



# JYOTI SRIVASTAVA

SCIENTIST

## About Me

I work on vegetation dynamics in response to climate change over a range of timescales with a concern for human-environment interactions in past, present, and future. This involves, elucidating the impact of past global climate change on the ecology of terrestrial and deltaic systems. I study palaeoecological records of vegetation biomes, field datasets and ecological niche models to understand and predict the impact of global warming on the biosphere. I hold expertise in mangrove palynology, palaeoecology, palaeoclimatology and vegetation modelling. My ongoing research work focuses on quantification of pollen-based reconstructions of past landcover for several time windows to produce vegetation descriptions useful for Earth system modelling.

## Contact

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### Webpage

[jyotisrivastava.in](http://jyotisrivastava.in)

### Permanent Address

R-014 DLF Woodland Heights,  
Bommasandra Jigani Link Road,  
Bengaluru- 560105  
Karnataka

## Expertise

- Palynology
- Ecological modelling
- Mangrove ecology
- Biodiversity and Conservation
- Mangrove evolution and Paleobiogeography
- Past continental climate and land-sea interactions

## Language

Hindi

English

## Affiliation

**Birbal Sahni Institute of  
Palaeosciences**  
**53 University Road,**  
**Lucknow-226 007**  
Position: Scientist-D

## Research Experience

### Birbal Sahni Institute of Palaeosciences 2021 - Present

Scientist-D  
Quaternary Paleoclimate Department

### Birbal Sahni Institute of Palaeosciences 2017 - 2020

Scientist-C  
Marine Micropaleontology Department

### Birbal Sahni Institute of Palaeosciences 2013 - 2016

Scientist-B  
Marine Micropaleontology Department

### Birbal Sahni Institute of Palaeosciences 2011 - 2012

DST-SRF  
Quaternary Palynology Department

### Birbal Sahni Institute of Palaeosciences 2009 - 2011

DST-JRF  
Quaternary Palynology Department

## Teaching Experience

### Academy of Scientific and Innovation Research (AcSIR) 2022 - Present

Associate Professor  
Faculty of Biological Sciences

### Academy of Scientific and Innovation Research (AcSIR) 2020 - 2021

Assistant Professor  
Faculty of Biological Sciences

### Global Centre for Languages, Lucknow 2008 - 2009

Spoken English Trainer

## Supervisory Experience

### PhD Thesis Supervised

Dr. Pujarini Samal  
Late Holocene palaeoclimatic and palaeovegetation reconstruction from the Mahanadi River Delta, East coast of India- A multi-proxy approach

## PhD Scholar(s) under supervision

- Ms. Pooja Nitin Saraf  
Reconstructing middle Holocene climate and vegetation biomes from fossil pollen data and species distribution modelling in Central Ganga plains
- Mr. Jereem Thampan  
Modelling the potential response of natural vegetation to past, present and future climate change scenarios in Rajasthan, Western India

## PhD Scholar(s) (affiliated to other institutions) supervised for palynological analysis

- Mrs. Shivangi Singh  
Assessment of response of Pichavaram mangroves to sea level rise: A multidisciplinary approach using RSET-MH and palynological analysis, under the guidance Dr. R. Sathyanathan (SRM Institute of Science and Technology, Chennai)
- Ms. Yamuna Sali (CSIR-SRF)  
Assessment of sediment cores from Lake Ramasamudra (Karkala, Udupi) to reconstruct past variations in the monsoonal intensity, under the guidance of Dr. Anish Kumar Warriar, Manipal Academy for higher education- Manipal Institute of Technology (MAHE-MIT), Manipal.

## Education

**2013**  
*Lucknow University* Late Quaternary Palynochronostratigraphy in North- eastern part of Cauvery delta: Implications in palaeoclimatic and sea-level studies  
**PhD (Botany)**

**2007**  
*CSIR-NET* Life Sciences

**2006**  
*Banaras Hindu University* Department of Botany, Centre of Advanced Study  
**MSc (Botany)** Gold Medalist in Ecology

**2004**  
*Lucknow University* Isabella Thoburn PG College, Lucknow  
**BSc (ZBC)**

**2000**  
*ISCE* Loreto Convent, Lucknow  
**Class 12**

**1998**  
*ICSE* Loreto Convent, Lucknow  
**Class 10**

## Scientific programmes/Projects

### Completed

- Reconstruction of late Quaternary climate from the floral records of Kanara region, SW coast of India
- Early Paleogene climatic records and biostratigraphy: Integrative multiproxy approach from South Shillong Plateau (Meghalaya) and lignite-bearing sequences of Rajasthan.
- FastTrack project for Young Scientist Project: Mangrove dynamics and relative sea level changes during late Quaternary in Godavari Delta.

