DT
Mallotus repandus	KS,JA,DT
Momordica dioica	VP,VN,KZ
Morinda umbellata	VP,SB,MD
Mucuna pruriens	CV,PY,KZ
Pandanus sp.	VP,SB,PS
Plumeria rubra	KP,KK,MR
Syzygium cumini	KK,PY,KT
Syzygium zeylanicum	KM,SB,KB
Terminalia arjuna	CK,PY,KT
Tinospora cordifolia	PY,KA,DT
Vateria indica	KM,SB,KB
Wrightia tinctoria	VK,PY,UK

Table 4: **Species occurring in 4 Sacred groves**

Species	Name of Sacred grove
Azadirachta indica	UR,KA,CB,KT
Bambusa bambos	MD,KR,KL,VC
Barleria prinotis	VP,UK,DT,VC
Cinnamomum verum	KP,KM,SB,PK
Ficua religiosa	CM,KB,MD,KT
Ficus racemosa	VP,KP,UO,DT
Ficus tsjahela	PK,CK,UK,KZ
Ficus callosa	VN,AM,KL,UR
Ficus exasperata	VP,VN,KS,KL
Flacourtia montana	VP,KL,DT,VC
Hibiscus rosa-sinensis	CM,MR,UR,KT
Maclura spinosa	CK,JA,OS,DT
Memecylon umbellatum	KM,SB,KB,KZ
Phyllanthus reticulatus	SB,PS,UK,KA
Toxocarpus kleinii	VK,MN,MD,KL
Vitex altissima	VP,PK,MN,CR

Table 5: **Species occurring in 5 Sacred groves**

Species	Name of Sacred grove
Aporusa cardiosperma	KM,SB,KB,KR,PY
Calycopteris floribunda	VN,KK,MN,KR,KT
Capparis zeylanica	MD,PS,CK,KL,PY
Chionanthus mala-elengi	KS,MN,JA,OS,DT
Cosmostigma racemosum	VP,KP,SS,JA,DT
Cyclea peltata	KB,MN,PS,PY,KT
Ficus hispida	KK,MR,KR,CK,JA
Ficus tinctoria ssp. parasitica	VP,MD,CR,UR,UO
Garcinia gummi-gutta	AM,SS,KM,SB,KZ
Hibiscus hispidissimus	MN,MR,KR,PS,PY
Ixora malabarica	VP,SS,VK,PS,KL
Litsea coriacea	VP,VN,CK,CV,UR
Merremia umbellata	KB,KR,PS,CK,PY
Swietenia macrophylla	CM,PK,MR,CK,UR
Trema orientalis	MD,KR,CV,PY,KT
Zanthoxylum rhetsa	VP,KL,CB,KT,DT

Table 6. **Species occurring in 6 Sacred groves**

Species	Name of Sacred grove
Alstonia scholaris	KB,KK,KS,MR,UK,VC
Anacardium occidentale	KB,KK,MR,KR,UK,KZ
Asparagus racemosus	AM,SS,KM,CK,PY,KA
Breynia vitis-idaea	KK,MR,CK,PY,KA,KZ
Cansjera rheedei	KM,SB,KB,PY,KA,KZ
Clerodendrum infortunatum	KK,MS,MR,PS,CK,CV
Dalbergia horrida	SB,VK,KS,KR,PY,JA
Derris scandens	VP,SS,CM,KK,PS,PY
Ixora coccinea	KM,SB,KB,MR,UR,KZ
Lannea coromandelica	KB,PY,KA,KZ,OS
Naringi crenulata	VP,VK,MD,KR,KL,DT
Piper nigrum	KK,MS,CK,KL,UR,JA
Rourea minor	PK,KB,CR,UR,KA,KZ
Saraca asoca	KP,AM,KK,MR,UR,KT
Wattakaka volubilis	CM,MD,KR,PS,PY,KA
Artocarpus heterophyllus	VK,KR,UK,UR,KT,VC

Table 7 **: Species occurring in 7 Sacred groves**

Species	Name of Sacred grove
Alangium salvifolium ssp. hexapetalum	VN,SS,CM,KS,MR,KR,JA
Aphanamixis polystachya	KP,SB,CV,PY,CR,UR,UO
Cassia fistula	SS,CM,KK,MR,KR,UK,CB
Chrysophyllum cainito	AM,CM,KM,SB,KK,KA,KT
Ficus benghalensis	VP,SB,KK,KL,KZ,CB,KT
Gnetum edule	KM,SB,PY,CR,UR,KA,KZ
Mussaenda frondosa	VP,VK,PS,CK,UR,KZ,DT
Nothapodytes nimmoniana	KS,MN,CV,PY,UR,UO,DT
Pongamia pinnata	PS,PY,UO,KA,JA,OS,DT
Santalum album	MR,UK,KZ,CB,KT,DT,VC
Ficus amplissima	VP,VN,SB,MS,MN,KR,VC

***Table 8.*: Species occurring in 8 Sacred groves**

Species	Name of Sacred grove
Carallia brachiata	KM,SB,KB,KK,KR,CR,UR,KA
Merremia vitifolia	VP,CM,VK,MN,KT,JA,AR,VC
Polyalthia longifolia	AM,KK,MS,VK,UR,UO,CB,KT
Tectona grandis	SS,CM,KK,VK,MD,KR,KT,VC
Uvaria narum	KM,SB,PK,KB,KR,PS,PY,KZ

***Table 9:* Species occurring in 9 Sacred groves**

Species	Name of Sacred grove
Artocarpus hirsutus	KM,SB,PK,KB,CV,PY,CR,KA,KZ
Delonix regia	VP,AM,CM,KK,VK,KS,UR,CB,VC
Tamarindus indica	VP,VK,KS,MD,KR,KA,OS,DT,VC
Tiliacora acuminata	VP,MR,KR,PS,CK,CV,UR,UO,KT

***Table 10.* Species occurring in 10 Sacred groves**

Species	Name of Sacred grove
Briedelia stipularis	VP,KK,MD,KR,PY,CR,UR,UO,KA,KZ
Canthium angustifolium	VP,SB,KB,MN,MD,KR,CK,CB,JA,VC
Morinda pubescens	MN,MD,KR,PS,KL,CV,UK,CB,KT,VC
Smilax zeylanica	VN,PK,MN,KR,PY,UK,KA,KZ,DT,VC

***Table 11:* Species occurring in 11 Sacred groves**

Species	Name of Sacred grove
Annona reticulata	VP,KP,SS,MS,CK,UR,UO,KT,JA,DT,VC
Jasminum coarctatum	VN,CM,VK,MD,MR,KR,PS,KZ,CB,KT,DT

***Table 12:* Species occurring in 12 Sacred groves**

Species	Name of Sacred grove
Briedelia retusa	VP,KP,KS,MN,MR,KR,UK,CR,CB,KT,DT,VC
Chromolaena odorata	KB,KK,MS,VK,PS,CK,PY,CB,KT,JA,DT,VC
Dioscorea bulbifera	VP,VN,CM,MD,MR,KL,CV,PY,UR,KA,KZ,DT
Dioscorea sp.	KP,KM,SB,PK,KK,KR,CR,UR,UO,CB,JA,VC
Glycosmis pentaphylla	VN,KP,SS,CM,VK,MN,KR,PS,CV,UO,CB,JA
Holigarna arnottiana	KM,SB,PK,KB,MN,PS,CV,PY,UR,UO,KA,KZ
Sarcostigma kleinii	SS,MS,KS,KR,CK,CV,PY,CR,UR,UO,KA,KZ
Tinospora sinensis	VP,VK,KS,MN,MD,MR,KR,PS,KL,PY,CB,KT

Table 13: **Species occurring in 13 Sacred groves**

Species	Name of Sacred grove
Schleichera oleosa	VN,SS,CM,VK,KS,MN,KR,KL,UR,CB,KT,DT,VC

Table 14: **Species occurring in 14 sacred groves**

Species	Name of Sacred grove
Putranjiva roxburghii	VN,CM,MS,VK,KS,MN,MD,PS,CV,CR,CB,KT, JA,OS

Table 15: **Species occurring in 15 sacred groves**

Species	Name of Sacred grove
Abrus precatorius	VN,KM,KK,MN,MR,KR,PS,CV,PY,UK,KA,KZ,CB, OS,VC
Grewia microcos	VP,KB,KK,MS,MD,MR,PS,CV,PY,UK,CR,UR,UO,K A,KZ
Mikania micrantha	VN,SB,PK,KB,MN,KR,PS,CK,CV,PY,UO,CB, JA,DT,VC

Table 16: **Species occurring in 16 Sacred groves**

Species	Name of Sacred grove
Anamirta cocculus	KP,AM,SS,CM,VK,KS,MN,MR,KL,PY,CR,UR,UO,K A,JA,OS
Sterculia balanghas	VP,VN,KP,AM,SS,CM,KK,MN,MR,PY,CR,UR,UO,K A,KZ,VC
Ziziphus oenoplia	VP,KP,SS,CM,KK,MS,VK,KS,MD,MR,KR,PS,CV,U K,KT,JA

Table 17. **Species occurring in 17 Sacred groves**

Species	Name of Sacred grove
Mimusops elengi	KM,SB,PK,KB,KK,MN,KR,CK,PY,CR,UR,UO,KZ,C B,KT,JA,DT
Tabernaemontana heyneana	SB,PK,KK,MD,MR,KR,PS,CV,PY,UR,KA,KZ,CB,K T,OS,DT,VC

Table 18: **Species occurring in 18 Sacred groves**

Species	Name of Sacred grove
Streblus asper	SS,CM,VK,MD,MR,KR,CK,CV,PY,CR,UR,UO,KA,C B,KT,JA,OS,VC

Table 19: **Species occurring in 19 Sacred groves**

Species	Name of Sacred grove
Sterculia guttata	VP,VN,VK,KS,MN,MD,MR,KR,KL,CV,PY,CR,UR,UO,KT,JA,OS,DT,VC
Mangifera indica	VP,KP,SS,PK,KB,KK,VK,KS,MR,KR,CK,KL, PY,CR,UR,KA,KZ,KT,VC

Table 20: **Species occurring in 20 Sacred groves**

Species	Name of Sacred grove
Cayratia pedata	VP,KB,MR,KR,PS,CK,KL,CV,PY,CR,UR,UO, KA,KZ,CB,KT,JA,OS,DT,VC
Mallotus philippensis	AM,SS,CM,KM,KK,MS,VK,MN,MD,MR,KR, KL,UK,CR,UR,CB,KT,JA,DT,VC
Strychnos nux-vomica	VP,KP,SB,KB,KK,VK,KS,MN,MD,KR,PS,PY,UR,UO,KA,CB,KT,JA,OS,VC

Table 21. **Species occurring in 21 Sacred groves**

Species	Name of Sacred grove
Olea dioica	Except VP,KP,AM,CM,KK,MS,KS, MD,KR,PS,CK,UK,KZ,VC

Table 22: **Species occurring in 23 Sacred groves**

Species	Name of Sacred grove
Hydnocarpus pentandra	Except VN,AM,CM,PK,KK,MN,MR,PS,KL, CV,CB,KT

Table 23. **Species occurring in 24 Sacred groves**

Species	Name of Sacred grove
Ichnocarpus frutescens	Except VP,VN,KP,AM,SS, CM,MS,MN,MD,CK,CR

Table 24: **Species occurring in 25 Sacred groves**

Species	Name of Sacred grove
Adenanthera pavonina	Except KM,SB,KB,KK,MS,MN,CK, CV,UO,KZ
Cissus latifolia	Except VP,AM,SS,SB,PK,KB,KK, KS,KL,CV
Leea indica	Except VN,KP,PK,KK,PS,CK,KL, CV,UK,UR

Table 25. **Species occurring in 26 Sacred groves**

Species	Name of Sacred grove
Macaranga peltata	Except VP,AM,SS,CM,KM,SB,PK,MR,VC

Table 26. **Species occurring in 27 Sacred groves**

Species	Name of Sacred grove
Chassalia ophioxyloides	Except VP,VN,AM,SS,KS,UK,DT,VC

Table 27. **Species occurring in 31 Sacred groves**

Species	Name of Sacred grove
Caryota urens	Except KM,PK,KL,KZ
Pothos scandens	Except CM,KK,MS,UK

