



Kerala State Council for Science, Technology and Environment

Dr. Anilkumar C
Principal Scientist & Head
Science Education Division, KSCSTE

07/01/2019

143 /SPS63/2018/KSCSTE

Dear Dr.Tessy Paul P,

Sub:-Financial assistance for Student Project scheme of KSCSTE reg.
Ref:-Your application received under Student Project scheme

This is to invite your attention to the reference cited and to inform that the project proposal titled **"CURRENT STATUS OF COASTAL FLORA OF CHAVAKKAD BEACH, THRISSUR DISTRICT, KERALA"** submitted by Dr.Tessy Paul P as PI and Ms.Sareena P.Mohamed as student investigator has been approved. An amount of **₹6500/-** is sanctioned by the Council. The budget estimate of the project is detailed below.

| SL.NO. | ITEMS | AMOUNT(₹) |
|--------|-------------------------------------|-------------|
| 1. | Consumables | 3000 |
| 2. | Travel | 2000 |
| 3. | Research Literature & Documentation | 1500 |
| 4. | Others (for analysis) | |
| | Total | 6500 |

The PI has to submit the signed Terms and Conditions, details of Bank Account of Head of the Institution and the date of start of the project within two weeks to the undersigned. On completion of the project you should submit one hard copy and a soft copy of the final report (in pdf to spkscste@gmail.com), audited Statement of Expenditure and Utilization Certificate counter signed by the Head of the Institution for releasing the grant. **The format for final report, SE, UC and Bank Account details can be downloaded from www.kscste.kerala.gov.in.**

Thanking you,

Yours sincerely,

Anilkumar C

To

✓ Dr.Tessy Paul P, Associate Professor and HOD, Department of Botany,Christ
College(Autonomous), Irinjalakkuda-680125

Copy to:

The Principal,Christ College(Autonomous), Irinjalakkuda-680125

Ms.Sareena P.Mohamed, student,Christ College(Autonomous), Irinjalakkuda-680125

Sasthra Bhavan, Pattom P.O., Thiruvananthapuram - 695 004, Kerala State, India

Tel : 0471 - 2548200-09, EVP - 2543557, 2548222, MS - 2534605, 2548220, CoA - 2543556, 2548248

Fax : 0471 - 2540085, 2534605 e-mail : kscste@gmail.com, www.kscste.kerala.gov.in

CURRENT STATUS OF COASTAL FLORA OF CHAVAKKAD BEACH, THRISSUR DISTRICT, KERALA

STUDENT PROJECT FINAL REPORT

Financial assistance provided by:
KERALA STATE COUNCIL FOR SCIENCE,
TECHNOLOGY AND ENVIRONMENT (KSCSTE), THIRUVANANTHAPURAM
143/SPS 63/2018/KSCSTE Dated 7th January, 2019

Student Investigator
Ms. SAREENA P. MOHAMED

Principal Investigator
Dr. TESSY PAUL P.
Associate Professor & HOD, Department of Botany
Christ College (Autonomous), Irinjalakuda



DEPARTMENT OF BOTANY
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA,
THRISSUR – 680 125, KERALA

(Affiliated to University of Calicut & Nationally reaccredited with 'A' grade)
FEBRUARY 2020

CURRENT STATUS OF COASTAL FLORA OF CHAVAKKAD BEACH, THRISSUR DISTRICT, KERALA

STUDENT PROJECT FINAL REPORT

Financial assistance provided by:

**KERALA STATE COUNCIL FOR SCIENCE, TECHNOLOGY AND ENVIRONMENT
(KSCSTE), THIRUVANANTHAPURAM**

143/SPS 63/2018/KSCSTE Dated 7th January, 2019

**Student Investigator
Ms. SAREENA P. MOHAMED**

**Principal Investigator
Dr. TESSY PAUL. P.**
Associate Professor & HOD, Department of Botany
Christ College (Autonomous), Irinjalakuda



**DEPARTMENT OF BOTANY
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA,
THRISSUR – 680 125, KERALA**

(Affiliated to University of Calicut & Nationally reaccredited with 'A' grade)

