

**Department of
Ecology and Environmental Science**

M.Sc. Dissertation Certificate

Batch: 2018-2020



ASSAM UNIVERSITY, SILCHAR
(A Central University constituted under Act XIII of 1989)
Silchar-788011, Assam, India

12th October, 2020

CERTIFICATE

This is to certify that **A Pretty** (Roll: 042018 No: 2011400007 of Regn. No: 04-130043911 of 2013-14) has carried out this literature survey-based project work entitled '**A systematic review of literature on plant functional traits in aquatic and wetland ecosystems**' as a requirement for fulfillment of Master's degree programme in **Ecology & Environmental Science** of Assam University under my supervision.

This work either in the present form or in any other form has not been submitted for any other degree to any other university or institutes of learning.

Prof. Ajit Kumar Das,
Head of the Department,
Ecology and Environmental Science,
Assam University, Silchar

Supervisor:

(Tapati Das)
Assistant Professor,
Dept. of Ecology and
Environmental Science,
Assam University, Silchar



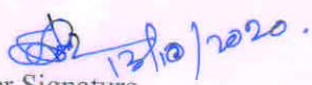
Dr. Arun Jyoti Nath

Assistant Professor

Dept. of Ecology and Environmental Science, Assam University, Silchar

CERTIFICATE

This is to certify that the dissertation entitled "Tree diversity and biomass carbon stock along an altitudinal gradient in old-growth secondary forests in North East India", submitted by Mr. Abed Ahmed, Roll: 042018, No.: 2011400008, Regn. No:01-140060582 of 2014-2015, in the partial fulfilment of the degree of Master of Science in the Department of Ecology and Environmental Science, 2020, Assam University, Silchar, embodies the record of original investigation carried out by him under my supervision.


Counter Signature

Head of the Department

Ecology and Environmental Science

Assam University, Silchar


Signature of Supervisor

Signature of Supervisor

Place:Silchar

Date: 13/10/2020




ASSAM UNIVERSITY, SILCHAR
(A Central University constituted under Act XIII of 1989)
Silchar-788011, Assam, India

12th October, 2020

CERTIFICATE

This is to certify that **Ankita Bhattacharjee** (Roll:042018 .No:2011400027) has carried out this literature survey based project work entitled **Toxicity of silver nanoparticles in aquatic macroinvertebrates** as a requirement for fulfillment of Master's degree programme in **Ecology & Environmental Science** of Assam University under my supervision.


This work either in the present form or in any other form has not been submitted for any other degree to any other university or institutes of learning.

 11/10/2020

Prof. Abhik Gupta

Supervisor

Dept of Ecology & Environmental Science
Assam University, Silchar

 12/10/2020
Heanfilc

DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL
SCIENCE

ASSAM UNIVERSITY

SILCHAR-788011

Prof D C Ray, Ph D., FSESc, FSLSc

Date : 12/10/2020

Former HoD & Dean

Mail raydulal@yahoo.co.in

Cell 9435170930

To whom it may concern

This is to certify that the Project work entitled "Studies on the review of literature on brinjal aphid (*Aphis gossypii* Glover) with special reference ecology, biology and management during 1980 to 2020" was carried out by Miss Ayesha Barbhuiya as a partial fulfilment of Master Science in Ecology and Environmental Science, Assam University, Silchar has been carried out under my supervision and guidance. This reproduction of work is original and no part of the work is carried out in any other University/Institute earlier. She is a very sincere and punctual worker.

I wish him/her every success in endeavour life



Prof D C Ray


Forwarded by the Head i/c

**DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL
SCIENCE**

ASSAM UNIVERSITY

SILCHAR-788011

Prof D C Ray, Ph D., FSESc, FSLSc

Date : 12/10/2020

Former HoD & Dean

Mail raydulal@yahoo.co.in

Cell 9435170930

To whom it may concern

This is to certify that the Project work entitled “ Review of literature studies on ecology and biodiversity of soil microarthropods in forest and agroecosystem during 1980 to 2020” was carried out by Mr Biswajit Lohar as a partial fulfilment of Master Science in Ecology and Environmental Science , Assam University , Silchar has been carried out under my supervision and guidance. This reproduction of work is original and no part of the work is carried out in any other University/Institute earlier. He is a very sincere and punctual worker.

