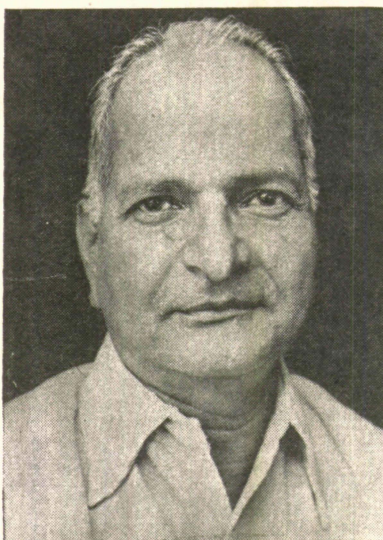


## OBITUARY



M. S. KRISHNAN  
(1898—1970)

Dr. Maharajapuram Sitaram Krishnan was born on the 24th August 1898, in a family of scholars at the village of Maharajapuram in the Thanjavur district of Tamil Nadu. He took his B.A. (Hons.) Degree in Geology of the Madras University with distinction in 1919 from the Presidency College, and received the M.A. Degree of the same University in 1921. He worked as a Demonstrator in Geology at the Presidency College, Madras, for two years with a short break of about five months when he was on an assignment as a field geologist in the Central Provinces of India.

In 1921, on the award of a fellowship, Dr. Krishnan entered the Imperial College of Science and Technology (Royal College of Science), London, and in 1922 received the associateship of the Royal College of Science (A. R. C. S.) obtaining a first class, and the Diploma of the Imperial College of Science (D. I. C.) in the following year. He was awarded the Ph.D. Degree in Geology (petrology) of the London University in 1924 for his thesis based on a collection of rocks from Girnar and Osham hills in Kathiawar (now a part of Gujarat State), prepared under the guidance of Professor W. W. Watts and Dr. J. W. Evans. During his study at the Imperial College of Science and Technology, London, he also received special training in Mining Geology. After receiving his doctorate degree, Dr. Krishnan worked for some time in the Indian Stall of the London Exhibition before being selected for the superior service in the Government of India (Secretary of State Services). Dr. Krishnan was the first person holding a doctorate degree to join as a Geologist in the Geological Survey of India.

During 1935-36, Dr. Krishnan proceeded to U. S. A. and U. K. on study leave. During this period, he took a full course in applied geophysics at the Imperial College of Science and Technology, London. Thereafter, he proceeded to U. S. A. where, besides visiting many laboratories, working mines and geological surveys, Dr. Krishnan spent some time at Harvard and Wisconsin Universities to familiarise himself with modern mineralogical techniques, including the use of the 5-axis Universal Stage. On his way back, he spent some time with Professor Bruno Sander at Innsbruck in Austria to learn techniques of petrofabric analysis.

In 1937-38, Dr. Krishnan served as a Member of the Coal Commission appointed by the Government of India to go into the problems of the coal industry. In the final report, he courageously recorded his famous dissenting note pleading for nationalisation of the coal industry.

Dr. Krishnan held various important positions of responsibility in Government with great distinction. He was geologist in the Geological Survey of India from 1924 to 1943 and was promoted to the post of Superintending Geologist which he held till 1948. As Superintending Geologist, he was responsible for initiating the Southern Circle Office in Madras and had undertaken the responsibility of guiding the field work and the training of the largest single field party of younger geologists. Dr. Krishnan imparted intensive and sound training giving his personal attention to each officer of his Circle, helping them with painstaking care both in regard to their work in the field and in their subsequent efforts involved in the presentation of their reports. One of that group is presently the Director General of the Geological Survey of India. In November 1948, Dr. Krishnan was appointed Director of the Indian Bureau of Mines which post he held till January 1951. In 1949, for a period of four months, he acted as the Director, Geological Survey of India, being the first Indian to occupy that post since its inception more than a hundred and twenty years ago. He returned to that post in 1951 as permanent Director and continued to direct the activities of the Geological Survey of India till August 1955, when he was invited to be at Delhi as Mineral Adviser to the Government of India.

Dr. Krishnan was Mineral Adviser to the Government of India in the Ministry of Natural Resources and Scientific Research from August 1955 to April 1957. At the special request of Government, he took up the post of Director, Indian School of Mines and Applied Geology, Dhanbad, in May 1957, but relinquished the post and voluntarily retired from Government service in August 1958. From January 1959 to September 1961, he remained at the Andhra University devoting his undivided attention to the teaching and training of aspiring geologists and geophysicists, a mission very close to his heart. In 1961, the Council of Scientific and Industrial Research invited him to be the first Director of the Central Board of Geophysics, later renamed The National Geophysical Research Institute, at Hyderabad. He filled the post with great distinction till his retirement in 1963. As Director of the Institute and member of the Bureau of the International Union of Geodesy and Geophysics, and on the invitation of the National Research Council of U.S.A., he visited Europe and U.S.A.

