

## Curriculum vitae

### PUNYASLOKE BHADURY as of 20<sup>th</sup> November, 2016

Associate Professor, Department of Biological Sciences,  
Indian Institute of Science Education and Research Kolkata (IISERK),  
Mohanpur-741246, Nadia, West Bengal, India.  
Email: [pbhadury@iiserkol.ac.in](mailto:pbhadury@iiserkol.ac.in) or [pbhadury@gmail.com](mailto:pbhadury@gmail.com)

**Date of Birth-** 29<sup>th</sup> March, 1979.

#### Educational Background

2005- Ph.D., Biological Sciences (Marine microbial ecology), Plymouth Marine Laboratory and University of Plymouth, Plymouth, United Kingdom  
2002- M.Sc., Marine Resource Development and Protection, Heriot Watt University, Edinburgh, United Kingdom  
2000- B.Sc. Honours in Botany, University of Calcutta, Kolkata, India

#### Professional Background

June 2014- Present      Head, Department of Biological Sciences, IISER Kolkata, India  
March 2014- Present    Associate Professor, Department of Biological Sciences, IISER Kolkata, India  
28<sup>th</sup> Jan 2009-Feb 2014    Assistant Professor, Department of Biological Sciences, IISER Kolkata, India  
Oct 2008- 21<sup>st</sup> Jan 2009    Scientist-C, Wildlife Institute of India (Ministry of Environment and Forests, Govt. of India), Dehradun, India  
Mar 2006-Sept 2008    Postdoctoral Research Associate, Department of Geosciences, Princeton University, United States of America (Professor Bess Ward's Lab)  
Jan 2006-Feb 2006      Research Scientist, Plymouth Marine Laboratory Applications Pvt. Ltd, Plymouth, United Kingdom

#### Research interests

Arsenic biogeochemical cycling in rice field and sub surface ecosystems; Ecological diversity of microbes and their role in marine carbon and nitrogen cycling in coastal ecosystems using genomics approach; Time series study to disentangle complexity of mangrove ecosystem in link with in situ carbonate chemistry; Response of coastal diatoms in a high CO<sub>2</sub> world

#### Peer-reviewed publications

1. Ghosh A and **Bhadury P** (2016) Insights into bacterioplankton community structure from Sundarbans mangrove ecoregion using Sanger and Illumina MiSeq sequencing approaches: a comparative analysis. Genomics Data DOI: 10.1016/j.gdata.2016.11.017
2. Sen A and **Bhadury P** (2016) Exploring the seasonal dynamics within the benthic foraminiferal biocoenosis in a tropical monsoon-influenced coastal lagoon. Aquatic Biology 25:121-138
3. Ansari KGMT and **Bhadury P** (2016) Occurrence of epibionts associated with meiofaunal basibionts from the world's largest mangrove ecosystem, Sundarbans. Marine Biodiversity DOI: 10.1007/s12526-016-0502-5
4. Debnath M and **Bhadury P** (2016) Adaptive responses and arsenic transformation potential of diazotrophic Cyanobacteria isolated from rice fields of arsenic affected Bengal Delta Plain. Journal of Applied Phycology DOI:10.1007/s10811-016-0820-9
5. Samanta B and **Bhadury P** (2016) A comprehensive framework for functional diversity patterns of marine chromophytic phytoplankton using rbcL phylogeny. Scientific Reports 6:20783 DOI:10.1038/srep20783

