

## GEONEWS

**Proceedings of the 23rd Annual General Meeting of the Society held on 9th April 1982 at 4-30 p.m. at the National Geophysical Research Institute, Uppal Road, Hyderabad 500 007**

### PRESENT

#### *Sriyuths:*

C. N. Venkata Kumaran  
B. S. Venkatachala  
M. K. Bose  
Supriya Roy  
R. Dhanaraju  
B. N. V. Raju  
P. K. Hansada  
Harsh K. Gupta  
Mohan Singh Bhalla  
M. Ramakrishnan  
Appaji Amrit Bhasker  
K. Naha  
T. S. Madoom Hussain  
R. L. N. Dixit  
P. F. Augustine  
S. V. G. Krishna Rao

#### *Sriyuts:*

C. Leelanandam  
T. M. Mahadevan  
G. R. Narayana Das  
A. V. Phadke  
S. M. Naqvi  
V. Divakara Rao  
P. Rama Rao  
J. S. R. Krishna Rao  
D. S. N. Murthy  
B. Uday Raj  
Y. J. Bhasker Rao  
P. K. Govil  
S. R. Satyanarayana Rao  
R. Srinivasan  
C. S. Pichamuthu  
K. Rajagopalaswamy

1. Notice calling the meeting was read by the Secretary.

2. The Annual Report of the Society together with the audited statement of accounts which had been circulated earlier was taken as read and comments were invited from the Fellows present. There were no comments. Dr. S. Balakrishna proposed that the report be accepted and Sri. K. Rajagopalaswamy supported. The audited statement of accounts was proposed for adoption by Sri G. Narayana Das and was supported by Sri T. M. Mahadevan.

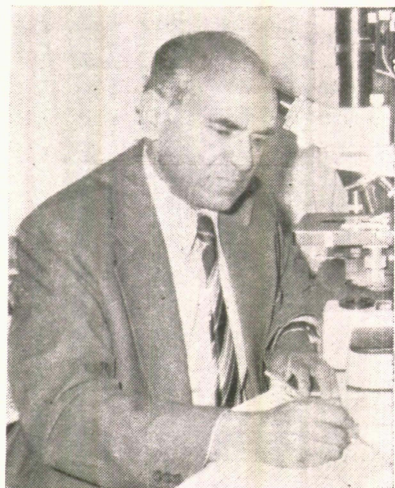
3. Prof. L. Rama Rao Gold Medal for 1982 was presented to Dr. B. S. Venkatachala, Head of the Palynology Laboratories, Oil and Natural Gas Commission, Dehra Dun in recognition of his significant contributions in the field of Indian Palaeontology and Stratigraphy. Sri S. Narayanaswami Award for the year 1982 was presented to Dr. Supriya Roy, Department of Geology, Jadavpur University and to Dr. R. N. Misra of the Geological Survey of India, Bangalore for their significant contribution in the area of economic geology. Since Dr. Misra was out of India at the time of Annual General Meeting, the award in his favour was presented *in absentia* by the President.

4. A scientific session was held in connection with the General Body Meeting. Two invited lectures were delivered; (i) Dr. B. L. K. Somayajulu spoke on the Oceanic Ferro-manganese nodules: composition, mineralogy and growth rates and (ii) Dr. K. Naha, Department of Geology, Indian Institute of Technology, Kharagpur spoke on the importance of structural studies in metamorphic and migmatitic terrains: an example from the Precambrian of Rajasthan.

A Group Discussion on the Geology of the Eastern Ghat Province was also held. Dr. C. Leelanandam, Dr. P. Perraju, Dr. Mihir K. Bose, Dr. V. Divakara Rao and Dr. J. S. R. Krishna Rao initiated the discussions in which other members present participated. Dr. Hari Narain chaired the session on invited lectures and Dr. Supriya Roy chaired the session on the Geology of Eastern Ghats.

The meeting concluded with vote of thanks by the Secretary.

PRESENTATION OF THE PROF. L. RAMA RAO GOLD MEDAL  
TO  
DR. B. S. VENKATACHALA



*Professor C. S. Pichamuthu, President of the Geological Society of India in presenting the Professor L. Rama Rao Gold Medal to Dr. B. S. Venkatachala for the year 1982 said:*

Dr. B. S. Venkatachala who is at present the Head of the Palynology Laboratory of the Oil and Natural Gas Commission, has been concentrating on the study of this branch of Palaeontology for the last several years. This has resulted in establishing palynology as an effective biostratigraphic tool for oil exploration in India.

