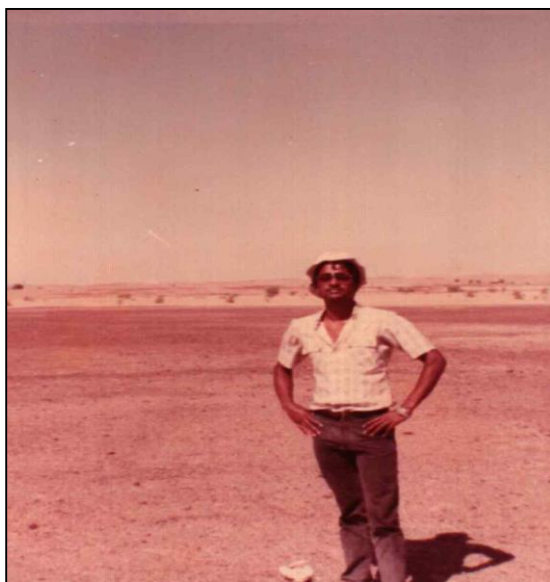


My Earth science educator story – Ramanathan Baskar

What I did, why I did it and what happened

One of the major things that fascinated me as a school student was the geography/geology sections in the school text books. After completing schooling, students from the science stream in India choose to study medicine or engineering, failing which any courses in Physics, Chemistry or Biology. During my school days, geology was not a favourite subject for students, but I was still inclined to study about the Earth. There was no strong competition to get admission in geology and joining the course was a cakewalk.

When I started reading the subject, I enjoyed the field tours and of being in direct contact with nature. It was great fun and the local geology was always fascinating. Studying for graduation (1987) and post-graduation (1988) in the subject, at Panjab University Campus, Chandigarh, was a great experience. I was longing to do research in geosciences and to be a teacher.



Field work in Rajasthan desert, 1988.

My initial research activities

I was always attracted to Environmental Geology and Geochemistry. When I joined in order to research the geochemistry of granites, I was supported through a DST project grant received by

my supervisor, Dr. Naresh Kochhar. After completing my M. Phil. in 1989, I was appointed as a Stipendiary Geologist - a temporary position - in the Atomic Minerals Division, Department of Atomic Energy. I was exposed to using a GM counter for radioactivity survey and heap leaching operations in the laboratory. I was not completely satisfied with this work as my longing was to be a teacher in the University; hence, I quit the job. I returned to Panjab University, Chandigarh. Based on my research proposal, I was awarded the prestigious Dr. K.S. Krishnan Department of Atomic Energy Research Fellowship to support my research work. Obtaining the ICSC World Laboratory Scholarship (1990-1991) to work at the University of Paris-Sud, France, was a turning point in my research career. Working with Professor Bernard Bonin, one of the leading world experts in granite geochemistry/mineralogy, filled me with enthusiasm. On my return to India, I did not have any immediate grant to support my research; I supported myself by teaching part-time in schools and giving tuition. Later, I got the position of a lecturer (part-time) in the Department of Geology, Kurukshetra University, Kurukshetra, Haryana.

Within a few months, I was awarded a Senior Research Fellowship by the Council of Scientific and Industrial Research, to pursue full-time research at Panjab University, Chandigarh. After completing my PhD, I got a Research Associateship through the Department of Ocean Development to work on the rocks of Antarctica at the Wadia Institute of Himalayan Geology, Dehra Dun, a research institute. As my longing to be a teacher in the University was very strong, I joined as a Research Associate (supported by the University Grants Commission) at the School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.

A geologist transforming into a geomicrobiologist

Finally, after a long and patient wait, I got a permanent academic position at Kurukshetra University, PG Regional Centre, Hisar, which subsequently became a fully-fledged university (Guru Jambheshwar University) in 1995. I married Dr. Sushmitha Baskar – an environmental scientist with interest in microbiology. I being a geologist, we both wanted to channel our energies to work in Geomicrobiology - a common field of interest to us. I had never been exposed to microbiology until then but was bold enough to take the plunge. We initiated studies to determine the links between laterization and microbes. A turning point came when I got the opportunity as an Academic Guest in the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, to work with Prof Judith McKenzie. Then, along with Dr. Sushmitha Baskar, my research veered to cave geomicrobiology in an attempt to elucidate the influence of microbes on mineral dissolution/ precipitation and the environmental geochemistry of speleothems. Then came a series of opportunities to work as an academic guest with leading experts in the Centre for Geobiology, Norway, Stockholm University, Sweden, TUM, Germany and VTT, Finland. Since then, I have been calling for the seamless integration of geology and microbiology and have been one of the pioneering Indian workers in cave geomicrobiology.

Open to new subjects and ideas

I was always willing to learn new subjects. I feel that everything is connected; we do not always see the connections because of the limitations of our minds. I updated myself with post-graduate diplomas in Environmental Management and in Environmental Economics from the University of Hyderabad, Hyderabad. Then, I completed a post-graduate diploma in Environmental Law from the National Law School of India University (NLSIU), Bangalore.



CGB, Norway- Training in geomicrobiology, 2009.

My love for outreach activities

I strongly believe that public engagement with science is essential, involving a high level of outreach activities. To improve my science communication skills, I completed a one-year training course in Science Journalism (2011-2012) conducted by the Indian Science Communication Society (ISCOS), Lucknow. I now regularly conduct the entrance test for the International Earth Science Olympiad (IESO) for school students in Hisar on behalf of the Geological Society of India. Then, I got involved as the Deputy Council Member from India for IGEO. I was nominated as an Observer by the Geological Society of India in the Indian team to the IESO, held in Buenos Aires, Argentina, October 8-12, 2012; as a Leader of the Indian team by the Geological Society of India to the IESO held in Mysore, India, September 11-19, 2013; and as the Course Coordinator of the training programme for the National Earth Science Olympiad programme from 13th May to 1st June 2014 by the Geological Society of India. I am a Life member of the Society for Promotion of Science and Technology in India (SPSTI) and the Regional Coordinator of SPSTI, Hisar district.

The future

If I look back, one of the things I learnt is to be open to ideas and do what one loves – then life is a great caravan filled with joy. Never say no whenever you get

an opportunity to learn new subjects/ concepts. Everything is connected to everything else. Be extremely positive and do not harbour even a single negative thought. Our energies are fixed and choose to use them wisely. Being around 49 years of age now, I believe it is payback time and I try to motivate students and young teachers. I frequently

deliver lectures in schools, colleges and universities, trying to create awareness about earth and environmental issues. I am a strong believer in the continuous improvement of the mind, body and soul.

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