

DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that TAZMIN AHMED bearing Roll no. 17/MSZ/001 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "TRADITIONAL IVORY CURVING IN BARPETA AND ITS CONSERVATION RELATED ISSUES" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Reabal Sarkan

Dr. Prabal Sarkar

Supervisor

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Techno City, Kling Road, While, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

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University of Science and Technology, Meghalaya Techno City, Baridua, 9th mile, Ri-bhoi, 793101, Meghalaya

Certificate

This is to Certify that NEINGAM KONYAK student of M.Sc. 4th Semester has satisfactorily completed the project work under my guidance in the Department of Zoology, USTM that the post graduate research Project entitled "ICHTHYOFAUNAL DIVERSITY OF LAPA LAMPONG, TIZIT, MON, NAGALAND" submitted by NEINGAM KONYAK is a record of research work carried out by her under the guidance and supervision of me in the fulfilment of the award of Master in Science with specialization in 'Animal Ecology and Wildlife Biology'. The research output contained in her thesis is the outcome of her continuous efforts. This certificate is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any other degree or diploma as such by any other University or Organisation or Institution.

Moreover, NEINGAM KONYAK is an honest, dedicated and conscientious research and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

MR. ARUP NAMA DAS

Assistant Professor

Department of Zoology

School of Biological Science

Date: 175 6 - 2019

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Unveiling Excellence

Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "A Comparative study of activity budgeting and diet preference of rhesus macoque in Basistha temple" submitted by Miss Karishmita Hazarika is a record of benefit research work carried out by her under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

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Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "Study on the Butterfly Diversity of Garbhanga Reserve Forest" submitted by Shri Debojit Bhumij is a record of bonafide research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

(Mr. Sudipta Nag)

Sudipla Nag.

Project supervision

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UNIVERSITY OF SCIENCE & TECHNOLOGY MEGHALAYA Techno - City Baridua, 9th Mile, Ri- Bhoi -973101, Meghalaya

CERTIFICATE

I have the pleasure to certify that the Post Graduate research project work entitled

"A SURVEY ON THE FISH DIVERSITY OF BARLIA RIVER, RANGIA IN THE

KAMRUP (R) DISTRICT OF ASSAM"

Submitted By Safika Begum is record of bonafied research Work Carried out by her under my guidance and supervision in the fulfillment of the award of Master of Science with specialization in "Fish and Fishery Biology'. The research outputs contained in her thesis in the out come of her continues efforts. This certification is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any other degree of this University or any other Institute.

Signature of the External Examiner

(Dr. Bulbul Acharjee)

Signature of the Project Supervisor

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Department of Zoology Meathers and Technology Meathers

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SCHOOL OF BIOLOGICAL SCIENCE.

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA TECHNO CITY, BARIDUA, 9TH MILE, RI-BHOI 793101,



CERTIFICATE

This is to certify that FREBIOUS A SANGMA student of M.Sc 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "DIVERSITY OF BEETLES (ORDER: COLEOPTERA) IN KHANTOLGURI, NORTH GARO HILLS DISTRICT, MEGHALAYA" submitted by FREBIOUS A SANGMA is a record of research work carried out by him under the supervisor of me in the fulfillment of the award of Master in Science with specialization in "ENTOMOLOGY". The research outputs contained in his dissertation is the outcome of his continuous efforts. This certification is made in the sense that the work complied and presented in his dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, FREBIOUS A SANGMA is an honest, dedicated and he possesses a very good moral character. I wish him a bright, prosperous and successful future.

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Dr. Rashmimala Kakoti

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Department of Zoolegy.

Subsel of Binlos ical Science, USTN

Date: No As /17

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

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Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "An account of Distribution of Phytoplankton and the seasonal variation of physio-chemical parameters of USTM pond" is a compilation of the results of work carried out by Ms. Shahnaz Parbin Haque (Roll No. 17/MSZ/07), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Shahnaz Parbin Haque is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

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(DIPANKAR DUTTA)
Dissertation Supervisor

AK Registral & Technology

University of Weapsilay



DEPARTMENT OF ZOOLOGY

University of Science and Technology, Meghalaya 9th Mile, Ri-Bhoi, Meghalaya, INDIA.

Syed Rizaul Karim Ahmed, Date: Assistant professor, Department of Zoology

Certificate

This is to certify that the dissertationwork entitled "A field study on distribution of ABO blood group and presence of rare blood group Bombay (Oh) phenotype if any, among the people of Bongaigaon district, Assam, India" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoologywith specialization in Cell and Molecular Biology in University of Science and technology, Meghalaya. This dissertation work has done by Mr.Hafiz Uddin Ahmed, M.Sc.4" semester bearing Roll No. 17/MSZ/08 and Enrollment No.PG/2017/03023, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life.

Place: USTM, Meghalaya

(SYED RIZAUL K. AHMED)

Assistant Professor,

Department of Zoology, USTM

Oeoauman of Joology & exercising of science and Technology

HOD

Department of Zoology

University of Science and Technology Meghalaya

University of Schedingles as I school



Certificate

This is to certify that the thesis entitle "Study On Mutant Varieties of Deasophila melanogaster in Gonlpara District" is a compilation of the result of research work carried out by Meheboob Ali Ahmed (17/MNSZ/09) under my guidance and supervision.

Meheboob Ali Ahmed is a bona fide M.sc fourth semester student of the department of the Zoology of this university. His work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master of Science in Zoology of this University.

900210

13/06/15 Rizaul Karim Ahmed

Asst. Professor of Department of Zoology

School of Biology Science, USTM

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CERTIFICATE

This is to certify that MURSIDA AKHTAR a student of M Sc 4" semister bas satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "DIVERSITY OF BUILTERFLY IN RANGHA AREA" submitted by MURSIDA AKHTAR is a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in "INSECT PHYSIOLOGY AND ECONOMIC ENTOMOLOGY". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Date:

Dr. BAKHTIAR HUSSAIN

Assistant Professor

Department of Zoology

School of Biological Science, USTM.

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Mary HOD Toology terropays

University of Science and Technology, Meghalaya

Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Antushree Patgiri student of M.Sc. 4th semester has satisfactorily completed the research project entitled "A Preliminary Survey on Comparison of feeding behaviour of Navagraha and Basistha temple" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Antushree Patgiri is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Mr. Arup Nama Das

Date: 17-6-2019

Place: USTM

Assistant Professor Department of Zoology

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Diversity of fish found in the water bodies of Jonai sub division, Assam" is a compilation of the results of research work carried out by Ms. Kerumoni Kaman (M.Sc. Roll No. 17/MSZ/12) under my guidance and supervision. She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

* University of Chiversity of

May of Medical and Lectudos.

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

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Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Comparative Biochemical Estimation of Protein having scale & non-scaled of two different Fish species of the genus Mystus (M. tengara & M. bleekeri) and the genus Labeo (L. rohita & L. bata)" is a compilation of the results of work carried out by Ms. Shahida Ahmed (Roll No. 17/MSZ/13), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Shahida Ahmed is <u>bonafide</u> student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

(DIPANKAR DUTTA)
Dissertation Supervisor

All Jagradaya Condooy

HOD
Department of Zoology
University of Science and Technology Meghalaya

SCHOOL OF BIOLOGICAL SCIENCE

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA TECHNO CITY, BARIDUA, 9TH MILE, RI-BHOI 793101, MEGHALAYA.



CERTIFICATE

This is to certify that NAZIM UDDIN AFZAL student of M.Sc 4th semester has satisfactorily completed the project work under my guidance for the post graduate field study entitled "DISTRIBUTION OF ABO BLOOD GROUP AND PRESENCE OF RARE BLOOD GROUP "BOMBAY(Oh)" if any PHENOTYPE AMONG THE PEOPLE OF GOALPARA DISTRICT, ASSAM

"The dissertation submitted by NAZIM UDDIN AFZAL is a record of research work carried out by him under the supervision of me in the fulfillment of the award of Master in Science with specialization in CELL AND MOLECULAR BIOLOGY. The research outputs contained in his dissertation is the outcome of his continuous efforts. This certification is made in the sense that the work complied and presented in his dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, NAZIM UDDIN AFZAL is an honest, dedicated and he possesses a very good moral character. I wish him a bright, prosperous and

and Techno

successful future.

Date: 20/6/19

Mr. Syed Rizaul Karim Ahmed

Assistant Professor

Department of Zoology

School of Biological Science, USTM,

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University of Science and Technology, Meghataya

Techno Civ, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Parash Pratim Barman student of M.Sc 4th Semester has satisfactorily completed the research project entitled "Study of Population Growth of Parasites and Predators of Muga Silkworm (Antherea assama) and Pests of Som Plant (Machilus bombycina) at Adverse Environmental Conditions" under my guidance and supervision in the fulfillment of the award of Master in Science with specialization in "Entomology". The research contained in his thesis is the outcome of his continuous effort. The certification is made in the sense that the works complied and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Parash Pratim Barman is an honest, dedicated and conscientious researcher and he possesses a very good moral character. I heartily wish him a bright, prosperous and successful future

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Dr. Rashmimala Kakati

Professor

Department of Zoology

School of Biological Science, USTM

Date:

Thingsing of Medical & Lectuology.

Department of 2001099 Meghalaya



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Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "Seasonal variation of physico-chemical parameters of water in three historic ponds in Guwahati city with reference to their Zooplankton distribution" submitted by Miss Parismita Phukon is a record of bonafied research work carried out by her under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Techno city Baridua ,killing road ,9th mile,Dist-Ri –Bhoi,793101



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CERTIFICATE....

This is to certify that the dissertation entitled "EVALUATION OF INTIATION STAGES OF CHITIN SYNTHESIS IN EXOSKELETON OF COCKROACHES(P. americana)" is a record of research work done by BANJITA BARUAH beating Roll No -17/MsZ/18 submitted to UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA in partial fulfillment of the requirement of MSc 4th semester, Department Zoology and that the dissertation has not previously formed the basis of any other dissertation work for any other students or research work for any other scholar and that the dissertation represents independent and original work on the part of the candidate under my guidance.

R leakati 1906 19 Dr.RashmimalaKakati

(Assesians Professor)

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Mr. Department of Zook Andrewskin



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar **Associate Professor** Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that NEKIBUDDIN AHMED bearing Roll no. 17/MSZ/020 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. He has successfully carried out the dissertation entitled "HABITAT PREFERENCES OF BUTTERFLY IN BOKO AREA OF ASSAM" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on his observation and not submitted for any other degree in any other institute.

