Birbal Sahni Institute of Palaeosciences
Monthly summary on Research Activities
(January, 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. 9th B. S. Venkatachala Memorial Lecture (January 03, 2022)

On the occasion of 89th birth anniversary of former Director Late Dr. B. S. Venkatachala, BSIP organized 9th B. S. Venkatachala Memorial Lecture on 03rd January, 2022 in which Prof. Mukund Sharma, Scientist G at BSIP, present a summary of his contributions to present international of status BSIP and delivered a lecture on entitled as "Precambrian Palaeobiology: A Journey through Early Life". The function was attended by all the scientists, research scholars, technical and administrative staff of the institute.

b. 1st Indian Quaternary Congress, AOQR (January 19-21, 2022)

The 1st Indian Quaternary Congress was organized by the Association of Quaternary Researchers (AOQR) India in virtual mode between January 19-21, 2022. The focal theme of the congress was Integrative Quaternary Sciences for Societal Service. This three-day congress was inaugurated by a presidential address by Dr. Vandana Prasad, Director BSIP, who is also the President of AOQR society. The congress brought contributions from 266 researchers working across India in different aspects of the Quaternary sciences. The papers

were classified into sessions on Climate: Past, Present and Future; Earth Surface Processes in Quaternary; Oceans in Quaternary; Humans in Quaternary; Fossil records from Quaternary and Quaternary landscape evolution having 3 keynote talks, 42 oral and 49 poster presentations. The congress encompassed all important aspects of the Quaternary period from both terrestrial as well as marine domains. IQC 2022 provided a unified platform where Quaternary community of India could present and discuss its newer findings and build a wider interdisciplinary collaborative program.

List of research publications (January, 2022)

1. **Kar, R., Mishra, K., Quamar, M.F., Mohanty, R.B., Agarwal, S., Tripathi, S., Mishra, A.K.** (2022). A high-altitude calibration set of modern biotic proxies from the Western Himalaya, India: Pollen–vegetation relation, anthropogenic and palaeoclimatic implications. Catena 211(1):106011. DOI.: 10.1016/j.catena.2021.106011**. (Impact factor: 5.19).**

2. **Mishra, S., Singh, S.P., Arif, M., Singh, A.K., Srivastava, G.,** Ramesh, B.R., **Prasad, V.** (2022). Late Maastrichtian vegetation and palaeoclimate: Palynological inferences from the Deccan Volcanic Province of India. Cretaceous Research 133. DOI.: 10.1016/j.cretres.2021.105126. **(Impact factor: 2.176).**

3. **Govil, P., Mazumder, A., Agrawal, S., Azharuddin, S.,** Mishra, R., **Khan, H., Kumar, B., Verma, D.** (2022). Abrupt changes in the southwest monsoon during Mid-Late Holocene in the western Bay of Bengal. Journal of Asian Earth Sciences 227. DOI.: 10.1016/j.jseaes.2022.105100. **(Impact factor: 3.44).**

4. **Azharuddin, S., Govil, P.**, Singh, A.D., Mishra, R., **Agrawal, S.** (2022). Mid-Holocene intensification of the oxygen minimum zone in the northeastern Arabian Sea. Journal of Asian Earth Sciences 227. DOI.: 10.1016/j.jseaes.2022.105094. **(Impact factor: 3.44).**

5. **Roy, I., Singh, P.S., Tomar, N., Shekhar, M., Agrawal, S., Bhattacharyya, A.**, Kumar, P., Patil, S.K., Sharma, R. (2022). Reconstruction of the Late Holocene climate variability from the Summer Monsoon dominant Bhagirathi valley, western Himalaya. Journal of Asian Earth Sciences 227. DOI.: 10.1016/j.jseaes.2022. 105080. **(Impact factor: 3.44).**

6. **Nag, D., Phartiyal, B.**, Kumar, P., **Joshi, P., Singh, R.** (2022). Geomorphological and sedimentological evidences of palaeo-outburst flood events from TanglangLa-Gya catchment of River Indus, Ladakh, India. Physical Geography. DOI.: 10.1080/02723646.2021.2022339. **(Impact factor: 2.08).**

7. **Phartiyal, B., Nag, D.** (2022). Sedimentation, tectonics and climate in Ladakh, NW Trans-Himalaya-with a special reference to Late Quaternary Period. Geosystems and Geoenvironment. DOI.: 10.1016/j.geogeo.2022.100031.

8. Pandey, V.K., Kumar, R., Singh, R., Rai, S.C., Singh, R.P., Tripathi, A.K., Soni, V.K., **Ali, S.N.,** Tamang, D., Latief, S.U. (2022). Catastrophic ice-debris flow in the Rishiganga River, Chamoli, Uttarakhand (India). Geomatics, Natural Hazards and Risk 13(1), 289−309. DOI.: 10.1080/19475705.2021.2023661. **(Impact factor: 3.528).**

9. Dannemann, S., Appel, E., Rösler, W., Neumann, U., Liebke, U., **Nag, D.** (2022). Paleomagnetic indication for India-Asia collision at 12° N and maximum 810 km Greater India extent in the western suture zone. Geophysical Journal International. DOI.: 10.1093/gji/ggab528. **(Impact factor: 2.934).**

10. Modi, P., Jamal, A., Varshney, R., **Rahi, I.C.** (2022). Occurrence, mobility, leaching, and recovery of rare earth elements and trace elements in Sohagpur Coalfield, Madhya Pradesh, India. International Journal of Coal Preparation and Utilization. DOI.: 10.1080/19392699.2021.2014823. **(Impact factor: 2.697).**

11. **Govil, P., Mazumder, A.** (2022). A Review of the paleoclimatic Studies from Lake Sediments of Schirmacher Oasis, East Antarctica. In book: Assessing the Antarctic Environment from a Climate Change Perspective. DOI.: 10.1007/978-3-030-87078-2_7.