FEBRUARY 2020

FORMAT FOR SUBMISSION OF THE STUDENT PROJECT FINAL REPORT

CURRENT STATUS OF COASTAL FLORA OF CHAVAKKAD BEACH, THRISSUR DISTRICT, KERALA

Student Investigator: Ms. SAREENA P. MOHAMED

Financial assistance provided by:

**KERALA STATE COUNCIL FOR SCIENCE, TECHNOLOGY AND
ENVIRONMENT (KSCSTE), THIRUVANANTHAPURAM**

File No: 143/SPS 63/2018/KSCSTE Dated 7th January 2019



**DEPARTMENT OF BOTANY
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA,
THRISSUR – 680 125, KERALA**

(Affiliated to University of Calicut & Nationally recredited with 'A' grade)

Principal Investigator

Dr. TESSY PAUL P.

**KERALA STATE COUNCIL FOR SCIENCE,
TECHNOLOGY AND ENVIRONMENT (KSCSTE)**

FORMAT FOR STUDENT PROJECT REPORT

1. **PROJECT TITLE:** CURRENT STATUS OF COASTAL FLORA OF
CHAVAKKAD BEACH, THRISSUR DISTRICT,
KERALA
2. **FILE NO:** 143/SPS 63/2018/KSCSTE Dated 07-01-2019
3. **NAME AND ADDRESS OF STUDENT:** Ms. SAREENA P. MOHAMED
IV Semester, M.Sc. Botany,
Christ College (Autonomous), Irinjalakuda,
Thrissur (Dt.), PIN 680 125
4. **NAME AND ADDRESS OF PRINCIPAL INVESTIGATOR**
WITH MOBILE NO: Dr. TESSY PAUL P.
Associate Professor & HOD,
Department of Botany,
Christ College (Autonomous),
Irinjalakuda, PIN- 680 125
Mob: 9446233104
5. **BROAD AREA OF RESEARCH:** BOTANY
6. **SPECIFIC AREA:** TAXONOMY
7. **DATE OF START:** 15-11-2018
8. **TOTAL COST OF PROJECT:** Rs. 6,500/-
9. **APPROVED OBJECTIVES OF THE PROPOSAL:**
 1. To explore the flora of Chavakkad beach, Thrissur district, Kerala.
 2. To documentation of the flora by taking the photographs of the plants.
 3. To understand the beach ecosystem.
 4. To list out the endemic plants present in the study area.
 5. To list the weeds, invasive species and medicinal plants in the study area.
 6. Preparation of the herbarium sheets of the plants collected from the study area.

10. METHODOLOGY:

The present study was conducted at Chavakkad beach, Thrissur district, Kerala. This beach is sandy type with particle size ranging from 0.08-4.6mm. The study area lies between latitude $10^{\circ} 36' \text{ N}$ to $10^{\circ} 31' 30'' \text{ N}$ longitude $76^{\circ} 0' \text{ E}$ to $76^{\circ} 3' 0'' \text{ E}$. Two sites were chosen in Chavakkad beach and are denoted as Site 1 (S_1) and Site 2 (S_2) respectively (Fig. 1 and 2).

