

Birbal Sahni Institute of Palaeosciences
Monthly summary on Research Activities
(March, 2022)

1. Areas of Focus:

The institute carries out research on fundamental as well as applied aspects of Palaeosciences that includes Evolutionary history of biota, Paleoclimate, studies of past civilization, Human history and contemporary Climate Change issues, following an integrated and multi-disciplinary approach.

Key research activities under following objectives:

- Understanding origin and evolution of life through time and space.
- Understanding climate change in recent and deep geological times.
- Understanding past civilization and human history.
- Application of Palaeosciences in exploration of fossil fuel and coal industry.

2. Important Highlights of Major Research Programmes

a) Research Advisory Council (RAC) Meeting (March 2-4, 2022)

Research Advisory Council meeting was held in Institute from March 2nd – 4th, 2022. All scientific staff including Research Associates and Scholars presented by their research progress in institute funded projects. All other scientific and research related matters were also discussed.

b) International Women's Day celebrations (March 8th, 2022)

International women day was celebrated on 8th march 2022 in the institute campus in the august presence of chief guest Prof. Hema Achyuthan, Institute of Ocean Management, Anna University, Chennai, Director BSIP, Dr. (Mrs) Vandana Prasad along with all the scientific, technical and research scholars of the institute. On this occasion, Prof. Achyuthan delivered an insightful lecture on “Women empowerment in Academics and Research-The Need to understand and mitigate gender disparity”. In addition to this, seniorscientists and registrar of the institute also shared their experiences focusing on the important contributions of women in research and development.

c) 8th Dr. M.N. Bose memorial Lecture (March 09th, 2022)

8thDr. M. N. Bose memorial lecture was delivered by Dr.Amit Kr. Ghosh (Retired Scientist) of Birbal Sahni Institute of Palaeosciences, Lucknow on “Floral radiation and diversity during age of reptiles” in the Institute auditorium. The lecture was attended by institute's scientists, technical officers and research scholars.

d) Inauguration of Scientific Research Laboratories

Birbal Sahni Institute of Palaeosciences Lucknow is continuously enhancing its technical capabilities and academic prowess towards newer avenues of Geosciences and bio-geosciences. In this regard, Prof. Nitin Karmalkar, Chairman, Governing body and Prof. L. S. Chamyal, Chairman, Research Advisory Council of the institute inaugurated three new ‘state

of the art' scientific research laboratories at its campus. Clumped Isotope laboratory will be used for reconstruction and accurate quantification of key climate parameters (such as temperature) in the past. This is one of the most sophisticated and advanced tool in palaeoclimate reconstruction. In addition to this, new Industrial Micropalaeontology Laboratory, FTIR (Fourier Transform Infra-Red) spectroscopy and ICP-AES laboratories were also inaugurated in the Institute. These instruments are capable of analyzing both inorganic and organic samples coming from wide array of geological fields comprising coal, petroleum, rocks and other energy related fields.

List of research publications (March, 2022)

1. **Azharuddin, S., Govil, P., Chalk, T., Shekhar, M., Foster, G.L., Mishra, R.** (2022). Abrupt upwelling and CO₂ outgassing episodes in the north-eastern Arabian Sea since mid-Holocene. *Scientific Reports* 12(1). DOI: 10.1038/s41598-022-07774-4. (**Impact factor: 4.379**).
2. **Quamar, M.F.** (2022). Modern pollen-vegetation relationship from the Rourkela (Sundargarh District), Odisha, India: a preliminary study and a comparative account. *Palynology*. DOI: 10.1080/01916122.2022.2050321 (**Impact factor: 2.344**).
3. **Saxena, S., Chakraborty, A., Golvic, I., Roy, L., Ghosh, A.K.** (2022). New insights into the earliest occurrence, possible evolutionary lineage, palaeogeography and palaeoclimatic implications of *Nicklithus amplificus*: Evidence from the Adriatic Sea, Indian Ocean and Paratethys. *Marine Micropaleontology* 172. DOI: 10.1016/j.marmicro.2022.102111 (**Impact factor: 2.415**).
4. Upadhyay R., **Gautam, S., Ram Awatar** (2022). Discovery of an Entrapped Early Permian (ca. 299 Ma) Peri-Gondwanic Sliver in the Cretaceous Shyok Suture of Northern Ladakh, India: Diverse Implications. *GSA Today* 32, 4–9. DOI: 10.1130/GSATG481A.1.

Photographs showing important highlights of major programs/research activities organized during March, 2022:

