

BIODATA

DR.N.R.NISHA

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Academic Back Ground

Examination	University/ Board	Year	Subjects	% of marks	Division
S.S.L.C	Board of secondary Examinations, Kerala	1988	All subjects	80.0	Distinction
Pre Degree	KeralaUniversity	1990	Physics, Chemistry, Biology	76.6	Ist Class
B.Sc.	KeralaUniversity	1993	Geology (Main), Physics, Mathematics	79.9	I st Class
M.Sc.	Cochin Uni. of Science & Tech.	1996	Marine Geology	69.6	I st with II Rank
Ph.D.	Cochin Uni. of Science & Tech	2002	Marine Micropaleontology &Paleoceanography		

Details of professional training and research experience, specifying period

Twenty years of research experience in the field of Marine Micropaleontology
&Paleoceanography

15.01.1997 to 14.10.1999 ----- Cochin University **Junior Research Fellow**

15.10.1999 to 14.10. 2002 ----**CSIR-Senior Research Fellow**

15.10.2002 to 30.09.2003 ----- **CSIR – Senior Research Fellow (Extented)**

1.10.2003 to 11.12.2006 ----- **CSIR –Research Associate**

12.12.2006 to 31.01.2007 ----- **Lecturer** (Contract Basis)

01.01.2007 to 17.12.2008 ----- **Principal InvestigatorDST SERC YOUNG
SCIENTIST SCHEME**

18.12.2008 to 25.11.2013 ----- Lecturer (Contract)

26.11.2013 to 26.02.2015 ----- UGC Post Doctoral Fellow

27.02.2015continuing ----- Assistant Professor, CUSAT

Thesis submitted on 14.01.2002. Awarded Ph.D on 7th June 2002

Thesis Title : “Foraminiferal and pteropod records in the late Quaternary sequence off northern Kerala and their oceanographic and climatic significance”

Supervisor : Prof.A.D.Singh (Currently in Banaras Hindu University, Varanasi)

DETAILS OF RESEARCH PROJECTS

Principle Investigator: Dr. N.R.Nisha

	Project Title	Funding Agency	Total Cost (Rs.)
DST FAST TRACK Young Scientist Scheme	Benthic foraminiferal and pteropod responses to the last glacial - Holocene oceanographic changes along the Southeastern Arabian Sea.	DST NewDelhi	14.75 lakhs <i>completed</i>
UGC BSR START UP RESEARC H GRANT	A High Resolution study of Benthic foraminifera and pteropods of Southern Arabian Sea Oxygen Minimum Zone	UGC, New Delhi	6 Lakhs <i>completed</i>

Ph.D Scholars working under my supervision

1. Gurusewak Singh (Part time)
2. Kavya Aravind (KSCSTE fellow)
3. Puja Vijay (UGC JRF Part time)
4. Vena G Viswam (UGC JRF)

PUBLICATIONS

(a) Papers published in International/National Journals:

- (i) Significance of pteropods in deciphering the late Quaternary Sea-Level history along the southwestern Indian shelf (2001) Singh AD, Ramachandran KK, Samsuddin M, Nisha NR and Haneeshkumar V *Geo-Marine Letters*, **20**, 243-251 <https://doi.org/10.1007/s003670000056>
- (ii) Occurrence of pteropods in a deep eastern Arabian Sea core: Neotectonic implications (2000) .Singh AD, Schiebel R and Nisha NR *Curr. Sci.*,**78**, No.9,1142-1144
- (iii) Distribution patterns of Recent pteropods in surface sediments of the western continental margin of India (2005) Singh AD, Nisha NR and Joydas TV) *Jour. Micropal.* **24** 39-54. <https://doi.org/10.1144/jm.24.1.39>
- (iv) Late Quaternary evolution of the shelf environment off north Kerala, SW India: Faunal and sedimentological evidence (2007) Singh AD, Nisha NR and Ramchandran KK, *Jour. Geol. Soc. Ind.*, **70**, 109-120. <https://doi.org/10.1007/s12594-012-0208-7>
- (v) Bathymetric distribution pattern of recent benthic foraminifera recorded in surficial sediments of southwestern Indian shelf (2012) Nisha NR and Singh AD *Jour. Geol. Soc. Ind.* **80**, 783-801 <https://doi.org/10.1007/s12594-012-0208-7>
- (vi) Diversity of the agglutinated foraminifera from the Cochin Region with special reference to their ecological preferences (Ranju.R, Nisha.N.R. and Menon N.R). *Marine biodiversity and Bioprospecting for sustainable livelihood*, Editors Aneykuty Joseph and Rosamma Philip, Proceedings of the National seminar on Marine biodiversity and Bioprospecting for sustainable livelihood ,2016 pp.48-54.ISBN 978-93-80095-85-1.
- (vii) First report of *Ovamina opaca*, Dahlgren, 1962, a saccaminid benthic foraminiferal species from the sediments of Arabian Sea. (2017) R.Renju, N.R.Menon, M.Nashad and N.R.Nisha, *Journal of Marine Biological Association of India*, v.59 (2), 119-121. doi: 10.6024/jmbai.2017.59.2.1964-16