I wish him/her every success in endeavour life



Prof D C Ray


Forwarded by the Head i/c

CERTIFICATE

This is to certify that the dissertation entitled “**Study of Home Garden plants used by Hmar community of Udharbond, Sub division area of Cachar District, Assam**” submitted by Dipsona Malakar in partial fulfilment of Master Degree in Ecology and Environmental Science, batch (2018-2020), Assam University Silchar, embodies the records of original investigation by him under my supervision.

The results embodied have not been submitted to any other University/ Institute.

Counter Signature



(HOD i.c.)
Environmental

Date: 14.10.2020

Place: Dargakona, Silchar

Signature of the Supervisor


(Prof. Ajit Kumar Das)

Ecology and

Science, Assam University,
Silchar.

DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL SCIENCE
E.P.ODUM SCHOOL OF ECOLOGY AND ENVIRONMENTAL SCIENCES
ASSAM UNIVERSITY,SILCHAR,ASSAM

CERTIFICATE

This is to certify that the dissertation entitled “ Ethno botanical study of missing tribe of Majuli district, Assam” submitted by Geetashree Borah in partial fulfillment of Master degree in ecology and environmental science,2020, Assam University, Silchar, embodies the records of original investigation carried out by her under my supervision.

The result embodied has not been submitted to any other university/institute.

Counter Signature



HoD

Department of Ecology & Environmental
Assam University, Silchar



(Ajit Kr. Das)

Supervisor
Dept. of Ecology & Environmental
Assam University, Silchar

Date- 14.10. 2020


Place-Dargakona

CERTIFICATE

I certify that the dissertation titled "**Shifting Cultivation in Dima Hasao District**" submitted under the course number 404 by **Ijeringle Daime**, a student of Master of Science, Department of Ecology and Environmental Science, Assam University, Silchar is a record of the research work carried out by her under my supervision and guidance to the best of my knowledge. The contents embodied in the dissertation have not been submitted for the award of any other degree in this or any other university.

ADe

Aparajita De
Associate Professor

 13/10/2020

Head i/c
Ecology & Environmental Science
Assam University

Date: 13.10.2020

CERTIFICATE

This is to certify that **Kaynath Yasmin Laskar** (Roll- 042018, No- 2011400022) has carried out the literature survey based project work entitled "**VARIATION IN THE SOIL ORGANIC CARBON CONTENT ALONG LAND USE, SOIL DEPTH AND AGGREGATE SIZE UNDER SHIFTING CULTIVATED LANDS**" as a requirement for fulfillment of Master's degree programme in Ecology and Environmental Science of Assam University under my supervision.

This work either in the present form or in any form has not been submitted for any other degree to any university or institutes of learning.


Prof. Ajit Kr. Das

Head ICC


Dr. Arun Jyoti Nath

Supervisor

CERTIFICATE

This is certified that the dissertation entitled " A survey of small to medium size nocturnal mammals by camera trapping in assam university silchar campus " submitted by *Koushik Rajbongshi* in partial fulfillment of Master degree in Ecology and Environmental Science,2020, Assam university, silchar, embodied the records of original investigation carried out by him under my supervision.

The result embodied has not been submitted to any other university/institute.