6. Srichandan S, Maharana B, Kim JY, Kumar A, Mishra DR, **Bhadury P**, Muduli PR, Pattnaik AK, Rastogi G (2015). Interannual and cyclone-driven variability in phytoplankton communities of a tropical coastal lagoon. *Marine Pollution Bulletin* DOI: 10.1016/j.marpolbul.2015.11.030
7. Boufahja F, Semprucci F, Beyrem H and **Bhadury P** (2015) Marine nematode taxonomy in Africa: promising prospects against scarcity of information. *Journal of Nematology* 47:198-206
8. Ansari KGMT, Lyla S, Khan SA and **Bhadury P** (2015) Diversity patterns of free-living marine nematodes in the southwest continental shelf off Bay of Bengal and their link to abiotic variables. *Marine Ecology* DOI 10.1111/maec.12332
9. Choudhury AK and **Bhadury P** (2015) Relationship between N: P: Si ratio and phytoplankton community composition in a tropical estuarine mangrove ecosystem. *Biogeosciences Discussions* 12: 2307-2355
10. Sen A and **Bhadury P** (2015) Molecular diversity of benthic foraminifera from tropical and subtropical coastal settings- a concise review. *Indian Journal of Geo-Marine Sciences* 44:1-10
11. **Bhadury P** (2015) Effects of ocean acidification on marine invertebrates- a review. *Indian Journal of Geo-Marine Sciences* 45:1-11
12. Sen A, Ghosh M, Khanderao P, Das SK, Roy Chowdhury D, Sarkar PK, Saha R and **Bhadury P** (2015) Modern benthic foraminiferal assemblages from the world's largest deltaic mangrove ecosystem, the Sundarbans. *Marine Biodiversity* DOI: 10.1007/s12526-015-0383-z
13. Ghosh D, Routh J and **Bhadury P** (2015) Elemental and biomarker characteristics in a Pleistocene aquifer vulnerable to arsenic contamination in the Bengal Delta Plain, India. *Applied Geochemistry* 61: 87-98
14. Ghosh D, Routh J and **Bhadury P** (2015) Characterization and microbial utilization of dissolved lipid organic fraction in arsenic impacted aquifers (India). *Journal of Hydrology* 527: 221-233
15. Ansari KGMT, Pattnaik AJ, Rastogi G and **Bhadury P** (2015) An inventory of free-living marine nematodes from Asia's largest coastal lagoon, Chilika, India. *Wetlands Ecology and Management* DOI: 10.1007/s11273-015-9426-2
16. Samanta B and **Bhadury P** (2015) *Thalassiosira sundarbana* sp. nov. (Bacillariophyta), an estuarine diatom from Sundarbans mangrove ecoregion based on morphology and molecular phylogeny. *Phycological Research* 63:102-109
17. Bhadury P, Mandal N, Ansari KGMT, Philip P, Pitale R, Prasade A, Nagale P and Apte D (2015) Checklist of free-living marine nematodes from intertidal sites along the central west coast of India. **Check List** DOI: <http://dx.doi.org/10.15560/11.2.1605>
18. Choudhury A, Das M, Philip P and **Bhadury P** (2015) An assessment of the implications of seasonal precipitation and anthropogenic influences on a mangrove ecosystem using phytoplankton as proxies. *Estuaries and Coasts* 38: 854-872
19. Land P, Jamie S, Findlay H, Girard-Arduin F, Sabia R, Reul N, Piolle J-F, Bertrand C, Quilfen Y, Salisbury J, Vandemark D, Bellerby R and **Bhadury P** (2015) Salinity from space unlocks satellite-based monitoring of ocean acidification. *Environmental Science and Technology* DOI: 10.1021/es504849s
20. Srichandran S, Kim JY, Bhadury P, Barik SK, Muduli PR, Samal RN, Pattnaik AK and Rastogi G (2015) Spatiotemporal distribution and composition of phytoplankton assemblages in a coastal tropical lagoon; Chilika, India. *Environmental Monitoring and Assessment* DOI 10.1007/s10661-014-4212-9
21. Ghosh D, **Bhadury P** and Routh J (2014) Diversity of arsenite oxidizing bacterial communities in arsenic-rich deltaic aquifers in West Bengal, India. *Frontiers in Microbiology* DOI: 10.3389/fmicb.2014.00602
22. Choudhury AK and **Bhadury P** (2014) Phytoplankton study from the Sundarbans ecoregion with an emphasis on cell biovolume estimates- a review. *Indian Journal of Geo-Marine Sciences* 43:1-9
23. Kumar A, Sen D and **Bhadury P** (2014) Unraveling free-living marine nematode community structure from a biodiversity rich tropical coastal setting based on molecular approaches. *Marine Biodiversity* DOI: 10.1007/s12526-014-0234-3