Among the significant results of his work, mention may be made of the discovery of organic remains in the Precambrian Dharwar sediments as well as in the late Precambrian and Cambrian Kaladgi and Bhima sediments, which has helped in establishing a chronology of these ancient rocks. Identification of similar fossil assemblages from the subsurface sediments of the Ganga valley has resolved some complex stratigraphic problems related to oil exploration in this sub-Himalayan territory.

His meticulous study of the palyno-fossils in the Lower Gondwana coal beds and shales has formed the basis of the stratigraphic sub-division of the coal-bearing sequence. This has now been accepted as a standard zonation for the North Karanpura coal field.

Detailed zonation has also been done by him from a study of the Late Jurassic-Early-Cretaceous sediments of Kutch.

On the basis of palynological assemblages, Dr. Venkatachala has successfully demarcated the Permo-Triassic boundary in the Purnea basin. Another important contribution of his to Gondwana palynology is his study of the Permian assemblages in parts of the Salt Range in Pakistan.

He was mainly responsible for the pioneering work in cataloguing fossil spores, pollen, and phytoplankton from the Mesozoic-Tertiary subsurface sediments of the Cauvery Basin. The statistical analyses which followed this work has led to a zonation scheme and palaeo-ecological and palaeo-geographical reconstruction for identifying better areas of source-reservoir rock association in time and space.

This work established the important fact that the earliest marine transgression in the Cauvery Basin took place during the Neocomian-Aptian times.

Similar work by him on the East Coast of India resulted in the palynological zonation of the Godavari-Krishna and Mahanadi Basins. His study on the fossil floral assemblages in the East Coast Gondwanas has led to a revision of the dates which were earlier assigned to these rocks based on plant megafossils.

His collaborative work with other scientists of the Institute of Petroleum Exploration has identified the presence of a narrow palaeo-shelf to the east of the eastern continental shelf of India prior to the break-up and drift of Gondwana. The tectonic, stratigraphic, and palaeobiological evidences collected by him supports the juxtaposition of the East Coast of India with West Australia.

Another outstanding contribution of Dr. Venkatachala is the development of source rock palynology which evaluates hydrocarbon source potential on the basis of total organic matter. These studies have indicated that terrestrial organic matter which was considered earlier as a non-hydrocarbon source type is also an important component in the formation of sapropel under reducing environmental conditions. The conclusion that the major sources for hydrocarbons are phytoplankton marine and land algae, amorphous material which is bacterial in nature, and terrestrial vegetable matter, is considered a major break-through in our understanding of petroleum source material.

I have now great pleasure in presenting him with the Prof. L. Rama Rao Gold Medal for 1982, and in doing so, wishing him many years of active research in the field of palynology.

*Reply by Dr. B. S. Venkatachala*

Professor Pichamuthu, Dr. Hari Narain, Dr. Balakrishna and distinguished Earth Scientists :

I am extremely grateful to the Geological Society of India for conferring the Prof. L. Rama Rao gold medal on me. I consider this a great honour. It is indeed a recognition for the science of Palynology, which has become an important biostratigraphic tool. Palynology is a new-comer to the Indian scene. Active palynological studies in this country are only about three decades old and during these formative years this science has established itself well and is now used in stratigraphic correlations, palaeoecological studies and various other aspects in solving geological problems.

Source rock palynology is a new and important branch today enabling typing of hydrocarbon source material and for deciphering thermal alteration levels. I had the privilege of introducing this aspect in oil exploration in this country and it has proved extremely useful.

My palynological work started early in 1955, when we were only few and it was then not considered fashionable to be a Palynologist. I was in fact dissuaded by a number of well-wishing elders to take up better known and apparently more profitable branches. I still remember those days when Mrs. Savitri Sahni, the illustrious wife of Professor Birbal Sahni, inspired in me a desire to tread this lonely path and assured me that I would not be alone. I will be failing in my duty, if I do not acknowledge her encouragement and support which has shaped my career.

Since then, I have had the privilege of working on palynofossil assemblages from the Precambrian through the Tertiaries. The plethora of fossil life remains that I have seen only inspires awe and bewilderment.