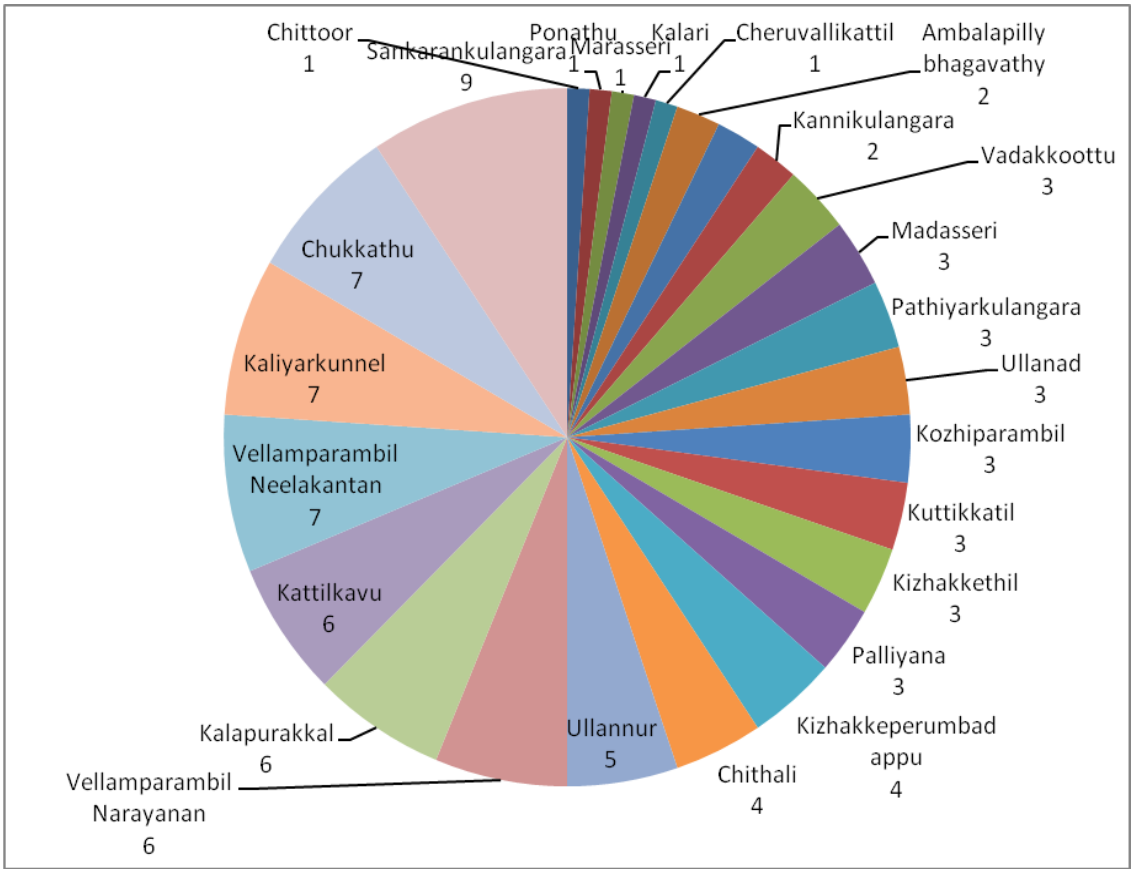

Figure 1. Number of species unique to the sacred grove

The number of trees, shrubs and climbers in the 35 sacred groves is provided in table 28 and Taluk wise occurrence of trees, shrubs and climbers in table 29.

Table 28.

The number of species of trees, shrubs and climbers in the 35 sacred groves

Sl.no	Kavu	Tree	Shrub	Climber	Total
1.	Vellamparambil Neelakantan	28	10	13	51
2.	Vellamparambil Narayanan	16	2	15	33
3.	Kizhakkeperumbadappu	17	3	9	29
4.	Ambalapilly	11	1	3	15
5.	Ambalapilly bhagavathy	16	5	9	30
6.	Chittoor	14	5	9	28
7.	Kalathuparambathu	15	8	15	38
8.	Sankarankulangara	26	12	14	52
9.	Ponathu	13	2	7	22
10.	Kannikulangara	16	11	12	39
11.	Kaliyarkunnel	28	10	8	46
12.	Malayathu	8	6	5	19
13.	Vadakkoottu	20	9	10	39
14.	Kakkattu	16	2	9	27
15.	Mekkattu	17	8	13	38
16.	Madasseri	16	8	12	36
17.	Marasseri	19	10	14	43
18.	Kalari	26	11	21	58
19.	Pathiyarkulangara	10	13	18	41
20.	Chukkathu	17	9	13	39
21.	Kailath	16	3	9	28
22.	Cheruvallikattil	13	7	11	31
23.	Palliyana	25	12	27	65
24.	Udalakavu	15	3	5	23
25.	Cheruvakkara	118	4	9	131
26.	Ullanad	32	11	15	58
27.	Ullannur	21	8	12	41

28.	Kalapurakkal	21	8	23	52
29.	Kozhiparambil	17	10	17	44
30.	Chithali	26	6	11	43
31.	Kattilkavu	40	9	14	63
32.	Kuttikkatil	16	7	18	41
33.	Odamplackal	13	4	7	24
34.	Kizhakkethil	26	8	14	48
35.	Vachakil	25	7	10	42

The analysis with respect to endemism shows that out of the 276 species, 29 are endemics. Endemism among trees is relatively high with 17 species. Among the 87 species of climbers, only 4 are endemics and out of the 56 shrubs, 8 endemics. Among the 10 dominant Sacred groves, tree diversity is highest in Cheruvakkara mana sacred grove with 118 species. Shrub diversity is high in Pathiyarkulangara sacred grove with 13 species and climber diversity is high in Palliyana sarpakavu with 27 species. Out of the 276 species enumerated from SGs, 44 are exotics. Among trees, 24 are exotics. In the case of shrubs 12 species are exotics and in climbers 8 are exotics. Invasive species such as *Mikania micrantha*, *Mimosa diplotricha* and *Chromolaena odorata* have established in some of the Sacred groves where the vegetation is degraded.

Table 29. **Taluk-wise occurrence of trees, shrubs and climbers**

Taluk	Trees	Shrubs	Climbers	Total
Thrissur	89	39	64	192
Kodungallur	36	13	22	71
Thalappilly	73	28	42	143
Mukundapuram	36	18	18	72
Chavakkad	40	16	33	89

Among the Taluks, Thrissur has the highest species diversity.

The analysis with respect to family shows that Euphorbiaceae is the most dominant family with 20 species, followed by Moraceae (18 species); Fabaceae (16 species); Rubiaceae (13 species). Among tree species Moraceae is dominating with 16 species; followed by Euphorbiaceae (11); Mimosaceae (8); Fabaceae and Caesalpiniaceae (6). Among shrubs Rubiaceae is dominating with 10 species followed by Euphorbiaceae (6); Malvaceae and Apocyanaceae (4); Poaceae (3). Fabaceae and

Convolvulaceae are the dominant families among climbers with 9 species in each, followed by Dioscoreaceae (8) and Cucurbitaceae (6).

Analysis with respect to Taluks shows that, out of the 5 Taluks of Thrissur district, in 4 Taluks Moraceae is the dominant family except in Mukundapuram Taluk where Euphorbiaceae is the dominant family. In Thrissur Taluk, Moraceae is dominating with 16 species, followed by Euphorbiaceae and Rubiaceae with 16 and 15 species respectively. In Kodungallur Taluk Moraceae is represented with 6 species, followed by Rubiaceae and Fabaceae, 5 species in each family. In Thalappilly Taluk Moraceae and Euphorbiaceae are the dominant ones with 11 species in each family, followed by Rubiaceae with 9 species. In Mukundapuram Taluk, Euphorbiaceae is dominating with 6 species, followed by Moraceae, Caesalpiniaceae and Anacardiaceae with 5 species in each. In Chavakkad Taluk, Moraceae is dominating with 7 species, followed by Dioscoriaceae with 6 species and Fabaceae with 5 species.

CHAPTER VI

ECOLOGICAL STATUS.

Ecological condition in a sacred grove revolves around its relationship and influence imparted on various components like microclimate, soil and moisture retention, soil nutrients, nature of vegetation and other life forms that associate. The vegetation as well as the biological setup in a sacred grove is normally fully protected from human interference through customary taboos and sanctions with cultural and ecological implications. In such a typical condition there can be immense activity among and between all living organisms providing plenty of resources for research on some of the aspects not seen studied hitherto. In this report there is only limited scope to undertake a study on this vast subject, and this chapter is confined to vegetation, soil conditions, faunal significance and water conservation .as could be observed and understood.

Vegetation

The composition of vegetation exhibit a different pattern in which the number of tree species are much more than other habit forms unlike the northern or southern regions. Among trees about six species of Ficus are represented. Ficus provide a safe haven for wasps, bees and other insects. As different species of Ficus flower during different periods the birds and insects largely converge on such trees.There are other species such as *Calophyllum calaba* and *Pterospermum reticulatum* the fruits and some parts are liked by birds and animals. This relation ship can be one of the reasons for the predominance of tree species in this disrict. The species Pterospermum belongs to the family Sterculiaceae which is considered to be most primitive. The predation by the fauna on almost all parts of *Pterospermun reticulatum* could be one of the reasons making its conservation status IUCN Red. *Corypha umbraculifera* and *Bambua bamboos* are growing well in Kaliath sarpa kavu in Kodannur village of Thrissur taluk . But this kind of bamboo growth is quite uncommon.

Keystone species

Apart from direct benefits of biodiversity conservation, there are indirect benefits which flow from sacred groves through ecosystem functions. Some species, though present in small numbers, play very important role by their unique abilities such as nitrogen fixation and attracting many birds, animals etc. and help maintaining life forms in plenty. They are known as keystone species. These species have

disproportionate large effect on other species in a community. Law (2002) tried to identify keystone species in two SGs based on following parameters.

Once such species are removed from an ecosystem it may create dramatic changes in the rest of the community. Many studies have not been made on this aspect in respect of the SGs in Kerala. In Tamil Nadu *Ficus religiosa* and *F. benghalensis* - known as strangler figs, are considered to be Keystone species. These species have aggressive growth habit ensuring their regeneration and survival. They bear pulpy small fruits during dry summer when most of the other species do not. Hence they attract frugivorous birds, a few mammals and reptiles and several species of insects. Many pollinators and seed dispersers are attracted to promote regeneration in the plant community. In many of the SGs Ficus species are present. Another attraction is that the different species of Ficus bear fruits in different seasons also .The strong winding roots of Ficus prevent soil erosion. It is because of these influences on other community these species are called keystone species. There can be more such species if studies are taken up in this direction.

Taking into consideration the essential qualities of keystone species the following species seen in these SGs are suggested for consideration and study.

i. *Vateria indica* (Dipterocarpaceae). This is a shade bearer having no problems in regeneration. This has profuse seeding habit. It occupies the canopy in a spreading manner and flowers during January-March.

ii. *Caryota urens* (Palmae)- This is almost very common in the SGs. It's regeneration status is excellent. Most of the time it is in flowers or fruits. It is attracted by many birds and mammals. Bats always finish it in course of time. It provides toddy attracting may species.

iii. *Aphanamixis polystachya* (Meliaceae)-This tree called *chemmaram* is liked by birds and animals and produces plenty of fruits.. It is one amog the large trees where ever found and grows in almost all types of soils. Bark has medicinal value and used in treatment of animals.

iv. *Perospermum reticulatum* (Sterculiaceae)- The qualities of this tree has been described above. This is seen in plenty in Vadakkottu sarpakavu in Nelluvai village of Thalappilly taluk.

Regeneration

The species composition of trees in sacred groves consists of light demanders, shade bearers and shade tolerant. Seedlings of species, for which securing light condition is less pronounced, may come up or compete with the seedlings of top canopy species. As the top canopy trees of varying growth requirements survive well, their regeneration under less favourable conditions particularly when the light condition is restricted, is a matter of study. Regeneration of shade bearing and shade tolerant species do come up, but it persists for long periods in whippy form till favourable light conditions set in. These seedlings survive if soil conditions are favourable and root competition is less provided they could build up reasonable level of root stock. It is by keeping these basic principles in mind the flora of the sacred groves have been examined. However, in these SGs the existence of number of various tree species stand to reason that regeneration and subsequent establishment of the seedlings is assured. This may be due to the tolerance level of these species and low soil acidity.

. Natural regeneration is generally good in the case of Anjily (*Artocarpus hirsutus*), Manchady (*Adanenthera pavonina*), Charu (*Holigarna arnottiana*), Uletty (*Caryotta urens),* Marotty (*Hydnocarpus pentandra*), etc. which are common in almost all the sacred groves. Regeneration in the form of root suckers is also noticed in the case of *Strychnos nux-vomica*. Natural regeneration is good in respect of *Aglaia elaeagnoidea* where the soil is high acidic and in respect of *Aphanamixis polystachya, Vatica chinensis* and *Olea dioica* it is good when the soil is less acidic.

