

THE EFFECT OF FOUR NATURAL REPELLENTS- CLOVE LEAVES, MINT, LIME PEELS AND CITRON PEELS ON COCKROACHES

Dissertation submitted to the Mahatma Gandhi University
in partial fulfilment of the requirement for the award of the degree of
BACHELOR OF SCIENCE IN ZOOLOGY



BY

AMEENA P SHAHUL

Reg. No: 210021037030

Under the guidance of

Ms. TEENA JAMES

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled " **THE EFFECT OF FOUR NATURAL REPELLENTS -CLOVE LEAVES, MINT, LIME PEELS AND CITRON PEELS ON COCKROACHES**" is a bonafide work carried out by **Ms. Ameena P Shahul**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021-2024.



Ms. Teena James

Supervising Teacher

Asst. Professor in Zoology

Alphonsa College, Pala

PALA

15/04/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila,

Head of the Department of Zoology

Alphonsa College, Pala

**A STUDY ON THE AVIAN DIVERSITY IN
AMARAMKAVU SACRED GROVE AND
KONNACKMALA RUBBER PLANTATION,
IDUKKI DISTRICT**

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



By

ARDHRA KS

Reg No: 210021037031

Under the guidance of

Dr. MAYA GEORGE

PG AND RESEARCH DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE

PALA

CERTIFICATE

This is to certify that the dissertation entitled “**A STUDY ON THE AVIAN DIVERSITY IN AMARAMKAVU SACRED GROVE AND KONNACHAMALA RUBBER PLANTATION, IDUKKI DISTRICT**” is a bonafide work carried out by **Ms. ARDHRA K S**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. Programme in Zoology at MG University during the period 2021 – 2024.

Dr. MAYA GEORGE

Supervising Teacher

Assistant Professor

Department of Zoology

Alphonsa College, Pala

Place: PALA

Date: 6/5/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

Water Quality Analysis Of Sasthamkotta Freshwater Lake

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



BY ASMAYA BAHULAYAN

210021037032

Under the guidance of

Dr. Simimole Sebastian

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**WATER QUALITY ANALYSIS OF SASTHAMKOTTA FRESHWATER LAKE**" is a bonafide work carried out by **Ms. Asmaya Bahulayan** , under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.

Dr. Simimole Sebastian

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

25/04/2024

Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

STUDY ON THE FISH DIVERSITY IN MEENACHIL RIVER OF KAVALIPUZHA REGION

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



BY

CHRISTINA JAMES

210021037033

Under the guidance of

Ms POORNIMA BABY

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "**STUDY ON THE FISH DIVERSITY IN MEENACHIL RIVER OF KAVALIPUZHA REGION**" is a bonafide work carried out by **Ms. Christina James**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2024.



Ms. Poornima Baby

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

06/05/2024



Countersigned by,

Dr. Sr. Manju Elizebeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

STUDY OF DIFFERENT BREEDS OF CATTLE AND THEIR COMMON DISEASE IN MANAKKAD PANCHAYAT

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



BY GAURI SANTHOSH

210021037034

Under the guidance of

Dr. CINNIE SUSAN ANTONY

DEPARTMENT OF ZOOLOGY ALPHONSO COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**STUDY OF DIFFERENT BREEDS OF CATTLE AND THEIR COMMON DISEASE IN MANAKKAD PANCHAYAT**" is a bonafide work carried out by **Ms. GAURI SANTHOSH**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.

Dr.CINNIE SUSAN ANTONY

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department of Zoology

PALA

06/05/2024

Countersigned by,

Dr.Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

WATER QUALITY ANALYSIS OF PANNIYAR RIVER

*Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement of the award of degree of BACHELOR OF SCIENCE IN ZOOLOGY*



By

GOURI KRISHNA S.

210021037035

Under the guidelines of

Dr. SIMIMOL SEBASTIAN

Department of Zoology

Alphonsa College Pala

May - 2024

CERTIFICATE

This is to certify that the dissertation entitled "**WATER QUALITY ANALYSIS OF PANNIYAR RIVER**" is a bonafide work carried out by Ms. Gouri Krishna.S under my guidance in the Department of Zoology, Alphonsa College, Pala, during the course as partial fulfilment of the requirements for the award of BSc. Programme in Zoology at MG University during the period 2021– 2024.

