



Physical Research Laboratory, Ahmedabad

Colloquium 19-17

- Speaker:** Prof. Jyotiranjana S. Ray
Professor, PRL
- Title:** “Retracing Saraswati: the lost river of the Harappan Civilization.”
- Time:** Wednesday, 11 December 2019, 16.00 hrs.
- Venue:** K.R. Ramanathan Auditorium, PRL

Abstract

The most celebrated river of Indian mythology, the Saraswati, has often been hypothesized to be the river of the Bronze Age Harappan civilization in north-western India. The suspected modern counterpart of the glacier-fed Saraswati is the river Ghaggar, which unlike the former is a seasonal stream that originates in the Himalayan foot-hills. Despite the discovery of a large number of settlements along the Ghaggar, many believed that the Harappans depended solely on monsoonal rains, because no proof existed for the river’s uninterrupted flow during the peak of the civilization. This had led many to reject the very idea of the river Saraswati and its hypothesized relationship with the Harappan culture. To resolve the issues related to the existence of the river Saraswati and its drainage area, we investigated the nature of the ancient Ghaggar during the last several thousand years by studying the changes in the sources of the sediments deposited by it. Results of our study, using sophisticated geochemical and isotopic proxies, conclusively establish that the ancient Ghaggar was a round-the-year flowing, glacier-fed river during 9,000 to 4,500 years ago, when the Pre and Early Harappan settlements had flourished along its banks. This river matches with all the descriptions of the river Saraswati, thus reaffirming its existence during the Harappan period.

The Speaker

Prof. Jyotiranjana S. Ray is a Professor in the Geosciences Division of PRL. He is a geologist by training and a geochemist by profession. He uses principles of elemental and isotope geochemistry to address some of the important questions related to the origin and evolution of various reservoirs in the Earth. His current research interests include evolution of the Earth’s mantle through time, subduction zone processes, arc magmatism, proterozoic isotope stratigraphy and evolution of Quaternary landscapes. Prof. Ray is an alumnus of the Indian Institute of Technology Roorkee. He earned his Ph.D from PRL in 1998. He has received many awards throughout his career including the National Geoscience Award in 2009 and Shanti Swarup Bhatnagar Prize in 2015.

Tea at 15:30 hrs
ALL ARE WELCOME