Saraca asoca (Ashokam) is a shade loving tree and is considered to be one of the species in Sacred Groves. Besides regeneration from seeds it produces coppice shoots. This is seen more common than in southern regions. .But such profuse regeneration is not seen in SGs. It is understood from literature that there are chances for pods of *Saraca* getting infected by pests before they become ripe to disperse mature seeds. Some of the species though shade tolerant when young need overhead light to grow well after they reach sapling stage. *Artocarpus hirsuta* and *Alstonia scholaris* behave this manner. *Phyllanthus emblica* is rarely seen in the sacred groves. Natural regeneration is very poor due to low viability of seeds and sensitivity of seedlings to shade.

Soil Condition

An attempt has been made to test tested. The soil samples from five representative SGs of different taluks. In addition soil from outside the SG close by also was tested. The number of soil samples taken is not sufficient enough to make authentic conclusions on the occurrence of various species. Moreover, such a detailed study is beyond the purview of this report.

Soil test results

Sl.no	Site Id	pH	EC	Organic carbon	Phosphorus	Potassium
1	Palliyana	Medium	Low	Medium	Medium	Low
		Do	Do	Low	Do	Do
2	Kalari	Do	Do	Medium	Do	Medium
		Do	Do	Do	High	High
3	Kannikulangara	Do	Do	Low	Medium	Low
		Do	Do	Do	Low	Do
4	Madassery	Do	Do	High	Medium	High
		Do	Do	Medium	High	Do
5	Shanghukulangara	Do	Do	Do	Do	Low
		Do	Do	Low	Do	Do

. As is seen from the above, soil is medium in all the areas including in those outside SG. There is only slight variation among other parameters. Level of organic carbon is naturally more than that outside sites. An overall picture shows that that the soil is generally medium acidic and organic carbon is medium in SGs while that outside is low. Al most same is the case with phosphorus and potassium. Only outside sites P & K are more. It can be well taken that the soil in these sacred groves is at medium level and as could be seen most of the common species also exhibit same soil requirements as reported under studies made by scientific community. Except *Aglaia* species seen in Madasseri kavu and *Aporusa cardiosperma* seen in Kalar kavu requiring high acidic soil the existence of most of the common species such as *Ficus spp., Aphanamixis, Holigarna, Tabernaemontana, Strychnos nux-vomica, Macaranga peltata, Sterculia guttata etc.* are very much adopted to this kind of soil.

Soil conservation

Rapid litter decomposition and the root mat development with plenty of fine roots on the surface layer of the soil support large above ground biomass. Many micro organisms, invertebrates, fungi etc flourish. Root mat prevents the nutrients from leaching out. This is visible in many SGs when visited soon after rainy season. The spreading net work of large trees prevents to a great extent soil being washed away.

Water conservation

The existence of ponds in the sacred groves of Thrissur is conspicuous by their absence. One reason is that majority of the SGs are small in size. The underlying structure of the geological layers may not be impermeable to hold water percolating through the sandy soil. Of course some of the large SGs having more than an acre do have ponds as could be seen in Sankukulangara and Ponathukavu. Here again they are covered by weeds.

Faunal significance

The sacred grooves harbour numerous birds, butter flies and bats apart from primates and small mammals (Chandran, 1993). Number of tortoise live in ponds attached to SGs. In one SG- there are two varieties. On the ground there are termites, ants and earth worms which play an important role in building up soil. Around 100 sp. of mammals, 476 spp. of birds, 156 spp. of reptiles, 91 spp. of amphibians and 196 spp. of fishes are reported to be available in the sacred groves of Kerala (KFRI Reserch Report.406). Though the above information indicates the potential giving an overall picture, in these pockets of SGs many of them are not visible on one or two visits as all depends on the season. The animals found are those which nested there in like snakes, frogs, tortoise, lizards etc. and those visit the site for food and temporary shelter like bats. A clear study on this fauna would involve long period of periodical observation by experts, not to speak of the cost. In this report the study team noted the animals seen directly and also gathered information from the custodians or local people and also available literature specific to such cases. Bats, small mammals, civets, monitor lizard, monkeys and Peacock are the animals very frequently visiting these SGs. Termite mounts are noticed even though they are generally present inside dead wood and below soil.

B) A rapid Survey of Selected Sacred Groves in Thrissur District

A pilot survey in the sacred groves found in Thrissur district has been made during June 2016. The size of the Sacred Groves is a decisive factor in maintaining the richness of the diversity of the groves. All the groves surveyed are of small size. It is apparent that the there exist a positive correlation between the size of the groves and faunal wealth. The results of the fauna observed are given in the Figure. 1 and Table 1.

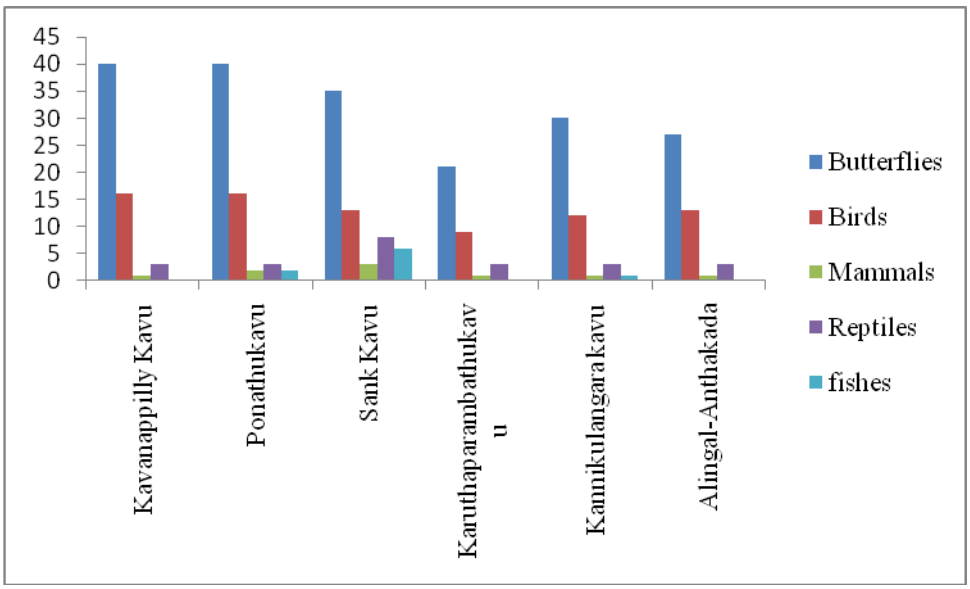

Figure 1. Faunistic wealth of the Sacred Groves studied

Name of SG	Butterflies	Birds	Mammals	Reptiles	fishes
Kavanappilly Kavu	40	16	1	3	0
Ponathukavu	40	16	2	3	2
Sankukulangara Kavu	35	13	3	8	6
Kulathuparambathukavu	21	9	1	3	0
Kannikulangara kavu	30	12	1	3	1
Alingal-Anthakada	27	13	1	3	0

Butterflies are the outnumbering faunal groups among the groves studied. This was followed by the birds, reptiles and mammals. The availability of food plants in and the premises of the groves for the larval survival and growth could be a reason for the high abundance of butterflies.

Fresh water fish

Ponathukavu, Sankukulangara Kavu and Kannikulangara kavu have water bodies like ponds of size less than 2 cents. The pond of Sankkukulangara is larger in size and six species of freshwater fishes were recorded from here. The Channa striatus, Anabas testudineus, Heteropneustes fossilis, Ompok bimaculatus Psueosphronemus cupanus and Aplocheilus lineatus were the fish species recorded from here.

The Channa striatus (Murrel) is a snake head fish. Telungana has adopted it as state fish.It is popular among asthamatic patients. This is known in Kerala as Varalu
The Anabas testudineus (*Karimeen*) This is an invasive species that can live without remaining in water if kept in moist surroundings.

The Heteropneustes fossilis is found mainly in ponds and marshes. It is omnivorous having medicinal value. This is called stinging fish having invigorating qualities. (Kadu)

Again, the Psueosphronemus cupanus is in IUCN Red List and recorded from these areas. This prefer swamps and weedy ponds.(Karimkanna)

The avian species spectrum consists of common lowland bird species. The common crow, Crow pheasant, White headed babbler, Common myna are evenly distributed in all the groves. No specialists could be located in any of the groves during this rapid survey. A regular monitoring is required to find out the species spectrum changes, if any, over the seasons.

The most common mammal recorded from the groves is Common palm squirrel. Common mongoose was recorded from Ponathukavu (Edavilangu). Indirect evidences of palm civet (droppings) were found in Sankukulangara kavu. The presence of palm civet is also confirmed by the local residents.

The sacred groves visited are rich with humus. The leaf litter of the grove was not removed. This provided an ideal conducive habitat for the annelids and soil arthropods. The high abundance of millipedes, centipedes and earthworms is due to the unpolluted mass of the humus.

Role of termites

Termites form a significant element of soil micro-fauna. The food of termites mainly is plant material. Termites can also feed on animal products such as dung, fresh mammalian carcasses. Studies on termites also reveal that they have no sight

and they are deaf also. They recognize their nest mate by their special odor. They leave scent trails to food sources outside the nest. The scent comes from a gland present on the under side of the abdomen.

Below ground nests are very common where moisture remains at low levels throughout the year. Here evaporation and desiccation remain low. But it is noticed that many SGs have termite mounds above ground. They break down litter into smaller particles and expose inner surfaces of litter for early action by bacteria and fungi. Their mounts are seen in some of these SGs where leaf litter is plenty during cold season.

Bats

The bats visiting the SGs fall under the category of fruit bats. Their presence is not noticed so much as seen in other districts. Even if they are seen, no damage to trees is reported by any people.

Peacock

Peacock visits some of the SGs finding favourable conditions of food. It feeds on plant parts, insects, white ants etc. Also it takes plenty of water. It can devour even snakes. It scratches termite mound in sacred groves and eat the ants coming out. Pea fowl is reported from many of the SGs. But they are mostly on the move. They prefer SGs adjoining paddy fields. Local information is that they suddenly appear in the morning or evenings soon after rain subsides. Sacred groves with light canopy and bushy undergrowth or tall grass are stated to be their favorite. Their way of foraging make the surroundings healthy. They feed on lizards, rhodents, and even small snakes. They avoid flying but do fly to tall trees for roosting.

By virtue of their iridescent bluish green plumage and beautiful large tail they are noticed easily by people. They escape from falling victim to the hunters as long as they are in the vicinity of sacred groves.

Carbon sequestration

Sacred groves cannot be taken as an isolated system. By its presence amidst a mosaic of landscape such as fringe forests, cultivated areas and human settlements sacred groves enhance the landscape heterogeneity and biodiversity. An assessment on this contribution by sacred groves is a matter of study to be undertaken by bio-diversity organizations.

CHAPTER VII

SOCIO-ECONOMIC DIMENSION.

The number of Sacred Groves in Thrissur district is estimated to be 970. Most of them are under private management. The number under public management or Devaswom Board is very negligible, say about-20 unlike in the case of southern districts. Another peculiarity is that many of the groves - around 72% are very small between 5 cents and 1-2 cents. Evidently the socio-economic condition mainly revolves around these small ones. Even if an SG is small having only 2 cents the essential rituals are being performed irrespective of the size. This is one of the reasons for including them in the list. Some SGs are attached to temples owned by families.

There are many instances where more than one SG is owned by the same family. In Thalikulam village of Chavakkad Taluk, there are two SGs having the same name "*Aaparambil"* in the same Tharawad campus. One is owned by a member Nirmala teacher (Id.no.Chv-37- 3 cents) and another by Namboothiri (Id.Chv-38-8cents). Similarly in Manalur village of Thrissur taluk one Namboothiri family is holding three SGs (Tcr.Id-37, 38 & 39) having the extent 2.5, 1.5 and 1 cent respectively. These SGs are about 100 m apart.

In Kandassery village of Tahalappilly taluk one large Tharavad having more than 12 acres have two SGs of 25 cents each within the property. The six families having right to inherit the property decided to retain these SGs by constituting a Kudumba Trust to ensure conservation of these SGs in perpetuity.

Social Harmony

The role of sacred groves in social harmony is immensely high though intangible. The devotees coming from different families and members of the same family living at different places assemble for important functions to rejuvenate relation ship and friendship. They jointly put their might in organising functions. Members of the family as well as local people including children get opportunities to display their inherent talents in various arts and many cultural programmes.

Communal harmony.

As in Kozhikode district the element of communal harmony is exhibited in the case of some SGs here. The communities under Hindu religion such as Namboothries, Nairs and Thiyyas own many sacred groves under private category. There are two SGs owned by Christian family and they get the poojas performed by Brahmin priests.

In Kodungallur taluk, Mundassery Sarpakavu (Id. No. 26 Kdr.) of 10 cents was originally owned by Mundassery Tharawad. Later they all left the place leaving SG in an abandoned condition. Now local people consisting of Hindus, Muslims and Christians formed committee and they conduct pooja and manage it. The president of the committee is a Muslim-by name Nasseer.