24. Samanta B and **Bhadury P** (2014) Molecular diversity of chromophytic phytoplankton assemblages in a mangrove ecosystem based on functional gene sequencing approach. *Journal of Phycology* 50:328-340
25. **Bhadury P** (2014) Molecular biodiversity of benthic communities in deep-sea sediments- examples from the phylum Foraminifera and Nematoda. *Indian Journal of Geo-Marine Sciences* 43:709-713
26. Bhattacharjee D, Sharma C and **Bhadury P** (2013) Chromotypes of *Globigerinoides ruber* in the surface sediments from the North-West coast of the Bay of Bengal. *Marine Biodiversity Records* 6: e133
27. Bhattacharjee D, Samanta B, Danda AA and **Bhadury P** (2013) Temporal succession of phytoplankton assemblages in a tidal creek system of the Sundarbans mangroves- an integrated approach. *International Journal of Biodiversity* 2013:824543
28. Bhattacharjee D, Choudhury BC, Sivakumar K, Sharma C, John S, Behera S, Behera S and **Bhadury P** (2013) Benthic foraminifer assemblages in turtle congregation sites along the North East coast of India. *Journal of the Marine Biological Association of the United Kingdom* 93: 877-887
29. **Bhadury P**, Bik HM, Austen MC, Lamshead JD, Smerdon GR and Rogers AD (2011) Molecular diversity of fungal phylotypes co-amplified alongside nematodes from coastal and deep-sea marine environments. *PLoS One* 6:e26445
30. **Bhadury P**, Song BK and Ward BB (2011) Intron features of key nitrogen metabolizing genes in marine phytoplankton. *Marine Genomics* 4: 207-213 [one of the most downloaded articles of 2011]
31. **Bhadury P** and Annapurna C (2011) Marine barcoding- how will it help Indian marine benthic studies. *Indian Journal of Geo-Marine Sciences* 40: 645-647
32. **Bhadury P** and Austen MC (2010) Barcoding marine nematodes- an improved set of nematode 18S rRNA primers to overcome eukaryotic co-interference. *Hydrobiologia* 641: 245-251
33. **Bhadury P** and Ward BB (2009) Molecular diversity of marine phytoplankton communities based on key functional genes. *Journal of Phycology* 45: 1335-1347
34. **Bhadury P**, Bridge PD, Austen MC, Bilton DT and Smerdon GR (2009) Detection of fungal 18S rRNA amplicons in conjunction with marine nematode 18S rRNA amplicons. *Aquatic Biology* 5:149-155
35. **Bhadury P**, Austen MC, Bilton DT, Lamshead PJD, Rogers AD and Smerdon GR (2008) Evaluation of combined morphological and molecular techniques for marine nematode (*Terschellingia* spp.) identification. *Marine Biology* 154: 509-518
36. **Bhadury P**, Austen MC, Bilton DT, Lamshead PJD, Rogers AD and Smerdon GR (2007) Exploitation of archived marine nematodes- a hot lysis DNA extraction protocol for molecular studies. *Zoologica Scripta* 36: 93-98
37. **Bhadury P**, Austen MC, Bilton DT, Lamshead PJD, Rogers AD and Smerdon GR (2006) Development and evaluation of a DNA barcoding approach for the rapid identification of nematodes. *Marine Ecology Progress Series* 320: 1-9
38. **Bhadury P**, Austen MC, Bilton DT, Lamshead PJD, Rogers AD and Smerdon GR (2006) Molecular detection of marine nematodes from environmental samples: overcoming eukaryotic interference. *Aquatic Microbial Ecology* 44: 97-103
39. **Bhadury P**, Mohammad BT and Wright PC (2006) The current status of natural products from marine fungi and their potential as anti-infective agents. *Journal of Industrial Microbiology and Biotechnology* 33: 325-337
40. **Bhadury P**, Austen MC, Bilton DT, Lamshead PJD, Rogers AD and Smerdon GR (2005) Combined morphological and molecular analysis of nematodes through short term preservation in formalin. *Molecular Ecology Notes* 5: 965-968
41. Cook AA, **Bhadury P**, Debenham NJ, Meldal BHM, Blaxter ML, Smerdon GR, Austen MC, Lamshead PJD and Rogers AD (2005) Denaturing gradient gel electrophoresis as a tool for the identification of marine nematodes. *Marine Ecology Progress Series* 291: 103-113
42. **Bhadury P** and Wright PC (2004) Exploitation of marine algae: biogenic compounds for potential antifouling applications *Planta* 219: 561-578