(b) Communicated/Under Preparation

- (viii) Quantitative distribution and paleoecology of benthic foraminifera in the subsurface section at Quilon, Kerala , Nisha NR, *Jour. Paleon. Soc. Ind.* **2020** (communicated)
- (ix) Fluxes of pteropods in response to the seasonal hydrographic conditions and monsoonal upwelling off Somalia (Northwestern Arabian Sea) 2021 **Nisha NR** and Singh AD *Marine systems.* (under preparation).

c) Books Published

1. Quaternary Faunal Records off Northern Kerala: Their Oceanographic and Climatic Significance, Nisha Ravindran, Lambert Academic Publishing, Germany, 2018
2. Monograph of benthic foraminifers and pteropods off Northern Kerala. Nisha Ravindran, Lambert Academic Publishing, Germany, 2018

(x) Papers presented in Seminars/Symposia:

- (i) “ A revised age and depositional history of the Quilon Formation, Kerala” (N.R.Nisha and A.D.Singh), In: XVI Indian Colloquium on Micropaleontology and Stratigraphy, NIO, Goa, 1998,(Abst.) pp.102
- (ii) Pteropods: New tool for sea level reconstruction (A.D.Singh, N.R.Nisha, K.K.Ramachandran and G.K.Suchindan, National Symposium on Late Quaternary Geology and sea level changes, Cochin,1998, (Abst.) pp.41
- (iii) Oceanographic and climatic changes during the last 24 kyr- Deduced from pteropods-isotope record from the southwest continental shelf of India (A.D.Singh and N.R.Nisha), IGCP 396, NIO-Goa, October 1998, (Abst.), pp.27
- (iv) On the occurrence of pteropods in a deep eastern Arabian Sea core (A.D.Singh, R.Shiebel and N.R.Nisha) XVII Indian Colloquium on Micropaleontology and Stratigraphy, Vikram University, Ujjain, January 2000. (Abst.) pp.80
- (v) Efficacy of pteropods in deciphering late Quaternary sea level variations along the continental shelf of India (A.D.Singh and N.R.Nisha) XVII Indian Colloquium on Micropaleontology and Stratigraphy, Vikram University, Ujjain, January, 2000. (Abst.) pp.79
- (vi) Foraminiferal biofacies on the southwestern continental shelf of India (N.R.Nisha) XVIII Indian Colloquium on Micropaleontology and Stratigraphy, Nagpur University, Nagpur, January, 2002. (Abst.) pp.74
- (vii) Fluxes of Euthecosomatous pteropods in Somali basin, NW Arabian Sea, (A.D.Singh, N.R.Nisha and S.M.-H.Conan). International workshop on Biogeochemical processes in the Northern Indian Ocean, NIO, Goa, February 2003 (Abst.)pp.10
- (viii) Reports of some recent benthic foraminifera from the inner shelf of Kerala Coast (Ranju.R, Nisha.N.R, Menon.N.R.and Nashad.M) International conference Towards a sustainable blue economy: production, Strategies and

Policies, Kerala University of Fisheries and Ocean Science, 4-6th February 2016 , pp.25

- (ix) Fluxes of Euthecosomatous pteropods off Somalia: A sediment trap analysis (N.R.Nisha) National Semnar on Marine biodiversity and Bioprospecting for sustainable livelihood, Department of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, March 21-22nd 2016 pp.21
- (x) Diversity of the agglutinated foraminifera from the Cochin Region with special reference to their ecological preferences (Ranju.R, Nisha.N.R. and Menon N.R). National Seminar on Marine biodiversity and Bioprospecting for sustainable livelihood, Department of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, March 21-22nd 2016 pp.21.
- (xi)** Triggering of South East Arabian Sea Oxygen Minimum Zone (SEASOMZ) by Indian Summer Monsoon(ISM): Evidence from Benthic Foraminifera and Stable isotopes (Thamizharasan,S., Nisha,N.R., Deepak,R.P.).National Seminar on Dynamics of Surface and Subsurface Geological Processes held at the department of Earth Sciences, Pondicherry University, 8-9 February 2018.
- (xii) Pleistocene/ Holocene summer monsoon intensification of the Southeastern Arabian Sea: Faunal and Stable isotopic records (Kavya Aravind, N.R.Nisha and Abhiram), XXVII Indian Colloquium in Micropaleontology and Stratigraphy organized by Banaras Hindu University Varanasi, 4th- 6th November 2019.
- (xiii) Benthic foraminiferal distribution pattern and depositional history of Quilon formation (Veena G Viswam, N R Nisha and Sulika A.S in XXVII Indian Colloquium on Micropaleontology and Stratigraphy (ICMS- 2019) organized by Department of Geology, Centre of Advance study, Institute of Science, BHU, Varanasi
- (xiv) Summer monsoon intensification of the Southeastern Arabian Sea: Faunal and Stable isotopic records (Kavya Aravind, Veena G Viswam and N R Nisha), The International Conference MARICON 2019 organized by School of Marine Sciences, Cochin University of Science and Technology on 16th to 20th December 2019.