### Ongoing

- Quaternary Monsoon/Climate reconstruction through high resolution multi-proxy studies of lacustrine archives from Central India (Core Monsoon Zone and Indo-Gangetic Plain)
- SERB-SUPRA Project: Quantification of pollen-based reconstructions of Holocene land cover of Southwest India for Earth system modelling.

## Affiliations / Positions / Memberships

- Member, [Association for Tropical Biology and Conservation](#)
- Member, [Conservation Paleobiology Network](#)
- Member, [INQUA- Human and Biosphere Commission \(HABCOM\)](#)
- Member, [Association of Quaternary Researchers \(AOQR\)](#)
- Member, Editorial Board, Quaternary Chronicle (under [Association of Quaternary Researchers \(AOQR\)](#))
- Life Member, [Palaeobotanical Society of India](#)

- Life Member, [Palaeontological Society of India](#)
- Member, Screening Committee for recruitment in BSIP, Lucknow.
- PhD Co-Supervisor, [Manipal Academy of Higher Education \(MAHE\)](#) for Quaternary Paleoclimate, Palynology, Mangrove dynamics, Estuaries and Deltaic ecosystem, Biodiversity and conservation, Species distribution Modelling (2022- )
- Member, [AcSIR](#) biological sciences coursework for BSIP Committee
- Member, Editorial board, [Geophytology](#), The Palaeobotanical Society, Lucknow (2016-2018).

## National/International Conferences/Seminars/Invited Talks

- 30 National and 8 International conferences attended
- Invited talk on "Introduction to Palaeobotany" at Navyug Mahila Mahavidyalaya, Lucknow on November 14, 2014.
- Invited talk on "Mangrove Palynology: Implications in Palaeoclimatic and sea level studies" in Department of Geological Sciences, Guwahati University on February 6, 2015.
- Invited talk on "Pollen based quantitative reconstruction of past climate and vegetation" in Pune-Mumbai Students' Chapter, Palaeontological Society of India on October 16, 2020.
- Invited talk on "Holocene climate and RSL changes in NE Cauvery Delta" in Quaternary Palynology Training by Association of Quaternary Researchers from January 22-24, 2021.
- Invited expert talk on "Species distribution models to predict the priority conservation areas (PCAs) for mangrove ecosystem" in the International School and Symposium- 2023 "Landuse-landcover mapping and modelling in Ecological regions of the Monsoon (LEM)" during March 13-26, 2023.

## Awards and Recognitions

- Mrs. Prem Kumari Singh Memorial Gold Medal for securing the highest marks in Ecology in MSc Examination, 2006 from Banaras Hindu University.
- Nominated to undertake a Refresher course organized by the Regional Training Institute, Geological Survey of India, Northern region, Lucknow from May 11-16, 2015 on the theme "Paleontology and Biostratigraphy".
- 2nd Prize for Best Poster award entitled "Estuarine ecosystem dynamics in response to Holocene climate and sea level changes in southeast coast India: Evidences from pollen and sedimentary archives" in NECLIME 2016.
- Jury for model display event in the "National Geography Olympiad and Geofest International-2015" held at City Montessori School, Lucknow on 4th November 2015.
- Mentor to nurture school students about science, as desired by Vijnana Bharti.
- DST-International Travel Support (ITS) for CNRS Summer School- POLQUANT – on "Pollen analysis and its applications for vegetation reconstruction in National Center for Scientific Research (CNRS) Moulis, France from 29th August- 2nd September 2016.
- INQUA Congress Bursary Grant 2019 as a full delegate for attending the 20th INQUA Congress from 25-31 July 2019 in Dublin, Ireland.
- Nominated as a panelist in a panel discussion on 'Women in Science' for National Science Day and attended a Vigyan Samachar workshop from 28-29 February 2020 in CSIR-IITR, Lucknow.
- News story on research titled "Certain mangrove species in east coast and west coast of India is likely to reduce and shift landward" got covered on Press Information Bureau- Government of India.