Peabal

Dr. Prabal Sarkar

Supervisor

Attoo of Looks Westings Techno City, Kling Road, 9th Mile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101



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(Established under Act 6 of 2008 enacted by the state Legislative Assembly of Meghalaya & Incorporated under Section 22 & 2 (f) of the UGC Act 1956)

Certificate

This is to certify that WORLDSRANG T SANGMA, a student of M.sc 4th Semester bearing Roll No.17/MSZ/21 of the Department of Zoology, University of Science & Technology Meghalava has successfully completed her dissertation entitled, "Bionomics of two stored grain pest(Sitophilus Oryzae and Tribolium Casteneum) from West Garo Hills" towards the partial fulfillment of Master of Science in Zoology, University of Science & Technology, Meghalaya under my supervision.

To the best of my knowledge and belief the work is based on the investigations made, data collected and analyzed by him, therefore, is a genuine record of independent and bonafide research work done by him.

Date: 20, 06.19



Dr. Rashmimala Kakoti

Supervisor

Department of Zoology

University of Science & Technology, Meghalaya

Techno City, Kling Road, Baridua, 9th Mile, R-Bhoi, Meghalaya - 78 101Ph, 0361-2895030 (Telefix), 008540-23060, E-mail: ustm2011@gmail.com, wo work www.ustm.ac.in

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA
TECHNO CITY, BARIDUA, 9^{TR} MILE, RI-BHOI 793101, MEGHALAYA.



CERTIFICATE

This is to certify that AMAR DEBNATH student of M.Sc 4th semester has satisfactorily completed the project work under my guidance for the post graduate research project entitled "PROTEIN CONTENT OF SOME PREFERED INSECTS BY TRIBAL COMMUNITIES OF BAKSA DISTRICT, BTAD, ASSAM." The dissertation submitted by AMAR DEBNATH is a record of research work carried out by him under the supervision of me in the fulfillment of the award of Master in Science with specialization in ENTOMOLOGY. The research outputs contained in his dissertation is the outcome of his continuous efforts. This certification is made in the sense that the work complied and presented in his dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, AMAR DEBNATH is an honest, dedicated and he possesses a very good moral character. I wish him a bright, prosperous and successful future.

Date: 15/06/10

Dr. Alika Borphukan Borah

Assistant Professor

Department of Zoology

School of Biological Science, USTM.

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Rongkai River, Meghalaya" is a compilation of the results of research work carried out by Ms. Rikginchi Marak (M.Sc. Roll No. 17/MSZ/23) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA-793101

Dr. ALIKA BORPHUKAN BORA

Assistant Professor.

Department of Zoology

University of Science & Technology, Meghalaya

Phone: +91 8638573962, +91 9854012154

Email: alikanandask@yahoo.com

Date: 18/06/19

Certificate

This is to certify that the dissertation entitled "COMPARATIVE STUDIES ON LARVAL WEIGHT AND SHELL RATIO OF ERI SILKWORM(Samia ricini) REARED WITH CASTOR(Ricinus communis) AND VITAMIN D₃ ENRICHED DIET" is a compilation of the results of work carried out by CHINMOYEE GOGOI (Enrolment No. PG/2017/03216, Roll No. 17/MSZ/24), Department of zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

CHINMOYEE GOGOI is a bonafied student of M.Sc Zoology 4th semester with Entomology as his Special paper. The dissertation or any of its part has not been submitted absolute for any degree or distinction in any other University/ Institution.

Learning to the forward this dissertation for consideration for the award of the learning to the section of University of the Section of Biological Science) of University of the Section of Control of Biological Science of University of the Section of Control of the Section of Biological Science of University of the Section of the Section of Biological Science of University of the Section of Control of the Section of Biological Science of University of the Section of Control of Co

Leady the all success in life.

(Alika Borphukan Bora)

Dissertation

Supervisor

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UNIVERSITY OF SCIENCE & TECHNOLOGY MEGHALAYA

(Established under Act 6 of 2008 enacted by the state Legislative Assembly of Meghalaya & incorporated under section 22 & 2(f) of the UGC Act 1956)

CERTIFICATE

Date:

This is to certify that Rabina Begum, a student of M.sc 4th Semester bearing Roll No. 17/MSZ/25 of the Department of Zoology, University of Science & Technology, Meghalaya has successfully completed her dissertation entitled, "A Study on The Prevalence of Anemia Among Girls Residing in Hostels/PG" towards the partial fulfillment of the degree of Master of Zoology of University of Science & Technology, Meghalaya, under my supervision.

To the best of my knowledge and belief the work is based on the investigations made, data collected and analyzed by her and, therefore, is a genuine record of independent and bonafide research work done by him.

SYED REJAUL KARIM AHMED

Assistant Professor

Department of Zoology

University of Science & Technology, Meghalaya

Techno City, Killing Road, Baridua, Ri-Bhoi, Meghalaya-79310
Ph- 0361-2895030, E-mail: <u>ustm2011@gmail.com</u>, website: www.ustm.ac.in

University of Science & Technology

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

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Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Comparative Biochemical Estimation of Protein having scale & non-scaled of two different Fish species of the genus Anabas (Anabas testudineus & Anabas cobojius) and the genus Ompok (Ompok pabda & Ompak bimaculatus)" is a compilation of the results of work carried out by Ms. Razia Sultana (Enlloment No. PG/2017/03239, Roll No. 17/MSZ/26), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Razia Sultana is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

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DIPANKAR DUTTA)

Dissertation Supervisor

University of Meghadaya choology

SCHOOL OF BIOLOGICAL SCIENCE UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA TECHNO CITY, BARIDUA, 9TH MILE, RI-BHOI 793101, MEGHALAYA.



CERTIFICATE

This is to certify that NAMBE K. SANGMA student of M.Sc 4th semester has a stactorily completed the project work under the guidance of me for the post graduate research project entitled "DIVERSITY OF COLEOPTEA IN USTM CAMPUS, RI-BHOI DISTRICT, MEGHALAYA" submitted by NAMBE K. SANGMA is a record of research carried out by her under the supervisor of me in the fulfillment of the award of Master Science with specialization in "INSECT PHYSIOLOGY AND ECONOMIC TOMOLOGY". The research outputs contained in her dissertation is the outcome of her naous efforts. This certification is made in the sense that the work complied and ented in her dissertation has not been formed for the award of any other degree or to ome as such by any other University or Institution.

Moreover, NAMBE K, SANGMA is an honest, dedicated and she possesses a very and character. I wish her a bright, prosperous and successful future.

10/06/10

Technology

Maghukan Dr. Alika Borphukan Borah

Assistant Professor

Department of Zoology

University of Medicalaya

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SCHOOL OF BIOLOGICAL SCIENCE

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA
TECHNO CITY, BARHDUA, 9TH MILE, RI-BHOI 793101, MEGHALAYA.



CERTIFICATE

This is to certify that MAHMUDA KAKATI student of M.Sc 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "DIVERSITY OF VEGETABLE INSECT PEST IN BAMUNBART AREA, NALBARI DISTRICT, ASSAM" submitted by MAHMUDA KAKATI is a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in "INSECT PHYSIOLOGY AND ECONOMIC ENTOMOLOGY". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Alexhukan

Dr. Alika Borphukan Borah

Assistant Professor

Department of Zoology

School of Biological Science, USTM.

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Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that TRIBENI HAZARIKA bearing Roll no. 17/MSZ/029 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "BUTTERFLY DIVERSITY IN USTM CAMPUS OF MEGHALAYA" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Prabal Sarkar.

Dr. Prabal Sarkar Supervisor

June Dept of Tot Tot Tot Tot Technology Head ales

Techno City, Kling Road, 9thMile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101





DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

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Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that LAKHYA CHUMPI BORA bearing Roll no. 17/MSZ/030 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "MOTH DIVERSITY IN GOLAGHAT DISTRICT OF ASSAM" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Prabal Sarkar.

Dr. Prabal Sarkar Supervisor

Department of technical Heartaines

Techno City, Kling Road, 9th Mile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

University of Meghalaya

SCHOOL OF BIOLOGICAL SCIENCE

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA
TECHNO CITY, BARIDUA, 9TH MILE, RI-BHOI 793101, MEGHALAYA.



CERTIFICATE

This is to certify that BIDISHA DUTTA student of M.Sc 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "SPECIES COMPOSITION, ABUNDANCE AND DIVERSITY OF GRASSHOPPER (INSECTA: ORTHOPTERA) IN USTM CAMPUS, RI-BHOI DISTRICT, MEGHALAYA" submitted by BIDISHA DUTTA is a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in "INSECT PHYSIOLOGY AND ECONOMIC ENTOMOLOGY". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, BIDISHA DUTTA is an Express, dedicated and she possesses a very good moral character. I wish her a bright, prosperous and successful future.

Date: 18 | 6.6 | 19

University of Meghalaya

Maylinka Dr. Alika Borphukan Borah

Assistant Professor

Department of Zoology

School of Biological Science, USTM.

Department of Econology the University of Science and Technology the

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UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA-793101

Dr. ALIKA BORPHLIKANI BORA

Assistant Professor,

Department of Zoology

University of Science & Technology, Meghalaya

Phone: +91 8638573962, +91 9354012154

Email: alikanandask@yahoo.com

Date: 18/06/19

Certificate

This is to certify that the disserbation entitled "INFLUENCE OF VITAMIN C ON LARVAL WEIGHT AND SHELL RATIO OF EIG SILKWORM (Samia ricini) " is a compilation of the results of work carried out by Mr. ASHIQUDDIN AHMED (Enrolment No. PG/2017/03278, Roll No. 37/8/67/332 Department of zoology, University of Science & Technology, Meghalaya under my endsens and supervision.

ASHIOUDDIN AHMED is a barrated stadent of M.Sc Zoology 4th semester with Entomology as his Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any celter University/ Institution.

I am pleased to forward this dissertation for consideration for the award of the of Master in Science in Zoology (under the School of Biological Science) of University and Technology, Meghalaye.

while all success in life.

Dorphukan (Alika Borphukan Bora)

Dissertation

Supervisor

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

CERTIFICATE

This is to certify that the thesis entitled "Study of diversity of vegetable pests in Kamrup district of Assam" is a compilation of the results of research work carried out by Ms. Amina Khatun (M.Sc. Roll No. 17/MSZ/34) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Rashmimala Kakati

Professor

Department of Zoology

School of Biological Science, USTM

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Description of Tology in the Branch of the State of the S

University of Science and Technology, Meghalaya Techno City, Baridua, 9th mile, RI bhoi 793101, Meghalaya



CERTIFICATE

This is to certify that the research entitled "Protein Content of Labeo roblin (Ramilton) in fresh, refrigerated and sundried condition" submitted in partial fulfillment for the award of M.Sc. Degree in Biological Sciences with Specialization in Cell and Molecular Biology of the University of Science and Technology, Meghalaya, is a record of the bonafied research work carried out by Upasana Sarma under my guidance and supervision. The certification is made in the sense that the works complied and presented in this thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

All the help and assistance received during the course of investigation have been duly acknowledged.

