

OBITUARY



D.S.N. Raju
(1938-2021)

The news that Dr. D.S.N Raju, former Deputy General Manager (DGM) of Oil and Natural Gas Commission (ONGC), Dehradun, a renowned micropaleontologist and biostratigrapher left for heavenly abode on 11th May 2021, was a shock to one and all who knew him. A great teacher, scholar and a passionate geologist, Dr. D.S.N. Raju died at his Rajahmundry residence after a brief illness. He was a kind hearted and wonderful person with never-ending curiosity for geological studies. With his dedication and hard work, he determined to leave his legacy summarized in books, charts and papers to the next generations and he succeeded in this to a large extent. Till the time he could move around, he was collaborating with Professors and Scientists across the globe at his personal lab working tirelessly on Lexicon (INDPLEX) for the geological formations on Indian sedimentary basins. He was addicted to micropaleontology till his last breath. His contributions in geological studies will continue to guide hydrocarbon exploration in the Indian basins for a long time to come.

Born on 01.07.1938 at Yelurupadu in West Godavari district, Andhra Pradesh, he was the second son of Lt. Mr. Datla Venkatanarasimha Raju and Lt. Mrs. Datla Buchirajaiah. Dr. D.S.N. Raju had his earlier education at Yelurupadu and topped the SSLC exam and intermediate in the DNR College at Bhimavaram. He desired to study philosophy and secured a seat in Santiniketan (Kolkata). However, as destiny would determine, his family members weighed in and changed his mind on the verge of boarding the train to Howrah at the Tadepalligudem railway station. Then, he applied for B.Sc. (Hons.) in Geology at Andhra University, Waltair. Introductory lecture of Prof. Mahadevan, coupled with the research works of the Geology Department impressed him and he never looked back. After completing B.Sc. (Hons.) with a first-class, he joined IIT Kharagpur for M.Tech. (Applied Geology) and worked on "Kateru and Duddukuru Microfossils." Appreciable teachings, decent and practical topic of dissertation together with profound encouragement from his professors, he managed to publish papers in Memoir of the Geological Society of India and Journal of Austria. Although he wanted to do research on sedimentary and structural geology, he joined ONGC in 1963 as his seniors convinced him that he could continue research in ONGC. After seven months of his joining, he was assigned well-site duty to carry out foraminiferal studies in Karaikal-1, the first well in South India. He succeeded in giving results on age and paleoenvironment of the sediments of the well. The well yielded rich planktonic foraminifera unknown from Indian subcontinent until that time and helped in

correlation with similar marine sediments from Trinidad and Russia. Among other peers, Dr D.S.N. Raju was one who blazed a trail in foraminiferal studies in India. To quench his thirst for scientific research, Dr. D.S.N. Raju pursued Ph.D., worked on Miogypsinidae and Biostratigraphy, and obtained a Ph.D degree in nine months from the State University of Utrecht, The Netherlands in 1972, the shortest duration of its sort in the university's 375-year history.

As a dedicated and young scientist of his days, Dr. D.S.N. Raju had the opportunity of availing a number of trainings and participated in national and international conferences. Among others, he participated International Geological Congress in New Delhi, 1964; First International Conference of Planktonic Microfossils in Geneva, 1967; the 23rd International Geological Congress in Prague, 1968; Micropaleontology and Stratigraphy training by the Geological Survey of Austria and the University of Vienna in 1968; six-week-long colloquium in Micropaleontology and Stratigraphy by the Geological Surveys of Austria, Hungary, and Czechoslovakia in 1971.

In recognition of his academic performance, he was awarded a scholarship during M.Tech at IIT Kharagpur. Subsequently, in 1967, he received UNESCO scholarship for training in micropaleontology in Vienna, Austria. Prof. Drooger offered a six-month Utrecht scholarship at Utrecht in 1971-1972. As his zeal for scientific research was never ending, he resigned from ONGC in 1975 when he was offered to participate as Scientific Collaborator of the International Geological Correlation Project (IGCP) during 1975-1977 at Utrecht. He worked on the evolution of *Planorbulinella* (Greek Islands) and Miogypsinidae (India) and found that their evolution is not straight but pulsating (back and forth) during certain geological time intervals. On his return from Utrecht, with the knowledge acquired, he carried out extensive work in Kutch, Gujarat.