## Publications

- Samal, P., **Srivastava, J.\***, Subramanian, S.R., Charles, B. (2023). Species distribution models to predict the potential niche shift and priority conservation areas for mangroves (*Rhizophora apiculata*, *R. mucronata*) in response to climate and sea level fluctuations along coastal India. *Ecological indicators* (Accepted)
- Samal, P.\*, Subramanian, S.R., **Srivastava, J.**, Kawsar, M., Manoj, M.C., Gurumurthy, G.P., Chauhan, M.M., Ali, S., Alam, M., Sharma, A., Jena, P.S., Shivam, A., Bhushan, R. (2023). A 2600-yr multiproxy record for climate and vegetation reconstruction along the Mahanadi River delta, east coast of India. *The Holocene*, 33(7), 860–879.
- Samal, P.\*, Subramanian, S.R., **Srivastava, J.**, Jena, P.S., Shivam, A., Bhushan, R. (2023) Coastal vegetation dynamics in response to climatic and relative sea level changes in Mahanadi River delta, NE coast of India, *Palynology*, DOI: 10.1080/01916122.2022.2134937.
- Samal, P., **Srivastava, J.\***, Singarasubramanian, S.R., Saraf, P.N., Charles, B. (2022). Ensemble modeling approach to predict the past and future climate suitability for two mangrove species along the coastal wetlands of peninsular India. *Ecological Informatics*, 72, p.101819.
- Samal, P.\*, Singarasubramanian, S.R., Manoj, M.C., **Srivastava, J.**, Dsouza, N., Balakrishna, K., Chauhan, M.M., Ali, S (2022). Heavy metal contamination assessment and its associated human health risk evaluation in the Mahanadi River sediments, India. *Int. J. Environ. Sci. Technol.* (2022). <https://doi.org/10.1007/s13762-022-04630-w>.
- **Srivastava, J.\***, Manoj, M.C., Manjunatha, B.R., Yoganandan, V., Jose, J., Balakrishna, K., Naveen Kumar A., Ahmed, A. (2022). Delineation of terrestrial and marine productivity in the southwestern continental margin of India, *Journal of Asian Earth Sciences*, 230, 105-203.

