

Acknowledgements

Investigations presented in this thesis were carried out by the author at the Centre for Life Sciences, University of North Bengal, Raja Rammohunpur, 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, A.K.Chakravarty, Prof. K.B.Dutta, Prof. P.K.Basu and other teachers, Centre for Life Sciences, N.B.U. for encouragement.

I wish to express my thanks to Botanical Survey of India, Shibpur, Howrah for identification of plant specimens; Mr. T.Sinha, Asstt. Chemist, Hindustan Fertilizer Corporation, Siliguri for analysis of soil samples; Mr. C.Nayek, Systems Engineer, Computer Centre, N.B.U. for statistical analysis.

I am thankful to the Librarians, of North Bengal University, RajaRammohunpur, Darjeeling; Zoological Survey of India, Calcutta for allowing me to consult necessary literature.

I wish to express my thanks to my fellow researchers, Dr.(Mrs.) S.Roy, Dr.A.Nandi, Dr.D.Sinha, Mr. A.Bhattacharya and other co-workers of the Centre for helping in various ways.

Thanks are also due to Mr. N.Ghosh, B.Bagchi and N.Chandra for drawing the figures and to T.Guin and Mr. A.Guha North Bengal University for typing the manuscript carefully.

I wish to thank Mr. B.K.Bardhan Rai, C.F.N.C.; Mr.M.K. Nandi, D.F.O., Jalpaiguri Forest Division; Mr.Predip Sarker, Beat Officer, Garumara Wildlife Sanctuary and other Forest Department Personnel who extended cordial help to me during the course of the study period.

Assistance offered by Sri Budhu Onrau, Late Kancha Bhugel, N.Ghatak and other forest watchers and Sri A.Roy, Laboratory attendant, Ecology, Behaviour and Wildlife Unit, Centre for Life Sciences, North Bengal University during my field and laboratory works is gratefully acknowledged.

I am grateful to the authorities of the University of North Bengal for laboratory and other facilities. Financial assistance from U.G.C. New Delhi [Grant No.F.23-892/78(SR-II) Code No.059/Bio.Sc./78, dt. 24.8.1978 to (BCP)] is gratefully acknowledged.

I am also grateful to Sri Satyen Mookherjee, Taltola Library Row, Calcutta; Dr. B.Goswami, Dr.R.Dey, Lecturer, Bagati College; Prof. ~~Sankar Banerjee~~; Dr.S.Chatterjee, Dr.(Mrs) B.Choudhury, Institute of Science Education, Burdwan University; Dr.T.Bhattacharya, Centre for Life Science, Agartala University for their encouragement throughout the study.

It is a proud privilege to express my deep sense of gratitude to my parents Mr. and Mrs. L.K.Guin, to my wife Smt. C.Guin and other family members for sacrifice and constant inspiration during the course of this study.

Debasadas Guin
17.8.89