

Presentation of Awards

Recognition of merit and publicly appreciating good work carried out by our colleagues in the profession have become an integral part of the Annual Day function. Such recognition by fellow workers is expected to act as an incentive for further work. This year several awards were presented at a colourful ceremony on the final day of the Annual Convention at Varanasi.

Lakshmeshwar Rama Rao Birth Centenary Award

This is the earliest award instituted by the Society in memory of Professor Lakshmeshwar Rama Rao, the first editor of the Journal of the Geological Society of India. It is a prestigious award given once in three years to a person who has made significant contribution over a life time in the fields of Stratigraphy, Palaeontology and Historical Geology.

In presenting the award to Dr. D.S.N. Raju of the Oil and Natural Gas Corporation, President of the Society said:

'D.S.N. Raju was born at Yellurupadu in West Godavari District, Andhra Pradesh on 24th November, 1938. He obtained BSc. (Hons.) degree from the Andhra University in 1961 and M.Tech degree in Applied Geology from IIT, Kharagpur in 1963. He joined ONGC in 1963 and worked on microfauna, biostratigraphy and palaeoecology of the



Cambay and Cauvery basins. He worked for a year (1967-1968) in the Geological Survey of Austria and the University of Vienna. He obtained doctorate degree from the State University of Utrecht for his thesis on *Miogypsinidae* from India. After working in different laboratories of ONGC on foraminifera from offshore wells and on global sea level changes and transgressive-regressive cycles in Krishna-Godavari and Cauvery basins, he became the head of the Geology Division (Laboratories) of ONGC.

On retirement from service in the ONGC he has set up a private laboratory of his own in order to provide

independent expert opinion on aspects of stratigraphy and micropalaeontology.

Dr. Raju has made outstanding contributions to the Cenozoic micropalaeontology and stratigraphy of India. His studies especially on the *Miogypsinidae* from the Cauvery and Kutch basins enabled him to trace the phylogeny and establish biozones which eventually provided a framework for four Indian stages, and correlation of these stages with those of the European and Mediterranean stratotypes. This work became immediately useful to the ONGC palaeontologists to classify and correlate the succession of Bombay High Oil field discovered in 1974.

The contributions of Dr. Raju between 1974 and 1996 have helped in building sound biostratigraphic criteria for defining Indian Cenozoic and Cretaceous stages and tracing them through other Indian basins.

During the nineties Dr. Raju succeeded in the reconstruction of sea level changes and palaeoenvironmental framework for hydrocarbon occurrences in the K-G basin, bathymetric zonation based on *Uvigerinid* and estimation of magnitude of hiatuses including K/T boundary. In addition Dr. Raju has made significant contributions on the evolutionary trends in *Phanolinderina* and *Planorbulinella* and the planktic foraminifera of the Cauvery basin.

In recognition of these various contributions the Council of the Geological Society of India has decided to present the prestigious L. Rama Rao Birth Centenary Award to Dr. Raju'.

Replying to the felicitation Dr. D.S.N. Raju said:

Respected Padmashri Dr. B.P. Radhakrishna, respected Prof. Dr. M.S. Srinivasan, Prof. R. Vaidyanadhan, Prof. Chatterjee, distinguished academicians, research scholars, students, ladies and gentlemen,

I thank the President, Hon. Secretary and the Council of the Geological Society of India for bestowing on me with the honour of L. Rama Rao Birth Centenary Award.

Following my teachers I believe: *Vidyadan* (offering knowledge) is as great as *Annadan* (offering food to hungry people). Prof. Vaidyanadhan was the first to teach me palaeontology in 1958-59. But I got preliminary training in

micropalaeontology from Prof. Barun Sengupta in 1962-63 and got a job as STA in ONGC in October 1963. I was however undecided whether to join or do research. My teachers in IIT, Kharagpur prevailed on me because I was posted in the Palaeontology Laboratory of ONGC at Dehra Dun. I must add here that I was selected as Geologist Jr. in Geological Survey of India in 1964 through the UPSC in the first batch. But I was disqualified in medical test because of minor defect in colour vision. I must thank the ONGC geoscientists, particularly Shri V.V. Shastri, Shri S.N. Talukdar, Shri D.K. Guha and Dr. S.K. Biswas, for giving me freedom in my ventures of applied/pure research.