## Book chapters

1. **Bhadury P** (2016) DNA barcoding in marine nematodes: successes and pitfalls. In DNA barcoding in marine perspectives (Eds Trivedi S, Ansari AA, Ghosh SK and Rehman H) 330 pp, Springer ISBN 978-3-319-41838-4
2. Behera S, Tripathy B, Sivakumar K, Choudhury BC and **Bhadury P** (2016) Distribution and abundance of two sympatric species of horseshoe crabs along the Odisha Coast, India. In Changing global perspectives on horseshoe crab biology, conservation and management (Eds. Carmichael RH, Botton ML, Shin PKS and Cheung SG). 793 pp, Springer ISBN 978-3-319-19541-4
3. Chakraborty A and **Bhadury P** (2015) Effect of pollution on aquatic microbial diversity. In Environmental Microbial Biotechnology (Eds Sukla LB, Pradhan N, Panda S, Mishra BK), Springer, pp 53-75, ISBN 978-3-319-19017-4 (Invited book chapter)
4. Chakraborty A, Dasgupta CK and **Bhadury P** (2014) Application of molecular techniques for assessment of microbial communities in contaminated sites. In Microbial Biodegradation and Bioremediation (Ed Das S), Elsevier, pp 85-106, ISBN 978-0-12-800021-2 (Invited book chapter)
5. **Bhadury P**, Kumar A and Maiti M (2013) Nesting status of Sea Turtles in West Bengal-The East Midnapore scenario. In Marine Turtles along the Indian Coast (Ed Kurian A), WWF-India, pp 85-91.
6. Bhattacharjee D, Samanta B, Danda A and Bhadury P (2013) Understanding the impact of climate change in the Sundarbans aquatic ecosystem- phytoplankton as proxies. In Climate Change and Island and Coastal Vulnerability (Eds Sundaresan J, Sreekesh S, Ramanathan A, Sonnenschein L, Boojih R) 126-140 pp, Springer [ISBN: 978-94-007-6015-8]

## Research grants (ongoing)

Ongoing research projects funded by different agencies including Ministry of Earth Sciences, Govt of India, Integrated Coastal Zone Management Program of World Bank, International Atomic Energy Agency (Vienna), FIRE program of IISER Kolkata, World Wildlife Fund-India and Wildlife Trust of India.

## Honors and Awards

- (i) Member of the International Steering Committee of Horseshoe crab Specialist Group of the IUCN Species Survival Commission
- (ii) Convener of the session 'Biogeochemical cycling in coastal ecosystems', AOGS 2015, Singapore (2<sup>nd</sup>-7<sup>th</sup> August, 2015)
- (iii) Biogeosciences, Section Secretary, Asia Oceania Geoscience Society [2014- present]
- (iv) Invited scientific lecture at State Key Laboratory of Marine Environmental Science, Xiamen University, China [2014]
- (v) Recipient of International Union for Geological Sciences (IUGS) Hutchinson Travel Award, 2012 to deliver a contributed scientific talk as well as co-chairing a session on 'Education and Outreach in Polar Science' in 34<sup>th</sup> International Geological Congress, Brisbane, Australia
- (vi) Team Leader, 3<sup>rd</sup> Indian Arctic Expedition, Government of India, 2010 (Winter Phase)
- (vii) Recipient of Plymouth Marine Laboratory (PML) International Ph.D. Scholarship from 2002-2005 to pursue Ph.D. research
- (viii) Recipient of the prestigious Department for International Development (DFID) Scholarship to pursue M.Sc. studies in United Kingdom from 2001-2002
- (ix) Advisory role to Indian Polar Research Network (IPRN) for promotion of polar research

## Selected professional activities

- (i) Editorial Board Member of Frontiers in Marine Science
- (ii) Editorial Board Member of Scientific Reports (Nature Publishing Group)
- (iii) Editorial Board member of Journal of Genetics (IAS and Springer)

- (iv) Editorial Board Member of Journal of Marine Biology and The Scientific World Journal (Hindawi)
- (v) Referee responsibilities for several journals in the field of marine science and oceanography including Marine Biology, Marine Ecology Progress Series, Marine Biodiversity Records, Journal of Experimental Marine Biology and Ecology, Deep-Sea Research Part I, Canadian Journal of Microbiology, Molecular Ecology, Molecular Ecology Resources, BMC Evolutionary Biology, Regional Studies of Marine Science, International Journal of Greenhouse Gas Control, Natural Hazards, and Aquatic Biology
- (vi) Grant proposal reviewer for FCT Fundação para a Ciência e Tecnologia (Portugal) and APN-GCR (Japan)

**Other academic commitments**

PhD students guided- 2; Ongoing-4

Postdoctoral Research Associate-1 (ongoing)

Teaching commitments for BS-MS and Integrated PhD programs of IISER Kolkata.