

ACKNOWLEDGEMENTS

I am indebted to all of the generous persons, without their cooperation, I would not have been able to complete my thesis. I owe them for the motivation and consistent support. First and foremost, I am extremely grateful to my Ph. D. Supervisor, Prof. Sudip Barat, formerly Head of the Department of Zoology, University of North Bengal, for the scholarly guidelines, directions during the study, and valuable comments and input for the preparation of the thesis.

I express my profound gratitude to my Ph. D. Co- Supervisor, Dr. Hemant K. Badola, formerly Scientist 'G' & Scientist In-charge of the G.B. Pant National Institute of Himalayan Environment & Sustainable Development (GBPNIHESD), Sikkim Unit and currently the Advisor-Biodiversity, Office of the Hon'ble Chief Minister of Sikkim at Gangtok, for his untiring research guidance and direction, administrative and financial support and constant encouragement during the entire research period, and constructive criticism throughout the course of this work and of while preparing the thesis.

I am thankful to the Department of Zoology, University of North Bengal for providing a platform for my Ph.D career. It is my great pleasure to express my sincere thanks to Prof. Soumen Bhattacharjee (Present Head of the Zoology Department), Prof. Joydeb Pal, Prof. Ananda Mukhopadhyay, Prof. Tapas Kumar Chaudhuri, Professor Min Bahadur Rai, Associate Prof. Dhiraj Saha, Assistant Prof. Tilka Saha, and non-teaching staffs of the Department.

Acknowledgements

I am grateful to the Director of the GBPNIHESD (an autonomous Institute of the Ministry of Environment Forest and Climate Change, Govt. of India) for providing necessary facilities and financial support to carry out this study under the programme "Understanding Biodiversity patterns and process under changing resources use and climate scenario in the Indian Himalayan-ecological and social implication" at Sikkim Unit, attached with the Principal Investigator, Dr Hemant K. Badola.

I am obliged to the Government of Sikkim, especially to the authorities of the Forest, Environment, and Wildlife Management Department, Government of Sikkim, and particularly including the former Director of the Khangchendzonga Biosphere Reserve Mr. J.B. Subba, for their support for the field studies. The Chief Wildlife Warden, Government of Sikkim is gratefully acknowledged for his permission for the entry and work in KNP/KBR. The Scientist In-charge of the Botanical Survey of India (Dr. Dinesh K. Agarwala) at Gangtok is highly acknowledged for helping to access the BSI herbarium for plant identification.

I would like to thank my entire family of GBPNIHESD, Sikkim unit, for their support. I would like to thank Dr. M. Singh, currently Scientist In-charge of GBPNIHESD for encouragement and support. The cooperation of Dr. K.S. Gaira and Dr. M. Shahid is highly acknowledged. I appreciate the support of Mrs. Sheila

Acknowledgements

Sinha, Miss. Martina Rai, Mr. Jhony Lepcha, Mr. Alexander R. O'Neill, Miss. Archana Chhetri, Miss. Prashanti Pradhan, Miss Gargi Taryal, Mr. Bikash Pradhan, Mrs. Milan K. Rai, Ruksha Nur, and Arpita Dey. I am thankful to my college friends (Jigme Bhutia, Suman Gurung, Shishir Tamang, Sumit Pradhan and Samikcha Thapa) and college teachers (Dr. Willie Henry and Mrs. Swapna Chhetri), for moral support and encouragement during the work. The community of in and around the Kiangchendzonga Biosphere Reserve were very much supportive. Sincere gratitude goes to the forester Mr. B. L. Subba, the tourist warden Mr. Dal Bahadur Subba and the guide Mr. Ruben Rai for their cooperation in the field. Mr. Prem K. Chhetri, Dr. Asheesh Pandey, Mr. Kushal Gurung and Mr. Lakpa Bhutia are highly acknowledged for their help.

Finally, I take this opportunity to express my gratitude to my whole Lamichaney Basnet family especially my parents (Mr. Bhirav Bahadur Chhetri and Mrs. Lacchi Maya Chhetri), brothers (Mr. Umesh Chhetri, Mr. Ramesh Chhetri, Mr. Dinesh Chhetri and Mr. Mohanlal Chhetri), sisters (Mrs. Sarmila Thakuri, Mrs. Shivmaya Tamang and Mrs. Sita Pakhrin), and Sister-in-laws (Mrs. Mingma Lambu Chhetri, Mrs. Mangita Chhetri, Mrs. Purnima Chhetri and Mrs. Roshni Chhetri) for their love, unflinching encouragements and support. Last but not the least, thanks to those people who directly or indirectly helped and supported me for my thesis work.

Place: University of North Bengal

Dated: 11/12/2018

*Bijoy Chhetri
(Bijoy Chhetri)*