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Professor

Department of Zoology

School of Biological Sciences

Mr. - ma 6. Sten

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Bulbul Acharjee Associate Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish Diversity of Aie River, Assam" is a compilation of the results of research work carried out by Ms. Jemifa Wahid Mondal (M.Sc. Roll No. 17/MSZ/36) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Bulbul Acharjee Associate Professor, USTM



My Decentron of Zoology Meghalaya

University of Meghalaya



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Bulbul Acharjee Associate Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish Diversity of Kapla Beel, Barpeta, Assam" is a compilation of the results of research work carried out by Ms. Dimpal Kalita (M.Sc. Roll No. 17/MSZ/37) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Signtaure

Dr. Bulbul Acharjee Associate Professor, USTM



Department of Zoology Heartables A



Department of ZOOLOGY
University of Science and Technology,

Meghalaya

CERTIFICATE

This is to certify that the dissertation "TOXICOLOGICAL EFFECT OF MERCURY CHLORIDE ON Clarias batrachus NEAR THE CITY GUWAHATI, KAMRUP DISTRICT, ASSAM". submitted by NILIMA KHATUN 17/msz/38. Department of zoology, University of Science and Technology, Meghalaya embodies the result of his original work and personal investigation carried out under my supervision and guidance. The work as a whole or part thereof has not been submitted for any degree elsewhere.

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SUPERVISOR (MRS. WANAZ N ISLAM)

Mulling Control of the Control of th

University of Meghalaya



Department of Loology
University of Science and Technology,
Meghaloya

CERTIFICATE

This is to certify that the dissertation "AQUATIC INSECT DIVERSITY OF CHAULKHOWA RIVER OF CHIKARBHITA AREA OF BARPETA DISTRICT", Submitted by HENA YESMIN, 17/MSZ/40. Department of zoology, University of Science and Technology, Meghalaya embodies the result of his original work and personal investigation carried out under my supervision and guidance. The work as a whole or part thereof has not been submitted for any degree elsewhere.

All the help and assistance received during the course of investigation have been duly acknowledged.

Dates

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DR. BHAKTIAR HUSSAIN

Assesse Professe

Department of Zerology, USIM

University of Meghalaya

My Department of Zoology hegraaya

CERTIFICATE

This is to certify that RAKIBUL ISLAM, a student of M.Sc.4th semester bearing Roll No.-17/MSZ/41,has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "A STUDY ON GRASSHOPPER OF HOWLY AREA, BARPETA, ASSAM" The same submitted by RAKIBUL ISLAM is a record of research work carried out by him under the supervision of me for the fulfillment of the award of Master in science with specialization in "ENTOMOLOGY". The research output contained in the thesis is the outcome of his continuous efforts.

(Dr. Bakhtiar Hussain) Associate Professor Dept. of Zoology, USTM

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University of Science and Technology Meghataya



UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA-793101

Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "An Account of Seasonal variation of Water Physiochemistry and Zooplankton Fauna in the USTM pond, Ri-Bhoi Meghalaya" is a compilation of the results of work carried out by Mr. Firdous UI Kabir Mollah (Enlloment No. PG/2017/03340, Roll No. 17/MSZ/42), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Mr. Firdous Uł Kabir Mollah is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish him all success in life.

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Department of Zoology tegrature

(DIPANKAR DUTTA)
Dissertation Supervisor



UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

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Department of zoology

Mrs. Wanaz Nasreen Islam

Asst. Professor, Cell and Molecular Biology

Certificate by the Supervisor

I certify that the project entitled "A COMPARATIVE STUDY ON HAEMATOLOGICAL VALUES OF BLOOD OF INDEGENOUS AND BROILER CHICKEN" submitted by Ms.Devi Ngute, Roll No:17/MSZ/43, EXAM ID: 19241017, to the Department of Zoology, USTM in partial fulfilment of M.Sc. degree embodies the record of original investigation carried out by her under my supervision. To the best of my knowledge, the Project embodies account for her own findings and has not been submitted previously anywhere for any degree whatsoever by either her or anyone else.

Clence and

Dated: 20/06/19

Place: Techno City, 9th Mile, Ri-Bhoi

Again to Ties

Mrs Wanaz Nasreen Islam

University of Medhalaya



UNIVERSITY OF SCIENCE AND TECHNOLOGY

MEGHALAYA

(Established under Act 6 of 2008 enacted by the state Legislative Assembly of Moghalaya & Incorporated under Section 22 & 2 (f) of the UGC Act 1956)

CERTIFICATE

This is to certify that DECKYSON M. MARAK, a student of M sc 4th Semester bearing Roll No.17/MSZ/45 of the Department of Zoology, University of Science & Technology Meghalaya has successfully completed her dissertation entitled, "A Study of Coleoptera in 8th Mile and 9TH Mile Area, Assam" towards the partial fulfillment of Master of Science in Zoology, University of Science & Technology, Meghalaya under my supervision.

To the best of my knowledge and belief the work is based on the investigations made, data collected and analyzed by him, therefore, is a genuine record of independent and bonafide research work done by him.

Date:



Dr. Bakhtiar Hussain

Supervisor

Department of Zoology

University of Science & Technology, Meghalaya

Ph. 9361-2895030 (Telefax), 098540-23060, E-mail: ustm2011/a/gmail.com, websitewww.ustm.ac.in

University of Science days

Department of Zoelogy Meghalaya



University of Science and Technology, Meghalaya

Certificate

This is to certify that the dissertation work entitled "A field study on distribution of ABO blood group and presence of rare blood group "Bombay (Hh) phenotype" if any, among the people of Barpeta district, Assam, India". Submitted for partial fulfillment of the award for the degree of Master of Science in Zoology with specialization in Cell and Molecular Biology of University of Science and technology, Meghalaya, This dissertation work has done by Mr. Md Abul Kalam Azad Bhuyan, M.Sc.4th semester bearing Roll No. 17/MSZ/46 and Enrollment No. PG/2017/03376, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life.

Mr. SYED RIZAUL K. AHMED

Assistant Professor Department of Zoology USTM

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University of Science of technology, Meghalaya Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya.



Certificate

This is certify that Divya Sonar student of M.Sc 4th Semester has satisfactorily completed the research project entitled "STUDY OF AVIAN FAUNA DIVERSITY IN BRAMHAPUTRA, ASSAM" under my guidance and supervision in the fulfilment of the award of Master in Science with specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis has hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organisation or Institution.

Moreover, Divya Sonar is an honest, dedicated and conscientious researcher and she posses a very good moral character. I heartily wish her a bright, prosperous successful future.

Mr. Arup Nama Das 16/19

Assistant Professor

Department of Zoology

School of Biological Science

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UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA



University of Science and Technology, Meghalaya

Techno city, Baridua, 9th mile, Ri-Bhoi 793101, Meghalaya

Certificate

This is to certify that RAJINA APTER student of M.Sc. 4th semester has satisfactorily completed the project work under my guidance in post graduate research entitled "EVALUATION OF PROTEIN CONTENT IN FRESH, REFRIGERATED AND DRIED Labeo bata (Hamilton, 1822)" submitted by Rajina Apter is a record of research work carried out by her under guidance and supervision of me in the fulfillment of the Master in Science with specialization in "Cell and Molecular Biology". The research output contained in her thesis is the outcome of his continuous efforts. The certification is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any other degree or diploma as such by any other University or Organisation or Institution.

Moreover, RAJINA APTER is an honest, dedicated and conscientious student and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Date: 19/05/19

Place: USTM

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Prof. D.K. Sharma

Professor

Department of Zoology

School of Biological Science

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Department of Zoology

University of Science and Technology Meghalaya

University of Meghalaya

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

Techno city, Baridua, 9th mile, Ribhoi 793101, Meghalaya



CERTIFICATE

This is to certify that Pilpili Bathari student of M.sc 4th semester has satisfactorily completed the research project entitled "Fish Diversity Of Diyung River, Diyungbra, Dima Hasao" under my guidance and supervision in the fulfillment of the award of Master in Science with specialization in Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continous effort, the certification is made in the sense that works compiled and presented in her thesis hasn't formed the basis for the award of any degree or diplomas such by any other university or organization or institution.

Moreover, Pilpili Bathari is an honest, dedicated and conscientious researcher and she posses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Mr. Arup Nama Das

Assistant professor

Department of Zoology

School Of Biological Science

USTM

Date: 17

Place:

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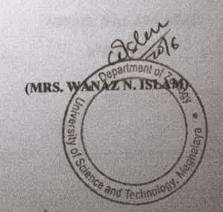
Department of Zoology University of Science and Technology, Meghalaya

CERTIFICATE

This is to certify that the dissertation "toxicological effect of copper on <u>Heteropneustes fossilis</u>. near Guwahati city, kamrup district, Assam". Submitted by ABDUL KALAM AZAD, 17/msz/50. Department of zoology, University of Science and Technology, Meghalaya embodies the result of his original work and personal investigation carried out under my supervision and guidance. The work as a whole or part thereof has not been submitted for any degree elsewhere.

Head of the Department
Supervisor

3|Page



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University of Science & Technology, Meghalaya



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Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that KRISHNAKSHI BARUAH bearing Roll no. 17/MSZ/051 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "IMPACT OF HABITAT DEGRADATION ON THE AVIAN DIVERSITY IN AND AROUND IIT, GUWAHATI, ASSAM, INDIA" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Prabal Sarkar.

Dr. Prabal Sarkar

Supervisor

Techno City, Kling Road, 9thMile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

Department of Zodlogy Heathaure

University of Science & Technology, Meghalaya



CERTIFICATE

This is to certify that APARAJITA BARMAN student of M.Sc 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "STUDY OF PADDY PEST IN BARCHALA, SONITPUR DISTRICT, ASSAM" submitted by APARAJITABARMANIS a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in "ENTOMOLOGY". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Date: 20/06/2019

Dr. Bakhtiar Hussain

Assistant Professor

Department of Zoology

School of Biological Science, USTM.



University of Egistral & Technology

Department of Establishing Mestablishing



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya - 793101, India

CERTIFICATE

This is to certify that the thesis entitled "Evaluation of pest infestations in the paddy fields of Barpeta district of Assam" is a compilation of the results of research work carried out by Ms. Farida Yesmin (M.Sc. Roll No. 17/MSZ/53) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

1 am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Rashmimala Kakati

Professor

Department of Zoology

School of Biological Science, USTM



UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA- 793101

Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Study of Hematological and Blood Biochemical Parameters in Assam Hill Goat" is a compilation of the results of work carried out by Ms. Farhina Afrin Siddiqui (Roll No. 17/MSZ/54), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Farhina Afrin Siddiqui is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

(DIPANKAR DUTTA)
Dissertation Supervisor



University of

Registrar Technology, Science & Technology, Meghalaya



Department of ZOOLOGY
University of Science and Technology,
Meghalaya

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CERTIFICATE

This is to certify that the dissertation "COMAPARATIVE STUDY ON PROTEIN CONTENT OF FRESH AND FORMALIN TREATED Labeorohita". submitted by ELINA AKTARUN AHMED 17/msz/55. Department of zoology, University of Science and Technology, Meghalaya embodies the result of his original work and personal investigation carried out under my supervision and guidance. The work as a whole or part thereof has not been submitted for any degree elsewhere.