The development of life and its path through millions of years is indeed the greatest story on earth. The unicellular algae building up its own atmosphere and then bettering this atmosphere, making the world a better place to live in, has set a great example to each one of us to strive towards improving our own world and our atmosphere'. Evolutionary trends were started here and now through a galaxy of plant forms and groups, culminated in the advanced angiospermic flora of today, which has conquered land and sea and can be found from the snowclad tundras to mountain slopes and to the ocean shores, each having its own characteristics. Plants adapted themselves to meet the ecological requirements, living in harmony with nature and creating an ecological balance.

The appearance of new forms of life, in a way its struggle to conquer itself and to improve, the foot prints they have left behind on the sands of time, in other words, the extinction patterns, are milestones in stratigraphy and the key to stratigraphic divisions.

Insignificant as we are, when I look through this great panorama of life patterns appearing and disappearing on the scene, I feel like the proverbial 'salt doll' trying to fathom the depths of the seas and ultimately getting lost. It is only here that we merge ourselves with the universe and feel that our identity is lost. One can see and decipher a goal—the desire to improve and better oneself. Is it not a great lesson? Man is also striving hard amidst many pitfalls to improve himself. This is indeed the divine message.

My thoughts, now go back to Prof. L. Rama Rao, my teacher in whose illustrious name this medal, that you, Sir, have presented me, is named, who was a great teacher, a disciplinarian and above all a great man. He taught me the principles of stratigraphy, when I was a student of B.Sc. (Honours) with a special paper in Palaeobotany at Central College, Bangalore. Later, his encouragement was never failing. I remember the long hours we used to spend together editing papers on Stratigraphy, Palaeontology and Palynology for the Society's Journal. His keen editor's eye and helpful attitude taught me many things that I could not learn in a class room.

I owe a deep debt of gratitude to, the Birbal Sahni Institute of Palaeobotany, Lucknow, where I started my work; the U.N. for providing me an opportunity to work in Europe & United States; The Oklahoma University, Norman, Oklahoma, USA where I learnt advanced methods and the Institute of Petroleum Exploration, presently the Keshava Dev Malaviya Institute, Oil and Natural Gas Commission which provided me great and challenging opportunities to pursue my studies and continue them.

I look forward for the day when at least half of the Indian Universities have palynological laboratories and the Geological Survey of India and other premier centres of Geoscience have a band of select palynologists in their laboratories. It is always the individuals who specialise and establish specialised branches and the Institutions are to take a lead in encouraging specialisation. It is only the development of specialisation in various sciences that ensures the growth of science.

The developed countries to whom we look forward for scientific leadership and guidance have attained their stature due to specialisation. We have to emulate their example and develop specialisation in various fields in our country.

Permit me Sir, once again, to thank you and the Geological Society of India for bestowing on me this great honour.



PRESENTATION OF SRI S. NARAYANASWAMI AWARD  
TO  
DR. R. N. MISHRA



*Professor C. S. Pichamuthu, President of the Geological Society of India in presenting Sri S. Narayanaswami Award to Dr. R. N. Mishra for the year 1982 said :*

Dr. R. N. Mishra had a distinguished University career and passed the M.Sc. Degree from the Ravenshaw College, Cuttack, in I class with I rank (with gold medal) and in 1980 the Ph.D. Degree from Utkal University.

Dr. Mishra is a young, active geologist who has acquired a reputation as one of the ablest exploration geologists of the Geological Survey of India. Among his outstanding achievements mention may be made of his proving the largest known iron ore deposit in India viz., the Chiria Iron Ore Deposit in Singhbhum District, Bihar, where one single deposit contains as much as 1970 million tonnes of iron ore. He was largely responsible for proving the iron and manganese ore deposits of the Sandur schist belt in Karnataka.

His aptitude for the critical appraisal of ore reserves has been recognised not only in the Geological Survey of India, but in the Indian Bureau of Mines and Mineral Exploration Corporation.

Dr. Mishra's insight into problems of mineral exploration has earned for him the position of national representative in the United Nations bodies—he is the UNIDO Fellow on Iron Ore Development, and U.N. Expert on Reserves and Resources.

The reports of Dr. Mishra on iron and manganese ores are not only of economic value, but also of academic importance, for they afford a better insight into the genetic aspects of these deposits. His papers contain valuable data on the industrial properties of the ores, information which is not normally found in many such geological reports.

