

ACKNOWLEDGEMENTS

Investigations presented in this thesis were carried out by the author at the Centre for Life Sciences, University of North Bengal, Raja Ramohunpur, Dt. Darjeeling.

I express my deep sense of gratitude to Dr. Bikas Chandra Pal, Professor, Centre for Life Sciences, University of North Bengal without whose constant guidance and encouragement this dissertation could not take its present shape.

I am also grateful to Professor K.B. Dutta, Prof. P.R. Basu, and Prof. A.R. Chakravarty, Centre for Life Sciences, NBU for encouragement.

I would also express my indebtedness to Professor Amallesh Chowdhury, Dept. of Zoology, University of Calcutta; Dr. Asish Ghosh, Deputy Director, Zoological Survey of India, Calcutta; Prof. S. Roy, Prof. R.L. Brahmacharya, Indian Statistical Institute, Calcutta; Dr. A.K. Das, Deputy Director, Mr. R. Saha, Cultural Research Officer, Cultural Research Institute, Calcutta; for helping me in tackling several problems in the course of my study.

I am particularly grateful to Mr. S. Nandi, Special Officer, SC & ST Office, Jalpaiguri, for providing me accommodation facilities at Totopara tribal welfare bungalow; Mr. R. Brahma, BDO, Madarihat; Sri Manik Bhattacharya, Sri H. Shaba, Sri S. Tirga and Sri Nisikanta of Madarihat and Totopara-Ballalguri Panchayat Office for helping me during my stay at Totopara in many ways.

Assistance offered by Sri John Kerketta, Sri Muktaram Toto, Sri Shakta Toto, Sri Ratne Toto, Sri Anuj Mankhin, Sri Saroj Chisim and Harkababdur Lama during my field work at Totopara is gratefully acknowledged. I am very grateful to the people at Totopara, particularly to Mr. and Mrs. L. Kerketta, Mr. and Mrs. G.P. Sharma of Totopara tribal welfare centre; Mr. and Mrs. H. Mankhin of Luthern World Service Organisation, Totopara; Late Dinesh Toto, Toto Headman, and Mr. Rabi Toto of Totopara for their whole-hearted help and many hours of companionship.

I wish to express my thank to Zoological Survey of India, Calcutta; Botanical Survey of India, Shibpur, Howrah; and Mr. S.K. Das, Regional Ayurvedic Research Centre, Calcutta for identification of animal and plant specimens; Mr. T. Sinha, Asst. Chemist, Hindustan Fertilizer Corporation, Siliguri for analysis of soil samples; and Mr. C. Nayak, Research Officer, Research Service Centre, NBU, for statistical analysis.

I am also grateful to Dr. C.R. Malakar, Demography Unit, ISI, Calcutta for valuable discussion on demographic analysis; Professor J.N. Bhaduri, Head, Dept. of Physiology, North Bengal University Medical College, Siliguri, for valuable comments on physiology and haematological study and for giving necessary valuable physiological apparatus on loan; to Mr. A. Roy and Mr. P.K. Dutta, Technical Assistant, Dept. of Physiology, NBUMC; Mr. A.C. Roy, Laboratory Attendant, Ecology, Behaviour and Wild Life Unit, Centre for Life Sciences, NBU, for their help during laboratory and field works.

I am thankful to the libraries of North Bengal University, Raja Ramoohanpur, Darjeeling; North Bengal University Medical College, Siliguri, Darjeeling; Cultural Research Institute, Calcutta; Indian Statistical Institute, Calcutta; Zoological Survey of India, Calcutta; Asiatic Society, Calcutta; for allowing me to consult necessary literature.

I wish to express my thank to my fellow research workers Dr. S. Roy, Dr. A. Nandi, Mr. A. Bhattacharya, Mr. D.P. Guin and other co-workers of the Centre for helping in various ways.

Thanks are also due to Mr. H. Ghosh and D.P. Bost for drawing the figures and to Mr. A. Bose, North Bengal University for typing the manuscript carefully.

I am grateful to the authorities of the University of North Bengal for laboratory and other facilities. Financial support from Govt. of West Bengal, Grant No. GO 150 Edn(U) 1976 to Prof. Bikas Chandra Pal, Centre for Life Sciences, NSU is gratefully acknowledged.

I am also grateful to Sri Gopal Brammacharya, Motijheel, Dum Dum, and Late Hamendra Mohan Majumdar and his family for their encouragement throughout the study.

It is a proud privilege to express my deep sense of gratitude to my parents Mr. and Mrs. B. Sinha and other family members particularly to Mr. and Mrs. R.N. Pal and Mr. and Mrs. I. Majumdar, Calcutta, for sacrifice and constant inspiration during the course of this study.