Dr. Simimol Sebastian

Supervising Teacher,

Alphonsa College, Pala

Department Of Zoology

PALA

25/04/2024

Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

WATER QUALITY ANALYSIS OF WELL WATER ADJACENT TO POULTRY OPERATIONS : A COMPARATIVE STUDY

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the requirement for the award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY GOWRI PRASANTH

210021037036

Under the guidance of

Ms. POORNIMA BABY

DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "WATER QUALITY ANALYSIS OF WELL WATER ADJACENT TO POULTRY OPERATIONS : A COMPARATIVE STUDY " is a bonafide work carried out by Ms. GOWRI PRASANTH, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2024.



Ms. Poornima Baby

Supervising Teacher

Assistant Professor, Alphonsa College, Pala

Department Of Zoology

PALA

19/04/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

EFFECT OF DIFFERENT HERBAL PRODUCTS AS MOSQUITO REPELLENTS

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY

HAZNA HARIS

210021037037

Under the guidance of

Ms TEENA JAMES

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**EFFECT OF DIFFERENT HERBAL PRODUCTS AS MOSQUITO REPELLENTS**" is a bonafide work carried out by **Ms. Hazna Haris**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021-2024.



Ms. Teena James

Supervising Teacher

Assistant Professor in Zoology

Alphonsa College, Pala

PALA

15/04/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

MICROPLASTICS IN EDIBLE TISSUES OF FRESHWATER FISHES

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the requirement
for the award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY

NANDANA SURESH

Reg No. 210021037039

Under the guidance of

Dr. Maya George

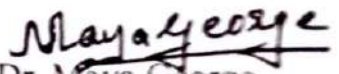
PG AND RESEARCH DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**MICROPLASTICS IN EDIBLE TISSUES OF FRESHWATER FISHES**" is a bonafide work carried out by **Ms. Nandana Suresh**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2024.


Dr. Maya George

Supervising Teacher
Assistant Professor
Department of Zoology
Alphonsa College, Pala

PALA

30/04/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila
Head of the Department of Zoology
Alphonsa College, Pala

DIFFERENT BREEDS OF CATTLES AND ITS DISEASES

Dissertation submitted to the Mahatma Gandhi University in
partial fulfilment of the requirement for the award of the degree
of BACHELOR OF SCIENCE IN ZOOLOGY



BY NEERAJA SUNIL

210021037040

Under the guidance of

DR CINNIE SUSAN ANTONY

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "DIFFERENT BREEDS OF CATTLES AND ITS DISEASES" is a bonafide work carried out by Ms. NEERAJA SUNIL , under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2023.

DR CINNIE SUSAN ANTONY

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

06/05/2024

Countersigned by

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonse college pala

CHEMICAL COMPOSITION OF MILK FROM DIFFERENT BREEDS OF COW

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the requirement for
the award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



**BY REMYAKUMARY SV
210021037042**

Under the guidance of
Ms. TEENA JAMES

**DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA
MAY 2024**

CERTIFICATE

This is to certify that the dissertation entitled "**CHEMICAL COMPOSITION OF MILK FROM DIFFERENT BREEDS OF COW**" is a bonafide work carried out by **Ms. REMYAKUMARY SV**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.

