

## Veeravalli Venkata Ranga Varadachari (1925–2007)

A telephonic message on the evening of 4 August 2007 informed me about the sad demise of V. V. R. Varadachari. Popularly known as VVR amongst Indian oceanographers, Varadachari was a torch-bearer of studies in conventional physical oceanography from 1960s to mid-1980s. My association with him dates back to 1959, as a student in the post-graduate faculty at the Andhra University, Waltair.

Varadachari was born in 1925 into an orthodox family at Gutala, a small village on the banks of River Godavari in Andhra Pradesh. After going through primary and secondary education with excellence, VVR went on to receive B Sc (Hons.) degree in physics in 1948 from the Andhra University. The faculty of physics at the University was then headed by the well-known educationist Suri Bhagavantam, who later served as Scientific Advisor in the Prime Minister's office, Government of India. At the advice of V. Mahadevan, Principal, College of Science, Andhra University, VVR enrolled as a student in the first batch of a newly started M Sc programme in Meteorology and Oceanography. On completion of this course, VVR worked as a member of the teaching faculty in the Department of Meteorology and Oceanography, before proceeding to the Florida State University, USA on a research fellowship. In Florida, he worked with Seymour L. Hess in the Department of Meteorology, which was then an US Air Force advanced training centre in meteorological forecasting. VVR returned to India in 1956 with a MS degree in fluid dynamics, to continue work as a member of the teaching faculty at the Andhra University. He began data collection, using Indian naval vessels and improvised boats, to study physical oceanography of the waters bordering the east coast of India. In this endeavour he was joined by Eugene C. La Fond, US Navy Electronics Laboratory, San Diego, who was visiting the Department of Meteorology and Oceanography. VVR was awarded D Sc

in Oceanography in 1959. Back at Andhra University, he continued his career as a teacher at postgraduate level in meteorology and oceanography to make significant contributions to teaching, planning and organizing oceanographic cruises in the seas around India, and formulation of marine science programmes in several Indian Universities having postgraduate courses in physical oceanography and meteorology. Varadachari made significant contributions to oceanography in India. His main contributions are in the areas of physical and dynamical



aspects of upwelling along the Indian Coastline, ocean currents, water masses, submarine canyons, wave refraction and littoral currents along the Indian coastline, circulation in the seas around India, coastal oceanography and coastal zone management, particularly on problems of beach erosion, mud banks along the Kerala coast, rip currents, harbour sedimentation, bar formation near river mouths, dispersal of effluents in the nearshore environment, and the role of oceans and ocean variables on the India Southwest monsoon. His basic researches triggered applied researches and led to several sponsored projects in coastal oceanography.

He provided logistic support for the first scientific expedition to Antarctica. VVR joined the National Geophysical Research Institute (NGRI) at Hyderabad

in 1962 and shortly thereafter moved to Cochin as Senior Scientist with Oceanographic Research Wing (ORW) of NGRI. He was a leading Indian oceanographer to participate in the International Indian Ocean Expedition (1961–65). On completion of the expedition, the ORW under NGRI became the nucleus for the formation of the National Institute of Oceanography (NIO) on 1 January 1966. VVR shifted his place of work from Cochin to Goa, and continued to serve NIO till his retirement in July 1985.

For his research and organizational abilities, VVR was honoured with a D Sc by the University of Jabalpur (Rani Durgavati Vishwavidyalaya) in 1981. VVR was a Fellow of all the three science academies of India and a founder Fellow of the Indian Geophysical Union. He served as a Member Secretary of the Indian National Committees for Scientific Committees on Oceanic Research (SCOR) and was elected Vice-Chairman of the joint SCOR/IOC committee on climatic changes and the ocean (CCCO). He represented India in many international conferences of the Intergovernmental Oceanographic Commission (IOC) and contributed to the preparation of the document on 'Ocean Sciences for the year 2000' published by IOC/UNESCO. At NIO, VVR played a key role in organizing the four Indian scientific expeditions to Antarctica from 1981 to 1984, and NIO received the status of 'pioneer investor' in the survey of 'polymetallic nodules' in the Indian Ocean. Simple and shy, VVR will be remembered for his sincerity and honesty while providing solutions to difficult science and management matters during early days of oceanography in India. He is survived by four daughters and two sons.

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