I express my sincere gratitude to my research guide Dr. K.Y. Mohammed Salih, Professor (Rtd), Department of Marine Biology, Microbiology and Biochemistry for his supervision and guidance. I thank him for the kind of freedom I was endowed with, to improvise, plan and implement.

I am forever obliged to Dr. A.V. Saramma, Head, Department of Marine Biology, Microbiology and Biochemistry, for the encouragement and support I received from her throughout the tenure of my doctoral program.

I thank my Co-Guide, Dr. C.H. Sujatha, lecturer, Dept of Chemical Oceanography, for the motivation and guidance I received from her. I take this opportunity to express my thankfulness to her for the way she used to motivate me.

I am thankful to Dr. Mohan Kumar, Dean, faculty of Marine sciences, for his ever inspiring attitude towards constructive research and for the keenness he always showed in improving the quality of research in marine sciences. Sir, I express my boundless appreciation and gratitude for inspiring me to set more goals.

I thank my teacher, Dr. A.A. Mohammed Hatha, I could not have imagined having a better educator for my masters and PhD times, and his wisdom, perceptiveness and promptness helped me to become a better scientific person.

I am grateful to Dr. R.Damodaran, Prof. Dr. N.R. Menon, Dr. Kuttyamma, Dr. C.K. Radhakrishnan, Prof. Dr. Babu Philip, Dr. Rosamma Philip, Dr. Bijoy Nandan and Prof. Dr. Anneykutty Joseph for their support and encouragement.

I express my gratitude to Dr. Nevin Uner, University of Cukurova, Faculty of Science and Letters, Turkey; and Dr. Fousia Begum, Dept. of Zoology, Osmania University, Hyderabad, for their timely help during the preparation of my thesis.

I express my respect and gratitude to Mr. Rajgopal, Director and Dr. Viswanathan Nair, Chief scientist, Sea lab, Seafood Park India Pvt. Ltd. for the kind and friendly attitude which helped me through the Chromatographic aspects of my work.

I am especially grateful to Mr. Steph Thomas, Dept. of Statistics, CUSAT for his valuable help during data analysis. I am obliged to him for the lessons of statistics.

I am thankful to Mr. Suresh Kumar, Lakeshore hospital for his valuable suggestions during my work.

Dear Rajeev Raghavan, (Conservation Research Group & Department of Aquaculture, St. Albert’s College, Kochi), thank you, for all the intellectual support which aided me to come across the most recent information and publications on fish related aspects, which helped me immensely to finish this thesis promptly.
Rekha, wonder how I possibly will find some apt words to thank you!! For making, the past long years of life in CUSAT, happy and peaceful...for the great times of togetherness...for making me feel safe and sound...for pulling me away from hideaways of despair...for always telling me how dazzling the other side of life shall be!

I am short of words when I am to comment on how much I am beholden to my friend Ms. Bindya Bhargavan for her immense help through out my doctoral programme. From basic to advanced, there was not a single thing on toxicology we let not discussed! Thank you my friend, for the kind of support and understanding which always facilitated me to steer across the thick and thin of research days.

Jaleel, I think you would not let me say a word of gratitude, but here I am to say it finally. Your relentless support and assistance spanned from the beginning of Ph.D life, through the acclimation of fishes, to the finishing point of my thesis is forever etched in memory.

Krishna Kumar, how could I thank you for those long time pre treatments and seemed endless periods of acclimation and transportation of my catfishes! I express my appreciation for astonishing me with the valuable information on freshwater fishes of kerala.

Shubhasree, a lot of thanks buddy, for all the well-timed helps, for your positive attitude and for your pleasant company that helped me a great deal to relax and do away with worries. Thanks for being there!

I thank my dear friend Roja Sebastian for her love, care and sweet smile which enabled me to go through the toughest times. I remember the jokes and merry thoughts she shared with me which made me laugh like anything and made my days light and pleasant.

My dear friends Selvan, Anil Kumar, Rejil, Smitha C.K, Sridevi, Manjusha Mohandas, Neil, Nousher Khan, Keshavan Namibduri, Prabhakaran, Sanal Kumar, Sudha, Beena, Jini Jacob, Subitha, Rejish Kumar, Sudheer, Sreedharan, Remya, Jisha Jose, Aniladevi Kunjamma, Cilla Abraham and Chithra were always there to help me when ever I was in need. I thank them wholeheartedly.

Abhilash, its right time to say a big 'Thank you' for all the help, as you never allowed me to say it earlier.

I specially thank Dr. Soja Louis for her encouragement and valuable comments during the making of thesis.

Smitha V. Bhanu, I am inspired by your openness in knowledge sharing. Keep it up buddy! Thank you so much for all valuable ideas during the making of thesis.

I sincerely thank staff, Department of Marine Biology, Microbiology and Biochemistry for their timely helps.

I thank Mr. Premachandran and Mr. Manuel, librarians, School of Marine Sciences Library for their constant encouragement.

I record my thanks to Mr. Binoop M.R (Indu Photos & Graphics) for his perfect sense of commitment which helped a great deal in the layout and design aspect of my thesis.
I record my gratitude to Mr. Nazar and Mr. Sajeeven (Staff, School of ocean science and technology) for their timely helps which enabled me to carry out work without interruption.

I thank Mr. Stephen, School of Ocean Science and Technology for his well-timed helps during the transportation of my catfishes.

My brothers Bineesh and Anish were always keen about my research and I thank them for their true enthusiasm.

I thank my sister Sharmila, who has always been my best pal, am deeply beholden to her for the long story telling sessions from our childhood, she has always been a powerful source of dynamism to me.

I am deeply beholden to my brother-in-law, Dr. A.P. Mukundanunni, for his enthusiastic attitude which inspired me a lot to pursue my research, his great skill of editing which helped my words with refinement.

Papa and mummy, I thank you for your support, encouragement and understanding which helped me a lot during stiff working hours.

I owe my father and mother, much of what I have become. I thank them for their love, their support, and their confidence throughout the past years. My parents have always put education as a first priority in my life, and raised me to set high goals for myself. They taught me to value honesty, courage, and respect for humanity above all other virtues. I have always needed to work hard to achieve my goals in life and they have always been there for me as an unwavering support. I dedicate this work to them, to honour their love, patience, and support during these years.

Bijeesh, without whose love, understanding and endless impetus, this work would never have been materialized! Especially for all the holidays that he arranged to give me time to write, to think, to improvise and to talk to him about this subject. Had I written this sentence myself, I couldn’t have put it any better.

Finally, I have to say ‘thank-you’ to all my friends and family, at times, it has been good to know they have just been a phone call or an email away.

There are lots of people I would like to thank for a huge variety of reasons...

Peace and harmony,

Anupama.