PROFESSIONAL RECOGNITION, AWARDS, FELLOWSHIPS RECEIVED

Awards/Honours

- (i) Recipient of **Lakshmeswar Rama Rao Birth Centenary Research Grant** of the Geological Society of India for the year 1998-1999
- (ii) Awarded **Senior Research Fellowship by the Council of Scientific and Industrial Research**, New Delhi in October 1999.
- (iii) Awarded **Senior Research Fellowship (Exnt.) by the Council of Scientific and Industrial Research**, New Delhi in May 2002.
- (iv) Awarded **Research Associateship by the Council of Scientific and Industrial Research**, New Delhi in May 2003.
- (v) Awarded **DST FAST TRACK SCHEME FOR YOUNG SCIENTISTS** in September 2007
- (VI) Awarded **UGC POST DOCTORAL FELLOWSHIP FOR WOMEN IN JULY 2013**
- (VII) Awarded **UGC BSR START UP RESEARCH GRANT IN FEBRUARY 2016**
- (viii) Awarded **INSA VISITING SCIENTIST FELLOWSHIP 2017-2018**
- (ix) Recipient of **Cochin University Merit Scholarship** for Master of Science
- (x) Cochin University **second rank holder in M.Sc. Marine Geology**, 1996

WORKSHOPS/TRAINING PROGRAMMES ATTENDED

- (i) Attended the workshop on the “**Application of fractals in Earth sciences**” sponsored by the Department of Science and Technology and organized at **National Geophysical Research Institute, Hyderabad** (from Sept.22 to Sept.26, 1997)
- (ii) Participated and presented a paper in the **XVI Indian Colloquium on Micropaleontology and Stratigraphy, NIO, Goa**, January 1998
- (iii) Attended the annual convection of Geological Society of India and the National Symposium on **Late Quaternary Geology and Sea level**

Changes organized by **Cochin University of Science and Technology**, Cochin-1998

- (iv) Participated and presented a paper in the **XVII Indian Colloquium on Micropaleontology and Stratigraphy**, Vikram University, Ujjain, January 2000.
- (v) Attended and presented a paper in the National Seminar on Coastal Evolution, Processes and Products & **XVII Convention of the India Association of Sedimentologists** organized by **Cochin University of Science and Technology**, Cochin-2000
- (vi) Participated in the Contact Programme/Winter School/ Training Course in **Precambrian Paleobiology: Techniques and Methodology** sponsored by Department of Science & Technology and organized by Department of Geology, **University of Lucknow, Lucknow**, December 4-18th, 2000.
- (vii) Participated and presented a paper in the International Workshop on **“Biogeochemical Processes in the Northern Indian Ocean”**, NIO, Goa, 24-25 February, 2003.
- (viii) Participated in the UGC sponsored National Seminar on **“Marine Biology – Advances & Prospects”**, organized by **Cochin University of Science and Technology**, Cochin-2006.
- (ix) Participated in the **ISRO-GBP** Sub-working Group Brainstorming Workshop on **High Resolution Monsoon Reconstruction Since the Last Glacial Maximum (~21ka)** organized by **Cochin University of Science and Technology and Physical Research Laboratory at Cochin**, 20-21st July 2007
- (x) Participated and presented a paper in the National Seminar on **Costal Zone-Processes, Resources & Social Relevance** organized by Cochin University of Science & Technology, on 17th February 2012.
- (xi) Participated in the **National Workshop on Geospatial Technology** organized by School of Marine Sciences on March 2014
- (xv) Participated and presented a paper in the **International Conference Towards a sustainable blue economy: Production, Strategies and Policies**, Kerala University of Fisheries and Ocean Science, 4-6th February 2016.
- (xvi) Participated and presented a paper and a poster in the **National Seminar on Marine biodiversity and Bio-prospecting for sustainable livelihood**, Department of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, March 21-22nd 2016.