Outside India, Prof. C.W. Drooger of the State University of Utrecht, the Netherlands, helped me in many ways. My latest occupations include:

1. Study of the Standard and Indian chronostratigraphic units.
2. Reconstruction of relative sea level fluctuations and their value in hydrocarbon exploration. All of us agree that sea level has risen by about 100 m during the last 14000 years. We can imagine what would have happened during the dramatic events of last 145 million years. We should take seriously to neotectonics.
3. Estimation of the magnitude of hiatuses, rates of sedimentation and their status in interpretation of local/regional tectonics. One example: Godavari clay is the youngest litho-unit in the offshore part of Krishna-Godavari basin. 2500 m thick fine clastics were deposited in 2.5 million years. This is slightly higher than the rate of sedimentation of the Siwaliks. Such high rates are associated with geosynclines/transform faults.

Let us fulfil our dreams and carry forward the spirit of elderly scientists.

S. Narayanaswamy Award

This award instituted in 1981 in the name of Sri S. Narayanaswamy of the Geological Survey of India is to be given to a person who has made important contributions in the area of economic geology. In presenting the award to Dr. B. Krishna Rao, Professor of Geology at Manasagangotri, University of Mysore, the President said:

'Dr. B. Krishna Rao, Professor and Chairman of the Department of Studies in Geology, University of Mysore was born in 1941 and obtained his MSc. (Tech.) in Applied Geology in 1964 from the Andhra University, Visakhapatnam and Ph.D in 1969 from Friendship University, Moscow and M.S. in Quaternary Geology (1981) from the Free University, Brussels. During a span



of 30 years of service in the University of Mysore, Dr. Krishna Rao has published 46 research papers devoted mainly to the studies on mineral deposits and the Late Archaean supracrustal rocks of Dharwar craton. In the field of ore geology, Dr. Krishna Rao has contributed substantially to the better understanding of the evolution of the deposits of gold (Kolar and Hutti), copper (Thinthini, Kalyadi and Ingaldhal), manganese (Shimoga and North Kanara schist belts), bauxite (Belgaum and North Kanara districts), magnesite (Bellary and Mysore districts) and asbestos (Holenarsipur schist belt). In the year 1985, Dr. Rao was instrumental in the discovery of two new mineral species in the gold ores of KGF viz., *Kolarite* (Pb Te Cl_2) and *Radhakrishnaite* [$\text{PbTe}_3(\text{Cl}, \text{S})_2$]. In the year 1994, Dr. Krishna Rao reported the unique occurrence of vein-type magnesite mineralization in granulite schist (Sandur schist belt) derived from the weathering of the host rock. Dr. Krishna Rao participated in collaborative research projects with geoscientists from Russia, England, Denmark, Germany and France.'

Receiving the award Dr. Krishna Rao said:

'I am grateful to the President and Members of the Council of the Geological Society of India for having considered my humble contributions in the field of Economic Geology and Precambrian Geology worthy enough to bestow this honour. I accept the S. Narayanaswamy award with all humility. I am also very happy to receive this award from Dr. Radhakrishna, the President of the Society, whose contribution to the development of mineral industry in Karnataka cannot be described in mere words.

My interest in Economic Geology began in the year 1965 while working for my Ph.D. on Hydrothermal Base Metal Deposits of Caucasus Mountains, Russia, under the guidance of Late Professor V.I. Kreiter, who was a pioneering exploration geologist and I owe him a lot for the knowledge imparted to me in the field of economic geology. During 1969, I was fortunate enough to meet Late

Dr. M.N. Vishawnathaiah in Moscow, who invited me to join his Department in Mysore University. During initial period of my research activities, I learned the rudiments of Precambrian Geology of Karnataka from my good friends: Dr. R. Srinivasan, Dr. V.N. Vasudev, Dr. Achuta Pandit and scores of others. During 1970s Dr. Radhakrishna gave me the much-needed support and encouraged me to have collaboration with Russian scientists to generate modern analytical data on the gold and copper deposits of Karnataka. Dr. Radhakrishna's support and collaborative work with Russian scientists, especially with Dr. Yu.G. Sofonov and Dr. A.D. Genkin enabled us to report for the first time in 1985 two new mineral species from gold ores of KGF, which we aptly named as *Kolarite* (PbTeCl_2) and *Radhakrishnaite* ($\text{PbTe}_3(\text{Cl},\text{S})_2$).