In view of all these considerations, the Council of the Society selected him for the Narayanaswami Award for 1982. Since Dr. Mishra was out of India on official work at the time of the Annual General Meeting of the Society, the Award was made *in absentia* by the President.

integrated account and critical synthesis of manganese deposits of the world, occurring both on land and under water.

At present Professor Roy is an internationally recognised authority on Manganese. On behalf of the Council of the Geological Society of India, I have great pleasure in presenting him Sri Narayanaswami Award.

*Reply by Prof. Supriya Roy :*

Professor Pichamuthu, Fellows of the Geological Society of India and distinguished guests :

I feel highly honoured to be chosen for the Sri S. Narayanaswami Award of the Geological Society of India for 1982. I note that this is the first year that the award has been instituted and I am grateful to the Council of the Geological Society of India for recognizing my contributions in the field of Economic Geology in choosing me for this honour.

May I first have the privilege of paying my respects to the memory of the late Sri S. Narayanaswami in whose name this award has been instituted. Sri Narayanaswami was a renowned economic geologist whose scientific contributions are well known to you all. I was particularly acquainted with his detailed and excellent work on the metamorphosed manganese formations of the Sausar Group. As I myself specialized in the study of manganese ore deposits, I feel deeply honoured to be the recipient of the award that bears his name.

My thoughts today go back to my student days at the Presidency College and the University of Calcutta where I learnt the fundamentals of geology under the dedicated care of my teachers among whom Prof. N. N Chatterjee and Prof. S. Ray stood out most and who are no more. In my formative years, I had the privilege of associating myself with the late Prof. S. Deb who practically founded the Department of Geological Sciences at Jadavpur University and to whom I owe a deep debt of gratitude. I also remember how enthused we used to be by the frequent contacts with stalwarts in the subject such as B. Rama Rao, W. D. West, M. R. Sahni, P. K. Ghosh and yourself, Mr. President, during your visits to the Presidency College and the University of Calcutta. Some of these eminent men were examiners for my M.Sc. degree.

During my teaching career, I have been constantly enthused and rejuvenated by the intimate and uninhibited association with my students. I have no hesitation in admitting that I learnt more from them than they did from me. In these days of eroding values, my pleasure and my hopes for the future always lie with my students.

I have great pleasure in accepting the Sri S. Narayanaswami Award for 1982.

PRESENTATION OF SRI S. NARAYANASWAMI AWARD  
TO  
PROF. SUPRIYA ROY



*Professor C. S. Pichamuthu, President of the Geological Society of India in presenting Sri S. Narayanaswami Award to Prof. Supriya Roy for the year 1982 said:*

Professor Supriya Roy is a well-known geologist with international reputation having made outstanding contributions to our knowledge of manganese ore deposits. His name in India is almost synonymous with manganese.

He has had a distinguished university career, has received many academic honours, and held many important positions both in this country and abroad.

The Asiatic Society awarded the Sarat Lal Biswas Medal in 1962 for significant contributions in the field of petrology and mineralogy. The Krishnan Medal was given by the Indian Geophysical Union in 1969 for outstanding contributions on the manganese formations of India, and for establishing a generalised classification for the manganese deposits of the world. He received the National Mineral Award in 1969 for his contributions in the field of ore genesis.

Among his many academic records, mention may be made of his election as a Fellow of the Indian National Science Academy in 1972, Vice-President of the Commission on Manganese of the International Association on the Genesis of Ore Deposits in 1976, Convener and Chairman of the section on 'Geology of Manganese Deposits' of the 2nd International Symposium on 'Geology and Geochemistry' of Manganese Deposits' held during the 25th International Geological Congress in 1976, and Leader of the International Panel on 'Manganese Deposits on the Continents' for the UNESCO sponsored International Geological Correlation Programme (IGCP) in 1976. He was elected global leader of the UNESCO sponsored IGCP Project on Genesis of Manganese Ore Deposits, also in 1976. He is at present Convener of the Geosciences Panel of the University Grants Commission. He has been a respected university Professor for over two decades.

Professor Roy is the author of over 50 publications on various aspects of Economic Geology. His latest book on 'Manganese Deposits' is a monumental work, profusely illustrated, and with an extensive bibliography. This gives an