In Mukundapuram taluk, (SG No. 31 Mpm) of is owned by a Chritian by name Pious Antony. He is allowing other to conduct pooja.

In Sankukulangara kavu (Id. No. 45 Kdr) of nearly 173 cents 28th of *Makaram month* is set apart for Harijan community to conduct and organize pooja and carry out other rituals according to their wish. They call it *Poocharal.*

The Koorkamattom Sarpakavu (Id. No.38 Chd) having 10 cents in Chalakudy taluk is being managed by Pulaya Community since so many years. They formed a Society –*Kshethra Samrakshana Samithy*- consisting of 60 families. The property belongs to Muslim Community.
crossed.

The facts narrated above present a reasonably clear picture of the different attitudes and approaches prevalent among the custodians. Barring a very few cases one aim in common is to *protect* the sacred grove from destruction irrespective of its size. Going through the various cases described, three categories of sacred groves emerge.

i. ***Category A-High***

Poojas, organizing festivals and involvement of local devotees besides holding large extent under grove with a temple. *Kalamvarappu, Pulluvan kali, Ailyapooja,* 41 days pooja during Sabarimala season along with free meals to devotees, and so on. These are very expensive. But it is managed when a temple is also attached. A good number of devotees are attracted. Folk arts and variety entertainments add to the majestic style. But such temples are very rare. A rough estimation makes it around 10 numbers.

On an average yearly expenditure is estimated based on a few representative cases studied is minimum of about Rs. 8 lakhs per year and employment generated by way of priests, helpers in pooja, men for organizing special programmes etc. can be 1345 man days/ yr.

Particulars	Monthly expenditure Rs.	Annual Expenditure.Rs.	Remarks
Daily lighting lamp	5000	60,000.00	
Priest-1	10,000	1,20,000.00	365 man days
Assistants-2	8,000	96000.00	730 do
Special pooja like- Mandalam 41 days, Navarathri 9 days, public feeding, Neyvilakku, Theyyattu etc.	……	5,00,000. 00	250 man days
Total Expenditure		**7,76,000. 00**	
Total man days			**1345.**

Examples are,
1. Sankukulangara kavu in Kodugallur Taluk (Id.No. Kdr 45).having 1.73 acres.

2.Valavathu kavu in Chavakkad Taluk (Id. No. Chv.8) extending over 2.5 acres

ii. Category. B.Medium

These SGs are generally attached to temples where regular poojas are conducted daily. The extent of kavu may be small also. Here also involvement of devotees does exist. Other poojas and festivals are conducted in a comparatively smaller scale. At the same time a portion of the income from temple is diverted for expenses in the SG. In other cases like those managed by Public Trusts and Local Committee, all important rituals are conducted though on a smaller scale. But local people associate very well for effective management. Yet there exist another set of families who want to manage the affairs of their sacred groves in the same standard by allowing involvement local devotees. All such cases are grouped under this category. Still there is not much. Our estimation on contacting representative ones give a figure as 50.

Expenditure - The cost involved in maintaining the SGs in this manner is understood from enquiry with a few people possessing them is as follows.

In a representative case, monthly one pooja yearly festival and special poojas would cost a minimum of Rs. 1.22 lakhs. In all the poojas at least one priest is

engaged with a helper. Rest of the duties are attended by members of committee or family members.

Thus the employment rate is 150 man days per year per SG.

Particulars	**Monthly expenditure Rs.**	**Annual Expenditure Rs.**	**Remarks**
Daily lighting	1000	12,000. 00	
Priest	5000	60,000 .00	Priest-1/month=12
Assistants	3000	36000.00	2/month=24
Special poojas		1,50,000. 00	Assistants-10
Total expenditure		**2,58,000. 00**	
Total man days			**46**

A few examples-

1. Sankaramangalam kavu -20 cents, Id. No. Chv. 50,

2. Pazhoor pazhayannur Id. No. Tcr-51. Chakkalaparambil sarpakavu-No. Tcr-34 of 2 cents at Manaloor

3. Paryachuvadu sarpakavu of 15 cents at Chazhoor managed by Janakiya Committee- No. Tcr.65 .in Thrissur taluk.

4. Kottayil Chalippathu Sarpakavu, of 10 cents Vadanappilli No.Chv.48 of Chavakkadu taluk.

5. Kulathuparambu Sarpakavu of 30 cents No. Kdr.30 in Kodungallur taluk.

iii. Category- C. Ordinary

All the remaining Sacred Groves which are family owned fall under this category. They do every thing by themselves, spend very little money and do not encourage participation of local devotees in the management. Some may light lamp in the kavu daily. Others just light a lamp and raise it pointing towards the Kavu. All these are done any one of the members in the family as the SGs are within the house premises, mostly within the compound wall of the house. It would appear in many cases that the SG is in par with the prayer room in the house. Another peculiar fact is only the very minimum expenditure is incurred for the maintenance including pooja taking care to limit it within their means avoiding help from outside.

Yearly expenditureon an average is around Rs. 39, 000 and employment is 24 man days per year per SG.

Particulars	Monthly expenditure Rs.	Annual Expenditure.Rs.	Remarks
Daily lighting	200	24000	
Priest for one annual pooja-1+2			24 man days only
Total expenditure		**39000**	
Total man days/yr			**24**

Note- This is the case of most of the SGs and almost everything is attended by family member.

Consolidated Statement of Employment and Expenditure.

CATEGORY	Total No.of SGs	Yearly expenditure /SG Rs. Lakhs	Total expenditure for all SGs Rs. Lakhs	Employment Man Days/SG/Yr	Total for all-Man Days
A High	10	7.76	77.60	1345	4800
B Medium	50	2.58	142.50	22	7500
C Ordinary	910	0.39	354.90	24	21840
Grand Total	970		**575**		**34140**

Total Expenditure generated in all during one year- Rs. 575 lakhs
Total Man days created in a year- 34140

CHAPTER VIII

SOCIO CULTURAL ASPECTS
Worship/ Deities/Folklore/ Folk Arts

Introduction

Thrissur , originally Thiru Siva Peroor and previously known by its anglicized form as Trichur, is the capital of Thrissur District. Thrissur is also known as the 'cultural capital of Kerala' because of its cultural, spiritual and religious leanings throughout history. Cultural institutions like Kerala Sangeetha Nataka Accademy, Kerala Lalithakala Academy, Kerala Sahithya Academy, Kerala Kalamandalam, Unnayi Warrier Smaraka Kalanilayam etc are situated in the district.

Thrissur has historically been a centre of Hindu scholarship. The city has one of the most important temples of Hindu Shaivism, that is the Vadakunnathan temple. The district is also home of one of the holiest Hindu Vaishnava temples, the Guruvayur temple. Christianity, Islam and Judaism entered into the Indian subcontinent through the ports in Thrissur District. The works of scholars and Eastern Christian writings claim Thomas the Apostle to have set foot in Muziris near Thrissur 2,000 years ago (AD 51–52). The country's first mosque, Cheraman Juma Masjid, opened in AD 629, it is said. Thrissur has opened the gates for Arabs, Romans, Portuguese, Dutch and English.

The Thrissur Pooram, celebrated during April–May is top on the list of cultural attraction of South India. Thrissur is also widely acclaimed as the land of elephant lovers.

The concept of Sacred Groves

From time immemorial, humanity depended nature for everything they needed and therefore there had been a commitment to preserve, conserve and enrich nature at any cost. Our ancestors, whose only profession was agriculture, by their experience, found that retaining pieces of land with lot of tree growth would benefit their agriculture by providing perennial water sources. For this, the traditional society linked everything related to nature with worship of God. The concept of Sacred Groves seems to have emerged on this ground. People attached sacredness to different animals, birds and plants. Myths and legends related to Sacred Groves of the locality influenced in preserving this eco system to a great extent. Usually no one entered the 'Kavu' during days other than those of worship or during the festival. Cutting trees, collecting firewood, leaves etc. were strictly forbidden. People believed that any kind

of disturbance will invoke wrath of the gods, resulting in diseases, natural calamities, failure of crops and even death. Many experiences, miracles, mishaps and unbelievable incidents added to the strong belief on the sacredness of these pieces of woody plots. The result was strict protection of this eco system in the name of worship of Gods/Goddesses.

Uniqueness in the district

Unlike in other districts, especially Thiruvananthapuram, Kozhikode and Kollam districts, where studies have been completed, the unique situation in Thrissur district is that most of the major temples in the district are not maintaining Sacred Groves. For reasons unknown, except Guruvayoor temple, major temples like Vadakumnathan temple, Paramekavu temple, Kodungallur Bhagavathy temple, Koodalmanikkyam temple, Thiruvambadi temple, etc do not maintain protected areas in the name of worship of God. Even the major temples in other districts are known by the name of the Kavu attached to it. Though majority of the Sacred Groves in the district are in existence for the last 500 to 2000 or more years, 97 % of them are family properties belonging to illam/ mana /tharavadu etc and the family members perform poojas in small family temples maintained in the SG. Even the SGs are known by family names and not by the name of the temple unlike in other districts. Only 3% of the SGs in the district are managed by either public trusts or Devasoms, the rest being managed by either family members or family trusts. This has resulted in an unhealthy situation of fragmentation of the SGs during partition of family properties or by sale of the inherited properties by the successors. This repeated fragmentations resulted in the reduction of the size of SGs to even 0.5 cents. During the course of partition, some may get their share with a bit of SG and they maintain it, however small it may be, due to their ardent belief on its sacredness.

Analysis of the results of the study reveals that majority (72%) of the SGs in the district are smaller in size, having area 5 cents or below whereas in other districts the situation is entirely different. In Kozhikode district SGs with less than 5 cents area are only 26%, in Kollam 15% and in Thiruvananthapuram it is only 4%. It is also noteworthy to point out that in many cases; there are three to four SGs in a particular locality having the same name (family name), same survey number, and owners being the members of the same family, which also shows that originally these small pieces were part of a larger Sacred Grove which was subsequently subjected to fragmentation. In Kozhikode district where 3.4% of SGs are more than 100 cents in extent (maximum is 2400 cents) and in Kollam 2.8%, in Thrissur it is only 0.7 %, that too maximum being 300 cents (Pambumekattu mana sarpakavu in Chalakudy Thaluk). All these facts lead to the conclusion that the need for preserving Sacred

Groves was more felt by individual families than the famous temple trusts in the district. Therefore, worship pattern, intervals, intensity, and frequency of poojas, type of offerings, expenses for the performance of folk arts, and festivals related to SGs etc are unique when compared to other districts.

Deities and Worship

The Hindus engage in beliefs spanning all forms of theism as well as atheism. Brahma, Vishnu, Shiva and other Gods and Goddesses of the Hindu pantheon are worshipped in the important temples. Since majority of the major temples are devoid of Sacred Groves, the deities worshiped in the SGs are mostly Serpant gods. *Kavus* are considered as sacred gardens. To protect and conserve the *Kavu*, many rituals and related practices are followed. There is diversity in deities worshipped in the *Kavu*s of the district. Each has a presiding deity and most of them have associated deities too. Presiding deity may be a God, Goddess or Serpent God. Many *Kavu*s are dedicated to snake (*Serpant God*) alone. Snake is also the associated deity in many other *Kavu*s. The most common deities worshiped in the Sacred Groves are:-*Nagaraja, Sarparaja, Nagayakshi, Nagakanyaka, Maninagam, Anjana maninagam, uthama nagam, adhama nagam*- all different nomenclature for the *Serpant god*. Thuprath Sarpakavu (Ckd/8) is the only kavu in the district where the main deity is *Sarparaja.*

In the family temples attached to the SGs the deities are:- *Sastha, Sivan, Ganapathy, Brahmarakshas, veerabhadran, Kandkarnan, Vettakorumakan, Ananthaprathishta, Vishnu, Hanuman swami, Anthimahakalan, Dharmadeivam, Bala sastha, Ananthan, Vasuki, etc.* The godess deities are*:- Devi, Bhadrakali, Durga, Vana durga, Bhuvaneswari, Sundari yakshi, Parvathi, Panakkal Bhagavathy, Rudhiramala bhagavathy, Kulabhagavathy, Manapully bhagavathy, etc.*

The family members collectively take part in the rituals especially in the family temples attached to SGs. By conducting the rituals the family is believed to be blessed. It represents unity and collective action of the family members. Except a few, ownership of most of the *Kavus* vests with *Nampoothiry* (Brahmin) community. *Nair* and *theeyar* communities also own a number of *Kavus.* A few *Kavus* belong to scheduled castes and yet a few with Christians and Muslims. Kattiparambil Sarpakavu (Ckd/31) is owned by a Christian, Mr. Pius Antony, who purchased this land, still preserves it; permitting others to perform *poojas.* In Mundanchery nagakavu (TCR/Kdr/26), the Kavu is managed by a Janakeeya committee in which Hindus, Christian and Muslims are members. One Muslim, Mr. Nazir is the President of the

Committee. All these indicate the communal harmony and mutual acceptance between communities existing in the district.

