

## **ACKNOWLEDGEMENTS**

First of all, I would like to convey my humble respect and sincere gratitude to my Ph.D. Supervisors namely Dr. Ajaya Kumar Patra, Former, Professor of Zoology, Utkal University, Bhubaneswar – 751 004 and Dr. Manoj Kumar Pati, Assistant Professor, Department of Fishery Sciences, Vidyasagar University, Midnapore-721 102, West Bengal, India, who support constantly. Tired less effort, great mind and thoughtful creative guidance of the supervisors inspire me.

I am conveying special thanks to Dr. Subrata Kumar De, Professor of Zoology Department, Vidyasagar University, Midnapore- 721 102 who made a great chance, valuable suggestion, intellectual inspiration and kind help during the period of work.

I express my hearty thanks to the Honourable Vice-Chancellor, Research Committee of the Department of Fishery Sciences, Vidyasagar University, West Bengal, India for his formative critical opinion as well as suggestion and recommendation of my Ph.D. work. I am also indebted to Dr. Basudev Mondal, Assistant Professor and all other faculty members, Department of Fishery Sciences, Vidyasagar University, Midnapore, West Bengal India for providing necessary recommendation and laboratory facilities to complete my research work.

I also wish to convey my regard to Sri Ashim Kumar Das, Hotar, Magrahat, South 24-Parganas for his necessary help and support during sample collection. I am also grateful thanks to Palan Chandra Sardar, Moukhali Bazar, Hotar Magrahat, 24-Parganas (South) for his necessary help and support during culture ponds and collection of fishes on seasonal basis.

I gratefully acknowledge to all office staff of the Department of Fishery Sciences, Vidyasagar University, Midnapore, West Bengal. I am also grateful to Dr. S. K. Shee, Vivekananda Institute of Biotechnology, Nimpith Ashram, Jaynagar, South 24-Parganas, West Bengal, India for his valuable suggestion and guidance during the period of water testing laboratory.

I am exceptionally grateful to Dr. G. H. Pailan, Principal Scientist and Dr. B. K. Mahapatra, Director and Scientist of I C A R, Central Institute of Fisheries Education, 32, GN Block,

Sector-V, Salt Lake City, Kolkata -700 091, for their technical and scientific advice during my biochemical test (estimations of protein).

I thank my family for their everlasting support and encouraging me to continue to do the work.

I express my profound gratitude to my deceased parents Nani Gopal Sarkar and Namita Sarkar whom I was inspired and to get an incredible strength of will to live and learn since my childhood.

I acknowledge by gratitude to my husband Subal Kumar Saha for his patience and always support to continue to do my work.

Thanks are also rendered to the staff members of the following:

- 1) Central Library, Vidyasagar University, Midnapore, West Bengal, India
- 2) National Library, Belvedere Road, Kolkata- 700 027, West Bengal, India.
- 3) Library of Central Inland Fisheries Research Institute, Barrackpore, Kolkata, India.

*Ajanta Sarkar*

Dated: 25<sup>th</sup> September, 2020

( **Ajanta Sarkar** )