- **Srivastava, J.\***, Manjunatha, B.R., Balakrishna, K., Prajith, A., Manjunatha, H.V., Jose, J., Kumar, N. (2021). Quantitative pollen-based reconstruction of the vegetation diversity in response to the late-Holocene climate change near Karwar, south-west coast of India. *Quaternary International* 599–600, 95-106.
- **Srivastava, J.\***, Farooqui, A., Thakur, B., Seth, P. (2021). Palynomorph distribution in a mangrove ecosystem along environmental and salinity gradient: a tool for palaeoecological reconstruction. *Wetlands Ecology and Management* 29, 703–717.
- Manoj, M.C.\*, **Srivastava, J.**, Uddandam, P.R., Thakur, B. (2020). A 2000 Year Multi-Proxy Evidence of Natural/ Anthropogenic Influence on Climate from the Southwest Coast of India. *Journal of Earth Science*, 31(5), 1029–1044.
- Shah, S.K., Kapur, V.V., Manoj, M.C., **Srivastava, J.**, Prasad, V. (2020). Recent Advancement(s) at the Birbal Sahni Institute of Palaeosciences, Lucknow: An Overview. *Proc Indian Natn Sci Acad* 86(1), 675-688.
- **Srivastava, J.\***, Prasad, V. (2019). Evolution and paleobiogeography of mangroves. *Marine ecology* 40(6), e12571.
- **Srivastava, J.\***, Farooqui, A., Seth, P. (2018). Pollen-vegetation relationship in surface sediments, Coringa mangrove ecosystem, India: palaeoecological applications, *Palynology* 43(3), 451-466.
- Prasad, V.\*, Utescher, T., Sharma, A., Singh, I.B., Garg, R., Gogoi, B., **Srivastava, J.**, Uddandam, P., Joachimski, M.M. (2018) Low-latitude vegetation and climate dynamics at the Paleocene-Eocene transition – A study based on multiple proxies from the Jathang section in northeastern India. *Palaeogeography Palaeoclimatology Palaeoecology* 497, 139-156.
- **Srivastava, J.\***, Farooqui, A. (2017). Holocene climate and relative sea level changes in Cauvery River Delta, India based on Pollen and sedimentary records. *Journal of Palaeontological Society of India* 62(2), 193-204.
- **Srivastava, J.**, Prasad, V\*. (2015). Effect of global warming on diversity pattern in *Nypa* mangroves across Paleocene–Eocene transition in the paleo-equatorial region of the Indian sub-continent. *Palaeogeography, Palaeoclimatology, Palaeoecology* 429, 1–12.
- Thakur, B.\*, **Srivastava, J.**, Uddandam, P., Manoj, M.C., Prasad, V. (2015) Role of sedimentary processes and environmental factors in determining the distribution pattern of diatoms and marine/ terrestrial palynomorphs in a tropical coastal wetland. *Journal of the Palaeontological Society of India* 60(2), 71-84.
- Hussain, S.M., Nishath, N.M., **Srivastava, J.** (2015). Distribution and environmental implications of foraminifera in the core samples of Kollidam and Marakkanam mangrove locations, Tamil Nadu, South-east coast of India. In. *Lakes and wetlands* (eds. Vasudevan S, Ramkumar T, Singhal RK, Rajanikanth A, Ramesh G. Partridge Publishers, 314-333.
- **Srivastava, J.\***, Farooqui, A. (2014). Environmental impact on Palynological Assemblage and Thecamoebians in the Tributary of Uppanar River, Cauvery Delta during the last 3300 years. *Journal for Geological Society of India* 84, 459–466.
- Farooqui, A.\*, Pattan, J.N. Parthiban, G., **Srivastava, J.**, Ranjana. (2014). Palynological record of Tropical rainforest vegetation and sea level fluctuations since 140 ka from sediment core, south-eastern Arabian Sea. *Palaeogeography, Palaeoclimatology, Palaeoecology*, DOI: 10.1016/j.palaeo.2014.06.020.
- **Srivastava, J.\***, Farooqui, A., Hussain, S.M. (2013). Climate induced Late-Holocene ecological changes in Pichavaram Estuary, India. *Marine Ecology*, 34, 474–483.
- **Srivastava, J.\***, Farooqui, A. (2013). Late Holocene mangrove dynamics and coastal environmental changes in the Northeastern Cauvery River Delta, India. *Quaternary International* 298, 45- 56.
- **Srivastava, J.\***, Farooqui, A. (2013). Late Holocene mangrove dynamics and coastal environmental changes in the Northeastern Cauvery River Delta, India. *Quaternary International* 298, 45- 56.
- **Srivastava, J.\***, Farooqui, A., Hussain, S.M. (2012). Vegetation history and salinity gradient during the last 3700 years in Pichavaram Estuary, India. *Journal of Earth system sciences*, 121(5), 1229–1237.
- **Srivastava, J.\***, Farooqui, A., Hussain, S.M. (2012). Sedimentology and salinity status in Pichavaram mangrove wetland, Southeast coast of India. *International Journal of Geology, Earth and Environmental Sciences (Online)*, 2 (1), 7-15.
- **Srivastava, J.\***, Farooqui, A., Hussain, S.M. (2011). Ecological changes in Pichavaram estuary during the last 4 millennium. *International Journal of Geology, Earth and Environmental Sciences (Online)*, 1 (1), 18-26.
- Farooqui, A.\*, Hussain, S.M., Arikesan, S., **Srivastava, J.** (2010). Deposition of biotic forms in the surface and sub-surface sediments of the Pichavaram estuary and adjoining areas. *Journal of Soil Science, Ukrainian Academy of Sciences*, 1-2, 28-40.
- Farooqui, A.\*, **Srivastava, J.**, Hussain, S.M. (2009). Comparative Leaf Epidermal Morphology and Foliar Na:K Accumulation in Suaeda species: A Case Study from Coastal Ecosystem, East Coast, India. *International Journal of Plant Morphologists (Phytomorphology)* 59 (3&4), 102-111.

## Popular Science articles

- **Srivastava, J.**, Alappat, L. (2020). Ecological impacts of Coronavirus lockdown or ‘Anthropause’. *Quaternary Chronicles, AOQR newsletter* 2(2), 8-10.
- **Srivastava, J.** (2022). Role of palynomorph assemblages from a mangrove wetland in paleoenvironmental reconstruction. *CPN Newsletter, Conservation Paleobiology Network* 11, 2.

## Other Professional Experience

- Health and nutrition coach, giveaway yoga, weight training sessions and nutritional guidance to people and research scholars for cultivating healthy eating habits and mental/emotional health.
- Conducted yoga flow sessions on "International Day of Yoga" in BSIP campus for all the staff members and researchers in the year 2022, 2023.

**I solemnly declare that the information in this resume is true to the best of my knowledge and belief.**

**Dr. Jyoti Srivastava  
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Birbal Sahni Institute of Palaeosciences  
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Lucknow-226007**