Though the ownership is as mentioned above, poojas are mainly *brahmana pooja. Abrahmina* poojas are performed by *pulluvas* (eg. Parambil Sarpakavu (TCR/Kdr 13).

Worship patterns and rituals vary from place to place. *Noorum palum* is the commonest offering in many of the SGs. *Pambin kalam* with *pambin thullal* or *sarapam thullal* (dance) is another common form of ritual followed in majority of the SGs. Pambin kalam, an art work made in the ground with different colours and thullal (dance) by sitting on it is performed every month or during festive occasions. *Theeyat in Karkidakam, Thrikarthika in Vrichikam and Harijan vela in Makaram* are certain other forms of rituals.

Astrology has an important role over rituals and offerings and preservation of the sacred garden. Astrologer decides the date of festivals *in kavus* where there is no fixed date. He declares the need for additional rituals *during* festivals. In certain cases Astrologers by their verdict becomes saviors of the kavu and in certain other cases they are alleged to be turning into a threat for the existence of sacred groves. In order to cut trees from sacred groves for financial benefits or to clear the land for construction purposes, the astrologer's advice is managed to get to conduct *punaprathishta* (shifting of the Kavu) now-a-days.

Folk lore/ Folk Arts

Thrissur, being the cultural capital of Kerala, is the home of many folk art forms of the State. Some of the villages in the district are known as the abode of many popular art forms, like Thichur for *Kadhakali, Vadyakala, and Chendavadyam,* Painkulam *for Chakyar Koothu,* Irinjlakuda *for Koodiyattam,* Machad *for Kombuvadyam,* Kuzhoor *for Panchavadyam,* Kadavallur *for Ilathalam etc. Thullal, Thayambaka,, Panchavadyam etc can also claim its origin in Thrissur district.*

As already explained in the aforesaid paragraphs, since majority of the SGs are family properties and since the general public do not have much stake over the management and worships in these SGs, the financial commitment for the purposes of festivals, rituals, folk arts etc are comparatively less than the SGs which are managed by public trusts, Devasoms or the major temples. Therefore unlike in other districts, the practices of expensive festivals are not undertaken exclusively in the SGs, except for *Ayilllia poojas* that too, not much expensive. During festive occasions in the temples or Kavu, entertainments like *Chaviti kali, kathakali, ottanthullal, kaikottikali, Nadanthullal, Kalamezhuthu pattu, Koodiyattam, Koothu, Kummattikali, Puli kali, Pulluvan pattu, Thayambaka, Theeyatu, Theyyam, Thiruvathirakali, Vadakkan pattu,*

Velakali etc. are performed. Ritual dances such as Mudiyettu, theeyattu, thidambu nritham, *Thira and Theyyams* are performed as part of the religious festivals.

Chavitikali : Among the many art forms in the district, *Chavitikali* one art form which can claim its origin in the district. It is performed as part of festivals. During earlier days it was performed in the presence of the *Karanavar* (heads of family in ancestral houses called *tharavadu.* Both men and women used to take part in it by dancing to the accompaniment of melodious songs.

Kalamezhuthupattu:- It is an art form mainly performed in the northern parts of Kerala. This art form is believed to be 600 years old. It is performed to worship goddess *Kali.*

Kolkkali :- This art form is performed by wielding a stick by the dancers. They strike the stick uniformly according to the rhythm of dance and song. It is highly rhythmic and the dancers make fast movements without missing a single beat. The noise produced by striking sticks and also the fast movements of the dancers make this art form marvelous.

Kathakali :- It is the classical dance form of Kerala which is believed to have originated in the 17th century AD. Kathakali is a dramatic art where expression is the art of its perfection. Its performance is based on the guide lines laid down in the *Bharath's Natya Sasthra.* Kathakali art form is an integration of dance, music, poetry and histrionics.

Koodiyattom :- Koodiyattam is one of the earliest classical art form. It is believed to have evolced in the 9th century. It represents events from mythology. The UNESCO has recognized Koodiyatom as the part of world heritage.

Kummattikkali :- In *kummattikali*, the performers wear masks and the dress is made of grass and dry leaves. It is usually performed during the season of *Onam.*

Pulikali :- By the name, it is dance of tiger. It is also performed during onam season. The artists wear the mask of tiger and perform dance according to the loud beating of traditional percussion instrument.

Thirayattam:- It is a ritual art form performed in the temples of the district. It is performed on a masonry stage called thara and thus the name modified to thirayattam. Another version is that the semi circled wooden crown fixed on the head to perform dance is known as '*thira'* and hence the name *'thirayatam'.* Another meaning of *thira* is *kappam* (tax). In brahmanpattu, there is mention about *thira*- collection of tax. Generally the period of *thirayattam* is from the months of D*hanu* to M*edam*. *Thirayattam* is usually performed at night. *Thudi, Chenda* and *lathalam* are the various instruments used in *thirayattam.*

Pambin kalam:- It is a ritual followed in many SGs. In Madassery Sarpakavu (TCR/Tlp/102), before preparing for the pambin kalam, one has to take bath and then only he can start the work, and this has to be performed for the 7 consecutive days , after the second day Sarpam will come etc etc is the belief.

Legends

Utharpan Kavu (TCR/Tlp 68) in Akathiyoor village- the principal deity is *Bhadrakali*. It is believed that Utharpan *(roudra moorthy)* who brought *theepantham* from Kodungalloor temple was killed by cutting his neck and hence the name Utharpan kavu. The system is that before submitting Nivedyam to Bagavathy, it should be given to Utharpan.

In Velathuparambil sarpakavu (TCR/Tcr/77), the owner tried to destroy the trees by applying kerosene oil. When the trees were felled, a number of snakes came out from the trees and the owner became mad.

In Ayyapath kavu (TCR/Tlp/13), the legend is that a lady when removed firewood from the kavu, a man sitting on a palm tree witnessed it and warned the lady that 'those' in the Kavu may follow her. She said, let it come. After reaching home, when the bundle of firewood was untied, a number of snakes came out from it.

CHAPTER IX

THREATS

There are various factors that pose a threat to the survival of some of the SGs. This has direct bearing on the attitude of the custodians. During the period when joint families system existed there used to be a sense of feeling to strictly follow the maintenance of the SGs situated in the tharawad property. When the system made a change over to partition of family properties, many SGs got destroyed or reduced in extent. But that tendency, though not arrested completely, has become a rarity now on account of popular belief in prayers and role of SGs in social binding of culture. They fall under the following categories.

1. Intention to reduce the extent for self motive

i. Some of the sacred groves are owned by families having large extent of landed properties. When family partition takes place they show a tendency to bring different SGs under their ownership. This is happening with one SG in Kandassery village in Thalappilly taluk.

ii. There can be an instance where the owner has only very little land and their financial capacity do not permit to regularly maintain the Kavu. They resort to the process of ***Ozhippical*** which however is expensive. Under this the deity is shifted to anther Kavu or temple. There are specially trained people called ***Pullavaas*** (non-brahmin priests specialised in serving serpent deities) who perform this ceremony. The owner has to pay yearly fee to the recipient kavu or temple.

iii. There is yet another case called sanscrtization in which a temple is constructed by clearing a portion of the kavu. The serpent deity's place is restricted to a concrete platform and a pyramid shaped stone is placed over it. The serpent deity is ritually invoked to take this open shrine as its abode.

It is known that the expense involved is very high as shown below-

Shifting idol-Kavumattom- Rs. 50,00 to 20,000.

Ozhippical- Rs. 80,000 to 3,00,000.

Sancritization-Punaprathishta- Rs. 5000 to 20,000.

Invasion of the exotic species:

Grazing-

Grazing by the domestic cattle is another negative element of human-kavu interaction. The premise of Ponathukavu is being heavily grazed by the domestic animals. This reduces the buffer of the groves, which indirectly protects the sacred groves.

As mentioned earlier, Ponathu kavu, Sankukulangara kavu and Kannikulangara kavu have water bodies. All these ponds were infested with exotic aquatic weeds. None of these ponds were maintained properly. An interview with the local residents revealed these ponds are seasonal. The pond in the Ponathukavu and Kannikulangara kavu were dumped with wastes.

ii. There are other instances when the member of a group of families owning the SG show desire to part with their share or clear their share for financial gain. In the process, practice of shifting deity to major temples by conducting necessary pooja by priests did happen occasionally.

Negative approaches tending towards destruction.

Instances of reducing the number and owning one jointly are also noticed in Chalakudy. In Chalakudy taluk, Ayiramparamb kavu of 5 cents is jointly owned by different families of one Tharavad and other groves they had were cleared.

Sacred groves are retained without performing pooja. Example- Chd 10 and Chd .13; Kdr. 21. There is yet another instance where Malayil Sarpa kavu (Kdr-29) having 17 cents is in an abandoned condition. This was till 1984 protected by local people carrying out regular pooja. It is locally stated that this was part of a larger property and one person returned from Gulf country purchased this property excluding this SG. Surprisingly the person who purchased the bordering property is not allowing anybody entering the SG in spite of the fact he has no legal right over it. Still surprising is that local people who were organising pooja etc keep fingers crossed.

3. Dumping Solid Waste.

There are some SGs which are very close to congested residential and commercial places. Dumping solid waste into SGs is not uncommon particularly

when there is no boundary wall. In such cases fire damage, damage to regeneration and even development of feeling of aversion among devotees are the ill effects.

4. Damage by invasive species.

Though most of the Sacred Groves are protected with compound wall and fence, the invasion of exotic weeds constitute a threat to the conservation of Kavu.

The sacred groves studied have high frequency of exotic plant species as seen in Sankukulangara Kavu where *Mikania micrantha* and also indigenous *Dalbergia horrida* suppress growth of other plants. . The abundance of exotic plant species limit the distribution and survival rate of the native plant species in limited area. In Mekkattu Kavu (Vadama, Mala) is being invaded by the exotic plant species like *Mimosa diplotricha* (Annathottavadi). In addition to this, exotic tree like Acacia sp is also found in this grove.

Exotics such as *Mikania micrantha, Eupatorium odoratum, Hyptis suaveolens* and *Lantana camara* are the main invasive climbers. *Hugonia mystax* and *Anamirta* climbers also get their turn. Local climbers also flourish as invasive species and suppress the growth of other tree saplings and even tall trees. Even Invasive species come up when native species are not able to dominate indicating poor ecosystem and degradation.

The woody vines need support for climbing. Naturally they have stems and are flexible. This enables them to grow long and blanket the canopy preventing growth of desirable species. These climbers tend to remain a constant fraction of the total biomass. Most of them are deep rooted plants and have wide vessels that can carry large volume of water up the stem. Small twigs and even small stems are girdled by tendrils or twining stems. Thus they are very much adopted to do damage to other vegetation with out any check taking the advantages they have as described above. This phenomenon is evident in many sacred groves. This calls for scientific study to evolve solutions for preventing diminution of the typical vegetation in sacred groves.

CHAPTER X

RECOMMENDATIONS

1. Separate project for Central Assistance to Sacred Groves.

Financial grant for maintenance of sacred groves received from Government of India is being distributed to the custodians of sacred groves. The present allotment is naturally very low when compared to the actual number of SGs in Kerala. According to the recorded information with Government (refer. website on sacred groves) the total number is 1500. By now with the results coming out of IFK's study in five districts the total number exceeds 6000. It is likely the total in the whole state would be around 10,000 and at least 30 % of them deserve financial and technical assistance from government agency. More over forest department had no authentic data on the total extent of vegetation under SGs in the state except those recorded in four districts by IFK. It is high time that KFD has to come out with detailed proposals for central grant to the custodians who have been protecting these natural patches rendering valuable and intangible contribution to bio-diversity.

2. Awareness Campaign.

Social Forestry wing or Bio-diversity wing of KFD should consider planning awareness programmes in conservation of sacred groves for the benefit of the public & Custodians of sacred groves particularly regarding hygiene of the grove and premises. Present status and importance of sacred groves should be one in the agenda for extension activities targeted on students.

3. Production of quality seedlings of plants.

Social forestry wing may also consider producing quality seedlings of species which are essential trees and other plants as would be emerged from this report. This has to be done after convincing and ascertaining the willingness of the custodians. A few seedlings considered to be typical for sacred groves are noted below for information of social forestry wing of KFD.

Trees- *Vateria indica, Aglaia elaeangnoidea, Holigarna arnottiana,* Ficus species, *Aphanamixis polystachya* (Chemmaram),*Vatica chinensis, Cynometra travancorica*, and *Dipterocarpus indicus*. These are producing plenty of fruits most of which are liked by fauna, there by promoting biodiversity status. *Dipterocarpus indicus* (kalpine) is a vulnerable species.