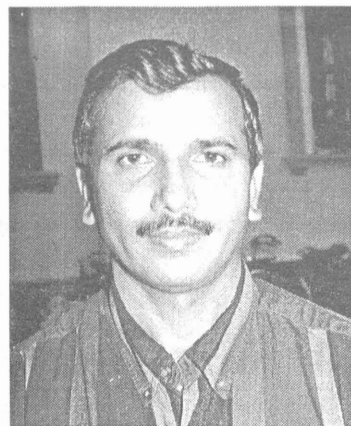
During the last 30 years, I had the opportunity to carry out studies on metallic and non-metallic deposits of Karnataka including those of gold, copper, manganese, bauxite, magnesite and asbestos. In the later years I was drawn to Precambrian Geology by Dr. Brian Chadwick of Exeter University, UK and Dr. J.J. Peucat of Rennes University, France. Studies on Precambrian Geology of Karnataka in fact helped me in a great measure in the understanding the genesis of several mineral deposits.

I would like to thank Dr. A.S. Janardhan, emeritus scientist, Mysore University for having nominated me for this award. I once again thank all the geoscientists who directly or indirectly supported me in my academic and research activities.'

M.R. Srinivasa Rao Award

This award instituted in 1982 is to be given once in two years to an Indian scientist who has made significant contributions in the field of Petrology. The Council of the Society has selected Dr. Mudlappa Jayananda for this award for the year 2000. In presenting the award to Dr. M. Jayananda, the President of the Society said:

'Dr. M. Jayananda, born on 1st July, 1958 has had a brilliant academic record securing the doctorate degree of the Bangalore University in 1985, the subject of his thesis being the Geology and Petrogenesis of Southern Closepet Granite. His areas of specialisation include petrology, geochemistry and isotope geology of the Precambrian continental crust of South India. His geochronological studies have confirmed a major episode of crustal accretion around 2500 Ma which involved granulite transformation. A distinct 550 Ma Pan-African thermal event has also been identified in southern Tamil Nadu, south of Palghat-



Cauvery shear zone. In association with a French team he has furnished precise geochronologic data for the Precambrian of South India.

In recognition of these contributions to our knowledge of the Precambrian of India the M.R. Srinivasa Rao Award is bestowed on Dr. Mudlappa Jayananda. This recognition should enable him to pursue his research with vigour in the coming years.'

Receiving the award M. Jayananda said:

'I am greatly honoured by the presentation of M.R. Srinivasa Rao Award of the Geological Society of India, which I accept in all humility. I am very much happy particularly to receive the award in the holy city of Varanasi from Padmashree Dr. B.P. Radhakrishna, the doyen of Indian Geology. I am immensely thankful to him and to the Council of the Geological Society of India for bestowing on me this unique honour. I will strive hard to live up to the expectations of the Society.

On this occasion, I wish to express my profound gratitude to all those who supported, guided, inspired and encouraged me over the years in my career. During my early career my parents have supported me to get good education. The early pioneers of Dharwar geology, Prof. P. Sampat Iyengar, Sri B. Rama Rao, Prof. C.S. Pichamuthu and Dr. B.P. Radhakrishna greatly inspired me in choosing Archaean geology of the Dharwar craton for my research career. I was fortunate to start my research under the inspiring guidance and supervision of Prof. B. Mahabaleshwar in 1983. His constant encouragement, continued support, timely advice and stimulating discussions have greatly helped me to shape my career. He also introduced me to well known research groups from UK and France which provided excellent opportunities to educate myself in the advanced aspects of geochemistry and geochronology. In later years, Prof. Mahabaleshwar and myself together developed collaborative research