Ms. Teena James
Supervising Teacher
Assistant Professor Alphonsa College, Pala
Department Of Zoology

PALA
06/05/2024

Countersigned by,
Dr. Sr. Manju Elizabeth Kuruvila
Head of the Department of Zoology
Alphonsa College, Pala

**DIVERSITY OF EARTHWORMS IN DIFFERENT
AREAS OF WARD -VIII OF MUTHOOLY GRAMA
PANCHAYATH**

Dissertation submitted to the Mathma Gandhi University in partial fulfillment
of the requirement for the award of the degree of

BACHELOR OF SCIENCE IN ZOOLOGY



BY TREESA JOHNEY

210021037045

Under the guidance of

Dr. Ambili T R

**DEPARTMENT OF ZOOLOGY
ALPHONSA COLLEGE PALA**

APRIL 2024

DECLARATION

I, hereby declare that the dissertation entitled "**DIVERSITY OF EARTHWORMS IN DIFFERENT AREAS OF WARD-VIII OF MUTHOOLY GRAMA PANCHAYATH**" submitted to the Mathma Gandhi University, Kottayam in partial fulfillment of the Degree of **BACHELOR OF SCIENCE IN ZOOLOGY** is a bonafide project work done by the under the supervision of **Ms. Ambili T R**, Department of Zoology, out by me, under the supervision and guidance of **Dr. Ambili T.R** Professor of Department of Zoology, Alphonsa colloge, Pala

Place: PALA

Treesa Johney

Date:06/05/2024

**DEVELOPING OF ECO-FRIENDLY MOSQUITO REPELLENT FROM
NATURAL INGREDIENTS**

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment
of the requirement for the award of BACHELOR OF SCIENCE IN
ZOOLOGY



BY ANSU JAMES

210021037048

Under the guidance of

Ms TEENA JAMES

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL, 2024

CERTIFICATE

This is to certify that the dissertation entitled "DEVELOPING OF ECO-FRIENDLY MOSQUITO REPELLENT FROM NATURAL INGREDIENTS" is a bonafide work carried out by Ms. Ansu James, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2024.



Ms. Teena James

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

12/04/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

PHOTOTACTIC RESPONSE OF NOCTURNAL INSECTS

**Dissertation submitted to the Mahatma Gandhi University in partial
fulfilment of the requirement for the award of degree of**

BACHELOR OF SCIENCE IN ZOOLOGY

By

ANUJA SHAJI JOSE

REG NO: 210021037049

Under the guidance of

DR. MAYA GEORGE



PG AND RESEARCH DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE, PALA – 686574

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "PHOTOTACTIC RESPONSE OF NOCTURNAL INSECTS" is a Bonafide work carried out by Ms. Anuja Shaji Jose, under my guidance, in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. Programme in Zoology at MG University during the period 2021 –2024.

Dr. Maya George
Supervising Teacher
Assistant Professor
Department of Zoology
Alphonsa College, Pala

PLACE: PALA

DATE: 3 – 5 – 2024

Countersigned by,
Dr. Sr. Manju Elizabeth kuruvila
Head of the Department of Zoology
Alphonsa College, Pala

**SPIDER DIVERSITY IN THE PREMISES OF ALPHONSA COLLEGE
PALA, KOTTAYAM**

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY

ATHIRA REGHU

Reg No: 210021037051

Under the guidance of

Dr. MAYA GEORGE

PG AND RESEARCH DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**SPIDER DIVERSITY THE PREMISES OF ALPHONSA COLLEGE PALA, KOTTAYAM**" is a bonafide work carried out by **Ms. Athira Reghu**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 – 2024.

Dr. Maya George

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

06/05/2024

Countersigned by,

Dr. Sr. Manju Elizabeth kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

**COMPARATIVE ANALYSIS OF ANTIBACTERIAL PROPERTIES
OF MANGO GINGER (*Curcuma amada*), GINGER (*Zingiber
officinale*) AND TURMERIC (*Curcuma longa*)**

Dissertation submitted to
the Mahatma Gandhi University in partial fulfilment of the requirement for the
award of the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY
FATHIMA FILDA
210021037053

Under the guidance of
Dr.Sr.MANJU ELIZABETH KURUVILA

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA
May-2024

DEPARTMENT OF ZOOLOGY
ALPHONSA COLLEGE PALA
(Affiliated to Mahatma Gandhi University)
CERTIFICATE

This is to certify that the dissertation entitled **COMPARATIVE ANALYSIS OF ANTIBACTERIAL PROPERTIES OF MANGO GINGER (*Curcuma amada*), GINGER (*Zingiber officinale*) AND TURMERIC (*Curcuma longa*)** is a bonafide work carried out by **Ms. FATHIMA FILDA**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 – 2024

Date:06/05/2024.