Head of the Department
Supervisor



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University of Meghalaya

Meghalaya

Meghalaya



Unveiling Excellence

Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "A Study on Butterfly Diversity in Garbhanga Reserve Forest" submitted by Miss Priyanka Baruah is a record of bonafied research work carried out by her under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

(Mr. Sydipta Nagy

Project supervision

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University of Science and Technology, Meghalaya

Certificate

This is to certify that the dissertation work entitled "The influence of the CADMIUM CHLORIDE on the muscle protein of Heteropneustes fossilis" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in Cell and Molecular Biology of University of Science and technology, Meghalaya. This dissertation work has done by Miss. Susmita Devi, M.Sc.4 th semester bearing Roll No. 17/MSZ/57 and Enrollment No. PG/2017/03446, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish her all success in life.

Construction and Tachnard

Wanas N. Islam
Assistant Professor
Department of Zoology

University of Science & Technology, Meghalaya

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University of Meghalaya



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA Established under Act 6 of 2008 enacted by State Legislative Assembly of Meghalaya & incorporated under section 22 & 2 (f) of the UGC Act 1956

CERTIFICATE

This is to certify that Rezina Ahmed bearing Roll no.: 17/MSZ/58 and Exam I.D: 19241031 is a bonafide student of 4th semester of the course M.Sc. Zoology in University of Science and Technology. Meghalaya. She has successfully carried out her dissertation entitled "STUDY OF DRAGONFLY SPECIES IN AGOMANI AREA, DHUBRI DISTRICT" under my supervision and guidance for the partial fullfilment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree to any other institute.



Dr. Bakhtiar Hussain Supervisor

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University of Meghalaya

Registral & Technology,

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya - 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Pagladia River, Assam" is a compilation of the results of research work carried out by Ms. Nikita Sarma (M.Sc. Roll No. 17/MSZ/59) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Department of Zoology Meghalaya



University of Science and Technology, Meghalaya

Certificate

This is to certify that the dissertation work entitled "The toxicological impact of Cypermethrin on the muscle protein of Heteropneustes fossilis" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in Cell and Molecular Biology of University of Science and technology, Meghalaya. This dissertation work has done by Sushruti Kashyap, M.Sc.4th semester bearing Roll No. 17/MSZ/060 and Enrollment No.PG/2017/3453 under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish her all success in life.



Ser La La

Wanaz N. Islam
Assistant Professor
Department of Zoology,
University of Science & Technology,
Meghalaya

University of Medhalaya



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

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Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that ANANYA CHAKRAVARTY bearing Roll no. 17/MSZ/061 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "PLAY BEHAVIOUR IN RHESUS MACAQUE" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Peabal Sarkar

Dr. Prabal Sarkar

Supervisor

Mr. Designation of Topics of Assessment

Techno City, Kling Road, 9th Mile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

University of Meghalaya



UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY TECHNO CITY, KILLING ROAD, BARIDUA, 9¹¹¹ MILE, RI-BHOI, MEGHALAYA- 793101

Dhirendra kumar sarma
Assistant Professor ,Dept.of zoology
University of Science & technology,Meghalaya

DATE- 19/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "ASSAY OF SOLUBLE PROTEIN IN FRESH, REFRIGERATED AND SUN DRIED TISH OF *Channu puniatus*" is a compilation of the results of work carried out by Mr./Ms. __Namul Hoque (Enrollment No. PG/2017/03488 Roll No. 17/MSZ/62), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Mr./Ms. ___NAZMUL HOQUE is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as his Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master In Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish his all success in life.

Dhirendra Kumar Sarma

Dissertation Supervisor

HOD

Department of Zoology

University of Science and Technology Meghalaya

Co and Te

University of Science & Technology

University of Science and Technology, Meghalaya Techno City, Baridua, 9th mile, Ribboi 793101, Meghalaya



Certificate

This is to certify that Saquiba Aziz student of M.Sc. 4th semester has satisfactorily completed the research project entitled "A Preliminary Survey on Avifaunal Diversity in Amchang Wildlife Sanctuary, Kamrup (Assam), North Eastern India" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Saquiba Aziz is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Mr. Arup Nama Das 18-6-2019

Assistant Professor

Department of Zoology

School of Biological Science, USTM

Date 18 6 19 Place: USTM

My De Darrine and Technology Medicals

University of Meghalaya

University of Science and Technology, Meghalaya

Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Biswajit Talukdar student of M.Sc. 4th semester has satisfactorily completed the research project entitled "Status and Habitat ecology of Fruit Bat in Orang, Udalguri District of Assam, North Eastern India" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in his thesis is the outcome of his continuous effort. The certification is made in the sense that the works compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Biswajit Talukdar is an honest, dedicated and conscientious researcher and he possesses a very good moral character. I heartily wish him a bright, prosperous and successful future.

Amp Nounday 1976 Mr. Arup Nama Das

Assistant Professor

Department of Zoology

School of Biological Science, USTM

Date: 19-6-19 Place: 19STM

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University of Meghalaya



Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Killing road, 9th mile, Ri-Bliof

Mr. Sudiple Neg

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled " Use of animal products in making traditional medicine around Rangia of rural Ramrup district, Asaam," submitted by MISS RUNA LAILA is a record of bonafied research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of my degree or diploma as such by any other University or Organization or Institution.

(Mr. Sudipta Nag)

Project supervision

University of Medicaleva connoised,



University of Science and Technology, Meghalaya

Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Ankita Kalita student of M.Sc. 4th semester has satisfactorily completed the research project entitled "Status of Elephant corridors in Garbhanga-Rani reserve forest in an around Deepor beel, Assam "under my guidance and supervision in the fulfilment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Ankita Kalita is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Anp Nama Das 17/6/19

Assistant Professor

Department of Zoology

School of Biological Science, USTM

Date: 200 artment of Local Place of Control Place and Technology

University of Medical a Technology

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA- 793101

Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar,dd,26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Analysis of protein of Fermented fish (by indigenously Bodo traditional method) with a comparative analysis of the protein content from fresh water fish sample" is a compilation of the results of work carried out by Ms. Rimli Basumatary (Enllowent No. PG/2017/03517, Roll No. 17/MSZ/67), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Rimli Basumatary is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

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(DIPANKAR DUTTA)

Dissertation Supervisor

Registral & Technology,

CERTIFICATE

This is to certify that SHAJED ALI AHMED, a student of M.Sc. 4th semester bearing Roll No.-17/MSZ/070, has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "A COMPARATIVE STUDY OF PROTEIN AND CARBOHYDRATE CONTENT BETWEEN INDIGENOUS AND BROILER CHICKEN". The same submitted by SHAJED ALI AHMED is a record of research work carried out by him under the supervision of me for the fulfilment of the award of Master in science with specialization in "CELL AND MOLECULAR BIOLOGY". The research output contained in the theses is the outcome of his continuous efforts.

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Mrs Wanaz Nasreen Islam

Assistant Professor

Dept. of Zoology, USTM



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University of Meghaleya

Registrar & Technology



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that SUDIPTAA SARKAR bearing Roll no. 17/MSZ/072 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "AN INVENTORY TRADITIONAL METHODS OF ELEPHANT CAPTURE AND ITS TRADE IN WESTERN ASSAM" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

Manual of September 1 to 120 to 100 to 1 to 100 to

Peabal Sarkar

Dr. Prabal Sarkar

Dr. Prabal Sarkar Supervisor

Techno City, Kling Road, 9th Mile, Barldua, Dist: Ri-Bhoi, Meghalaya-793101

University of Meghalaya

University of Science and Technology, Meghalaya Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Sudemsha Muchahary student of M.Sc. 4th semester has satisfactorily completed the research project entitled "Mortality Pattern of Rhesus Macaque at Basistha Temple Kamrup district of Assam, India" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in his thesis is the outcome of his continuous effort. The certification is made in the sense that the works compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Sudemsha Muchahary is an honest, dedicated and conscientious researcher and he possesses a very good moral character. I heartily wish him a bright, prosperous and successful future.

Assistant Professor

Department of Zoology

School of Biological Science, USTM

Date: 18-6-2019 Place: USTM

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University of Meghalaya



Unveiling Excellence

Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "Diversity of Butterfly in Manas Chowki, Baksa District, Assam Field" submitted by Shri Nobo Kanto Boro is a record of bonafide research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

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(Mr. Sudipta Nag)

Project supervision

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Unveiling Excellence

UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

Techno city, Baridua, 9th Mile, Ri-Bhoi-793101, Meghalaya

Dr. Bulbul Acharjee, M.Sc, Ph.D

Associate Professor, Department of Zoology

CERTIFICATE

This is the certify that the thesis entitled "Fish Diversity of Kulsi River at Kamrup District, Assam" is a compilation of the result of research work carried out by Jesmin Sultan Nahar (Roll No. 17/MSZ/75, Enrollment No. PG/2017/03551, Examination Id No. 19241046 under my guidance and supervision.

Jesmin Sultan Nahar is a bonafied M.Sc 4th semester student of the Department of Zoology of this university.

Her work is original. The thesis or any of this part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Masters of Science in Zoology of this university.

Signtaure

Dr. Bulbul Acharjee

Associate Professor

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Department of Zoology Heathalans

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Dr. Bulbul Acharjee, Msc. Phd. Associate professor, Dept. of Zoology

CERTIFICATE

I have the pleasure to certify that the post graduate minor research project entitled "STUDY OF FISH DIVERSITY OF PUTHIMARI BEEL, SORBHOG, BARPETA, ASSAM" submitted by HABIBA KHATUN (Enrollment no PG/2017/03554, Msc Roll no. 17/MSZ/76, Examination ID .NO .19241047) is a record of research work carried out by her under my guidance and supervision in the fulfilment of the award of master in science with specialization in' FISH AND FISHERY BIOLOGY'. The research output contained in her thesis is the outcome of her continuous efforts. This certificate is made in the sense that the work complied and presented in her thesis has not formed the basis for the award of any other degree or diploma as such by any other University or Organisation or Institution.

HABIBA KHATUN is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I healthy wish her a bright and successful future.

Signature

(Dr. Rulbul Acharjee)

Associate professor,

Department of zoology

A Securitar a Technology.

Department of the control of the con



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Estimation of Protein content (mg/g) in body muscles of two commercially important species of Puntius from Brahmaputra River, Guwahati Area" is a compilation of the results of research work carried out by Mr. Abdul Kadir (M.Sc. Roll No. 17/MSZ/77) under my guidance and supervision.

