

S. S. Merh (1928–2022)

Professor Sukumar S. Merh, a renowned earth scientist, founder Head, Department of Geology and former Dean, Faculty of Science, The M. S. University of Baroda, Vadodara passed away on 3 November 2022 in London. Profoundly mourned by his family, friends, admirers, colleagues and students from all over the country and abroad, he will always be fondly remembered by fellow geo-scientists. Merh was born on 2 October 1928 in a Gujarati family in Varanasi. His father was a lawyer and mother was a housewife. His wife Anjali Merh (1928–78) was a well-known classical dancer (Bharatnatyam) and educator. His only son Advait Merh was a neurosurgeon. Merh's demise is a great loss to Indian earth science (Quaternary geology), and a personal loss to me. I have been blessed to be associated with him since 1980 – as my Ph.D. guide, mentor and philosopher.

Merh studied geology at the Banaras Hindu University, Varanasi and took his M.Sc. degree in 1948 with a first class. He then joined the M. S. University of Baroda (1951) in the Civil Engineering Department. He was deputed by the University to the Imperial College of Science and Technology, London (1957) for doctoral studies. He worked under John Sutton and came in close contact with Janet Watson and Johan Ramsay, the eminent metamorphic and structural geologists of those days. Merh worked on the Moinian rocks of Scottish Highlands for his Ph.D. thesis, emphasizing on the structural complexities of the area.

On his return to India (1960), Merh was entrusted with the task of setting up the Department of Geology in the Faculty of Science at the M. S. University of Baroda, which he could establish in 1965 with full-fledged undergraduate as well as postgraduate courses and research programmes in wide-ranging disciplines of geology. He could also generate a lot of funds from UGC (SAP, COSIST), DST, DTRL, ISRO and ONGC, and the Department became nationally and internationally known for high-quality teaching and cutting-edge research, particularly in the areas of Himalayan geology and Quaternary geology. Merh was appointed as a Professor of Geology (1963) and then a Senior Professor (1972) at the young age of 44 years. He published a large number of research papers, books and monographs, and supervised about 48 doctoral students. Since Merh was trained to work on structural complexities of Scottish

Highlands, he chose to work on the Lesser Himalayan rocks of Kumaun, and most of his students worked for their Ph.D.s in the Kumaun Himalaya and a few on Quaternary geology of Western India. Merh's contributions to the structural and stratigraphic aspects of the Kumaun Himalaya are noteworthy in the sense that he threw new light on structural events on the basis of minor structures, correlating them with the meta-



morphic history. He differed from the structural observations of earlier workers and envisaged that the South Almora Thrust joins up synformally with the North Almora Thrust. He further invoked three deformational episodes in central Kumaun and opined that the rupturing of the overfolded rocks formed the Almora Thrust. He suggested a new structural set-up for the central part of Kumaun Himalaya. Merh identified the tectonic junction between the Almora crystallines and the metasedimentaries as a major reverse fault that has truncated the doubly plunging anticline along the crests and has pushed below the south-dipping flank of the Almora Thrust. An altogether new stratigraphic framework of the Inner as well as Outer Lesser Himalayan rocks of Kumaun was suggested by Merh. According to him, no thrust exists either beneath the Berinag quartzites or their equivalents of Chaukhutia, Someshwar, Ganai or Loharkhet in the Inner Lesser Himalaya or at Ramgarh-Nathuakhan (Chail, Ramgarh Thrust) in the Outer Lesser Himalaya. He revised the stratigraphy of the Lesser Himalaya on the basis of the occurrence of chloritic horizons (spilites) and also the existence of an unconformity at the base of the Loharkhet/Bageshwar/Ganai/Bhimtal Formations. He equated the rocks above the unconformity, viz. spilites with pebbly and gritty quartzites, subgrey-wacke and siliceous limestone bands with the Blaini Formation of Simla.

In the mid-nineteen seventies, he was awarded a major project by UGC to initiate Quaternary geological studies in India. Outstanding in his research on Quaternary geology and neotectonism in the country, exceptionally penetrating in exploring the pattern of sedimentation domains where tectonism, climate and sea level have been active and as an architect of Quaternary continental stratigraphy in the tectonically resurgent Gujarat terrain, Merh led a multi-disciplinary team and generated state-of-the-art data on these aspects of Gujarat. Thus the Quaternary geological studies in India were gradually taken up by fellow scientists and academicians. He could establish a remarkable convergence of the geomorphic configuration of Gujarat with the various fault systems and identified the influence of tectonics as the genetic factor in the evolution of its landscape. I was also inspired by Merh to take up Quaternary studies, though I was trained on structural and metamorphic aspects of the Higher Kumaun Himalaya. Together we studied and documented several crucial sections in Mainland Gujarat, Saurashtra and the Kachchh peninsula. The wealth of data on sediment deposition in fluvial and aeolian environments, marine transgression, neotectonic and palaeoseismic events recorded in riverine sediments and Holocene geomorphological development has greatly contributed to the understanding of the evolution of the landscape of Gujarat. He also extensively worked on miliolites of Saurashtra and Kachchh in terms of their depositional environments and related sea-level changes, and established late Quaternary evolution of the coastal plains of Gujarat. His book *Geology of Gujarat and a Monograph on Quaternary Geology of Gujarat Alluvial Plain*, papers on sea-level changes along the Indian coasts and Neogene–Quaternary sequences of Gujarat are some of the landmark contributions referred highly by fellow workers.

In recognition of his contribution in setting up the well-known Department of Geology, manpower training (about 48 Ph.D.s), teaching and research both in Himalayan geology and Quaternary geology, Merh was elected Fellow of all the three science academies of India, viz. Indian National Science Academy (INSA), New Delhi; Indian Academy of Sciences, Bengaluru and National Academy of Sciences, India, Allahabad. He was associated with numerous

educational and professional organizations. He was appointed by DST as the Chairman of the Governing Body of the Wadia Institute of Himalayan Geology, Dehra Dun (1985–88). He was President of the Geology Geography Section of the Indian Science Congress (1980), and Indian Geological Congress (1982). He was INSA Council Member (1987–89) and served as an INSA Senior Scientist (1989–91). In recognition of his momentous contributions, INSA awarded him the most prestigious D. N. Wadia Medal in 2001.

Merh will be missed by all those who knew him. The earth science community has lost one of the stalwarts of Himalayan and Quaternary geology, and he will be remembered for initiating Quaternary geological studies for decades to come. He was friendly with his peers and students, a wonderful orator and his balanced attitude to all problems earned him admiration and respect. However in his personal life, he faced several difficulties. He lost his wife and later their only son at a very young age and he had to shift to London to take care of his

daughter-in-law and two granddaughters: a responsibility which he shouldered commendably. Merh will remain in the hearts of many and will be deeply missed by his family, friends and students.

L. S. CHAMYAL

*Department of Geology,
A-102, Skyline Apartments,
Sunpharma Road,
Vadodara 390 012, India
e-mail: lschamyal@yahoo.com*
