Acknowledgement

First and foremost, I would like to express my humble gratitude to my supervisor, Professor Probir Kumar Bandyopadhyay, Professor of Zoology, University of Kalyani for his support, encouragement, suggestions and guidance throughout the study.

I humbly acknowledge Department of Science and Technology (DST), India for supporting the entire study by their research grant. The experimental work on which this Ph. D. thesis is based, was carried out at the Department of Zoology, University of Kalyani, Nadia, West Bengal. I am indebted to a number of people for their help and assistance in the preparation of this thesis.

Special thanks go to the Head of the Department, University of Kalyani for his cooperation and all the staff members of the Department for their full dedication for helping me to carry out this research work. Thanks are also due to the Librarians of both, the Departmental as well as Central Library.

I would like to extend my gratitude to all the teachers of the Department of Zoology, University of Kalyani who provided indispensable theoretical knowledge about the subject.

I also like to take an opportunity to thank Dr. Jatindra Nath Bhakta, who worked as the Research Associate in the project, for his suggestions and assistance in the entire work, sharing his expertise and making himself available at all times to solve all my problems regarding this research project.

To lab mates of Parasitology laboratory, Department of Zoology, Dr. Mostaq Ahmed, Dr. Amlan Mitra, Dr. Biplab Bhowmik, Ms Adrita Chakraborty, Sri Partha Mallik and Sri Sujoy Bagh and Ms. Jayati Chakraborty, thank you for your help and support throughout this study.

Sincere thanks are due to Professor Manimala Das, Principal, Bethune College, for taking keen interest in my research work and providing constant encouragement through the research period. I'm also thankful to all my colleagues of Bethune College, Dr. Madhumita Manna, Dr. Sarmistha Banik, Dr. Sarmila Pal, Dr. Saswati Sinha, Ms. Tanaya De, Ms Sutapa Sanyal and Ms Shubhasree Sengupta for their frank collaboration and great understanding during this study.

Last but not the least, I am indebted to my husband, Sri Sumit Ray for his endless patience and to my beloved parents, sisters and parents-in-law for their encouragement, prayer and support. Thank you very much for being by my side, believing in me, and putting up with me during the good and bad times.

Place: Kalyani
Date: 17.1.08.

(ROLISHUKLA)