He is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

His work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

HOD

Department of Zoology

University of Science and Technology Meghalaya

Registral & Technology



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Bulbul Acharjee Associate Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish Diversity of Yongo River, Aalo, West Siang" is a compilation of the results of research work carried out by Mr. Chimo Lombi (M.Sc. Roll No. 17/MSZ/78) under my guidance and supervision.

He is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

His work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Bulbul Acharjee Associate Professor, USTM



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Unveiling Excellence

Department of Zoology University of Science and Technology, Meghalaya Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "Hunting Practices & Techniques used by the Galo Tribe of Arunachal Pradesh with specific reference to the cultural beliefs associated with it" submitted by Mister Digge Yomcha is a record of bonafied research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution. ekejey6o

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Project supervision

University of Meghalaya Ocociment of Lociocy Hestable



UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA

DEPARTMENT OF ZOOLOGY

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Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Hematological study on Fresh water fishes, Heteropneustes fossilis and Clarius batrachus" is a compilation of the results of work carried out by Ms. Nikita Sutradhar (Roll No. 17/MSZ/81), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Nikita Sutradhar is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

(DIPANKAR DUTTA)

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(Dissertation Supervisor

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA- 793101

CERTIFICATE

This is to certify that the dissertation entitled "Estimation of soluble protein Content in Fresh, Refrigerated and Sun-dried Conditions of fish Puntius sophore (Hamilton)" is a compilation of the result of work carried out by Ms. SYED SANA ANSAR (Enrolment No. PG/2017/03591, Roll No. 17/MSZ/082), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. SYED SANA ANSAR is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation of any of its part has not been submitted elsewhere for any degree of distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (Under the school of Biological Science) of University of Science & Technology Meghalaya.

I wish her all success in life.

Date: 19/06/19

Place: USTM

Prof. D.K. Sharma

Professor

Department of Zoology

School of Biological Science

HOD

ce and Techni

Department of Zoology

Missestry of Science and Technology Meghalaya

University of Science & Technology, Meghalaya



CERTIFICATE

This is to certify that NAYANA DAS a student of M.Sc 4th semester has satisfactorily completed the project work under the guidance of the for the post graduate research project entitled " container survey of mosquito breeding sites in khanapara area of Guwahati " submitted by NAYANA DAS is a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in " **ENTOMOLOGY**". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, NAYANA DAS is an honest, dedicated and she possesses a very good moral character. I wish her a bright, prosperous and successful future.

Date: 20. 06 . 19

Dr. BAKHTIAR HUSSAIN

Associate Professor

Department of Zoology

School of Biological Science, USTM.



Meghalava

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CERTIFICATE

This is to certify that, PURNIMA BASUMATARY, a student of M.Sc. 47.

Semester bearing Roll No-17/MSZ/084, has satisfactorily completed the project work under the guidance of me for the post graduate Research Project entitled "A STUDY ON THE DIVERSITY OF GRASSHOPPER AT MUSHALPUR AREA OF BAKSA DISTRICT, ASSAM". The same submitted by PURNIMA BASUMATARY is a record of research work carried out by her under the supervision of me for the fulfilment of the award of Masser's in Science with specialization in "ENTOMOLOGY". The research output contained in the thesis is the outcome of her continuous efforts.

Moreover, PURNIMA BASUMATARY is an honest, dedicated and conscientious research and she possesses a very good moral character. I wish her a bright, prosperous and successful future.

Dr. Bhaktiar Hussain

Project Supervisor

Department of Zoology, USTM

School of Biological Science

University of Medicalaya achinology.

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DEPARTMENT OF ZOOLOGY

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

CERTIFICATE

This is to certify that Darshana Saikia bearing Roll no. 17/MSZ/85 and Enrollment no. PG/2017/3612 is a student of fourth semester of the course Msc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out her dissertation work entitled "PREVALENCE OF ANEMIA AMONG FEMALE OF AGE GROUP 18-25 YEARS, RESIDING EITHER IN HOSTELS OR AS PAYING GUESTS ACROSS KHANAPARA, SIX MILE AND RUKMINIGAON AREA, KAMRUP DISTRICT, GUWAHATI, ASSAM" under my guidance and supervision for the partial fulfillment of the requirement for the degree of Master of Science.

Data incorporated in this dissertation are based on her field survey, analysis and observation and not submitted to any other institute for any degree.

University of Science and Technology

Syed Rizaul Karim Ahmed

Supervisor

Minerally of Meghalaya Technology.

University of School and Technology Methods with the Comment of th



DEPARTMENT OF ZOOLOGY

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA Established under Act 6 of 2008 enacted by State Legislative Assembly of Meghalaya & incorporated under section 22 & 2 (f) of the UGC Act 1956

CERTIFICATE

This is to certify that Mehjabin Chowdhury bearing Roll no.: 17/MSZ/86 and Enrollment no.: PG/2017/03627 is a bona fide student of 4th semester of the course M. Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out her dissertation entitled "MORPHOMETRIC STUDY OF MUTANT VARIETIES OF FRUIT FLY (Drosophila melanoguster) IN LABORATORY REARING" under my supervision and guidance for the partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree to any other institute.

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Dr. Rashminials Kakoti Supervisor

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University of Me



Dr. Bulbul Acharjee, M. Sc, phD
Associate Professor, Dept. of Zoology

CERTIFICATE

This is to Certify that Asmina Khatun student of M. Sc. 4th semester has satisfactory competed the project work under the guidance of me the post graduate research project entitled "STUDY OF FISH DIVERSITY OF BALAISUTI BEEL, KALGACHIA, BARPETA DISTRICT, ASSAM" submitted by ASMINA KHATUN(Enrollment no-PG/2017/03635, Roll no-17/MSZ/87, Exam ID-19241058) is a record of research work carried out by her under guidance and supervision of me in the fulfillment of the award of Master in Science with specialization in 'FISH AND FISHERY BIOLOGY'. The research output contained in her thesis is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

ASMINA KHATUN is an honest, dedicated and conscientious research and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

VDr. Bulbul Acharjee

Associate Professor Department of Zoology

Registrat & Techno

Reghalaya



Unveiling Excellence

Department of Zoology University of Science and Technology, Meghalaya Techno city, Kiling road, 9th Mile, Ri-Bho

Mr.Sudipta Nag

Assistant Professor,

USTM.

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "A STUDY TO ASSESS THE BIO-PHYSICO-CHEMICAL PARAMETERS AND THE THREATS CONCERNED WITH THE DEEPOR BEEL AND SILSAKO BEEL OF GUWAHATI CITY, ASSAM" submitted by JEMIMA MASUM SULTANA is a record of bonafiedresearch work carried out by her under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in her thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution

Sudipla Nag (Mr. Sudipta Nag)

Assistant Professor

University of Meghalaya

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DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that NAVAJIT BAYAN bearing Roll no. 17/MSZ/090 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. He has successfully carried out the dissertation entitled "SPIDER DIVERSITY IN NALBARI DISTRICT OF ASSAM" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on his observation and not submitted for any other degree in any other institute.

Peabal

Sarkar

Dr. Prabal Sarkar

Supervisor

Techno City, Kling Road, 9thMile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

University of Science & Technology, Meghalaya

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UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

Established under Act 6 of 2008 enacted by the State Legislative Assembly of Meghalaya & incorporated under section 22 & 2(f) of the UGC Act 1956

CERTIFICATE

This is to certify that research entitled "EVALUATION OF PROTEIN CONTENT OF Anabas testudineus of DHEER BILL, DHUBRI UNDER FRESH, FROZEN AND DRIED CONDITIONS" submitted in partial fulfillment for the award of M.Sc. Degree in BIOLOGICAL SCIENCES with specialization in CELL AND MOLECULAR BIOLOGY of the University of Science and Technology, Meghalaya, is a record for the research work carried out by Palash Paul under my guidance and supervision. No part of this research has been submitted to any other degree or diploma.

All the help and assistance received during the course of investigation have been duly acknowledged.

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D.K.Sharma

Professor

Department of Zoology

School of Biological Sciences

USTM

Myersity of Meghalaya Technology.

The Department of Science and Technology Responses to Scann



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar Associate Professor Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that RESHMA KHATUN bearing Roll no. 17/MSZ/092 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. She has successfully carried out the dissertation entitled "CRAB DIVERSITY IN BARPETA DISTRICT OF ASSAM" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on her observation and not submitted for any other degree in any other institute.

A THE TO TOO TO THE STARTS

Peabal Sarkar

Dr. Prabal Sarkar Supervisor

Techno City, Kling Road, 9thMile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

University of Science & Technology, Meghalaya



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Icthyofaunal diversity with comparative morphometry of selected fish sp. of North Tirap River, Changlang, Arunachal Pradesh" is a compilation of the results of research work carried out by Ms. Tanroi Ngotan (M.Sc. Roll No. 17/MSZ/93) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Registral & Technology, of Science & Technology, Meghalaya



Certificate

This is to certify that the dissertation work entitled "Effect of Vitamin B-Complex on Samia ricini 5th instar larval body weight and it's shell ratio, submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in Entomology of University of Science and technology, Meghalaya. This dissertation work has done by Mr. MD SADDAM HUSSAIN, M.Sc.4th semester bearing Roll No. 17/MSZ/94, Enrollment No.PG/2017/03686 and Examination ID No. 19241064, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life,



Dr.ALIKA BORPHUKON BORAH

Assistant Professor

Department of Zoology,
University of Science & Technology,

Meghalaya

Registrar & Tech

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SCHOOL OF BIOLOGICAL SCIENCE

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA
TECHNO CITY, BARIDUA, 9¹⁸ MILE, RI-BHOI -793101, MEGHALAYA.



CERTIFICATE

This is to certify that BEDANA PROVA ROY a student of M.Se 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "EVALUATION OF SOLUBLE PROTEIN CONTENT IN FRESH, REFRIGERATED AND SUNDRIED FISH Notopterus notopterus" submitted by BEDANA PROVA ROY is a record of research work carried out by her under the supervisor of me in the fulfillment of the award of Master in Science with specialization in CELL AND MOLECULAR BIOLOGOY". The research outputs contained in her dissertation is the outcome of her continuous efforts. This certification is made in the sense that the work complied and presented in her dissertation has not been formed for the award of any other degree or diploma as such by any other University or Institution.

Moreover, BEDANA PROVA ROY is an honest, dedicated and she possesses a very good moral character. I wish her a bright, prosperous and successful future.

Date: 19 - 6 - 19

Dr. Dhirendra Kumar Sarma

Assistant Professor

Department of Zoology

School of Biological Science, USTM.

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Unveiling Excellence

Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "COMPARATIVE PHYSICO-CHEMICAL ANALYSIS OF CHAULKHOWA, PALLA, BRAHMAPUTRA AND BEKI, RIVER WITH SPECIFIC REFERENCE TO FISH DIVERSITY IN BARPETA DISTRICT, ASSAM" submitted by Amin Hussain is a record of bonafied research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or

Institution.