Counter signature

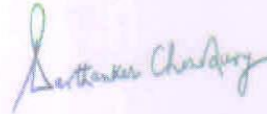
 12/1/2020
(Prof. Ajit Kumar Das)

(Head i/c)

Ecology and Environmental Science

Assam University, Silchar

Date:



Prof. Parthankar Choudhury

Ecology and Environmental Science

Assam University, Silchar



Date:

CERTIFICATE

This is to certify that the dissertation entitled "Study of Ethnobotanical plants used by the Reang Community of Hailankandi District, Assam" submitted by Kumarjit Nath, bearing Roll 041918 No. 2011400010, Regn.No. 01-150077343 in partial fulfillment of Master Degree in Ecology & Environmental Science 2020, Assam University, Silchar, Assam, embodies the records of original investigation carried out by him under my supervision.

This work has not been submitted previously for any other degree of this or any other University/Institution.

Counter signature


Head 

Dept. of Ecology & Environmental Science

Date: 14.10.2020

Supervisor


(Prof. Ajit K. Das)

Ecology & Environmental Science

Assam University, Silchar



ASSAM UNIVERSITY, SILCHAR

(A Central University constituted under Act XIII of 1989)

Silchar- 788011, Assam, India

13th October, 2020

Certificate

This is to certify that **Manimoy Das** 4th Semester, Department of Ecology and Environmental Science bearing M.Sc. Final examination **Roll-042018 no-2011400006** and **Regn. No.- 20180016236** carried out dissertation work titled – “**Acute toxicity of heavy metal (Copper) and pesticides (Chlorpyrifos) on *Microhyla berdmorei* (Blyth, 1856) and *Duttaphrynus melanostictus* (Schneider, 1799) tadpole species and review of toxicity studies on anuran tadpole**” for completion of M.Sc. in Ecology and Environmental Science during session 2018- 2020 under my supervision and guidance.

This work either in the present form or in any other form has not been submitted for any other degree to any other university or institutes of learning.

Prof. Ajit Kumar Das

Head

Dept. of Ecology & Environmental Science
Assam University, Silchar

Prof. Mithra Dey

Supervisor


Dept. of Ecology & Environmental Science
Assam University, Silchar

CERTIFICATE

This is to certify that Mohuya Dutta Purkayastha M.Sc. 4th semester,
Department of Ecology and Environmental Science bearing M.Sc.
Final examination Roll – 042018 No. – 2011400018 and Reg. No. –
01-150077536 carried out project work titled “STUDY OF
DIVERSITY OF BENTHIC MACRO-FAUNA FROM TWO
DIFFERENT STREAMS OF KATLICHERRA AREA” for
completion of M.Sc. in Ecology and Environmental Science, Assam
University, Silchar during session 2018-2020 under my supervision
and guidance.

Prof. Mithra Dey

Former Head, Ecology and
Environmental Science,
Assam University, Silchar


Prof Ajit Kumar Das
HoD i/c,
Dept of Ecology and Environmental Science

Date – 13/10/2020

**DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL
SCIENCE**

ASSAM UNIVERSITY

SILCHAR-788011

Prof D C Ray, Ph D.,FSESc, FSLSc

Date : 12/10/2020

Former HoD & Dean

Mail raydulal@yahoo.co.in

Cell 9435170930

To whom it may concern

This is to certify that the Project work entitled “Studies on the review of literature on soil microarthropods with special reference to ecology on grassland and horticulture ecosystems during the period 1970 to 2019” was carried out by Mr Mukul Sonowal as a partial fulfilment of Master Science in Ecology and Environmental Science, Assam University, Silchar has been carried out under mu supervision and guidance. This reproduction of work is original and no part of the work is carried out in any other University/Institute earlier. He is a very sincere and punctual worker.

I wish him/her every success in endeavour life



Prof D C Ray



Forwarded by the Head

CERTIFICATE

This is to certify that the dissertation entitled “ Study of home garden plants used by the Dimasa tribe of Cachar district, Assam ” submitted by Pallab Chakraborty in partial fulfilment of Master Degree in Ecology and Environmental Science, 2020, Assam University, Silchar, embodies the records of original investigation carried out by him under my supervision.

The result embodied have not been submitted to any other University / Institute.

Counter Signature



HoD i.c.