Dr. Raju rejoined ONGC in 1980 as a geologist. However, he was given two promotions within a period of twenty days. He served the organization in various capacities till his superannuation in 1996 as DGM. Altogether, he felt that success is not getting promotions in a job but the achievements in science and acquiring knowledge and serving humanity with one's best.

After superannuation, he continued to be an active biostratigrapher and served as consultant in ONGC from 1996-2002 and 2009-2012. In addition, Dr. Raju also served as advisor and consultant to Energy and Geosciences Institute (EGI), University of Utah, Salt Lake City,

the USA from 2007-2009. He had also worked on biostratigraphic projects for ONGC Rajahmundry from 2010-2013; Oil India Ltd. from 2016-2017; Hindustan Oil Exploration Company Ltd. (HOEC), Chennai in 2017.

During his academic career, it is a credit to his scientific acumen that he authored over 150 papers in national and international journals of repute, besides edited volumes, books, biostratigraphic and sea-level charts with various collaborators. His holistic view of the global geology and knack for correlating events of biostratigraphy, paleoenvironments, and sea-level changes in space and time was noteworthy. Out of his many publications, few are noted here: Study of Indian Miogypsinidae, *Utrecht Micropaleontological Bulletin*, No. 9, 1974; an overview of Litho-Bio-Chrono-Sequence stratigraphy and sea-level changes of Indian Sedimentary Basins, 2005; Proterozoic and Phanerozoic Integrated Stratigraphy of Southeast Asia, vols. 1 and 2, 2009. Likewise, the compilation of Mega Charts I and II on Proterozoic and Phanerozoic of India on major hiatuses, stratigraphic sequences, paleobathymetry, lithology, thickness, and sedimentation rates of litho units and sea-level fluctuations were some unique achievements published as *Stratigraphy of India* in 2008. These charts enable exploration geologists to assess the hydrocarbon resource potential of different Indian Sedimentary Basins. These are also useful as reference material for quick appraisal and acquaintance of the stratigraphy for professionals, consultants and students.

In recognition of his vast contribution in the field of geology, particularly biostratigraphy and sea-level changes of the Indian sedimentary basins, Dr. D.S.N. Raju was awarded the National Mineral Award, 1991; Technocratic Excellence and Meritorious Achievements in the field of petroleum exploration, 1999; L. Rama Rao Birth Centenary award, 2000; Man of the Year by American biographical institute, 2003; Outstanding Contribution in the field of petroleum exploration, 2008. He was made the President of the XXIII Indian Colloquium on Micropaleontology and Stratigraphy (ICMS) held at Bangalore University in 2011.

As his students and associates, we remember some of his philosophical and scientific thoughts: "Science tells you that everything changes, nothing remains permanent in a geological sense, but for individuals, things may look permanent for a short time." He would remember Sri Aurobindo's poem: "The mighty perish in their might. The slain survive the slayer." "See," he would say, "that is true. The mighty dinosaurs perished and the simple bacteria lived for 3500 million years with little changes." We are fortunate that he mentored and closely worked with us for several years. He was a man of integrity with a cheerful attitude, soft-spoken and eager to help others and that has impressed the scientists who have worked with him in India and abroad.

Dr. Raju is survived by his wife Smt. D. Satyavati, daughter-in-law Dr. Suneetha and granddaughters, Anya and Samara. He faced a tragic incident when his only beloved son, Dr. Aravind Raju Datla, a practicing nephrologist in New Jersey (USA), passed away in 2017. Dr. D.S.N. Raju will be remembered for long, not only by his colleagues, friends, students and admirers across the world but also everyone whose lives he will continue to influence through the legacy he leaves behind. The geo-scientific fraternity who had associated with him closely will be weaker without access to his ever approachable knowledge. The huge void created in the scientific community, particularly in the paleontological community, with the demise of Dr. D.S.N. Raju, will be difficult to fill.

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