Project supervision

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University of Meghalaya

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(established under Act 6 of 2005 State Legislative Assembly of Meghalaya and incorporated under section 22 and 2(f) of the UGC Act 1950)

Dr Bulbul Acharjee, M.Sc., Ph.D, Associate professor, Department of Zoology

June 20, 2019

Certificate

This is to certify that the thesis entitled "Fish diversity of Deopani river at Ezengo village, at Lower Dibang Valley district, Arunachal Pradesh is a compilation of the results of research work carried out by miss Koj Sumpi (Enrollment No. PG/17/03703 and M.Sc Roll No. 17/MSG/98) under my guidance and supervision.

Miss Koj Sumpi is a bonafide M.Sc. fourth semester's student of the Department of Zoology of this University.

Her work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University

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Dr Bulbul Achariee

Techno City, Kiling Road Baridus, 9th Mile RI-Bhol District,

Meghalaya - 793101

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DEPARTMENT OF ZOOLOGY

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

Established under the Act 6 of 2008 enacted by the State Legislative Assembly of Meghalaya and incorporated under section 22 and 2 (f) of the UGC Act 1956.

CERTIFICATE

This is to certify that Rupam Kumar Baruah bearing the Roll no. 17/MS7/99 and Enrollment No. PG/2017/03705 is a bonafied student of fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya, He has successfully carried out his dissertation entitled "To study the prevalence of Haemoglobin (Hb) in school going girls of age group 12-18 years, of 4 villages of Dist-Kamrup (M) Assam.", under my supervison and guidance for the partial fulfillment of the requirements for the Degree of Masters of Science.

Data incorporated in this dissertation are based on his observation and not submitted for any other degree to any institute.

Mr.Syed Rizaul Karim Ahmed

Supervisor

Registral & Technology

Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Nisha Devi student of M.Sc. 4th semester has satisfactorily completed the research project entitled "Studies on the certain physico-chemical parameters of water of Brahmaputra river, Guwahati, Assam, India" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Nisha Devi, is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Aleghalaya *

And Nama Das 13 16/19

Assistant Professor

Department of Zoology

Date: 19 - 6-2019

Place: USTM

School of Biological Science, USTM

Department of Locality Institutes Interest alare

Registrar Registrar Science & Technology University of Science Meghalaya



Certificate

This is to certify that the dissertation work entitled "EFFECT OF HYPOTHERMIA ON LARVAL GROWTH AND DISEASE INCIDENCE IN REARING OF MUGA SILKWORM (Antheraea assama)" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in ENTOMOLOGY of University of Science and Technology, Meghalaya. This dissertation work has done by Mr.SANDIP LAHKAR, M.Sc.4" semester bearing Roll No. 17/MSZ/102 and Enrollment No.PG/2017/03723, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life.

Photon, 2017

DR. RASHMIMALA KAKATI

PROFESSOR

Department of Zoology, University of Science & Technology, Meghalaya



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Registrat Technology, Of Science & Technology, Meghalaya



Dr. Bulbul Acharjee, MSc, PhD Associate Professor, Dept. of Zoology

CERTIFICATE

It is certified that the thesis entitled "Systematic Account of Fish Diversity of Charon Beel at Morigaon District, Assam" is a compilation of the results of dissertation work carried out by Reema Senga of Roll No= 17/MSZ/103, 4TH semester in Department of Zoology, USTM, under my guidance and supervision. Her work is original and this thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this consideration for the award of the degree of Master in Science in Zoology of this University.

Signature

University of Science &

Dr. Bulbul Acharjee

Associate Professor

Department of Zoology

Technology.

Department of Zoology

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Techno City, Baridua, 9th mile, Ri-bhoi 793101, Meghalaya



Certificate

This is to certify that Liza Saikia student of M.Sc. 4th semester has satisfactorily completed the research project entitled "A Preliminary study on the habitat utilization by one horned Rhinoceros in Pobitora Wildlife Sanctuary, Assam, India"under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". Theresearch output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Liza Saikia is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Assistant Professor

Department of Zoology

School of Biological Science, USTM

Date: 69-6-19 * e Response de la constant de la con

University of Meghalaya

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Techno city Bachtua, Sth Mile, Ri-Bhoi-783101, Meghalaya

This is to certify that the Meghalaya is a compllate Radhika Basumatary (17/MSG/105) under my

Miss Radhika Basumatary Department of Zoology of the Carlinersity.

elsewhere for any degree a

I am pleased to forward degree of Master in Science

Brtificate

antitled "Butterfly diversity at USTM Campus, results of research work carried out by Miss No. PG/2017/03730 and M.Sc Roll No. and supervision.

Managed M.Sc. fourth semester's student of the

Her work is original. This is a low any of its part has not been submitted

esis for consideration for the award of the bology of this University

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Asphukan 10/06/19

Dr Alika Borphukan Borah (Assistant Professor)

Department of Zoology

School of Biological Science, USTM Department of Zoology

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(Established under Act 6 of 2008 of State Legislative Assembly of Meghalaya & Incorporated under section 22(f) of the UGC Act 1956)

Dr. Bulbul Acharjee, M.Sc., Ph. D. Associate Professor, Department of Znology

Date:

CERTIFICATE

This is to certify that the thesis entitled "FISH DIVERSITY OF NAHOTIA AND POTIASOLA BEEL AND RANGAJAN RIVER, POTIAGAON, JORHAT, ASSAM", by Miss Pooja Hazarika (Enrollment no. PG/17/03744, M.Sc. Roll no. 17/MSZ/106, Examination ID no. 19241074) under my guidance and supervision in the fulfilment of the award of Master in Science in Zoology of this University with specialization in "FISH AND FISHERY BIOLOGY".

The research output contained in her thesis is the outcome of her continuous efforts. The work compiled and presented in her thesis has not formed the basis for the award of any other degree or diploma as such by any other University or Organisation or Institution.

POOJA HAZARIKA is an honest, dedicated and conscientious researcher and she possesses a very good moral character. I heartly wish her a bright and successful future.

Dr. Bulbul Acharjee

(Associate Professor)

Deptt. Of Zoology

Techno City, Killing Road, Baridua,

9th Mile, Ri-Bhoi District,

Meghalaya-793101

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University of Meghalaya



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya - 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Length weight relationship and condition factor of fish species found in Basistha River, Assam" is a compilation of the results of research work carried out by Ms. Mouborosha Hazarika (M.Sc. Roll No. 17/MSZ/107) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

> Dr. Kimty Das Assistant Professor, USTM



DEPARTMENT OF ZOOLOGY

UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

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CERTIFICATE

This is to certify that research entitled "A COMPARATIVE STUDY OF PROTEIN CONTENT OF Catla catla UNDER FRESH, FROZEN AND DRIED CONDITIONS" submitted in partial fulfillment for the award of M.Sc. Degree in BIOLOGICAL SCIENCES with specialization in CELL AND MOLECULAR BIOLOGY of the University of Science and Technology, Meghalaya, is a record for the research work carried out by Lakshyasree Boruah under my guidance and supervision. No part of this research has been submitted to any other degree or diploma.

All the help and assistance received during the course of investigation have been duly acknowledged.

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D.K.Sharma

Professor

Department of Zoology

School of Biological Sciences

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Dr. Bulbul Acherjee, M. Sc, PhD Associate Professor, Dept. of Zoology

CERTIFICATE

It is certified that the thesis entitle "Systematic Account of fish Diversity of Dikrong River at Lakhimpur District, Assam" is a compilation of the results of dissertation work carried out by Joyshree Charingia of Roll No.17/MSZ/109,4th semester in Department of Zoology, USTM, under my guidance and supervision. Her work is original and this thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this consideration for the award of the degree of Master in Science in Zoology of this University.

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Signature

Dr Bulbul Acherjee

Associate professor,

Department of Zoology

Registral & Technology

Department of 2001091 Meghaleys
University of Science and Technology Meghaleys



UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity and morphometric analysis of selected fish species from Ziro, Arunachal Pradesh" is a compilation of the results of research work carried out by Ms. Takhe Anku (M.Sc. Roll No. 17/MSZ/110) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Registral & Technology



Certificate

This is to certify that the dissertation work entitled "A field study on distribution of ABO blood group and presence of rare blood group "Bombay (Oh) phenotype" if any, among the people of Darrang district, Assam, India" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in Cell and Molecular Biology of University of Science and Technology, Meghalaya. This dissertation work has done by Mr. Jahidul Islam, M.Sc.4th semester bearing Roll No. 17/MSZ/111. Exam 1D No. 19241079 and Enrollment No.PG/2017/03765, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life.

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ence and Technolog

SYED RIZAUL K. AHMED

Assistant Professor

Department of Zoology,

University of Science & Technology,

Meghalaya

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Bulbul Acharjee Associate Professor

CERTIFICATE

This is to certify that the thesis entitled "Diversity of ornamental fish in Palla River, Barpeta" is a compilation of the results of research work carried out by Mr. Mohibul Hoque Ahmed (M.Sc. Roll No. 17/MSZ/112) under my guidance and supervision.

He is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

His work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Bulbul Acharjee Associate Professor, USTM

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UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

Techno city, Baridua, 9th mile, Ri- Bhoi-793101, Meghalaya

Certificate

This is to certify that the thesis entitled "Comparative study of Protein content in fresh, refrigerated and Sun dried fish Labeo ganius (Hamilton)" submitted in partial fulfillment for the award in M.sc degree in BIOLOGICAL SCIENCE with specialization in Cell and molecular biology of The university of science and Technology, Meghalaya, is a record of the bona fied work carried out by Puja Kairi under my guidance and supervision. No part of this thesis has been submitted for any other Degree or Diploma.

University of Science and technique

D.K. Sharma

Department of zoology

University of Meghalaya

Min



Certificate

This is to certify that the dissertation work entitled A field study on traction of Pebrine spore in Eri Silkworm (Samia ricini) seed in Silkworm uning villages of Baksa District, Assam, India. submitted for partial fulfillment the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of University of Science and Technology, with the award for the degree of University of Science and Technology, with the award for the degree and the science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science and Technology, with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the degree of Master of Science (M.Sc.) in Zoology with the award for the award for the a

I wish him all success in life.



Dr. ALIKA BORPHUKAN BORAH

Assistant Professor
Department of Zoology,
University of Science & Technology,
Meghalaya

University of Meghalaya

John Department and Technology Hear

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UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Bulbul Acharjee Associate Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish Diversity of Lali River" is a compilation of the results of research work carried out by Ms. Anamika Chungkhrong (M.Sc. Roll No. 17/MSZ/116) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Bulbul Acharjee Associate Professor, USTM

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Registrar Registrar Registrar Meghalaya

Techno Ciy, Baridua, 9th mile, Ribhoi 793101, Meghalaya



CERTIFICATE

This is to certify that LUIT PROTIM BORAH, a student of M.Sc. 4th semester bearing Roll No- 17/MSZ/117, has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "The study of Grasshopper at Sonapur Kamrup metro district, Assam" submitted by LUIT PROTIM BORAH is a record of research work carried out by him under the supervision of me for the fulfillment of the award of Muster in science with specialization in "ENTOMOLOGY". The research output contained in the thesis is the outcome of his continuous efforts.