Department of Ecology & Environmental
Assam University, Silchar

Place: Dargakona, Silchar

Date: 14.10.2020



(Ajit K. Das)

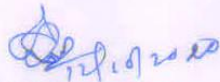
Supervisor
Dept. of Ecology & Environmental
Assam University, Silchar

CERTIFICATE

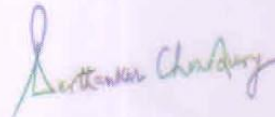
This is certified that the dissertation entitled "STUDIES ON STONE HARVESTING AND ITS IMPACT ON LANDSCAPE AND WILDLIFE OF MADHURA, CACHAR, ASSAM" submitted by Payal Das (Roll no-23) for partial fulfillment of Master degree in Ecology and Environmental Science,2020, Assam university, silchar, embodied the records of original investigation carried out by him under my supervision.

The result embodied has not been submitted to any other university/institute.

Counter signature



(Prof. Ajit kumar Das)
(Head i/c)
Ecology and Environmental Science
Assam University, Silchar



Prof. Parthankar Choudhury
Dept. of Ecology and Environmental Science
Assam University, Silchar



ASSAM UNIVERSITY SILCHAR

13th October, 2020

CERTIFICATE

This is to certify that **Ram Bahadur Chimariya** (Roll 042018 No. 2011400023) has carried out literature review based dissertation work entitled **Plant Invasion in the Tropics with special reference to *Parthenium hysterophorus***, as a requirement for fulfillment of Master's degree programme in **Ecology & Environmental Science** of Assam University under my supervision.

This work either in the present form or in any other form has not been submitted for any other degree to any other university or institution of learning.

Prof. Ajit Kumar Das

Head

Dept of Ecology & Environmental Science

Assam University Silchar
Head
Department of Ecology &
Environmental Science
Assam University
SILCHAR (Assam)
INDIA

Dr. Panna Deb

Supervisor

Dept of Ecology & Environmental Science

Assam University Silchar

CERTIFICATE

This is to certify that the dissertation entitled "Study of Medicinal plants used by the Jaintia Tribe of Meghalaya", submitted by Rituraj Roy in partial fulfillment of Master of Science degree in Ecology and Environmental Science 2020, Assam University, Silchar, embodies the records of original investigation carried out by him under my supervision.

The result have not been submitted to any other University/ Institutes for any award / degree for the same.

Counter Signature



(Prof. Ajit Kr. Das)

Head i.c. Deptt. Ecology and Environmental Science,

Ecology and Environmental Science, Silchar

Date: 14.10.2020.

Place *Dorjokona, Silchar*

Supervisor



(Prof. Ajit Kumar Das)



ASSAM UNIVERSITY, SILCHAR
(A Central University constituted under Act XIII of 1989)
Silchar-788011, Assam, India

12th October, 2020

CERTIFICATE

This is to certify that **Sabbir Ahmed** (Roll: 042018 No: 2011400011 of Regn. No: 01-140060426 of 2014-2015) has carried out this literature survey-based project work entitled 'A systematic review of literature on plant functional traits in grassland ecosystems' as a requirement for fulfillment of Master's degree programme in **Ecology & Environmental Science** of Assam University under my supervision.

This work either in the present form or in any other form has not been submitted for any other degree to any other university or institutes of learning.

Prof. Ajit Kumar Das,
Head of the Department,
Ecology and Environmental Science,
Assam University, Silchar

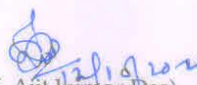
Supervisor:


(Tapati Das)
Assistant Professor,
Dept. of Ecology and
Environmental Science,
Assam University, Silchar

CERTIFICATE

This is certified that the dissertation entitled “**Human-Monkey Conflict in and around Amraghatt area of Barak Valley of Silchar, Cachar, Assam**” submitted by Sayontoni Deb for partial fulfillment of Master degree in Ecology and Environmental Science, 2020, Assam university, silchar, embodied the records of original investigation carried out by him under my supervision. The result embodied has not been submitted to any other university/institute.