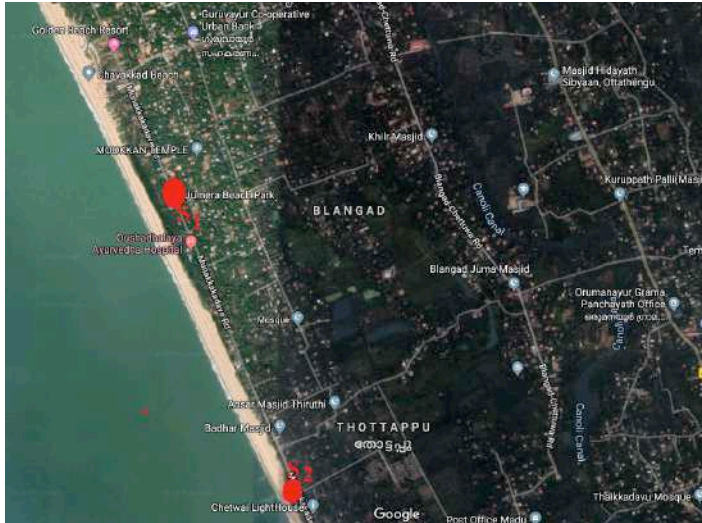


Fig. 1. Google Map of Chavakkad Beach, Thrissur District, Kerala State

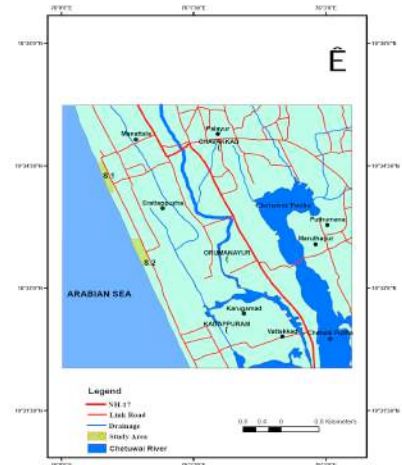


Fig. 2. Map showing selected sites in Chavakkad Beach

SITE 1 - JUMEIRAH BEACH, CHAVAKKAD

This site is located at $10^{\circ} 34' 18.0'' \text{ N}$ $76^{\circ} 00' 35.8'' \text{ E}$; and is very near to commercial section of Chavakkad beach (Fig. 3).

SITE 2 - THOTTAPPU BEACH, CHAVAKKAD

This site is located at $10^{\circ} 34' 18.1'' \text{ N}$ $76^{\circ} 00' 35.8'' \text{ E}$, at Thottappu, Chavakkad (Fig. 4). It is almost 1.9 km towards south side of site 1 and 1 km North to Chettuva lighthouse. Artificial sea wall is present here, which is partly broken after flood that happened in August 2018 in Kerala.



Fig. 3. Site 1 – Jumeirah Beach



Fig. 4. Site 2 – Thottappu Beach

DEPARTMENT OF BOTANY
CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA,
THRISSUR – 680 125, KERALA



Dr. TESSY PAUL P.

Associate Professor & Head,
Department of Botany,
Christ College (Autonomous), Irinjalakuda,
Thrissur District – 680 125

Ph. 9446233104
E-mail: tetsyjohnt@gmail.com

Irinjalakuda
17-02-2020

To

The Head.

Science Education Division (SED),

Kerala State Council for Science, Technology & Environment,

Sasthra Bhavan, Pattom, Thiruvananthapuram – 695 004,

Kerala, India

Sub: Final Report of the Student Project – Ms. SAREENA P. MOHAMED

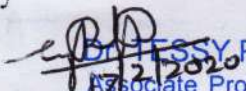
Ref: File No: 143 / SPS 63 / 2018 / KSCSTE Dated 07-01-2019

Sir,

Here with please find the *Final Report and the enclosures* for the Student Project of **Ms. Sareena P. Mohamed**, M.Sc. Botany student of Christ College (Autonomous), Irinjalakuda, done the student project under my guidance, entitled “*Current Status of Coastal Flora of Chavakkad Beach, Thrissur District, Kerala*”.

Thanking you

Yours sincerely

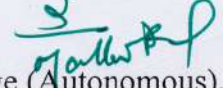

Dr. Tessa Paul P.
Associate Professor &
Head of the Department of Botany
Christ College (Autonomous)
(Principal Investigator), Irinjalakuda-680 125

Enclosures:

1. Format for submission of Student Project final report.
2. CD – Soft copy of the final report of the Student Project.
3. Utilization Certificate for Rs. 6,500/-
4. Statement of expenditure of Student Project
5. Photocopy of the Certificate – Research Review Seminar on 22nd June, 2019, organized by the Dept. of Botany, Christ College (Autonomous), Irinjalakuda
6. Photocopy of the Certificate, Photo and Brochure – National Seminar on ‘Species the Passion V’ on 27th June 2019, organized by the Research and PG Dept. of Botany, St. Thomas College (Autonomous), Thrissur, supported by KSCSTE, Thiruvananthapuram

Recommended and Forwarded:

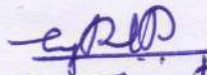


Principal, 
Christ College (Autonomous),
Irinjalakuda, Thrissur District.