programmes with internationally reputed French group from Rennes, France on the Archaean Lithosphere in Southern India. These collaborative research programmes enabled me to work with experts in structural geology, tectonics, geochronology and geochemistry on a large section of the Archaean Dharwar craton and expose myself to fundamental problems of global crustal growth and tectonic processes. I am extremely grateful to my French collaborators Profs. J-J. Peucat, H. Martin, P. Choukroune, Dr. D. Chardon, late Prof. B. Auvray and late Dr. H. Bouhallier whose invaluable support, encouragement and academic interactions have strengthened my research career. I am immensely thankful to all my teachers/esteemed colleagues in the Department for their encouragement, help and cooperation. I also wish to express my sincere gratitude to Prof. A.S. Janardhan (Mysore), Dr. M. Ramakrishnan (Bangalore), Dr. S.M. Naqvi (Hyderabad) and Dr. Anand Mohan (Varanasi) for fruitful academic interactions.

I also express my gratitude to Latha, my wife for her patience, support and inspiration without which it would have been very difficult to pursue scientific research.

The M.R. Srinivasa Rao Award provides me further encouragement to devote myself to problems of the geology of Southern India. I thank the Geological Society of India once again for this honour.'

JGSI Radhakrishna Prize

This prize first instituted in the year 1995 is to be given to the author of the best paper published in the Journal of the Geological Society of India during a calendar year in any branch of earth science. The paper should have wide appeal and should open up new avenues of research. In awarding the prize to Dr. C. Manikyamba, Scientist, National Geophysical Research Institute for her innovative paper "Reworking of BIF into GIF in the Sandur Schist Belt, India" the President said:

'The presence of Granular Iron Formation (GIF) in a greenstone belt is unusual and worth reporting since it is so rare and is of special interest to many researchers, especially those studying the Banded Iron Formations and the evolution of the earth's atmosphere and oceans. The prize is being given to a woman scientist for the first time in appreciation of her excellent publication record. She has twenty years of experience in field geology and many publications in national and international journals. The prize is being given to infuse confidence and as an incentive for further work. Dr. Manikyamba is the recipient of Young Scientist Award of the CSIR (1995).'



Receiving the award Dr. Manikyamba said:

'It is indeed a great honour to be the recipient of the prestigious JGSI Radhakrishna Prize especially because this award bears the name of an eminent authority and doyen of Indian geology – Dr. B.P. Radhakrishna. I wish to thank the Council of the Geological Society of India for this honour bestowed on me. I am extremely grateful to Dr. B.P. Radhakrishna, President, Geological Society of India for his kind and encouraging remarks.

I do not know how worthy I am for this award but if I am worthy of anything then I owe it to a number of people who shaped, guided, influenced and made me what I am today. First and foremost is my mentor, Dr. S.M. Naqvi under whose guidance I started my career. On this occasion, I take this opportunity to recall those days in 1980 when late Dr. Balakrishna, the then acting Director, NGRI placed me in Dr. Naqvi's "PL 480 project", who in turn entrusted me with analytical work in the Geochemical Laboratory of NGRI. While carrying out analysis on BIF samples with their attractive banding I developed keen interest in the study of BIFs and BMFs of Sandur schist belt which earned for me the Ph.D. degree. My grateful thanks to Dr. Naqvi for his continuing support.

I am indebted to Dr. H.K. Gupta, Director, NGRI, for his constant encouragement, continuous guidance and excellent support which led to my "first recognition" from CSIR in the year 1995 as an "Young Scientist" in the field of Earth Sciences. Over the years he has been the driving force in my academic pursuits. I wish to express my gratitude to Dr. Hari Narain – a great visionary in earth sciences – who always encouraged me in my research work. I am extremely fortunate to have had the guidance of these stalwarts who are great scientists and excellent human beings. I always cherish the stimulating discussions with my colleagues in the Geochemistry Division, which has helped me to enrich and broaden my knowledge. I also take the opportunity to recall the continued cooperation

extended by my husband and my two sons in this process of learning and express my gratitude to them.'

