ACKNOWLEDGEMENTS

The present thesis holds far more than the culmination of nearly five years of study. These printed pages also reflect the help received from many inspiring and generous persons I have met from the beginning of this undertaking.

It is a pleasure to acknowledge the great debt I owe to my teacher and guide, Dr. (Mrs.) K. R. Gandhe, Reader, Department of Botany, Modern College, Pune, who suggested the problem for the present work. I have been amazingly fortunate to have her as a guide who gave me the freedom to explore the subject on my own and at the same time was quick to guide me whenever I ran into an impasse during my laboratory work or the writing of the thesis. Her constant encouragement and inspiration pushed me forward in the difficult times encountered during the study. She taught me how to analyze my thinking and express my ideas cogently. Indeed I have learnt many more things from her which will help me throughout my life and I will always look up to her as a model teacher and guide. This thesis work is indeed an outcome of her critical insights and invaluable guidance. Without her expert guidance, I would have been lost. I remain grateful to her for the help she has rendered so selflessly and generously.

I am indebted to Dr. R. V. Gandhe, Scientist Emeritus, Agharkar Research Institute, Pune, for taking a keen interest in my work and for fruitful discussions during the study period. His critical comments and insights in the subject have helped me immensely and have enabled me to look at the problem from many different perspectives.

I wish to express my gratitude to my parents, the first teachers in my life, for their constant moral support and encouragement during the period of the study. They, not only gave me life, but have showered on me all the love and affection one can wish for. They are always around to listen to my problems and offer me practical solutions to a variety of problems. Their support and understanding turned out to be my strength in difficult times. I hope that completing the thesis will fulfill their dream they had for me all these many years when they decided to give me the best education they could.
I am also thankful to my wife, Dhanashree, whose patience and understanding were of vital importance during the period of my studies. She was always by my side during the difficult times and gave me the moral support in my accomplishing the task of thesis writing.

I offer my sincere thanks to Dr. C. Manoharachary, former Head, Department of Botany, Osmania University, Hyderabad and Dr. H. V. Ghate, Head, Department of Zoology, Modern College, Pune for their valuable suggestions. I am also grateful to Dr. Y. C. Shouche, Scientist, and Jay Siddharth, Research Student, National Centre for Cell Science, Pune for providing the DNA sequencing facilities.

I sincerely thank Dr. T. N. More, Principal, MIT Arts, Science and Commerce College, Pune, for his kind help and for suggesting the avenues to take the work forward.

It is a pleasure to express my sincere thanks to Dr. P. K. Ranjekar, Director, Interactive Research School for Health Affairs (IRSHA), Bharati Vidyapeeth University, Pune, for kindly providing the facilities to carry out the molecular work in his institute. His enthusiasm, supportive nature and fruitful discussions were critical for treating the problem from a different perspective.

I also thank Dr. A. M. Harsulkar, Scientist F, IRSHA, for his unconditional support, novel ideas and advice during the study at IRSHA. He has invested a great deal of his time in discussing the topic with me and in suggesting different ways to tackle the problem. My thanks are also due to Dr. P. K. Pawar, Scientist D, IRSHA for his constant encouragement and assistance in collecting the material and in RNA work. I am thankful to my friend, Dr. Suresh Jagtap, DBT – PDF, IRSHA, for his kind help in photography, image editing, arrangement of photoplates and also for his constructive criticism. The help rendered by my friends, Rupali and Ankita, was precious while learning different techniques in molecular biology. My thanks are also due to Mr. Suhit Gilda, for providing and demonstrating the use of GraphPad software for statistical analysis.

I am thankful to Dr. (Mrs.) S. S. Bhargava, Dr. (Mrs.) P. K. Jite, Dr. A. C. Kamble, Dr. (Ms) N. P. Malpathak, Dr. M. G. Shitole, Department of Botany, University of Pune for their constructive comments. I am also thankful to Dr.
N. N. Patil, Dr. S. K. Potdar Dr. V. D. Ranade, Prof. S. R. Raykar, Dr. B. P. Shinde and Dr. S. K. Singh for encouragement during the period of study.

I am thankful to the renowned mycologist Y. Hiratsuka for his expert and critical comments on my work. I am also thankful to S. Yamaguchi, R. P. Wise, M. J. Moscou, A. J. Bogdanove, S. A. Whitham for providing the references.

My sincere thanks are also due to Dr. (Mrs.) Shubhada Nagarkar, Lecturer, Library Science Department, University of Pune for her help in collecting the references.

I express my sincere thanks to my friend Mr. Rahul Mungikar whose expertise in different computer softwares solved many of my problems. He also provided the Google Earth images of the collection sites. His advice during the statistical analysis of the data was very helpful.

I am also thankful to my friend Ms. Sheetal Rhatwal and Dr. (Mrs.) Anandini Kshirsagar who kindly helped me in collecting the references required for my work.

I express my thanks to my friend Mr. Amit Danke, who helped me during the painstaking task of proof reading of the manuscript, page arrangement and the final printing.

My thanks are also due to the teaching and non-teaching staff of Department of Botany and authorities of Modern College, for providing necessary facilities and infrastructure.

I should like to thank the authorities of Jaykar Library, University of Pune, NCL library, Pune, Agharkar Research Institute library, Pune and Modern College library, Pune for providing the library facilities.

I gratefully acknowledge the financial assistance provided by the University Grants Commission, New Delhi as a JRF and SRF.

Aniket Arun Kuvalekar