DR. MATHEW PAUL UKKEN
PRINCIPAL
CHRIST COLLEGE (AUTONOMOUS)
IRINJALAKUDA

UTILIZATION CERTIFICATE

Certified that out of Rs.6500/-..... sanctioned by Kerala State Council for Science, Technology and Environment towards financial assistance for the student project titled '.....Current status of Coastal Flop of Chavakkad Beach, Thrissur district, Kerala.....' (File No./Letter No.143/SPS 63/2018 /KSCSTE dated 07/01/2019.....), an amount of Rs.6500/-..... was utilized for the purpose for which it was sanctioned, leaving a balance of Rs.NIL..... at the close of-..... as shown in the Statement of Expenditure annexed.


Name & Signature
of Principal Investigator

Dr. TESSY PAUL P.
Associate Professor &
Head of the Department of Botany
Christ College (Autonomous)
Irinjalakuda-680 125


Name & Signature
of Head of the Institution

DR. MATHEW PAUL UKKEN
PRINCIPAL
CHRIST COLLEGE (AUTONOMOUS)
IRINJALAKUDA



For TIJ & ASSOCIATES
Chartered Accountants
FRN - 015443s

Seal & Signature
of Chartered Accountant
M.No. 200142



STATEMENT OF EXPENDITURE

Project Title: Current Status of Coastal Flora of Chavakkad Beach, Thrissur district, Kerala
File No./ Letter no. 143/SPS 63/ 2018/ KSCSTE dated 07/01/2019
Name of Institution: Christ College (Autonomous) Irinjalakuda

| Receipts | Amount (Rs.) | Payments | Amount (Rs.) |
|--|--------------|---|--------------|
| 1. Amount sanctioned from KSCSTE (to be receivable) <u>Consumables</u> | <u>3000</u> | 1. <u>Consumables</u> | <u>3871</u> |
| 2. <u>Travel</u> | <u>2000</u> | 2. <u>Travel</u> | <u>2268</u> |
| 3. <u>Research Literature & Documentation</u> | <u>1500</u> | 3. <u>Research Literature & Documentation</u> | <u>3753</u> |
| 4. <u>Others</u> | <u>—</u> | 4 <u>Others</u> | <u>—</u> |
| Total | <u>6500</u> | Total | <u>9892</u> |

Certified that I have exercised all kinds of checks to see that the grant has been utilized for the purpose for which it was sanctioned by KSCSTE.

Dr. TESSY PAUL P.
Name & Signature
of Principal Investigator

Dr. TESSY PAUL P.
Associate Professor &
Head of the Department of Botany
Christ College (Autonomous)
Irinjalakuda-680 125

DR. MATHEW PAUL UKKEN
Name & Signature
of Head of the Institution

DR. MATHEW PAUL UKKEN
PRINCIPAL
CHRIST COLLEGE (AUTONOMOUS)
IRINJALAKUDA



For T I J & ASSOCIATES
Chartered Accountants

FRN - 0154438

Seal & Signature
of Chartered Accountant 12/02/2020
T.I. Joseph (Proprietor)
M.No. 200142





CHRIST COLLEGE (AUTONOMOUS)

(Regn. No. 137/75; No.F.22-1/2015/AC.U.G.C.)

Affiliated to University of Calicut and Accredited by NAAC 'A' Grade
IRINJALAKUDA - 680 125, KERALA, INDIA

Phone : Office (0480) 2825258, Principal 2820005, Res : 2825384, 2828241, Fax : 2831552

E-Mail:- christcollegeijk@gmail.com Web : www.christcollegeijk.edu.in

CERTIFICATE

This is to certify that Ms. **Sareena P. Mohamed** of IVth Semester M.Sc. Botany had participated and presented a paper entitled *Current Status of Coastal Flora of Chavakkad Beach, Thrissur District, Kerala, India* in the Research Review Seminar organized by the Department of Botany on 22nd June 2019 at Christ College (Autonomous), Irinjalakuda.

She got the **Best Presentation Award** instituted by the Christ College Management for the year 2019.