12. Kholia, N., Kotlia, B.S., Porinchu, D., Bisht, K., **Sharma, A.,** Poonam Jalal, P. (2022). Sedimentological and Grain Size Characteristics of Two Lake Cores from Himachal Pradesh, India. Journal of Climate Change 7(4), 35−51. DOI.: 10.3233/JCC210024.

13. **Roy, L., Ghosh, A.K.,** Bhaumik, A.K., **Chakraborty, A.,** Sensharma, S., **Dey, R., Saxena, S.** (2022). Diatom assemblages from the Tortonian of northeast Indian Ocean (NGHP- 01-17A): correlation with significant radiolarian and calcareous nannofossil events. Micropaleontology 68(1), 51−84.

14. **Singh, V.K., Sharma, M.** (2022). Dictyosphaera macroreticulata and Valeria lophostricta from the late Mesoproterozoic Chaporadih Formation, Chhatisgarh Supergroup and their significance. Journal of the Palaeontological Society of India 66(2), 141−155. **(Impact factor: 0.705)**.

15. **Kumar, R., Das, N., Aggarwal, N.**, Pandey, B. (2022). Palynofacies of the early Cretaceous Pariwar Formation, Jaisalmer Basin, Rajasthan, India: Palaeoenvironmental implications. Journal of the Palaeontological Society of India 66(2), 251−257. **(Impact factor: 0.705).**

16. **Ahmad, S., Pandey, S.K., Sharma, M.,** Srivastava, A. (2022). The early Cambrian (Series 2, Stage 3) burrows from the Nagaur Sandstone, Marwar Supergroup, Rajasthan, India: palaeoenvironmental and palaeoecological considerations. Journal of the Palaeontological Society of India 66(2), 271−289. **(Impact factor: 0.705).**

17. **Singh, D., Sharma, M.,** Bhan, U., Pandey, B., **Pandey, S.K.,** Singh, D. (2022). Carbonate Fan Fabric Structures (FFS) in time and space: A case study from the Palaeoproterozoic Kajrahat Limestone, Vindhyan Supergroup, India. Journal of the Palaeontological Society of India 66(2), 290−302. **(Impact factor: 0.705).**

18. Bhan, U., **Singh, D., Sharma, M.**, Singh, D., **Pandey, S.K.** (2022). A note on the Fan-Fabric Structures in the late Palaeoproterozoic Kajrahat Limestone, Katni, M.P., India. Journal of the Palaeontological Society of India 66(2), 315−322. **(Impact factor: 0.705).**

19. **Mishra, D.P., Murthy, S.**, Pandey, B., Singh, A. (2022). Palaeobotanical evidence for Artinskian wildfire in the Talcher Coalfield, Mahanadi Basin, India. Journal of the Palaeontological Society of India 66(2), 303−314. **(Impact factor: 0.705).**

20. Pandey D.K., Prakash, N., Fursich, F.T., Alberti, M., Shekhawat, R.S., **Das, N.**, Bhosle, S., Chaskar, K., Page, K.N. (2022). New record of Ptillophyllum and related leaf fossils from Kimmeridgian sediments of the Kachchh Basin, Gujrat, western India. Journal of the Palaeontological Society of India 66(2), **(Impact factor: 0.705).**

21. **Kumar, Y., Shukla, Y., Singh, V.K.,** Goswami, S. (2022). Confocal Laser Scanning Microscopy (CLSM) of newly recovered microfossil assemblage from the Kurnool Group, South India: New insights on microfossil morphology. Journal of the Palaeontological Society of India 66(2), 258−270. **(Impact factor: 0.705)**.

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


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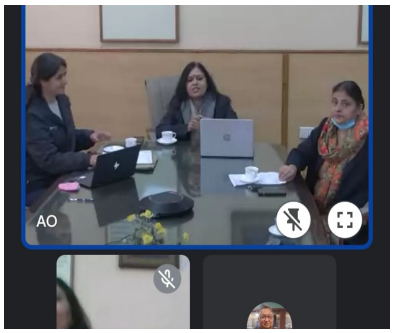
IQC-2022
1st Indian Quaternary Congress
International Virtual Conference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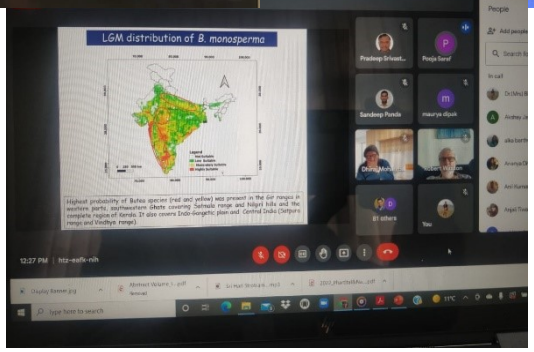
LGM distribution of B. monosperma
People


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