ACKNOWLEDGEMENT

Words can hardly express my profound debt of gratitude to my beloved guide Dr. P. SHAHUL HAMEED, M.Sc., Ph.D., B.Ed., Professor of Zoology, Jamal Mohamed College, Tiruchirappalli, without whose guidance, inspiring and valuable suggestions, close supervision, efficient instruction and encouragement, I would not have submitted this thesis in time.

I am immensely grateful to Prof. N. ABDUL SAMADH, M.A., M.Phil., Principal, Jamal Mohamed College, Tiruchirappalli for having admitted me in this course.

I extend my gratitude to Dr. M. SUBRAMANIAM, M.Sc., Ph.D., Professor and Head, Department of Zoology, Jamal Mohamed College, Tiruchirappalli for his constant encouragement during the tenure of my research.

I am very much indebted to Dr. M.A.R. IYENGAR, Head, Dr. S. GANAPATHY, Mr. S. VENKATARAMAN and Mr. V. KANNAN, Scientific Officers and Mr. ELUMALAI, Laboratory Technician, Environmental Survey Laboratory, Health Physics Division, Bhabha Atomic Research Centre, Kalpakkam for their valuable help in learning the analytical techniques of radionuclides, permitting me to make use of the library to collect references and for stimulating discussions in the field of environmental radioactivity.

I wish to express my heartfelt thanks to Dr. K.S.V. NAMBI, Head, Environmental Assessment Division, Bhabha Atomic Research Centre, Mumbai, for permitting me to visit BARC for literature survey and offering constructive comments and suggestions in preparation of this thesis.

It is with great pleasure I am thanking Dr. S. SADASIVAN, Head, Technical Co-ordination Division and Secretary, BRNS Research Advisory Committee, Bhabha Atomic Research Centre, Mumbai, for his encouragement and kind words.
I sincerely express my indebtedness to Dr. T.M. KRISHNAMOORTY, Head, Environmental Monitoring and Analysis Section, Bhabha Atomic Research Centre, Mumbai, for offering valuable comments on the interpretation of the data generated.

It is with great pleasure that I am thanking Prof. K.E. HAVENS, Prof. J. MANNING and Prof. ME DENLEY, Editors, Environmental Pollution, Elsevier Science Ltd., U.S.A., Prof. NAGAO IKEDA, Editor, J. Environmental Radioactivity, Japan Radioisotope Association, Japan, Dr. D. KRISHNAN, Editor, Bulletin of Radiation Protection, Indian Association of Radiation Protection, BARC, Mumbai and Dr. RAGAVENDRA GADAGKAR, Editor, J. Biosciences, Indian Academy of Sciences, Bangalore, for critically going through the manuscript and for providing valuable comments and suggestions.

I am very much thankful to all the staff members of Zoology faculty, especially Prof. B.M. GULAM MOHIDEEN and Dr. B. AMANULLAH, Jamal Mohamed College, Tiruchirappalli, for their continued support and encouragement.

My sincere thanks are also due to Prof. A.R. MOHAMED ISMAIL, Head, Prof. S. YAHIYA MOHAMED, Prof. B. MOHAMED JABARULLAH and Prof. A.R. MOHAMED SHANAVAS, Department of Computer Science, Jamal Mohamed College for their timely help in statistical analysis.

I owe a special word of thanks to Prof. S. YOUSUF, Department of English, Jamal Mohamed College, Tiruchirappalli, for having been kind enough to critically go through the manuscript.

I record my deep sense of gratitude and owe a special debt of sincere thanks to Mr. S.S.N. SOMASUNDARAM, M.Sc., M.Phil., My fellow scholar, who helped me in all possible ways for the successful completion of this thesis.
I gratefully acknowledge and express my sincere thanks to Mr. V. MASILAMANI, Mr. S. RAVIKUMAR and Mr. D. BABURAJ STANELY RAJKUMAR, Research Scholars, Department of Zoology, Jamal Mohamed College, Tiruchirappalli, for their kind co-operation and painstaking efforts throughout the course of the study.

My thanks are due to the Department of Atomic Energy-Board of Research in Nuclear Sciences, Govt. of India, towards the award of Research Fellowship under the DAE Research project.

I express my indebtedness to Mr. M. PIYARE JOHN and Mr. S.A. SHAFIULLAH, for the execution of computer typing and graphics and bringing out this thesis in time.

My sincere thanks are due to my Sister, Miss. K. SHABEENA, B.Sc., B.Ed., who helped me in all possible ways for the completion of this thesis.

The present piece of work would not have seen the light of the day but for my PARENTS who managed the family smoothly in my absence allowing me to concentrate on research work and for their constant encouragement.

Thanks are due to the ALMIGHTY for HIS BLESSINGS.

(K. SHAHEED)