

ACKNOWLEDGEMENTS

A word of sincere thanks to the following personalities and institutions:

- My mentor Prof. Joydeb Pal for his patient supervision, guidance, comments and insight throughout the course of this study.
- Teachers of the Department of Zoology, Prof. Ananda Mukhopadhaya, Prof. Tapas Kumar Chaudhuri, Prof. Sudip Barat, Dr. Min Bahadur, Dr. Soumen Bhattacharjee, Dr. Dhiraj Saha and Mr. Tilak Saha, for providing me with encouragement, valuable suggestions and advice in many aspects of my research project.
- My Research colleagues, Benoy Kishore Rai, Rujas Yonle, Tapan Sarkar, Ganesh Bahadur Thapa, Ritesh Biswa, Kumar Basnet, Gautam Debnath, Pokhraj Guha, Dr. Mahua Rudra, Dr. Manoj Lama, Dr. Priyankar Dey, Bappaditya Ghosh, Swati Singh, Ruksa Nur, Anjali Prasad, Sangita Khewa, Uttara Dey Bhowmick, Sutanaka Chattaraj and all the other scholars of the Department of Zoology for their cooperation and helping me to develop my idea which has guided me throughout this work and refine my ideas as well.
- Department of Zoology, University of North Bengal for providing me with the laboratory facilities.
- Mr. Ashis Sarkar and Mr. Simphu Sarkar for providing me with the fish samples along with the fisherman for helping me catch the fish samples from the field.
- Non-teaching staffs of the Department of Zoology, library Staffs of the University of North Bengal, for their willing cooperation and inexhaustible patience in searching the chemicals, articles and making them available to me.
- UGC (University Grants Commission). Without this funding I would have not had the opportunity to pursue my studies.

A personal word of appreciation and gratitude:

- My beloved parents, Late Pasang Bhutia and Late Kanchi Bhutia for their support, encouragement and understanding. Without their sacrifice and support, I would not have been able to succeed in my academic career.
- My friend's and dada's Anand Lama, Zigmee Khaling, Kuldeep Rai, Samten Tamang, Raju Subba, Anand Pariyar, Dhiraj Brahmin whose friendship and humour kept me sane throughout my studies.
- And finally to my wife, Anamika Moktan, for her love, understanding and support when I needed it the most.