ACKNOWLEDGEMENTS



Although a doctorate degree is awarded to individuals, yet many people contribute in a variety of ways to the completion of the doctoral work. I take this opportunity to express my deep sense of gratitude to all who have, directly or indirectly, helped me in completing my thesis work.

There was a great sigh of relief when Prof. R. Ramesh agreed to supervise my thesis work when I decided to change my thesis problem. I am indebted to him for accepting me as a Ph.D. student and providing all necessary support. I have greatly benefited from his profound knowledge and great disposition towards solving scientific problems. He not only made sure that the thesis gets completed in time but also took a great care in improving various skills essential for research activity. The sublime blend of freedom and supervision provided by him made the thesis work thoroughly enjoyable. I sincerely thank him for providing umpteen opportunities to expand my research experience. The latitude given by him to attend things in personal life is also worth appreciating. I sincerely thank Prof. L.S. Chamyal, my coguide, for his interest in the thesis work and help in completing university registration procedures.

I am grateful to Prof. S.V.S. Murty, with whom I worked initially in PRL, for his kind support and guidance. The work culture inculcated in those days served me later and, I am sure, will continue to serve me in future. His meticulousness in planning and performing experiments is what I liked and tried to emulate.

I acknowledge with thanks all the faculty members of Planetary and Geosciences Division for their constructive comments and suggestions during various area seminars and reviews. Their guidance always helped to improve the quality of the research work.

I owe a special appreciation to Dr. Jyotiranjan Ray for his guidance and unfailingly positive encouragement throughout my research tenure.

I am also thankful to Dr. H.P. Borgaonkar (Indian Institute of Tropical Meteorology, Pune) and Dr. Amalava Bhattacharyya (Birbal Sahani Institute of Palaeobotany, Lucknow) for providing climate data and teak samples from their collections.

It gives me great pleasure to express my gratitude to Dr. M.S. Sheshshayee for allowing me to use the mass spectrometric facilities at University of Agricultural Sciences (UAS), Bangalore. The support provided by him during my stay at Bangalore deserves special appreciation. Thanks are also due to Bhushana, Mohan, Divakar, Sumant and Thimmegowda for their support at UAS. Special thanks to Mr. Ram Mhatre and Mr. Prashant Puranik (Thermo Fischer, India) for teaching in great detail the operational aspects of the mass spectrometer. I gratefully acknowledge Prof. Malcolm Hughes, Prof. Ramzi Touchan and Prof. Michael Evans for their guidance during the summer school at Laboratory of Tree Ring Research, Tucson, USA. I learned a great deal about dendroclimatology from them. Generous help extended by Prof. Michael Evans and Dr. Kevin Anchukaitis regarding experimental procedures followed in the field of isotope dendroclimatology is appreciated.

I will always remain indebted to Dr. M.G. Yadava, Mr. J.T. Padia, Mr. R.A. Jani, Mr. D.K. Rao, Dr. R.D. Deshpande, Dr. Navin Juyal, Mr. R.R. Mahajan, Dr. Ravi Bhushan, Mr. Pranav Adhyaru and Mr. A.D. Shukla for their help and constant encouragement during the research work. Dr. M.G. Yadava deserves special thanks for his untiring guidance in the experimental work.

Support from the PRL workshop facility has always been exceptionally good. I thank Mr. Ubale for providing all the necessary support. Dexterity and timeliness shown by Vishnubhai (workshop section), Nilesh (carpentry section) and Bankim (glass blowing section) deserves special accolades.

Supportive staff of PRL were extremely helpful throughout the PhD tenure. I thank all the members of Computer centre, Library, Stores, Purchase, Accounts, Transport, Medical and Canteen sections for their help. Support extended by Vaghela bhai (C-14 lab) and Bhavsar bhai (Chemistry lab) is worth mentioning.

I thank Dr. Rehman, (ATIRA, Ahmedabad) for allowing me to use FTIR spectroscopic facilities.

I would like to acknowledge all the PhD scholars of PRL for keeping PRL environment joyful and intellectually stimulating. I feel myself lucky to have seniors like Anirban, Sanjeev, Manish, Santosh, Neeraj, Prashanta, Dilip, Sudeshna, Jayesh, Manoj, Morthekai, Nagar, Lokesh, Gowda, Ashutosh, Madhav and Pathak. I thank all the juniors: Naveen, Rohit, Amzad, Arvind, Alok, Sumita, Suchita, Sumanta, Rajesh, Lokesh, Ritesh, Neeraj, Gyana, Naveen (Chauhan), Ashwini, Rabiul, Kirpa, Rehman, Vineet, Datta, Santosh, Salman, Ahkilesh and many more for keeping PRL's atmosphere enjoyable. I specifically thank all the member of stress-busting 'tea-club' of PRL for their 'stimulating discourses' on academic as well as nonacademic matters.

I feel proud to have Subimal, Satya, Sanat, Uma and Sasadhar as my batchmates. They have always been extremely kind and supportive in research as well as personal life.

I gratefully acknowledge Sano for kindly providing important research papers in my research field.

I owe a special word of thanks to my non-PRLite friends Sachin, Sumit, Girish (Arbale), Girish (Jathar) and Ninad for their active encouragement.

This acknowledgement would never be complete without mentioning my family members. My parents have always encouraged me to pursue what I liked. Their patience and support have been instrumental in sustaining my career. Chaitali, my wife, has always been a perennial source of support, care and love. I appreciate her for her tolerance of the perpetual business of PhD work.

Shreyas Managave