Place: Pala.



Dr.Sr. Manju Elizabeth Kuruvila
Supervising Teacher
Department Of Zoology
Alphonsa College, Pala



Countersigned by,
Dr. Sr. Manju Elizabeth Kuruvila
Head of the Department of Zoology
Alphonsa College, Pala

DIVERSITY AND ABUNDANCE OF ANTS IN ALPHONSA COLLEGE CAMPUS

Dissertation submitted to the Mahatma Gandhi University in

Partial fulfillment of the requirement for the award of

the degree of BACHELOR OF SCIENCE IN ZOOLOGY



BY

JILBI JOSE

210021037054

Under the guidance of

Dr. AMBLI T.R.

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE

PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "DIVERSITY AND ABUNDANCE OF ANTS IN ALPHONSA COLLEGE CAMPUS" is a bonafide work carried out by Ms.Jilbi Jose, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfillment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.



Dr.Ambli T.R

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

6/05/2024



Countersigned by,

Dr.Sr.Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

DIVERSITY OF ODONATES IN WARD XII OF KIDANGOOR GRAMPANCHAYATH

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



BY KEERTHI KRISHNA P

210021037055

Under the guidance of

Dr. CINNIE SUSAN ANTONY

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**DIVERSITY OF ODONATES IN WARD XII OF KIDANGOOR GRAMPANCHAYATH**" out by **Ms.Keerthi Krishna P**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc programme in Zoology at MG University during the period 2021- 2024.


Dr. Cinnie Susan Antony

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

06/05/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

COMPARATIVE STUDY OF STARCH BASED BIOPLASTIC FROM “TAPIOCA” (*Manihot esculenta*) AND “POTATO” (*Solanum tuberosum*)

Dissertation submitted to
the Mahatma Gandhi University in partial fulfilment of the requirement for
the award of the degree of BACELOR OF SCIENCE IN ZOOLOGY



By

LALITHA LEELU P

210021037056

Under the guidance of

DR. SR. MANJU ELIZABETH KURUVILA

DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

May-2024

DEPARTMENT OF ZOOLOGY
ALPHONSA COLLEGE PALA
(Affiliated to Mahatma Gandhi University)

CERTIFICATE

This is to certify that the dissertation entitled “COMPARATIVE STUDY OF STARCH BASED BIOPLASTIC FROM “TAPIOCA” (*Manihot esculenta*) AND “POTATO” (*Solanum tuberosum*) is a bonafide work carried out by Ms. Lalitha Leelu P, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. Programme in Zoology at MG University during the period 2021–2024.



Dr . Sr .Manju Elizabeth Kuruvila

Supervising Teacher

Vice principal of Alphonsa College, Pala

Department Of Zoology



Counter signed by,

Dr . Sr .Manju Elizabeth Kuruvila

Head of the department.

Alphonsa College, Pala

Place: Pala

Date:06/05/2024

BUTTERFLY DIVERSITY IN THE CAMPUS OF GOVT. HIGH SCHOOL KUZHIMAVU

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of

BACHELOR OF SCIENCE IN ZOOLOGY



BY MEENU MOL EJ

Reg. No: 210021037057

Under the guidance of

DR. AMBILI T.R.

DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "**BUTTERFLY DIVERSITY IN THE CAMPUS OF GOVT. HIGH SCHOOL KUZHIMAVU**" is a bonafide work carried out by **Ms. Meenu Mol E J**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.



Dr. Ambili T.R

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala

**SPIDER DIVERSITY IN ALPHONSA COLLEGE
PALA, KOTTAYAM**

Dissertation submitted to the Mahatma Gandhi University in partial
fulfillment of the requirement for the award of the degree of BACHELOR
OF SCIENCE IN ZOOLOGY



BY NAVYA MANESH

210021037058

Under the guidance of

Ms POORNIMA BABY

DEPARTMENT OF ZOOLOGY ALPHONSA COLLEGE PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "SPIDER DIVERSITY IN ALPHONSA COLLEGE PALA, KOTTAYAM " is a bonafide work carried out by Ms. Navya Manesh, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfillment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 - 2024.