PRINCIPAL

PRINCIPAL
CHRIST COLLEGE (AUTONOMOUS)
IRINJALAKUDA

World Environment Day 2019

Air Pollution



SPECIES THE PASSION V

NATIONAL SEMINAR

Menachery Hall

St. Thomas' College (Autonomous), Thrissur

26-27 JUNE 2019

Supported by



Kerala State Council for
Science Technology and Environment
(KSCSTE)

Organised by



**THE RESEARCH AND POST GRADUATE
DEPARTMENT OF BOTANY
ST. THOMAS' COLLEGE**

(AUTONOMOUS)

THRISSUR - 680 001, KERALA

Certificate

This is to certify that ~~Prof. / Dr. / Mr. / Ms.~~


SAREENA . P . MOHAMED

has delivered a lecture on the topic:


CURRENT STATUS OF
COASTAL FLORA OF CHAVAKKAD BEACH

THRISSUR DISTRICT, KERALA


during the National Seminar '*Species The Passion V*' organized by the Research and Post graduate Department of Botany, St. Thomas' College (Autonomous), Thrissur on 26th & 27th June 2019 at Menachery Hall.



Dr. Anto P.V.
Convener



Dr. Vimala Jose
Head of the Department



Dr. Joy K.L.
Principal

Ms. Sareena P. Mohamed delivered a lecture on the topic “***Current Status of Coastal Flora of Chavakkad Beach, Thrissur District, Kerala***” in National Seminar on ‘Species the Passion V’ on 27th June 2019 organized by the Research and PG Dept. of Botany, St. Thomas College (Autonomous), Thrissur, supported by KSCSTE, Thiruvananthapuram.



World Environment Day 2019

Air Pollution

Dear Sir/ Madam,

St. Thomas' College (Autonomous), Thrissur is the oldest Catholic College in Kerala established as an educational institution in 1889 and was raised to the rank of Second Grade College in 1919. The college is now celebrating its centenary year of extending service to the nation and society. The Department of Botany was started in 1951 with Natural Science as intermediate course, and ever since its inception; the department has been initiated with a conservation oriented module of natural and environmental education. As part of the World Environment Day 2019 celebrations, the department has decided to organise a two day seminar "Species the Passion-V" – Stories of New Species Discovery. The program is highlighted to create environmental awareness on Air pollution and the significance of biodiversity conservation leading to the discovery of new species to Post Graduate students and Researchers of Botany. The Programme is scheduled at Menachery Hall, St. Thomas' College (Autonomous), Thrissur on 26 – 27 June 2019. We invite all the botanists and nature enthusiasts to participate in the seminar to make it a grand success.

Dr. Anto P.V.
Convener

Dr. Vimala Jose
HOD, Department of Botany

Dr. K.L. Joy
Principal

Programme

26.06.2019; 09.00am Registration

09.30am Inaugural session

Prayer

Welcome:

Dr. Vimala Jose, HOD, Department of Botany

Presidential address:

Dr. K.L. Joy, Principal,

St. Thomas' College (Autonomous), Thrissur

Inauguration:

Rev. Fr. Varghese Kuthur, Executive Manager,

St. Thomas' College (Autonomous), Thrissur

Felicitations:

Dr. Joby Thomas K, Vice-Principal,

St. Thomas' College (Autonomous), Thrissur

Dr. T.V. Sajeev, Principal scientist(Forest Entomology)

KFRI

Vote of Thanks:

Dr. Anto P.V, Convener, Species the Passion V

Keynote address:

Dr. T.V. Sajeev, Principal scientist(Forest Entomology)

KFRI

Air Pollution



NATIONAL SEMINAR

Menachery Hall

St. Thomas' College (Autonomous), Thrissur

26-27 JUNE 2019

Supported by



Kerala State Council for
Science Technology and Environment
(KSCSTE)



I.Q.A.C

Organised by



**THE RESEARCH AND POST GRADUATE
DEPARTMENT OF BOTANY
ST. THOMAS' COLLEGE**

(AUTONOMOUS)

THRISSUR - 680 001, KERALA



World Environment Day 2019

Air pollution



NATIONAL SEMINAR

Menachery Hall

St. Thomas' College (Autonomous), Thrissur

26-27 JUNE 2019

Supported by



Kerala State Council for
Science Technology and Environment
(KSCSTE)



