OBITUARY

Prof. Indra Bir Singh
(1943 - 2021)

In the early hours of 11th February, 2021, we lost a stalwart of Geology as Prof. I.B. Singh left for his heavenly abode. We lost a loving teacher, a global proponent of indigenous scientific thoughts and a bold thinker. Prof. I.B. Singh personified Science with an independent and questioning mind and strong emphasis on fundamentals.

Born on July 8, 1943 in Lucknow he had his basic schooling in the same town, receiving his Master's degree from the Geology Department of Lucknow University in the year 1962. He worked for a brief period in ONGC before he followed his research calling. He received doctoral degree in geology from the Technical University, Stuttgart, Germany under the guidance of H. Aldinger in the year 1966 when he worked on the Harz Mountains. Subsequently, he took up a postdoctoral fellowship at the University of Oslo where developed his skills on mineralogy and geochemistry. During this time, he authored a publication in the inaugural volume of Chemical Geology. He then joined a research position in Germany and finally joined the Department of Geology, Lucknow University as faculty in the year 1972 till his retirement in 2006. He served in Lucknow University as Professor of Geology, Head of the Department and Dean of Sciences and established the Geology Department as Centre of Advance Studies in Sedimentology. He also served as visiting faculty and Research Associate at Senckenberg Institute, Wilhelmshaven, Germany; Louisiana State University, Baton Rouge, U.S.A.; Erlangen-Nuremberg University, Germany and as Alexander von Humboldt Fellow in Germany. He has been associated with projects of the International Union of Geological Sciences (IGCP) and was Member of the Advisory Council of Directorate General of Hydrocarbons and Research Advisories of various institutions. During his long academic career Prof. Singh supervised sixteen Ph.D. students.

Prof. Singh's contributions range from re-writing stratigraphy of lesser Himalaya to unravelling the history of deposition of Vindhyan of Central India Bagh-Lameta, Jurassic of western India, Siwaliks, Karewas of Kashmir and Deltas of East Coast. Placing Blaini-Krol-Tal sequence of lesser Himalaya at Precambrian-Cambrian from earlier thought Mesozoic age is his idea that changed the stratigraphy of this mountain belt. His interpretation was based on field observations and simple logic of why the Krol-Tal sequence, if Paleozoic, does not yield any (body) marine fossil. Later with discovery of trilobites and other microfauna the Precambrian-Cambrian age was established for this sequence. He studied the Cretaceous Bhuj Formation of Kachchh using a simple tool of facies analysis, supported by palaeocurrent and grain-size and, in contrast to prevailing view of fluvio-deltaic origin

proposed a shallow marine-estuarine setting to these rocks. He pioneered the work in the flat terrain of Ganga Plain at a time when exposed sections were the area of interest globally. He made significant contribution to the Quaternary setup of Ganga Foreland and provided a model of evolution to vast doab regions of Ganga plains, explained the geomorphic controls of heavy metal pollution and also the dynamics of the rivers. He documented the evolution and geomorphic subdivision of the Ganga Plain, the facies of channel and interchannel deposits and the migration of bed forms in different types of rivers. His contributions to archaeology of food grain domestication in India suggested early Holocene agricultural evolution and training of rice cropping in India. His vast work on the Quaternary evolution of Ganga foreland and geochronology opened up a way forward to more structured and contextualized study of these plains and led to several national and international groups contributing to it subsequently.

Prof. Singh's work is published in the form of more than 200 research articles. His most monumental work is his book "*Depositional Sedimentary Environment*" published by Springer Verlag in 1973, which he authored with H.E. Reineck. The book describes fluid dynamics, facies architecture of each and every sedimentary environment with Indian and international field-based examples.

He was elected as a fellow of Indian National Science Academy, New Delhi in the year 1995. The Geological Society of India recognized his contributions and awarded him with prestigious L. Rama Rao Birth Centenary Award for the year 1996. The Ministry of Mines, Govt. of India conferred upon him the National Mineral Award in the year 1996 and National Award for excellence in Earth System Science in the year 2013. University of Lucknow on 25th November, 2020, during its centennial foundation day honoured him as illustrious faculty member for his outstanding contributions.

Prof. I. B. Singh will always be remembered for his innovative and novel ideas, as a great human being, excellent mentor, a man of simplicity and a field geologist who unravelled the untold and complicated story of the Earth.

He is survived by his wife Mrs. Janak Singh and two sons Shwetabh and Arunabh. His team of students, close associates and friends will keep celebrating his contributions and remember him always.

WIHG, Dehradun

PRADEEP SRIVASTAVA

Lucknow University, Lucknow

DHRUV SEN SINGH

BHU, Varanasi

UMAKANT SHUKLA

DOI: 10.1007/s12594-021-1703-5

"Printed by Aditya Prakash and Published by R.H. Sawkar on behalf of the Geological Society of India, No.30 & 31, 1st Main, 3rd Cross, Byrappa Garden, Kathriguppe, BSK 3rd Stage, Bengaluru -560 085 and Printed at Aditya Printers, #1, Sri Ramanjaneya Road, Hanumanthnagar, Bengaluru – 560 019 and Published at the Geological Society of India, No.30 & 31, 1st Main, 3rd Cross, Byrappa Garden, Kathriguppe Village, BSK 3rd Stage, Bengaluru - 560 085 – Editor: B. Mahabaleswar.