Ms. Poornima Baby

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

PALA

06/05/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology Alphonsa college pala

DIVERSITY OF ODONATES IN KIDANGOOR GRAMAPANCHAYATH, KOTTAYAM

Dissertation submitted to the Mahatma Gandhi University in
partial fulfilment of the requirement for the award of the degree of
BACHELOR OF SCIENCE IN ZOOLOGY



BY

PARVATHY S KUMAR

Reg No : 210021037060

Under the guidance of

Dr. Sr. MANJU ELIZABETH KURUVILA

DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled " DIVERSITY OF ODNATES IN KIDANGOOR GRAMAPANCHAYATH, KOTTAYAM " is a bonafide work carried out by Ms PARVATHY S KUMAR , under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2023 - 2024.



Dr. Sr. MANJU ELIZEBETH KURUVILA

Supervising Teacher

Department Of Zoology

Alphonsa College, Pala



Countersigned by,

Dr. Sr. MANJU ELIZEBETH KURUVILA

Head of the Department of Zoology

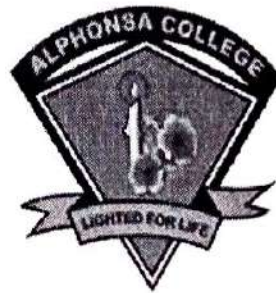
Alphonsa College, Pala

PALA

Date: 6/5/2024

**PLANT ANIMAL INTERACTION AND RELATIONSHIP
BETWEEN *CROTALARIA RETUSA* AND DANAINA
BUTTERFLIES**

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of
BACHELOR OF SCIENCE IN ZOOLOGY



BY PRIYA RAJU
Reg. No: 210021037061

Under the guidance of
DR. AMBILI T.R.

DEPARTMENT OF ZOOLOGY
ALPHONSA COLLEGE PALA

MAY 2024

CERTIFICATE

This is to certify that the dissertation entitled "**PLANT ANIMAL INTERACTION AND RELATIONSHIP BETWEEN *CROTALARIA RETUSA* AND DANAINAE BUTTERFLIES**" is a bonafide work carried out by **Ms. PRIYA RAJU**, under my guidance in the Department of Zoology. Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021- 2024.

Dr. Ambili T.R

Supervising Teacher

Assistant Professor Alphonsa College, Pala

Department Of Zoology

Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of

Zoology Alphonsa College, Pala

**STUDY OF DRAGONFLY DIVERSITY IN WARD 13,
ERUMELY GRAMA PANCHAYATH,
KOTTAYAM DISTRICT**

Dissertation submitted to the Mahatma Gandhi University in partial fulfilment of the
requirement for the award of the degree of BACHELOR OF SCIENCE IN
ZOOLOGY



By

VISHNUMAYA VC

210021037062

Under the guidance of

Dr. SIMIMOL SEBASTIAN

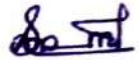
DEPARTMENT OF ZOOLOGY

ALPHONSA COLLEGE PALA

APRIL 2024

CERTIFICATE

This is to certify that the dissertation entitled "**STUDY OF DRAGONFLY DIVERSITY IN WARD 13, ERUMELY GRAMA PANCHAYATH KOTTAYAM DISTRICT**" is a bonafide work carried out by **Ms. Vishnumaya V.C.**, under my guidance in the Department of Zoology, Alphonsa College, Pala, during a course as partial fulfilment of the requirements for the award of BSc. programme in Zoology at MG University during the period 2021 – 2024.



Dr. SIMIMOL SEBASTIAN

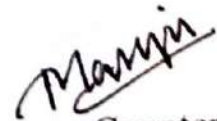
Supervising Teacher

Department of Zoology

Alphonsa College, Pala

PALA

06/05/2024



Countersigned by,

Dr. Sr. Manju Elizabeth Kuruvila

Head of the Department of Zoology

Alphonsa College, Pala