

Monthly Summary Report-December 2025

Birbal Sahni Institute of Palaeosciences

Any significant development/achievement that you feel warrants being brought to Cabinet Secretary's notice:

This study presents an integrated palaeoecological and palaeoherbivory history of Kaziranga National Park (KNP) since the late Holocene based on biotic proxies. A 110 cm deep sedimentary profile permitted the collection of pollen and spores for analysis employing the standard acetolysis method. Around 3290–1700 years BP, the KNP consisted of a tropical dense mixed forest dominated by *Bombax*, *Cinnamomum*, *Duabanga*, and *Lagerstroemia*, with less grasslands during a period of warm and humid climatic condition with low wildlife activity compared to the present. From 1700 to 640 years BP, the evergreen taxa, *Mesua*, *Cinnamomum*, and *Litsea* decreased and with an increase in the deciduous taxa, *Bombax*, *Dillenia*, and *Careya* along with an expansion of grassland. The appearance of *Mimosa*, an invasive plant, is significant and is detrimental to the vegetation in KNP.



The increase of coprophilous fungal spores, *Sporormiella*, *Saccobolus*, and *Ascodesmis*, indicates the gradual increase of wildlife in the region. During 640 years BP to present, the forest was comparatively less dense than the preceding phase with an expansion of openland areas. The significant increase of *Sporormiella*, *Saccobolus*, and *Ascodesmis* implies higher levels of the large herbivore population. We propose that the wildlife, especially rhinoceros, migrated from the western and northern part of the region into the north-eastern part of the Indian subcontinent in response to climatic amelioration and higher human activities during the late Holocene period. This study will be helpful in providing a better understanding of the palaeoecological and palaeoherbivory history of this region and can provide a greater insight into the causes of migration and subsequent extirpation of wildlife. (Basumatary et al 2025, *Catena*; <https://doi.org/10.1016/j.catena.2025.109762>).

Events during November 2025:

1. Inauguration of INQUA-2027 Congress Website (Dec 3, 2025)
2. POSH Awareness workshop (9th December 2025)
3. BSIP stall showcased scientific good practices at India International Science Festival (IISF-2025)
4. Fourth Official Language Hindi Workshop (Dec 2025)
5. Two Friday Scientific Lectures were delivered by Scientists and PhD students.
6. Mr. Mohammad Arif Ansari, AcSIR Ph.D. Scholar, presented his viva-voce presentation on 05 December 2025.
7. The Pre-Thesis Open Colloquium (PTOC) of Mr. Ravi Shankar Maurya was held on 28 November 2025 in the BSIP Main Auditorium.
8. Dr. Abha Singh, Scientist-E, BSIP delivered a lecture on “Microscopic Marvels of the Sea: Calcareous Nannofossils” at the Department of Geosciences, KSKV Kachchh University, Bhuj, for postgraduate students and research scholars.
9. Dr. Swati Tripathi, Scientist E, BSIP, attended the Anniversary General Meeting of the Indian National Science Academy (INSA) at Jawaharlal Nehru University (JNU), New Delhi, on 3 December 2025, for her induction and felicitation as an INSA Young Associate–2025.

Total 09 Research Papers published in high impact international journals during this month.

Photographs showing important highlights of major programs/research activities organized during December 2025:



Birbal Sahni Institute of Palaeosciences, Lucknow

Information to be provided quarterly

Sr. No.	Indicator	Current Quarter (October-December 2025)
1.	(i) No. of technologies developed	Nil
2.	(ii) No. of technologies commercialized	Nil