ACKNOWLEDGEMENT

I am obliged to express my profound gratitude to my research guide Dr. M. Manivel, Reader and Head, Department of Geology, School of Geosciences, Bharathidasan University, Tiruchirappalli, for his meticulous guidance, valuable suggestions and above all for his constant encouragement during the research work.

I express my sincere thanks to Prof. C. Thangamuthu, Vice-Chancellor, Mrs. Dr. Ratha Chellappan, Registrar and Dr. K. Raja, Controller of Examinations, Bharathidasan University for providing us Internet, Laboratory and Library facilities, and other necessary administrative help.

I express my sincere gratitude to Dr. V.A. Chandrasekaran, Professor and Head (Retd.), Department of Geology, Bharathidasan University, Tiruchirappalli and Dr. S. Sathiyamoorthy, Professor and Head (Retd.), Department of Geology, National College, Tiruchirappalli for their valuable suggestions and constant encouragement throughout my research work.

I am greatly indebted to Mr. V. Pugalanthi, Assistant Hydro-geologist, Tamil Nadu Water Supply and Drainage Board (TWAD), Chennai, for his valuable, dedicative help and suggestions throughout my research work. It is my duty to express my deep sense of gratitude to Dr. N. Jawahar Raj, Senior Lecturer, Department of Geology, National College, Tiruchirappalli-1 and Mr. A. Muthukrishnan, Guest Lecturer, Department of Geography, Bharathidasan University, Tiruchirappalli-24, for their painstaking help from the beginning of my research work to binding of this thesis.

I wish to thank the Ministry of Environment and Forests, Government of India, New Delhi for awarding me Research Fellowship.
Special thanks is hereby rendered to Dr. V. Jayaraman, Director, Earth Observation System, Dr. J. Krishnamurathy, Scientist, National Natural Resource Management Systems, ISRO, Head Quarters, Bangalore, for their valuable suggestions and help in the inception period of my research.

I wish to thank Dr. Edwin Chandrasekaran, Principal Investigator, Prof. A. Alagappa Moses (Co-Principal Investigator), Dr. C. Ravichandran, Reader, Mr. A. Chandramohan (Junior Research Fellow), Mr. P. Karunakaran (Field Assistant), Mr. Annamalai (Technical Assistant) and Mr. Simon of the Kalrayan hills project.

I wish to render my sincere thanks to Dr. D. Kumaran Raju, Research Scientist, Marine Information Technology, Tropical Marine Science Institute, National University of Singapore, Singapore; Mr. Surendra Verma (Scientist), Dr. Harish Bhat (Scientist), Mr. Vijay D. Anand, Centre for Ecological Studies, Indian Institute of Science, Bangalore and Mr. Abilash (Project Fellow), Kerala Forest Research Institute (KFRI), Kerala, for their help during the field survey.

I express my sincere thanks to Dr. A. Ganesh, Professor and Head, Dr. K. Kumaraswamy, Professor and Dr. S. Aruchamy, Professor, Department of Geography, School of Geosciences, Bharathidasan University for their encouragement.

I wish to thank Dr. K. Anbarasu, Reader and Head, Dr. V. Kumar, Dr. R. Baskaran, Dr. V. Subramanian, Dr. R. Ramesh, Dr. D. Srinivasan, Dr. S. Sivakumar, teaching faculty, Department of Geology, National College, Tiruchirappalli for their kind support and encouragement.

I am thankful to my research colleagues [Dr. A. Illanthirayan, Dr. B. Gobu Guest Lecturers, Department of Geography, Periyar E.V.R. College, Tiruchirappalli; Mr. S. Balaselvakumar, Research Scholar, Department of Geography; Mr. M. Tamilarasan, Lecturer in Sociology, University of Madras; Dr. Ravichandran...
and Mr. Goutham, Department of Plant Sciences; Mr. Rajkumar, Department of Animal Sciences; Mr. C. Sakthivel, Department of Chemistry and Mr. A. Manivel, Department of Economics], who helped me in variety of ways.

I am especially thankful to the following M.Tech students Mr. V.R. Sathish Kumar, Mr. G.R. Kamal Raj, Mr. J. Chandrasekar, Mr. R. Ramesh Kumar, Mr. T. Suresh, Mr. K. Karunanithi, Mr. Kamalakannan and special thanks are due to Mr. K. Ramesh (2004-2006 batch) of Department of Geology and Mr. R. Narayanakumar, Guest Lecturer and Mr. R. Muruganandam, and all other M.Tech. students of Department of Geography, Bharathidasan University for their valuable help during the research work.

I take this splendid opportunity to thank the officers and others staff of various Government and Autonomous Departments, Organisations and Research Institutions for their great help during secondary data and literature collections. Special mention must be made of Dr. K. Samanth Sinhar, Chief Conservator of Forests, Salem Circle, Mr. Yogesh Singh, District Forests Officer, Kallakurichi Division and other forest officials of Attur, Kallakurichi and Thiruvannamalai Divisions, Government of Tamil Nadu; Mr. Clouton and the staff members of Arcot Luthren Church (ALC), Kariyalur, Kalrayan Hills; Dr. B. Gurugnanam, Reader, Dr. S. Rajendran and Dr. S. Aravindan, senior Lecturers, Department of Geology, Annamalai University, Chidambaram; Dr. Moses Edwin and Dr. Kamaraj, Research Scientists, Institute of Remote Sensing, Anna University, Chennai; Mr. Kamalakannan, District Statistical Officer, Salem District; Mr. Chandrasekaran, Assistant Hydro-geologist, TWAD Board, Salem Division; Mr. Ravi, Project Officer, Kalrayan Hills Tribal Development Programme, District Collectorate, Villupuram District; The Director, District Statistical Department, Villupuram; Dr. S. Sanjeevi, Associate Professor, Department of Geosciences, Anna University, Channai; Mr. G. Prevesh Kumar (GIS Analyst, ESRI, Bangalore); Mr. K. Raja Kesavan (TATA INFOSYS, Chennai); Mr. D. Sathish Kumar and Mr. Vasanthamohan, Research Scholars, Department of Geology, University of Madras, Chennai.
I would like to express my sincere thanks to Mr. T. Ponniyamoorthy, Mr. Muthukumar, Mr. D. Stephen, Mr. Ravikumar, Mr. R. Karvannan, Mr. M. Rajasekar, Mr. R. Sakthivelu, Mr. S. Arumugam and all other non-teaching staff of School of Geosciences; Mr. Padmanaban, Informatics Centre, Bharathidasan University and the staff members of UNIQUE systems, computer services, Tiruhiappalli.

I am highly indebted to my friend Mr. M. Manikandan, Computer Officer, Computer Programming and Planning Division, Lakshmi Vilas Bank, Head Office, Karur for his uninterrupted encouragement and timely financial support.

I extend my deep sense of gratitude to my beloved Grand mother, mother, father, brothers, sisters and other family members for their endless encouragement, financial assistance, patience, moral support and their sacrifices they have made during the entire period of my research work.

Above all, this research work would not have been completed but for the divine grace of Bhagavan Shri Ramanamaharishi who has been uninterruptedly showering his blessing on me.

R. SAKTHIVEL