Shrubs-*Clerodendrum serratum* (Cheruthekku), *Anidesma diandrum, Allophyllus serratus, Flacourtia indica, Glycosmis pentaphylla* etc. These plants have medicinal properties.

Climbers like *Alangium salvifolium, Coscinium fenesatum* and herbs like *Scoparia dulcis, Crotalaria retusa, Geophila repens* having medicinal value also can be promoted in sacred groves.

More details if required can be seen in pages 21-23 under the chapter-IV Composition of Vegetation.

4. Dealing with invasive species.

This is posing a major threat to the existence of sacred groves. Removal and preventing further growth of invasive species is very essential. But the methods to bring about this task with out affecting the general structure and ritual concepts have to be designed by a team of forest officials and scientists conversant with this issue which may be ideal.

5. Ensure fair distribution of grant

When grants are distributed to SGs, it has to ensure that the process is made as fair as possible by verification by a superior. Details if any required can be gathered from IFK in districts where field study has been completed .Poorly maintained SGs if any may be considered only if improvement is ensured. An effective follow up on utilisation after distributing grant is essential.

6. Publicity for data collected.

In order to bring the Id numbers of the sacred groves to the notice of all custodians concerned, department may take action for publicity in the press and social media and ARANYAM Magazine.

7. Research studies.

The following studies by a research wing may be considered.

i. Natural regeneration of various plants in SGs.
ii. Role of fauna like termites, bats and many frequenting birds.
iii. Identifying keystone species.
iv. Detailed study on soils in Sacred Groves.
v. Methods to quantify role of SGs in Carbon Sequestration.

8. Sharing Data.

The knowledge gained in carrying out studies on sacred groves may have to be shared with other related organizations within and outside the forest department including Biodiversity Board, Department of Science and technology and other stake holders since such information is required for the benefit of the people as a whole.

9. Recognition on contribution for Carbon Sequestration.

Above all it is necessary to recognize the service of the custodians in the appropriate manner and give them enough encouragement for the valuable amount of carbon sequestration being contributed by them.

10. Intervention by Government.

The sacred groves are being well protected and conserved in general by the custodians without any legal enforcement. Therefore any intervention in the affairs of these sites by Forest Department or Government need to be planned and designed with caution not to disturb the freedom of custodians as it is a sensitive issue.

Norms Suggested for Distribution of Grant under International Bio-diversity Campaign to Sacred Groves by Social Forestry Wing.

1. Necessity

Sacred Groves are now fragmented habitats housing gene pools and have become the last refuge for many threatened, endangered and endemic plant and animal species. Outside the forest limits they constitute isolated vegetative patches in a mosaic form and are protected by the custodians who contribute in Conservation of Bio-diversity and establishment of healthy bondage among local people through faith in God. But they are not free from threats that can cause degradation or disappearance, particularly when there exists rising land value and greed for land for non-forest purpose. Hence it is only appropriate that all possible assistance for the upkeep of this pristine vegetation is extended by Government for proper maintenance.

2. Objective

Ensure fair distribution of financial assistance to the deserving applicants for maintenance activities for protection of the SGs.

3. Identification of requirement

Activities

- Construction of Compound Wall,
- Cleaning and maintenance of existing pond,
- Eliminating invasive species scientifically.
- Supplementing regeneration of tree species----site specific.
- Monitoring growth and regeneration of important plants and movements of fauna in selected SGs.
- In general, observe phenology of plant and animal life, by engaging trained students in selected SGs.
  This is essential for creating awareness among the youth on conservation of Bio-diversity.

4. Eligibility

- SG should have old trees of typical species under reasonable upkeep.
- Should have local acceptance in the neighbourhood.
- Low annual income.
- SGs associated with prominent temples and under Public Trust, Devaswom Board etc, to be **excluded.**
- Eliminate SGs having ownership dispute.
- Proper performance in utilisation of previous grant if any.
- Contribution in carbon sequestration.
- **Grading-** Based on the above considerations, the SGs in each district may be categorised into three or four categories before fixing the quantum of grant.

5. Allotment of Funds.

Total amount received may be apportioned among various districts according to the number of SGs. As regards the districts where IFK has taken up the inventory, the number can be taken in descending order as below.

Alappuzha
Kozhikode
THRISSUR
Kollam and
Thiruvananthapuram.

6. Financial Support

i. Financial assistance

This depends on the amount available and the cost of activities proposed. This payment has to be followed up by inspection later.

ii. Grant

A grant in the form of reward for the best managed sacred grove in a Taluk or District can be considered if funds are available. Irrespective of the quantum of amount, awarding such a grant would go a long way in creating awareness and enhancing bio-diversity conservation.

7. Selection of SGs.

In selecting SGs from among the applicants, preference can be given to community owned SGs and SGs existing on areas of high land value like those in cities, towns and road sides.

In making selection , the applications may be examined by a committee at district level consisting of officials from Forest and Local Self Government.

In case the committee need further information about the applicants the members of IFK team may be able to provide the required details based on their visits.

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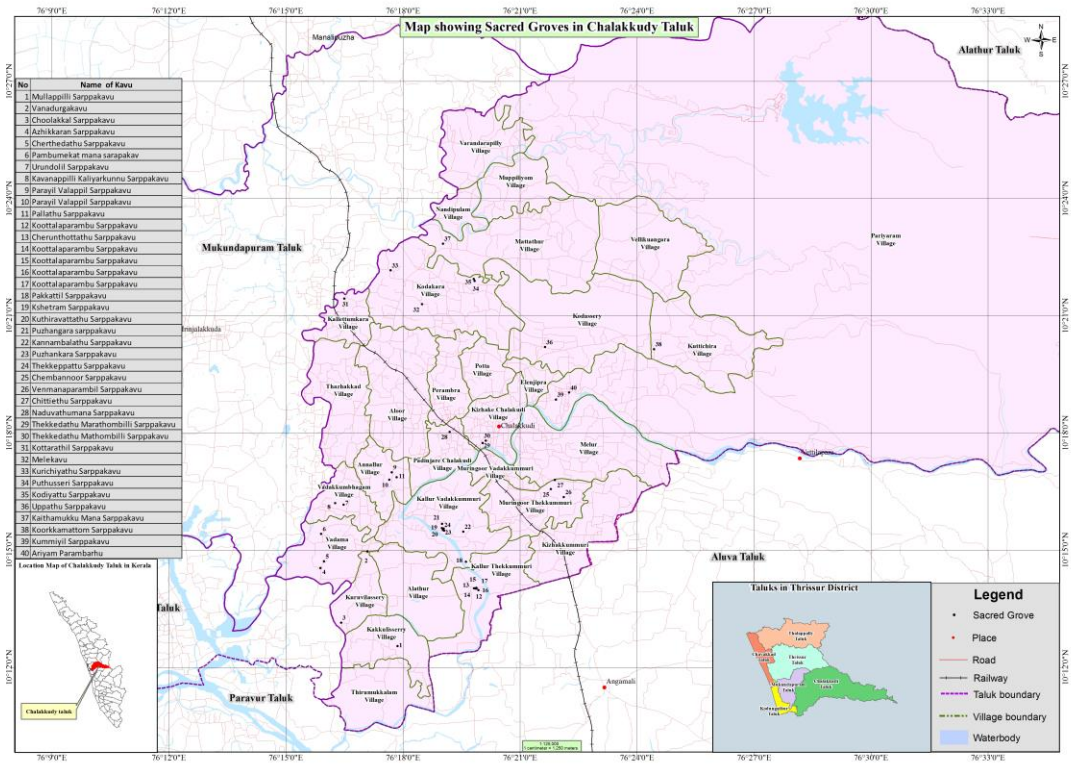
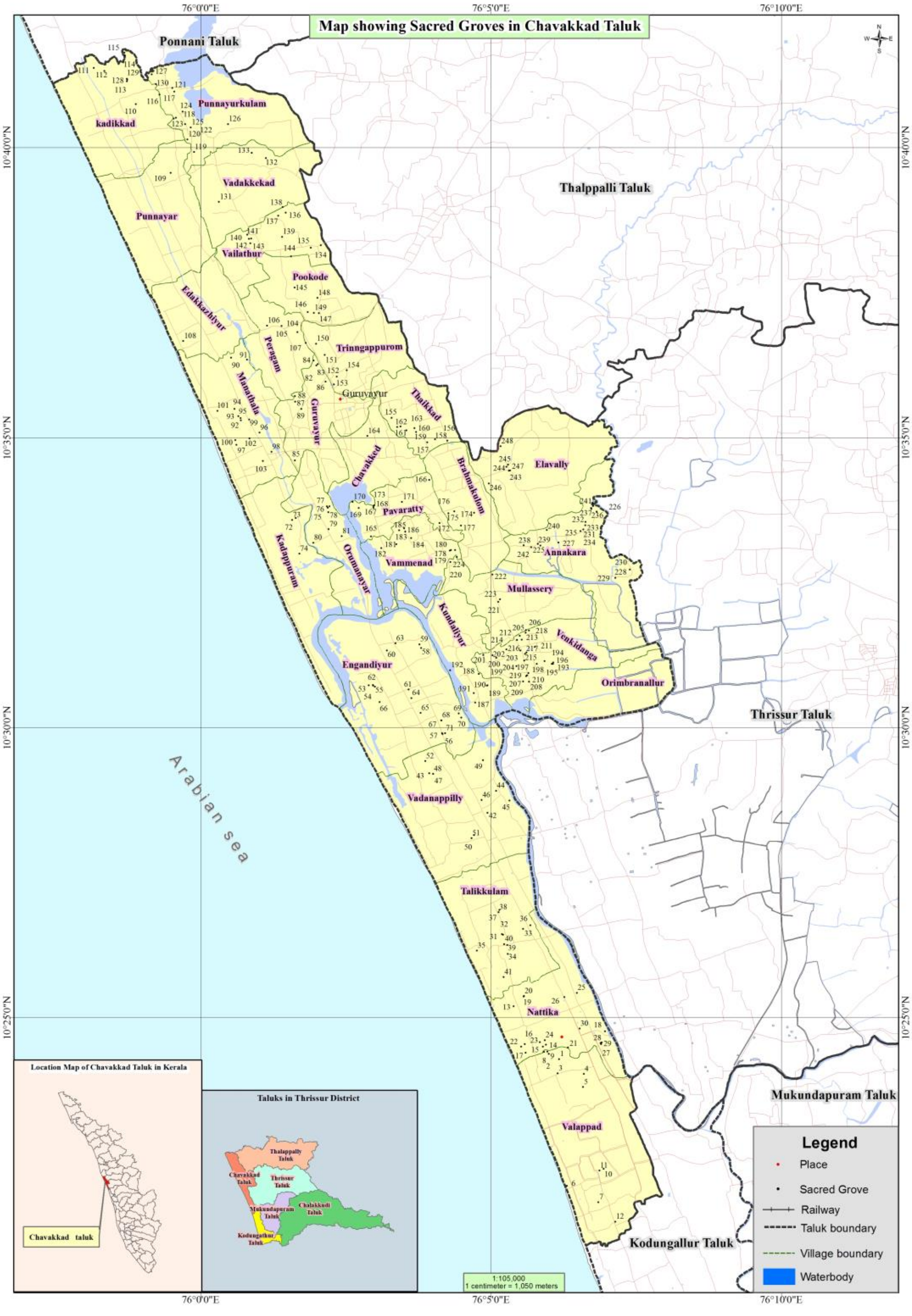
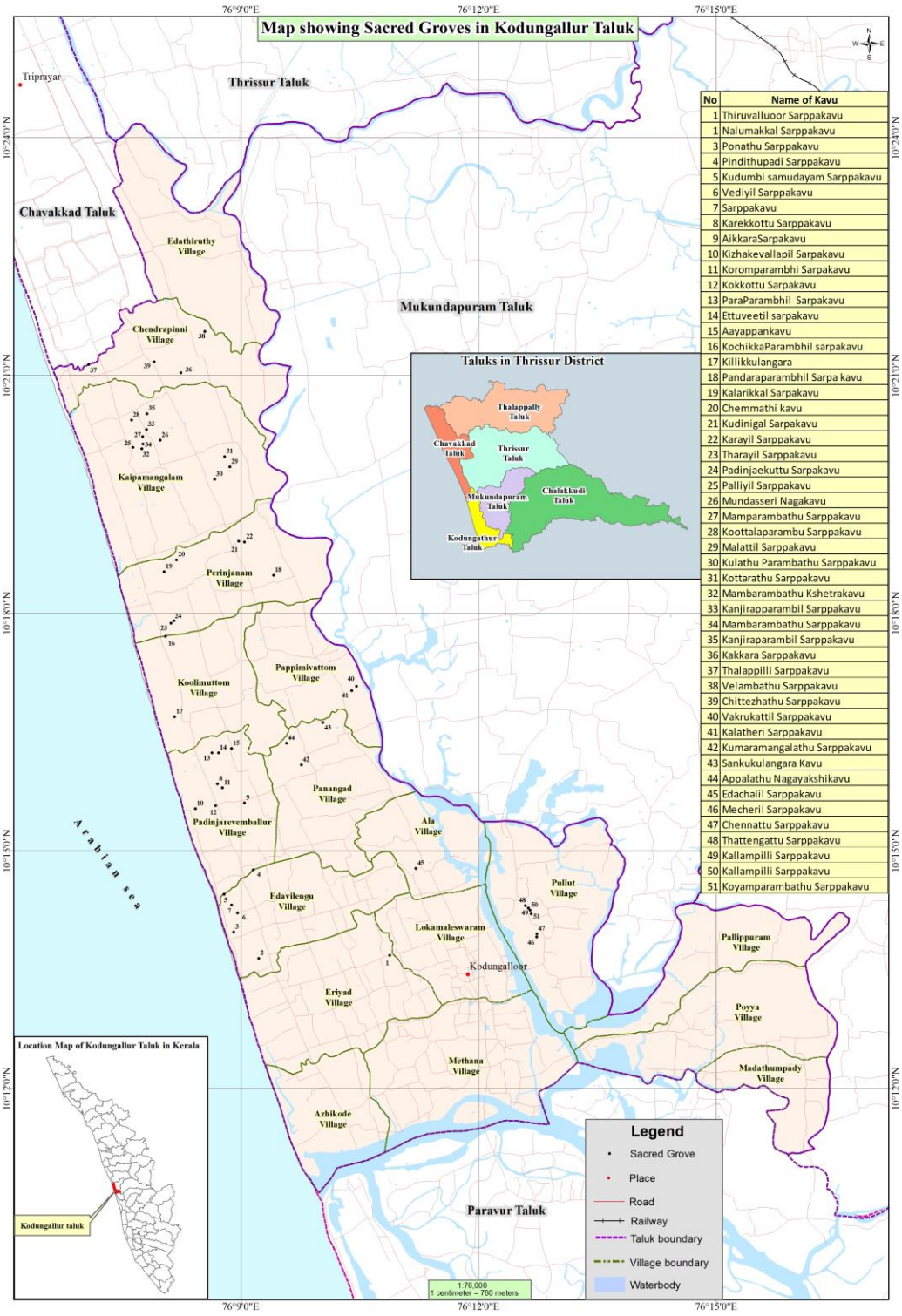
Bibliography

