ACKNOWLEDGEMENT

The present work is the outcome of valuable guidance, help and encouragement extended to my teachers, friends, my family and many dignitaries. I would like to put on record my deep sense of gratitude to them.

I am grateful to my guide Dr. T. S. Bhosale for his continued encouragement, valuable guidance, cordial treatment. He has been the source of inspiration and stimulus to me throughout the arduous process of completing this work.

I must thank Dr. G.P. Bhawane, professor and Head and Prof. Dr. (Mrs.) A.A. Kanase former Head, department of Zoology, shivaji university, Kolhapur. for their kind co-operation and suggestions in completing the research work.

I shall ever remain indebated to Principal Dr. A.S.Bhoite, Y.C. Institute of Science, Satara and Dr. M.M. Rajmane, S.G.M. College karad and Dr V. S. Shivanker, R.C.S. College Kolhapur, who are the source of constant inspiration for me.

I am thankful to Mr. S.A. Kadam and Dr. G.R. Gonjari, all teaching staff of Department of Zoology, I am also greatfull to Shri. R.D. Pawar and all other non teaching staff of Yashwantrao Chavan Institute Of Science, Satara. for their timely help in the course of study.

My thanks are also due to teaching and non teaching staff of my college and my teachers Dr. P.J. Sakate, Mr. A.R. Aundhakar, Shri. P.K. Kurade, Miss. U.H. Shah and Mrs. Neeta T. Bhosale madam for their kind help and co-operation during the completion of dissertation work.

I must express my feeling to my beloved Father (Arvind), Elder sisters (Rupali and Jagruti), Younger brother and his wife (Rahul and shradha) and Niece (Ridhi) for their constant support to complete this work and afforded all pains for my higher education and research activities. This is also to acknowledge my debt of gratitude to my wife (Ragini) for her generous encouragement and enduring patience, she shared all the difficulties while preparing this thesis.

I am thankful to my friends Mr. Suresh Ingawale, Prof. jaydeep Dixit, Prof. Suresh Pawar, Mr.V.B. Ranmale, Mr.Subhash Mohite, Miss. D.V. Jadhav Madam, Mr. A.A Ghadge sir for their co-operation during this work.

It is my duty to thanks all those who directly and indirectly assisted me through suggestions, valuable comments and much needed encouragement.

I thank honestly and sincerely Mr. Nilesh Taware (Ved Cyber Cafe, Vita) for computerized processing of the thesis.

Ena

Shivprasad. A. Tingare