SUN OR SUN OF SU

Dr. Bakhtiar Hussain
Project supervisor
Department of Zoology
USTM
School of Biological Science

Date:

University of Meghalaya

And a contract and a contract of the contract

Techno City, Baridua, 9th mile, Ribhoi 793101, Meghalaya



Certificate

This is to certify that Miss Fungbili Brahma student of M.Sc. 4th semester has satisfactorily completed the research project entitled "Study on the Avian Diversity in Kaya Kujia Wetland Park, Abhayapuri, Bongaigaon" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in her thesis is the outcome of her continuous effort. The certification is made in the sense that the works compiled and presented in her thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Fungbili Brahma is an honest, dedicated and conscientious researcher and She possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

Mr. Arup Nama Das 41619

Assistant Professor

Department of Zoology

Place: USTVM

School of Biological Science, USTM

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA INO CITY, BARIDUA, 9TH MILE, RI-BHOI 793101, MEGHALAYA

CERTIFICATE

This is to certify that the dissertation report entitled "EFFECT OF TEMPERATURE VARIATION ON MORPHOMETRY OF LEGS & WINGS OF Aedes MOSQUITO" was carried out and submitted by NIHA NASRIN HOQUE, a student of M.Sc 4th semester, Roll no. 17/MSZ/119, under my guidance and supervision. This work has been performed as a partial fulfillment of the M.Sc 4th semester under Department of Zoology, USTM during 2017-2019.

Dr. Rashmimala Kakati

Professor

Department of Zoology

School of Biological Science, USTM

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established under Act6 of 2008 State Legislative Assembly of Meghaliya and Incorporated under section 22 and 2(f) of the UGC Act 1956)

Dr Bulbul Acharjee, M.Sc., Ph.D. Associate professor, Department of Zoology

201 June , 2019

Certificate

This is to certify that the thesis entitled "FISH MARKETING STATUS AT DIMAPUR DISTRICT, NAGALAND. It is a compilation of the results of research work carried out by Miss Katoli G. Yeptho (Enrollment No. PG/2017/03804 and M.Sc Roll No. 17/MSG/120) under my guidance and supervision.

Miss Katoli G. Yeptho is a bonafide M.Sc. fourth semester's student of the Department of Zoology of this University.

Her work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University

O VIISIBNIU Meghalaya

(Ob. 19.

Dr Bulbul Acharjee

Techno City, Kilng Road Baridua, 9th Mile Ri-Bhoi District, Meghalaya - 793101

Department of Zoology Meghaleya

University of Science & Technology



UNIVERSITY OF SCIENCE & TECHNOLOGY

MEGHALAYA

(Established under Act 6 of 2008 enacted by the state Legislative Assembly of Meghalaya & Incorporated under section 22 & 2(f) of the UGC Act 1956)

Certificate

This is to certify that thesis entitle fish diversity of Kapla Beel at Sarthebari, Barpeta District, Assam is a compilation of the results of research work carried out by Monika Ahmed (Enrollment No. PG/2017/03811 MSc Roll No. 17/MSZ/121) under my guidance and supervision.

Miss Monika Ahmed is a bon fide M.Sc. fourth Semester's student of the Department of Zoology of this University.

Her work is original. This thesis or any of its part has not been submitted elsewhere for any degree of distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Bulbul Acharjee



University of Meghalaya

Techno City, Kling Road, Baridua, 9th Mile, Ri-Bhoi, Meghalaya-793101

Ph: 0361-2895030 (Telefax), 098540-23060, E-mail: dstm2011@gmail.com, Website: www.ustm.ac.in

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DR BULBUL ACHARJEE, M.SC, PHO Associate professor, Department of Zoology

June 20, 2019

Certificate

This is to certify that the thesis entitle Ichthyofaunal Diversity of Dikhu River at Mokokchung district, Nagaland is a compilation of the results of research work carried out by Temsueinla Longkumer (Examination ID. 19241089, Enrollment NO. PG/2017/03824, & MSc Roll no 17/MSZ/122) under my guidance and supervision.

Temsueinla Longkumer is a bona fide M.SC. Fourth semester's student of the Department of Zoology of this university.

Her work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to foward this thesis for consideration for the award of the degree of Master in science in Zoology of this university.

Oy, Meghalaya

10.06.19 Dr Bulbul Achariee

Associate professor, Dept of Zoology.

Department of Zoology Mediaters



University Of Science & Technology, Meghalaya

(Established under act of 2008 of state legislative assembly of Meghalaya & incorporated under section 22 & 2(f) of the UGC
Act 1956)

Dr. BULBUL ACHARJEE, M.SC, Ph. D
Associate professor, Department of Zoology





www.aslanfish.org

20 June 2019

Certificate

This is to certify that the thesis entitle ICHTHYOFAUNAL DIVERSITY OF SIANG RIVER at Pasighat, Arunachal Pradesh is a compilation of the results of research work carried out by Miti Mongku (Enrollment No. PG/2017/03833 and M.Sc roll no. 17/MSZ/123) under my guidance and supervision.

Miti Mongku is a bona fide MSC fourth semester's student of the Department of Zoology of this University.

Her work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. BULBUL ACHARJEE

University of

Meghalaya

Mrs. 06.19:

Techno city, killing road, Baridua,

9th Mile, Ri- Bhoi District,

Meghalaya - 793101

Department of Zoology Meghalaya Sca

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University of Science and Technology, Meghalaya

Certificate

This is to certify that the dissertation work entitled "The toxicological impact of Fluoride content on the muscle protein of Heteropneustes fossilis" submitted for partial fulfillment of the award for the degree of Master of Science (M.Sc.) in Zoology with specialization in Cell and Molecular Biology of University of Science and technology, Meghalaya. This dissertation work has done by Mr. Nur Alam, M.Sc.4th semester bearing Roll No. 17/MSZ/124 and Enrollment No.PG/2017/03834, under my guidance and supervision. This dissertation or any of its part has not been submitted to any other degree or diploma.

I wish him all success in life.

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Wanaz N. Islam
Assistant Professor

Department of Zoology, University of Science &

Technology, Meghalaya

And the second s

University of Meghalaya



University of Science and Technology, Meghalaya

(Established under act of 2008 of state legislative assembly of Megitalaya & Incorporated under section 22 & 2(I) of the UGC Act 1956)

Dr. Bulbul Acharjee M.SC, Ph. D. Associate professor, Department of Zoology

June 20, 2019

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Batang River at Mebo village of East Siang district, Arunachal Pradesh" is a compilation of the results of research work carried out by Mr.Mingkeng Dalbong (Enrollment No.PG/17/03836 and M.Sc Roll No. 17/MSZ/125) under my guidance and supervision.

Mr. Mingkeng Dalbong is a bonafide M.Sc. fourth semester's student of the Department of Zoology of this University.

His work is original. This thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

> Meghalaya University of

Dr. Bulbul Acharjee

Wro. 06'19

Techno City, Kilng Road Barldua, 9th Mile Ri -Bhoi District, Meghalaya - 793101

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Registral Rechnicogy.

University of Science & Technicogy.



Unveiling Excellence

Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling road, 9th Mile, Ri-Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

I have the pleasure to certify that the post graduate research project entitled "Assessing the patterns of nesting and roosting distribution of House Sparrow (Passer domesticus) in Guwahati City, Assam." submitted by Anasuya Bharadwaj is a record of bonafied research work carried out by his under my guidance and supervision for the partial fulfillment of the requirements for the degree of Master of Science. This certification is made in the sense that the work compiled and presented in his thesis has not formed the basis for the award of any degree or diploma as such by any other University or Organization or Institution.

Surdiple Nag (Mr. Sudipta Nag)

Project supervisor

University of Science



DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOI, MEGHALAYA- 793101

Dr. Dipankar Dutta

Assistant Professor & Head,

Phone: +91 9864264723, +91 8638122586

Email: dipankar.dd.26@gmail.com

www.ustm.ac.in

DATE: 20/06/2019

CERTIFICATE

This is to certify that the dissertation entitled "Effect of Colchicine on mitosis of Onion root tips" is a compilation of the results of work carried out by Ms. Samjhana Upadhyaya (Enlloment No. PG/2017/03855, Roll No. 17/MSZ/127), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Ms. Samjhana Upadhyaya is bonafide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.



(DIPANKAR DUTTA)

(DIPANKAR DUTTA)

Dissertation Supervisor



Dr. Bulbul Acherjee, M. Sc. PhD Associate Professor, Dept. of Zoology

CERTIFICATE

It is certified that the thesis entitle "Systematic Account of fish Diversity of Bomani beel at Kamrup District, Assam" is a compilation of the results of dissertation work carried out by Barsha Baroi of Roll No.17/MSZ/128,4th semester in Department of Zoology, USTM, under my guidance and supervision. Her work is original and this thesis or any of its part has not been submitted elsewhere for any degree or distinction.

I am pleased to forward this consideration for the award of the degree of Master in Science in Zoology of this University.

20.06.15

Signature

Dr Bulbul Acherjee

Associate professor,

Department of Zoology

Rology, Meghal's



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Umtrew River, Meghalaya" is a compilation of the results of research work carried out by Ms. Wandahun Wansai (M.Sc. Roll No. 17/MSZ/130) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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De Dartment of Zoology Meghalaya



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fishing gears used in Lakhimpur District, Assam" is a compilation of the results of research work carried out by Ms. Fatema Yasmin (M.Sc. Roll No. 17/MSZ/131) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Registral & Technology

Department of Zoology Meghalaya



UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA DEPARTMENT OF ZOOLOGY

TECHNO CITY, KILLING ROAD, BARIDUA, 9TH MILE, RI-BHOL MEGHALAYA- 793101

CERTIFICATE

This is to certify that the dissertation entitled "Comparative Assessment of Soluble Protein content in Fresh, Refrigerated and Sundried Fish Cirrhenus mrigala (Hamilton)" is a compilation of the results of work carried out by NUSRAT TASMIN NIPA (Enrolment No.PG/2017/03915,Roll No.17/MSZ/132), Department of Zoology, University of Science & Technology, Meghalaya under my guidance and supervision.

Mr/Ms.NUSRAT TASMIN NIPA is bona fide student of M.Sc. Zoology 4th Semester with Cell & Molecular Biology as her Special paper. The dissertation or any of its part has not been submitted elsewhere for any degree or distinction in any other University/Institution.