1. Dr. P.N.Nair & C.S.Nair-Forest Plants of Kerala.
2. KFRI-Non-Wood Forest plants of Kerala.
3. KFRI-Study on Medicinal Plants of Kerala.Research Report No-42
4. Dr. S. Nesamony, Medicinal Plants.Two Volumes.
5. National Workshop Papers on Sacred Groves, Kozhikode-2004 Organized by G OI & GOK
6. H.Pandey, Shillong-Sacred Forest, Their Ecology and Diversity.
7. Dr. D.J.Mabberley-Tropical Rain Forest Ecology.
8. INSA, New Delhi-Cultural and Ecological Dimentions of Sacred Groves in India.
9. Sivakumar.K.P. Akhila S.Nair & Jaya-A Review of Sacred Groves in India.
10. M.L.Khan-The Sacred Groves and Their Significance.
11. Wikipedia-Sacred Groves in India and in History.
12. Dr. P.J.Sanjeeva Reddy-Conservation of Keystone species.
13. Wikipedia-Role of termites.
14. E.D.Israel Oliver King -Sacred Grove Tradition & Ecological Heritage.
15. B.Arulanathan-Sacred Groves under Threat.
16. IFK-Report No.1 on Sacred Groves of Thiruvananthapuram District.
17. IFK-Report No. 2 on Sacred Groves of Kollam District.
18. Other related topics from internet browsing.

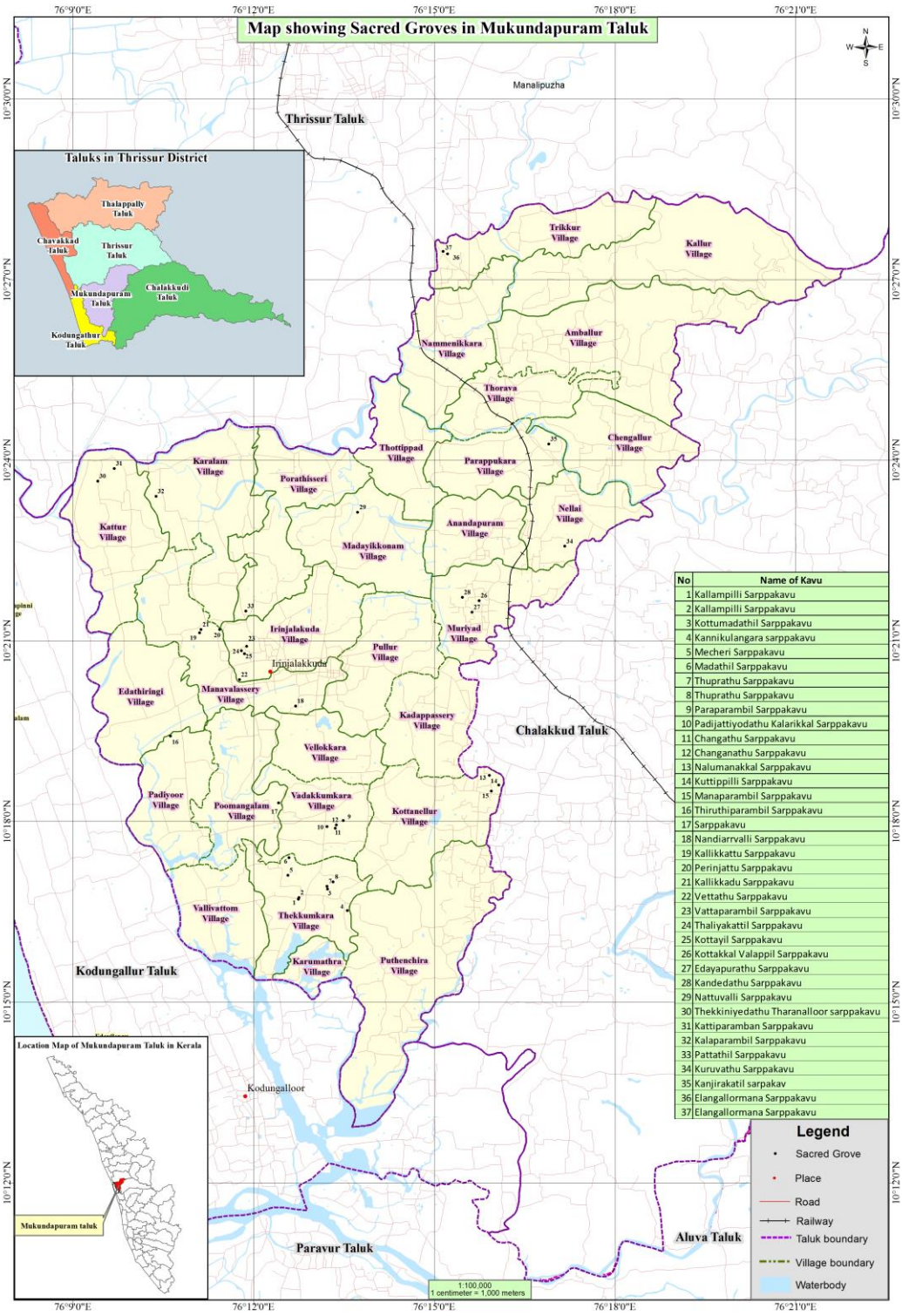


No	Name of Kavu
1	Mullappilli Sarppakavu
2	Vanadurgakavu
3	Choolakkal Sarppakavu
4	Azhikkaran Sarppakavu
5	Cherthedathu Sarppakavu
6	Pambumekat mana sarapakav
7	Urundolil Sarppakavu
8	Kavanappilli Kaliyarkunnu Sarppakavu
9	Parayil Valappil Sarppakavu
10	Parayil Valappil Sarppakavu
11	Pallathu Sarppakavu
12	Koottalaparambu Sarppakavu
13	Cherunthottathu Sarppakavu
14	Koottalaparambu Sarppakavu
15	Koottalaparambu Sarppakavu
16	Koottalaparambu Sarppakavu
17	Koottalaparambu Sarppakavu
18	Pakkattil Sarppakavu
19	Kshetram Sarppakavu
20	Kuthiravattathu Sarppakavu
21	Puthangara sarppakavu
22	Kannambalathu Sarppakavu
23	Puthankara Sarppakavu
24	Thekkeppattu Sarppakavu
25	Chembannoor Sarppakavu
26	Venmanaparambil Sarppakavu
27	Chittisethu Sarppakavu
28	Naduvathumana Sarppakavu
29	Thekkedathu Marathombilli Sarppakavu
30	Thekkedathu Mathombilli Sarppakavu
31	Kottarathil Sarppakavu
32	Melekavu
33	Kurichiyathu Sarppakavu
34	Puthusseri Sarppakavu
35	Kodiyattu Sarppakavu
36	Uppathu Sarppakavu
37	Kaithamukku Mana Sarppakavu
38	Koorkkamattom Sarppakavu
39	Kummiyil Sarppakavu
40	Ariyam Parambathu

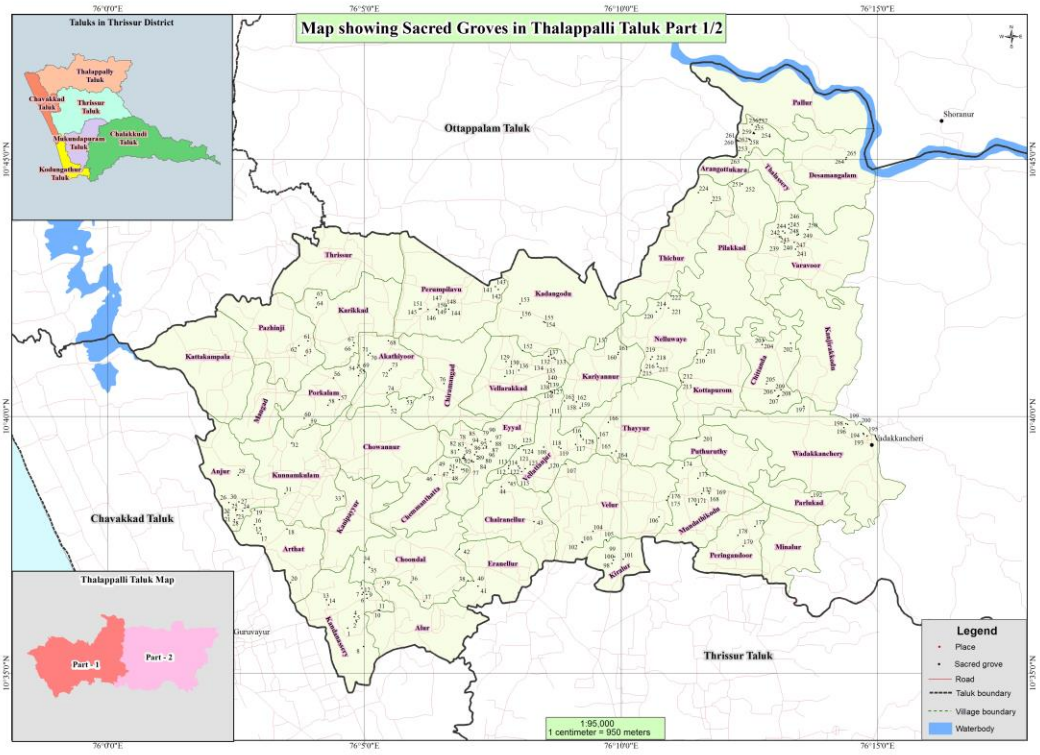

Map showing Sacred Groves in Chavakkad Taluk
Ponnani Taluk
Thalppalli Taluk
Thrissur Taluk
Mukundapuram Taluk
Kodungallur Taluk
Arabian sea
Location Map of Chavakkad Taluk in Kerala
Chavakkad taluk
Taluks in Thrissur District
Legend
Place
Sacred Grove
Railway
Taluk boundary
Village boundary
Waterbody
1:105,000
1 centimeter = 1,050 meters
76°0'0"E
76°5'0"E
76°10'0"E
10°40'0"N
10°35'0"N
10°30'0"N
10°25'0"N

