

## ***Acknowledgement***

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## **ABBREVIATIONS**

μl	Microliter
μg	Microgram
°C	Degree Celsius
A	Adenine
ACG	Area Conservation de Guanacaste
AIC	Akaike Information Criterion
BIC	Bayssian Information Criteria
BOLD	Barcode of Life Data System
bp	base pair
BLAST	Basic Local Alignment Search Tool
C	Cytosine
CAMP	Conservation Assessment and Management Plan
CBOL	Consortium of Barcode of Life
<i>COI</i>	Cytochrome c oxidase subunit I
DNA	Deoxy Ribonucleic acid
dNTPs	Deoxynucleotide triphosphate
EDTA	Ethylenediaminetetra actetic acid
EMBL	European Molecular Biology Laboratory
EtBr	Ethidium Bromide
EVACC	El Valle Amphibian Conservation Center
FAO	Food and Agriculture Organization
G	Guanine
gDNA	Genomic DNA
Gm	Gram
IUPAC	International Union of Pure and Applied Chemistry
IUB	International Union of Biochemistry
IUCN	International Union for Conservation of Nature
K2P	Kimura 2 Parameter
Lb	Pound
MEGA	Molecular Evolutionary Genomic Analysis

Mg	Milligram
ml	Millilitre
mM	Millimolar
MPEDA	Marine Products Export Development Authority
mtDNA	Mitochondrial DNA
ML	Maximum Likelihood
MYA	Million Year Ago
NCBI	National Centre for Biotechnological Information
NGS	Next Generation Sequencing
NJ	Neighbor Joining
NUMT	Nuclear mitochondrial DNA segment
ORF	Open Reading Frame
OTUs	Operational Taxonomic Units
PCR	Polymerase Chain Reaction
pmole	Picomole
RFLP	Restriction Fragment Length Polymorphism
rpm	Revolution per minute
RSCU	Relative Synonymous Codon Usage
SDS	Sodium Dodecyl Sulfate
STCZ	Subtropical Convergence Zone
T	Thymine
TAE	Tris-acetate-EDTA
TES	Tris-EDTA-Saline



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## *DECLARATION*

*I, Bishal Dhar, bearing Registration Number, Ph.D. 1702/2011 dated 15.09.11, and Assam University Registration Number 10401331 of 2005-2006, do hereby declare that the subject matter of the thesis entitled "DNA BARCODING OF ORNAMENTAL FISHES OF NORTHEAST INDIA" is the record of work done by me and that the contents of this thesis did not form the basis for award of any degree to me or to anybody else to the best of my knowledge. The thesis has not been submitted in any other University or Institute.*

*Place: Silchar*

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*Date:*