S.S. Merh Award

The award instituted in the year 1996 is to be given once in two years to a scientist below the age of 45 years for significant contributions in the field of Quaternary Geology. The Council of the Society has selected Dr. Vishwas Kale of the University of Pune for this award for the year 2000. In presenting the award to Dr. Kale the President said:

'Dr. Vishwas Kale, born in 1956, joined the Department of Geography, Pune University and specialised in Fluvial and Flood Geomorphology, Quaternary Geomorphology and Quantitative Geomorphology. His Ph.D dissertation (1983) was on 'Neogene and Quaternary Geomorphology of Goa'. Since then he has been working on the geomorphology of the Deccan Trap region and during the last ten years he has been working on the palaeoflood hydrology of several Indian rivers. He has analysed more than 100 year record of floods in some of the major rivers of the Indian Peninsula.



He is an active member of the Geological Society of India and served as a Member of the Council. He is widely travelled in UK, USA, Russia, Mexico, Germany, Canada and Japan. He has edited a volume on 'Flood Studies in India' and another on 'Quaternary Environment and Geochronology of India (Rajaguru Volume). He is organising an International Symposium in 2001.'

In acknowledging the award Dr. Vishwas Kale said:

'I would like to express my sincere gratitude to all the Members of the Council of the Geological Society of India for selecting me for this prestigious S.S. Merh Award. I feel it a great honour to receive the award in recognition of my contribution to the Quaternary geomorphology of western India.

After completing my Ph.D. in archaeology from Deccan College under Prof. S.N. Rajaguru, I joined the Department

of Geography, University of Pune in 1985. After joining the university I took up the study of fluvial and Quaternary geomorphology of the rivers of Maharashtra in collaboration with geoscientists from the Deccan College, Pune, Department of Geology, Pune University and University of East Anglia, UK. Several interesting geomorphological and archaeological sites were discovered by us during this period. As a result of these studies it was possible to understand the behaviour of the rivers of western Maharashtra and reconstruct the late Quaternary fluvial history.

During the last few years I have been involved in studies of the palaeoflood records of the Narmada, Godavari, Krishna and Tapi rivers. These studies were carried out in collaboration with a group of scientists from the University of Arizona, USA, led by Dr. V.R. Baker and the Deccan College, Pune. Later I undertook a similar study in the Luni basin with Dr. A.K. Singhvi of PRL, Ahmedabad. On the basis of these studies we have been able to establish the late Holocene palaeoflood history of these rivers and to some extent understand the behaviour of monsoons during the last 2 ka.

During the last two decades I have considerably benefited from interactions with many senior workers in India and abroad. I would like to make a special mention of L.S. Chamyal, Sheila Mishra, S.S. Merh, N.J. Pawar, S.N. Rajaguru, A.K. Singhvi, K.V. Subbarao, S.K. Tandon and K.S. Valdiya from India and T.C. Atkinson and Avijit Gupta from UK, and V.R. Baker from USA. I thank them all.

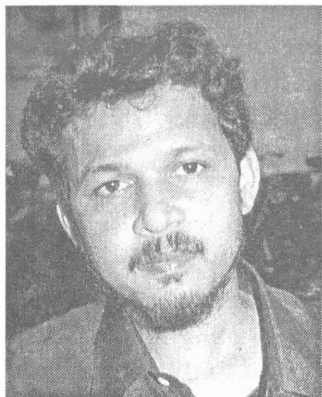
I would like to specially thank Dr. B.P. Radhakrishna for his constant encouragement and support. It was only because of his encouragement that I could bring out two edited volumes – 'Quaternary Environment and Geoarchaeology of India' in 1995 and 'Flood Studies in India' 1998. I would also like to thank Dr. K.R. Gupta and the DST for providing funds for my research.

I once again express my deep sense of gratitude to Dr. B.P. Radhakrishna and all the Council Members of the Society for honouring me with this award.'