I.Q.A.C

Organised by



THE RESEARCH AND POST GRADUATE
DEPARTMENT OF BOTANY
ST. THOMAS' COLLEGE

(AUTONOMOUS)
THRISSUR - 680 001, KERALA

26.06.2019 ; 10.30am - 01.00pm Technical Session I
Keynote Lecture: **Dr. T.V. Sajeew**, Principal Scientist,
(Forest Entomology) KFRI

Air pollution

Presentations:

1. Binimol K.J, Carmel College, Mala
Impact of tourism on water quality - special reference to Kumarakam
2. Neenu A. Santhosh, St. Thomas' College, Thrissur
Degradation of water pollutants by microbially synthesized alpha-Fe₂O₃
3. Aiswariya K.S., St. Thomas' College, Thrissur
Biogenic Ag₂O nanoparticle assisted catalytic degradation of perilous dyes in water
4. Praveena Jayan, St. Thomas' College, Thrissur
Screening and identification of newly isolated cellulose degrading bacterial strain
5. Akshitha M.R., St. Thomas' College, Thrissur
Effect of copper metal stress on morphology and physiology of *Lablab purpure*(L.)Sweet

01.00pm Lunch break

01.30 - 03.30 pm Technical session II

Invited lecture: **Dr. Joby Paul**, Assistant professor
St. Thomas' College, Thrissur

Phytogeography, endemism and tropical forest refugia of riparian flora of Pamba river, Kerala

Presentations :

1. Amritha M.S, St. Mary's College Thrissur
A new variety *Rotala indica* Koehne var. *mangadensis* var. nov. (Lythraceae), from Kerala, India
2. Anitha M.A, Carmel College, Mala
Isolation and identification of plant growth promoting rhizobacteria from *Coccinia indica* Wight & Arn rhizosphere
3. Hridhya M.V., St. Thomas' College, Thrissur
Photocatalytic degradation of an anionic dye using green synthesized CuO nanoparticles
4. Dhanya Jose, St. Thomas' College, Thrissur
Biomonitoring Pookot Lake using phytoplanktons in Premonsoon season
5. Seena K.K, St. Thomas' College, Thrissur
Ecological assessment of Chittur river using Phytoplankton diversity
6. Aparna Joseph. V. St. Thomas' College, Thrissur
Drosera (Droseraceae)- Distribution, Phytogeography and endemism

27.06.2019; 09.30am - 01.00pm Technical session III
Invited lecture: **Dr. K.M. Prabhukumar**, Senior Scientist,
CMPR, Arya Vaidya Sala, Kottakkal

Impatiens (Balsaminaceae) a key genus for endemism with special emphasis on habitat adaptation

Dr. Remesh Moochikkal, Assistant professor and curator of Jazan University Herbarium, Department of Biology, Faculty of Science, Jazan University, Kingdom of Saudi Arabia.

Phytogeographical significance of the floristic components of East Africa and South western Saudi Arabia

Presentations:

1. Keerthana Nandakumar, St. Thomas' College, Thrissur
Soil fungi of Iringolkavu during north-east monsoon
2. Nimmi C. Dominigose, St. Thomas' College, Thrissur
A revision on genus *Parthenocissus* (Vitaceae)
3. Jithin K.V., St. Thomas' College, Thrissur
Distribution and ecology of genus *Hydnocarpus* Gaertn. (Flacourtiaceae) In Kerala
4. Sareena P. Mohamad
Current status of coastal flora of Chavakkad beach, Thrissur district Kerala

01.00pm Lunch break

01.30 - 03.30pm Technical session IV

Invited lecture: **Baburaj T. S**, Research Scholar, Centre for Medicinal Plants Research Arya Vaidya Sala, Kottakkal
Genetic variability studies on indigenous paddy varieties of Wayanad

Invited lecture: **Dr. Alfred Joe**, Assistant professor
St. Joseph's College Irinjalakuda

New species of Gesneriaceae from North East India

03.00pm Valedictory function

Organizing Committee

Dr. Vimala Jose (H.O.D)
Mrs. Geethu Elizabeth Thomas
Dr. Anto P.V (Convener 9446230315)
Dr. Joby Paul
Dr. M. T. Thomas
Dr. Sandhya Vincent Neelamkavil