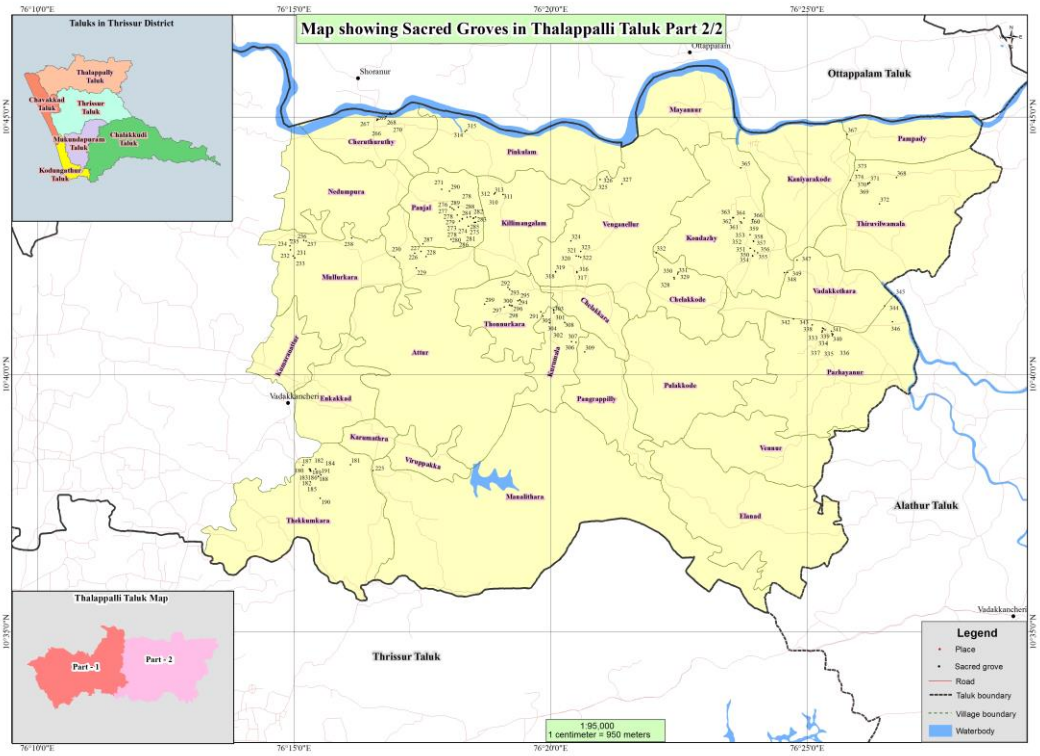


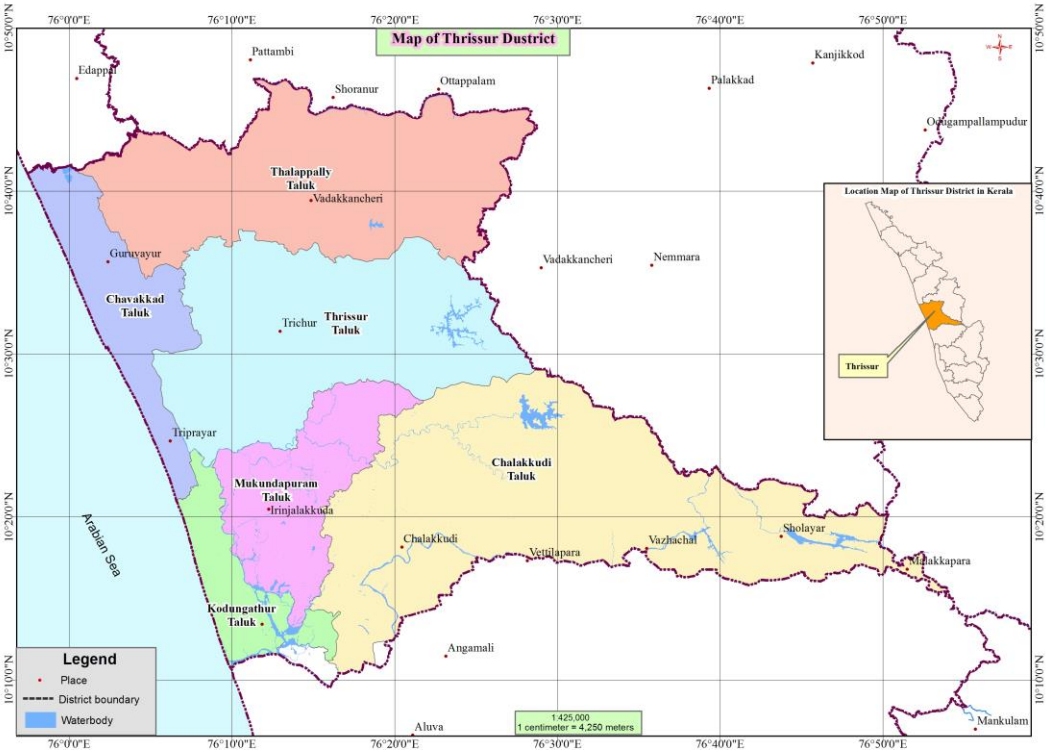
No	Name of Kavu
1	Thiruvalluoor Sarppakavu
1	Nalumakkal Sarppakavu
3	Ponathu Sarppakavu
4	Pindithupadi Sarppakavu
5	Kudumbi samudayam Sarppakavu
6	Vediyil Sarppakavu
7	Sarppakavu
8	Karekkottu Sarppakavu
9	AikkaraSarpakavu
10	Kizhakevallapil Sarpakavu
11	Koromparambhi Sarpakavu
12	Kokkottu Sarpakavu
13	ParaParambhil Sarpakavu
14	Ettuveetil sarpakavu
15	Aayappankavu
16	KochikkaParambhil sarpakavu
17	Killikkulangara
18	Pandaraparambhil Sarpa kavu
19	Kalarikkal Sarpakavu
20	Chemmathi kavu
21	Kudinigal Sarpakavu
22	Karayil Sarppakavu
23	Tharayil Sarppakavu
24	Padinjaekuttu Sarpakavu
25	Palliyil Sarppakavu
26	Mundasseri Nagakavu
27	Mamparambathu Sarppakavu
28	Koottalaparambu Sarppakavu
29	Malattil Sarppakavu
30	Kulathu Parambathu Sarppakavu
31	Kottarathu Sarppakavu
32	Mambarambathu Kshetrakavu
33	Kanjirapparambil Sarppakavu
34	Mambarambathu Sarppakavu
35	Kanjiraparambil Sarppakavu
36	Kakkara Sarppakavu
37	Thalappilli Sarppakavu
38	Velambathu Sarppakavu
39	Chittezhathu Sarppakavu
40	Vakrukattil Sarppakavu
41	Kalatheri Sarppakavu
42	Kumaramangalathu Sarppakavu
43	Sankukulangara Kavu
44	Appalathu Nagayakshikavu
45	Edachalil Sarppakavu
46	Mecheril Sarppakavu
47	Chennattu Sarppakavu
48	Thattengattu Sarppakavu
49	Kallampilli Sarppakavu
50	Kallampilli Sarppakavu
51	Koyamparambathu Sarppakavu

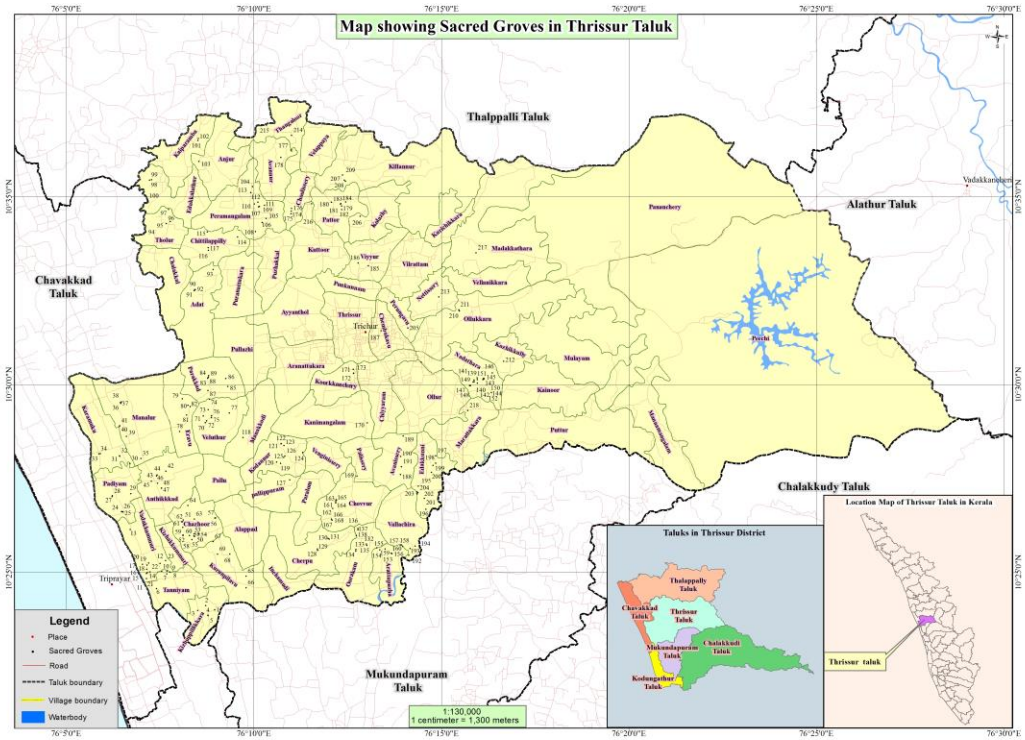


No	Name of Kavu
1	Kallampilli Sarppakavu
2	Kallampilli Sarppakavu
3	Kottumadathil Sarppakavu
4	Kannikulangara sarppakavu
5	Mecheri Sarppakavu
6	Madathil Sarppakavu
7	Thuprathu Sarppakavu
8	Thuprathu Sarppakavu
9	Paraparambil Sarppakavu
10	Padijattiyodathu Kalarikkal Sarppakavu
11	Changathu Sarppakavu
12	Changanathu Sarppakavu
13	Nalumanakkal Sarppakavu
14	Kuttippilli Sarppakavu
15	Manaparambil Sarppakavu
16	Thiruthiparambil Sarppakavu
17	Sarppakavu
18	Nandiarrvalli Sarppakavu
19	Kallikkattu Sarppakavu
20	Perinjattu Sarppakavu
21	Kallikkadu Sarppakavu
22	Vettathu Sarppakavu
23	Vattaparambil Sarppakavu
24	Thaliyakattil Sarppakavu
25	Kottayil Sarppakavu
26	Kottakkal Valappil Sarppakavu
27	Edayapurathu Sarppakavu
28	Kandedathu Sarppakavu
29	Nattuvalli Sarppakavu
30	Thekkiniyedathu Tharanalloor sarppakavu
31	Kattiparamban Sarppakavu
32	Kalaparambil Sarppakavu
33	Pattathil Sarppakavu
34	Kuruvathu Sarppakavu
35	Kanjirakatil sarpakav
36	Elangallormana Sarppakavu
37	Elangallormana Sarppakavu


Map showing Sacred Groves in Thalappalli Taluk Part 1/2
Taluks in Thrissur District
Thalappalli Taluk Map
Part - 1
Part - 2
Ottappalam Taluk
Chavakkad Taluk
Thrissur Taluk
Legend
Place
Sacred grove
Road
Taluk boundary
Village boundary
Waterbody
1:95,000
1 centimeter = 950 meters


Map showing Sacred Groves in Thalappalli Taluk Part 2/2
Taluks in Thrissur District
Thalappalli Taluk Map
Part - 1
Part - 2
Ottappalam Taluk
Alathur Taluk
Thrissur Taluk
Legend
Place
Sacred grove
Road
Taluk boundary
Village boundary
Waterbody
1:95,000
1 centimeter = 950 meters


Map of Thrissur Dustrict
Pattambi
Edappal
Shoranur
Ottappalam
Kanjikkod
Palakkad
Ottapalampudur
Thalappally Taluk
Vadakkancheri
Guruvayur
Chavakkad Taluk
Trichur
Thrissur Taluk
Nemmara
Location Map of Thrissur District in Kerala
Thrissur
Triprayar
Mukundapuram Taluk
Irinjalakkuda
Chalakkudi Taluk
Arabian Sea
Chalakkudi
Vettilapara
Vazhachal
Sholayar
Malakkapara
Kodungathur Taluk
Angamali
Aluva
Mankulam
Legend
Place
District boundary
Waterbody
1:425,000
1 centimeter = 4,250 meters


Map showing Sacred Groves in Thrissur Taluk
Thalppalli Taluk
Alathur Taluk
Chavakkad Taluk
Chalakkudy Taluk
Mukundapuram Taluk
Location Map of Thrissur Taluk in Kerala
Taluks in Thrissur District
Thrissur taluk
Legend
Place
Sacred Groves
Road
Taluk boundary
Village boundary
Waterbody
1:130,000
1 centimeter = 1,300 meters