Although the major part of his career was spent in the Geological Survey as a field geologist and later as its Director, he made significant contributions as a teacher of geology and geophysics. He was deputed by the Government of India as Professor

of Geology at the Imperial Forest College, Dehra Dun, for four months each year in 1928, 1929 and 1930. Between 1933-35, he was appointed Professor of Geology at the Presidency College, Calcutta, in addition to his duties in the Geological Survey of India. Dr. Krishnan was closely associated with the organisation of teaching in several Universities, and was perhaps the only Indian Geologist whose name is familiar to University teachers in Western Europe, U.S.S.R., Japan, North America and Australia.

Dr. Krishnan's most valuable contribution to geological education was the publication of his Text Book on the 'Geology of India and Burma' in 1943. This book has now run several editions and the last revision was made by Dr. Krishnan only two years back. This book which had been translated into Russian language as early as in 1924, is now recognised as the most up to date and comprehensive work on the geology of the subcontinent. Many geologists in the U. K. and U. S. A. consider this the most authentic book on the geology of the country. Dr. Krishnan condensed his large book into an 'Introduction to the geology of India' for the benefit of undergraduate students, and students of engineering and allied subjects where knowledge of geology is required. A Hindi translation of this work appeared in 1955; this is perhaps the first book on a technical subject in the national language. Dr. Krishnan is the author of more than half a dozen monographs of great merit and over 450 published papers in various national and international journals. His last two papers were completed a few days before he took ill.

Many may not be aware that the Neyveli Lignite project was the result of Dr. Krishnan's initiative and pioneering work as early as 1940. He was then able to persuade Sir S. V. Ramamurthy, Adviser to the Governor of Madras, to agree to a programme of drilling to delineate the lignite field.

Dr. Krishnan had been a Member and President of most learned societies dealing with earth sciences in this country. He was sectional President of the Indian Science Congress in 1935 and its General President in 1958. He delivered the 'Ripon' lectures of the Indian Association for the Cultivation of Science in 1954, the subject being the 'Iron ores of India'. He was a life fellow or life member of most learned societies in the world dealing with earth sciences. As a mark of his outstanding contributions to geological science, the Geological Society of London honoured him with a Commonwealth fellowship in 1967. The same year, the Mineralogical Society of America made him a life fellow. He was a member of the Society of Economic Geologists, was its Vice-President on several occasions and had been an associate editor of the Journal 'Economic Geology' for the last twenty years. He was a 'Foundation Fellow' of the Geological Society of India, and was one of its Vice-Presidents ever since its inception in 1958.

Many honours were showered on Dr. Krishnan as a reward of his devoted and sincere work. As a mark of recognition of his vast contributions to Indian Geology, the Royal Asiatic Society of Bengal awarded him the P. N. Bose Medal. Besides being an eminent scientist, Dr. Krishnan was a voracious reader and had a vast knowledge of 18th, 19th and 20th century English and French literature. Very few may realise that Dr. Krishnan was a scholar of the Vedas and had a vast knowledge of slokas and hymns. He was a connoisseur of Karnatic music and also appreciated good European music. Dr. Krishnan was of a very charitable disposition and

generously helped many a student to tide over monetary difficulties. While in office, he was most considerate to the lower staff and helped the needy ones generously. Dr. Krishnan was a most unassuming, simple and sincere gentleman. His concentration in studies was remarkable and unparalleled. He was scrupulously methodical in whatever he did. He was a strict disciplinarian, but always kind and considerate. He believed in hard work and himself set up a good example. He had perhaps one of the finest collections of books on earth sciences and other subjects.

After retirement from the Geological Survey of India, Dr. Krishnan kept his contacts with international bodies and went on many visits overseas to attend committee meetings and conferences to which he was a special invitee. His lecture on Salt tectonics of the Punjab and Northwest India in 1962 at the Salt Symposium at Houston in U.S.A. was regarded a masterpiece. The Commonwealth Foundation, London, invited him to undertake a lecture tour to Australia and New Zealand in March-July 1969 as distinguished lecturer. He lectured at all the universities and geological survey centres in New Zealand and Australia, leaving behind an imperishable impression of his scholarly attainments in all aspects of geology, and his ability to lucidly lecture on any subject at short notice.

In August 1963, the President of India, Dr. S. Radhakrishnan, honoured Dr. Krishnan at a special function by personally handing over to him a volume entitled 'Advancing Frontiers in Geology and Geophysics' in which there were contributions from eminent earth scientists all over the world. This volume felicitating Dr. Krishnan on his attaining the age of 65 was produced using donations received from friends and colleagues. The remaining funds were turned over the Indian Geophysical Union who have instituted a medal named after him to be awarded annually to the most outstanding geologist or geophysicist under the age of 40.

In appreciation of his valuable services to the country and the science of geology in particular, Dr. Krishnan was awarded the title of 'Padma Bhusan' by the Government of India in January 1970.

On 21st April 1970, Dr. Krishnan was admitted to the Tanjore Medical College Hospital for treatment of acute stomach ache. On the morning of 22nd April, he underwent a major abdominal operation and after an initial period of improvement, breathed his last on the evening of 24th April at 7-40 p.m. Dr. Krishnan has left behind three daughters, the eldest of whom is married to a geologist.

By his passing away the world has lost an eminent scientist and India her ablest geologist.

M. S. BALASUNDARAM.