K. Naha Award

Instituted in the year 1997 in the memory of the well-known structural geologist Khitindramohan Naha, the award is to be made once in two years to a young scientist below 40 years for significant contribution in the field of structural geology.

Presenting the award to Dr. Nibir Mandal (37 years) for his extensive studies on the mechanics of the formation of boudinage structure in layered and non-layered rocks,



the President said: 'A major contribution of Dr. Mandal is the experimental investigation of superposed folding, a widely quoted study. His experimental work has provided new insights on the geometry and mechanics of imbricate thrusting in orogenic belts such as the Himalaya.

He is also the recipient of Young Scientist Award of the Indian National Science Academy and is an associate of the Indian Academy of Sciences.

In acknowledging the Award, Dr. Nibir Mandal said:

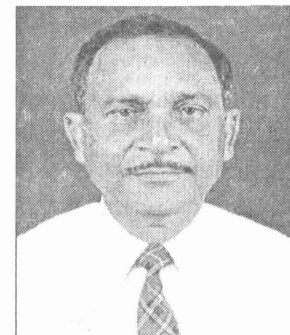
'I feel honoured in receiving this award. This occasion reminds me of several academic as well as light moments I had with the late Prof. Naha. Prof. Naha had a special flair in stimulating young people to pursue research work independently. I personally appreciate this attitude of an academician. To me, the most important task of a teacher is to encourage his students in a real sense. In this regard, it was a great success for Prof. Naha.

I hope that the Geological Society of India will hold seminars/workshops, especially to stimulate Ph.D. students and young workers. This effort is essential in order to keep our subject alive, which I feel at present is facing a sort of crisis. I specially thank the Department of Science and Technology, New Delhi for providing me constant support in carrying out my work. Finally, I wish to thank the Department of Geology of BHU for their hospitality during my stay at the University.'

H.S. Pareek Award

First instituted in 1998 this award is to be given to the best paper published in the Journal of the Geological Society of India on the subject of coal. The first award is being given jointly to Banani Bardhan and Arabinda Ghosh for their paper on 'Palaeo-temperature and palaeo-depth study of selected coal basins of the Damodar valley coal fields of India'. In presenting the award to Dr. Banani Bardhan and Prof. Arabinda Ghosh, the President said:

Dr. Banani Bardhan born in 1948, is presently working in the Geological Survey of India as Geologist (Sr.). Her main contribution in the field of coal geology are (a) Reconstruction of palaeo-depositional environment of Indian Gondwana basins like those of East Bokaro, South Karanpura, Jharia and Raniganj of the Damodar valley, (b) Evaluation of environmental hazards caused by toxic elements discharged as waste by coal-based thermal power plants and (c) Coal petrography in the upgradation of coking coal resources.



Arabinda Ghosh is Professor of Geology in the Department of Geological Sciences, Jadavpur University, Calcutta. His major areas of specialisation include coal and coke microscopy, geochemistry and environmental management of coal based industries.

In presenting the award President appealed to the researchers on coal geology to enroll themselves as Fellows of the Society and to publish the results of their research in the Journal of the Geological Society.

Replying to the presentation of the award, Prof. Arabinda Ghosh said: Respected scientists, ladies and gentlemen,

'We are extremely delighted to receive the award in the name of Dr. H.S. Pareek, the doyen of Indian coal science and renowned coal petrologist of our country. On behalf of my student Dr. Banani Bardhan and myself, I acknowledge our deep sense of gratitude to Dr. Pareek, Dr. Radhakrishna and all the Council Members of Geological Society of India for honouring us. I would like to submit a quotation from Albert Einstein's letter written to his student Dr. S. Chandrasekhar 'The responsibility of a scientist is not alone to search truth but to create an atmosphere to help others to search truth.' My humble opinion is that we should really act as scientists, or otherwise we will remain self-interested mediocres. I wish the country which led the world in '*parampara*' once, should again come up, when Indian scientists will leave behind a team of students to develop the ideas of the guru further. I thank you again and wish you all the best.'