- (xvii) Participated in the national workshop on “Applied Statistical Techniques (AST) sponsored by UGC and KSCSTE and is organized by the Department of Statistics, Cochin University of Science and Technology, January 19-21, 2017.
- (xviii) Participated in the National Workshop on “Mud banks of Kerala: Status, Issues and Societal Concerns conducted by CSIR-National Institute of Oceanography (NIO, Regional Centre, Kochi, 10 & 11 February 2017.
- (xix) Participated in the Faculty Development Program on “Effective and Innovative Teaching organized by Deen Dayal Upadhyay Kendra, CUSAT, 7-11 March 2017.
- (xx) Participated in the National Seminar on “Emerging Trends in Geoscience-Archean to Antropocene (Arche-An 2017) organized by the Department of Marine Geology and Geophysics, School of Marine Sciences, Cochin University of Science and Technology, March 21-22, 2017
- (xxi) An abstract has been accepted for presentation in the National Seminar on Dynamics of Surface and Subsurface Geological Processes going to be held at the department of Earth Sciences, Pondicherry University, 8-9 February 2018.
- (xxii) Participated in the Faculty Development Program on “Effective and Innovative Teaching “held at Deen Dayal Upadhyay Kendra, CUSAT, 20-24 February 2018.
- (xxiii) Participated in the winter school on Climate change Impacts and resilience options for Indian Marine Fisheries organized by Indian Council of Agriculture Research and conducted at ICAR-Central Marine Fisheries Research Institute, Kochi from 8-29th November 2018.
- (xxiv) Attended the International conference on Benthos (ICB-2019) organized by the Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science and Technology, 6-8 March 2019
- (xxv) Participated and presented a Poster entitled “Pleistocene/ Holocene summer monsoon intensification of the Southeastern Arabian Sea: Faunal and Stable isotopic records” at XXVII Indian Colloquium in Micropaleontology and Stratigraphy organized by Banaras Hindu University Varanasi, on 4th November 2019 to 6th November 2019.
- (xxvi) Participated and presented a Poster entitled Benthic foraminiferal distribution pattern and depositional history of Quilon formation” in XXVII Indian Colloquium on Micropaleontology and Stratigraphy (ICMS- 2019) organized by Department of Geology, Centre of Advance study, Institute of Science, BHU, Varanasi from 4th November 2019 to 6th November 2019.

- (xxvii) Participated in the Faculty Development Programme on Outcome based Teaching, Learning and Assessment Strategies organized by IQAC, CUSAT during 27th to 1st December 2019.
- (xxviii) Participated and presented a Poster entitled “*Summer monsoon intensification of the Southeastern Arabian Sea: Faunal and Stable isotopic records*” at *The International Conference MARICON 2019* organized by School of Marine Sciences, Cochin University of Science and Technology on 16th to 20th December 2019.
- (xxix) Participated in the Orientation/Induction Programme for faculty members conducted by the Teaching Learning Centre, Ramanujam College, University of Delhi from 1st September to 30th September 2020.
- (xxx) Participated in the National Webinar on International Fossil Day 2020 organized under the aegis of Geological Society of India, Bangalore and Paleontological Society of India, Lucknow organized by Dr. Harisingh Gour Vishwavidyalaya, Sagar, Banaras Hindu University, Varanasi, North eastern Hill University, Shillong and Deccan College & Research Institute, Pune on 17th October 2020.
- (xxxi) Participated in the Faculty Development Programme on Advanced Pedagogical techniques conducted by the Teaching Learning Centre, Ramanujam College, and University of Delhi from 28st October to 5th November 2020.

OCEANIC EXPEDITIONS

Participated in the **148th Cruise of ORV SagarKanya** in the Arabian Sea and the Bay of Bengal from **4 September – 10 October 1999**.

Also participated in several Local Riverine and Estuarine cruises as part of M.Sc. Marine Geology course

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Cochin-682 024

Permanent Address : Same as above

Areas of Interest

- Modern oceanography and pteropod distribution

- Benthic foraminiferal proxy for the OMZ in the Arabian Sea
- Preservation/ dissolution of Aragonite
- Aragonite flux and carbonate budget
- Aragonite cycle and its linkage with global climate
- Developing new pteropod proxies for deciphering sea level history
- Benthic foraminiferal distribution pattern of the Bay of Bengal and Andaman Sea.

Major contributions

We made first contribution on various aspects of Recent and Quaternary pteropods from the Arabian Sea. We made a thorough understanding of the distribution of pteropods and benthic foraminifers along the SW coast of India

We initiated research programme on aragonite flux study in the Arabian Sea

(Evaluation of production, Mass flux and dissolution) to understand better Arabian Sea carbonate system.)