Counter signature


(Prof. Ajit Kumar Das)
(Head i/c)
Ecology and Environmental Science
Assam University, Silchar


Prof. Parthankar Choudhury
Dept. of Ecology and Environmental Science
Assam University, Silchar

ASSAM UNIVERSITY SILCHAR

13
12th October, 2020

CERTIFICATE

This is to certify that Seigou Haolai (Roll: 042018 No:2011400002.) has carried out literature review based dissertation work entitled "Regeneration of trees species in tropical forests of India" as a requirement for fulfillment of Master's degree programme in **Ecology & Environmental Science** of Assam University under my supervision.

This work either in the present form or in any other form has not been submitted for any other degree to any other university or institution of learning.


Prof. Ajit Kumar Das

Head

Dept of Ecology & Environmental Science

Assam University Silchar


Dr. Panna Deb

13/10/2020

Head
Department of Ecology &
Environmental Science
Assam University
SILCHAR (Assam)
INDIA

**DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL
SCIENCE**

ASSAM UNIVERSITY

SILCHAR-788011

Prof D C Ray, Ph D., FSESc, FSLSc

Date : 12/10/2020

Former HoD & Dean

Mail raydulal@yahoo.co.in

Cell 9435170930

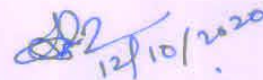
To whom it may concern

This is to certify that the Project work entitled "Studies on the review of literature on eco-biology and control of Bean aphid (*Aphis fabae* Scopoll) on flat bean during 1975 to 2019" was carried out by Miss Suprita Kempri as a partial fulfilment of Master Science in Ecology and Environmental Science , Assam University , Silchar has been carried out under my supervision and guidance. This reproduction of work is original and no part of the work is carried out in any other University/Institute earlier. She is a very sincere and punctual worker.

I wish him/her every success in endeavour life



Prof D C Ray



Forwarded by the Head i/c

**DEPARTMENT OF ECOLOGY AND ENVIRONMENTAL
SCIENCE**

ASSAM UNIVERSITY

SILCHAR-788011

Prof D C Ray, Ph D., FSESc, FSLSc

Date : 12/10/2020

Former HoD & Dean

Mail raydulal@yahoo.co.in

Cell 9435170930

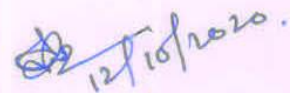
To whom it may concern

This is to certify that the Project work entitled "Review of literature studies on *Leptocorisa* sp in India and abroad with special reference to its ecology, life cycle strategy and management during 1980 to 2020" was carried out by Miss Sushmita Gam as a partial fulfilment of Master Science in Ecology and Environmental Science, Assam University, Silchar has been carried out under my supervision and guidance. This reproduction of work is original and no part of the work is carried out in any other University/Institute earlier. She is a very sincere and punctual worker.

I wish him/her every success in endeavour life



Prof D C Ray



Forwarded by the Head *HC*


CERTIFICATE

This is to certify that **Tonmoy Bhattacharjee**, Roll- **042018, No-2011400009**; **Regn. No-04-150075956** of **2015-16** has worked for his Master degree dissertation titled "**A Study On Avifaunal Diversity And People'S Perception And Awareness Towards Avifauna At Dariarghat Karicherra Gp Under Kukicherra Forest Range, Hailakandi District, Assam**" under my supervision and that he has fulfilled all the requirements of the ordinance relating to submission of Master Degree Dissertation.

It is also certified that this dissertation work incorporates his bona fide research and that this has not been submitted in support of an application for another degree of this or any other university or institute by the candidate.


Prof. Ajit Kumar Das.

Dept. of Ecology
& Environmental Science,
Assam University, Silchar


(Prof. Mithra Dey)
Professor
Dept. of Ecology
& Environmental Science,
Assam University, Silchar