I am pleased to forward this dissertation for consideration for the award of the degree of Master in Science in Zoology (under the School of Biological Science) of University of Science & Technology, Meghalaya.

I wish her all success in life.

Date: 19/06/2019

(D.K.Sarmah)

Dissertation Supervisor

A Registrat & Technology.

Department of Zoology Hearabus Scanned v



UNIVERSITY OF SCIENCE AND TECHNOLOGY,

MEGHALAYA

Techno City, Baridua, 9th Mile, Ri-Bhoi – 793101, Meghalaya

Certificate

This is to certify that PARSHAJYOTI HAZOWARY, student of M.Sc. 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research Project entitled "Fish diversity of Auranghedh Beel, Dudhnoi, Goalpara District, Assam" submitted by PARSHAJYOTI HAZOWARY is a record of research work carried out by him under the supervisor of me in the fulfillment of the award of Master in Science with specialization in 'FISH AND FISHERY BIOLOGY'. The research output contained in her thesis is the outcome of her continuous efforts. This certification is made in the sense that the work compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other UNIVERSITY or Institution.

Moreover, PARSHAJYOTI HAZOWARY is an honest, dedicated and conscientious research and he possesses a very good moral character. I heartily wish her a bright. I heartily wish her a bright, prosperous and successful future.

Date 20.6.19

(Dr Bulbul Archarjee)
Associate Professor
Department of Zoology
School of Biological Science, USTM

University of Weed halays

Department of Zoorbisty hearts



DEPARTMENT OF ZOOLOGY UNIVERSITY OF SCIENCE AND TECHNOLOGY, MEGHALAYA

(Established under Act No. 6 of 2008 enacted by the State Legislative Assembly Meghalaya and incorporated under section 22 & 2 (f) of the UGC Act 1956)

Website: www.ustm.ac.in

Dr. Prabal Sarkar
Associate Professor
Email: prabalsarkarindia@gmail.com

Date: 20th June, 2019

Certificate

This is to certify that KHUNGRAI BASUMATARY bearing Roll no. 17/MSZ/134 is a bonafied student in fourth semester of the course M.Sc. Zoology in University of Science and Technology, Meghalaya. He has successfully carried out the dissertation entitled "STATUS OF HUMAN-ELEPHANT CONFLICT AROUND DEEPOR BEEL SANCTUARY OF ASSAM, INDIA" under my supervision for partial fulfillment of the requirements for the degree of Master of Science.

Data incorporated in this dissertation are based on his observation and not submitted for any other degree in any other institute.

Prabal Sangar.

Dr. Prabal Sarkar Supervisor

Department of Zoology Hearth

Techno City, Kling Road, 9th Mile, Baridua, Dist: Ri-Bhoi, Meghalaya-793101

University of Science & Technology,



University of Science and Technology, Meghalaya Techno city, Baridua, 9th Mile, Ri-Bhoi -793101, Meghalaya

Dr. Bulbul Acharjee, M.Sc., Ph.D.
Associate professor, Department of Zoology,
School of Biological science (USTM)

Date: 20/06/2019

CERTIFICATE

This is to certify that the thesis entitled "Icthyofaunal diversity of Disang River at Sivasagar, District, Assam, (India)" is a compilation of the result of research work carried out by Miss Borakha Rani Lukhurakhon (Enrollment No:-PG/2017/03963, M.Sc., Roll No:-17/MSZ/135, Examination ID No:-19241101) under my guidance and supervision.

Miss Borakha Rani Lukhurakhon is a bonafied M.Sc 4th Semester student of the Department of Zoology of this University.

Her work is original. The thesis or any of this part has been submitted elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master of Science in Zoology of this University.

Signature

[Dr Bulbul Acharjee]

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Department of Zoology

University of Science and Technology, Meghalaya

Techno city, Kiling Road, 9th Mile, Ri - Bhoi

Mr. Sudipta Nag

Assistant Professor, USTM

CERTIFICATE

This is to certify that Miss JASPREET KAUR student of 4th semester bearing Roll No: 17/MSZ/136, Enrollment No: PG/2017/03965 has satisfactorily completed her review work emitted "ACCESSING THE HUMAN-LEOPARD CONFLICT SITUATION IN KAMAKHYA AND MALIGAON AREA OF KAMRUP DISTRICT, ASSAM" under my guidance and supervision in the fulfilment of the degree of master of science with specialization in "Animal Ecology and Wildlife Biology". This certificate is made in the sense that the work completed and presented in her thesis has not formed the basis for any other degree or diploma as such by other University or Organization or Institution,

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Sudipla Nong (Mr. Sudipta Nagy)

Project Supervisor

Assistant Professor

Department of Zoology,

USTM

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Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Icthyofaunal diversity of Siang River, Pasighat, Arunachal Pradesh" is a compilation of the results of research work carried out by Ms. Mity Nonong (M.Sc. Roll No. 17/MSZ/137) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Icthyofaunal Diversity and mophometric analysis of fish species of Tirap River, Arunachal Pradesh." is a compilation of the results of research work carried out by Mr. Krishna Pradhan (M.Sc. Roll No. 17/MSZ/138) under my guidance and supervision.

He is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

His work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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University of Meghalaya
Registral & Technology



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Rilang River, Meghalaya" is a compilation of the results of research work carried out by Ms. Jiedbhalang Khongthaw (M.Sc. Roll No. 17/MSZ/139) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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Registrar & Technology

University of Science and Technology,

MeghalayaTechno City, Baridua, 9th mile, Ribhoi 793101,

Meghalaya



CERTIFICATE

This is to certify that Akumyanger Longkumer student of M.Sc. 4th semester has satisfactorily completed the research project entitled "A Comparative Hydro-Biological Study Of Two Water Bodies Of Shillong City, Meghalaya" under my guidance and supervision in the fulfillment of the award of Master in Science with Specialization in "Animal Ecology & Wildlife Biology". The research output contained in his thesis is the outcome of his continuous effort. The certification is made in the sense that the works compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other University or Organization or Institution.

Moreover, Akumyanger Longkumer is an honest, dedicated and conscientious researcher and he possesses a very good moral character. I heartily wish him a bright, prosperous and successful future.

Median Policy Po

(Mr. Arup Nama Das)
Assistant Professor

June De Partir en la Endre de la Colonia de

University of Meghalaya



Techno City, Baridua, 9th Mile, Ri-Bhoi - 793101, Meghalaya

Certificate

This is to certify that MAHATMA KUMAR RABHA, student of M.Sc. 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "STUDY ON EFFECT OF COCOON PARAMETER OF ERI SURVIVIAL, Samia ricini REARED WITH VITAMIN A ENRICHED DIET" submitted by MASHATMA KUMAR RABHA is a record of research work carried out by him under the supervisor of me in the fulfillment of the award of Master in Science with special ration in 'ENTOMOLOGY'. The research output contained in her thesis is the outcome of her continuous efforts. This certification is made in the sense that the work compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other UNIVERSITY or Institution

Moreover, MAHATMA KUMAR RASHA is an honest, dedicated and conscientious research and he possesses a very good moral character. I heartily wish her a bright, prosperous and successful future.

(Dr Alika Borphukan Borah)
Assistant Professor
Department of Zoology
Colool of Biological Science, USTM

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University of Meghalaya

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University of Science and Technology, Meghalaya Techno City, Baridue, 9th mile, Ri-bhai 793101, Meghalaya



CERTIFICATE

This is to certify that LOBA GOPAL PATHAK, a student of M.Sc. 4th semester bearing Roll No- 17/MSZ/143, has satisfactorily completed the project work under the guidance of me for the post graduate research project entitled "THE STUDY OF DIFFERENT SPECIES OF DRAGONFLY IN SONAPUR AREA, KAMRUP METRO DISTRICT, ASSAM." submitted by LOBA GOPAL PATHAK is a record of research work carried out by him under the supervision of me for the fulfillment of the award of Master in science with specialization in "ENTOMOLOGY". The research output contained in the thesis is the outcome of his continuous efforts.

Moreover, Loba Gopal Pathak is an honest, dedicated and conscientious researcher and he possesses a very good moral character. I heartily wish him a bright, prosperous and successful future.

Date:

Dr. Bakhtiar Hussain

Project supervisor
Department of Zoology
USTM
School of Biological Science

Registral & Technology

and Technic

Department of Zoology Meghalava
University of Science and Technology Meghalava



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Myntdu River, Meghalaya" is a compilation of the results of research work carried out by Ms. Dona Nongkhlaw (M.Sc. Roll No. 17/MSZ/144) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

* explaint of the following of the follo

University of Science & Technology, University of Science & Technology, Meghalaya



UNIVERSITY OF SCIENCE AND TECHNOLOGY,

MEGHALAYA

Techno City, Baridua, 9th Mile, Ri-Bhol - 793101, Meghalaya

Certificate

This is to certify that RAJ KUSUM BASUMATARY, student of M.Sc. 4th semester has satisfactorily completed the project work under the guidance of me for the post graduate research Project entitled "EFFECT OF RAINFALL ON TEA PEST DENSITYON TEA GARDENS OF BAKSA DISTRICT, ASSAM" submitted by RAJ KUSUM BASUMATARY is a record of research work carried out by him under the supervisor of me in the fulfillment of the award of Master in Science with specialization in 'ENTOMOLOGY'. The research output contained in her thesis is the outcome of her continuous efforts. This certification is made in the sense that the work compiled and presented in his thesis hasn't formed the basis for the award of any other degree or diploma as such by any other UNIVERSITY or Institution.

Moreover, RAJ KUSUM BASUMATARY is an honest, dedicated and conscientious research and he possesses a very good moral character. I heartily wish her a bright. I heartily wish her a bright, prosperous and successful future.

(Dr Rashmimala Kakati)

Associate Professor Department of Zoology

School of Biological Science, USTM

Date



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Length- Weight relationship of selected murrels from Deepor Beel, Assam" is a compilation of the results of research work carried out by Mr. Himangshu jyoti Sharma (M.Sc. Roll No. 17/MSZ/146) under my guidance and supervision. He is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

His work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM



Oepartment of Zoology Meghalaya

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Meghalaya



Department of Zoology, School of Biological Sciences Ri-Bhoi, Baridua, Meghalaya – 793101, India

Dr. Kimty Das Assistant Professor

CERTIFICATE

This is to certify that the thesis entitled "Fish diversity of Simsang River, South Garo Hills, Meghalaya" is a compilation of the results of research work carried out by Ms. Barisha Mark (M.Sc. Roll No. 16/MSZ/84) under my guidance and supervision.

She is a bonafide student of the M.Sc. IV Semester of the Department of Zoology of this University.

Her work is original and this thesis or part of has not been submitted to elsewhere for any degree or distinction.

I am pleased to forward this thesis for consideration for the award of the degree of Master in Science in Zoology of this University.

Dr. Kimty Das Assistant Professor, USTM

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