

PROCEEDINGS OF THE ANNUAL GENERAL MEETING – 2003-2004 AT VISAKHAPATNAM

The 45th Annual General of the Geological Society of India was held on the 4th November 2004, at 5 p m , at the Department of Geology, Andhra University, Visakhapatnam

The following Fellows of the Society attended the meeting

Babu, VR R M , Das, S , Dhanaraju, R , Fareeduddin, Gurmeet Kaur, Kasipathi, C , Krishna Rao, J S R , Malay Mukul, Murthu, P S N , Nagabhushan, P, Nageswara Rao, K , Nageswara Rao, V V, Naqvi, S M , Rajashekar Reddy, D , Rajesh K Srivastava, Raman, C V, Ramana Rao, K L V, Rao, M S , Sawkat, R H , Shesha Rao, P V, Shubananda Sen Gupta, Srikantappa, C , Srikantia, S V, Srinivasachari, K , Subba Rao, Subbarao, K V, Subramanyam, N , Swaroop, P C , Vaidyanadhan, R

PROCEEDINGS

The Annual General Meeting of the Society for the year 2003-2004 was held at the picturesque port city of Visakhapatnam along the east coast of Northern Andhra Pradesh. It was presided over by Prof R Vaidyanadhan, Vice-President, Geological Society of India, in the absence of Dr B PRadhakrishna, President of the Society, who could not attend the meeting due to unavoidable circumstances. S V Srikantia, Honorary Secretary, read out the notice of the meeting. The Vice-President nominated Dr R Dhana Raju and Dr Jagannadha Rao as the tellers for the counting of the ballot papers received from Fellows. The Secretary next presented the Annual Report and the Audited Statement of Accounts for the year 2003-2004, which was earlier circulated to all the Fellows of the Society.

After making the In Memoriam reference to the departed fellows of the Society, the meeting observed two-minute silence.

After the presentation of the report and the audited statement of account, as there were no comments, the Annual Report of the Society and the Audited Statement of Accounts for the year 2003-2004 were adopted as proposed by Prof K L V Ramana Rao and seconded by Dr K Sreenivasachari. The General Body accorded its approval to the appointment of Sri M Shankar Narayana, Chartered Accountant, Bangalore, as auditor of the Society for the year 2004-2005.

The Vice-President next requested the tellers to announce the election results of the reconstituted Council of the Society for the Triennium 2004-2007. The following were elected as the office-bearers and members of the Council of the Society.

President (1)	Radhakrishna, B P (Bangalore)
Vice-Presidents (4)	Gupta, H K (New Delhi) Ravi Shanker (Lucknow) Srikantia, S V (Bangalore) Subba Rao, K V (Hyderabad)
Secretaries (2)	Sawkat, R H (Bangalore) Fareeduddin (Bangalore)
Editor (1)	Rao, M S (Bangalore)
Treasurer (1)	Jithendra Kumar, S (Bangalore)
Foreign Secretary	Shankar, R (Mangalore)
Members (16)	Aroia, B R (Dehra Dun) Chaku, Surender (Bangalore) Divakar Naidu, P (Goa) Godhavarri, K S (Bangalore) Gupta, K R (New Delhi) Jayananda, M (Bangalore) Kale Vishwas S (Pune) Mista, K S (Hyderabad) Mukhopadhyay, Dhruva (Kolkata) Naqvi, S M (Hyderabad) Narayana, A C (Cochin) Rajendran, C P (Thiruvananthapuram) Singhvi, A K (Ahmedabad) Srikantappa, C (Mysore) Srivastava, Rajesh, K (Varanasi) Tandon, S K (Delhi)

The Vice-President in his presidential remarks placed on record the services rendered by the outgoing Council. He referred to the contribution made by the Society in bringing out several new and valuable publications and the encouragement provided to earth scientists in bringing

out their scientific work and also for providing support to young and budding scientists in their research activity. The Vice-President sought support from Fellows in increasing the readership of Society publications and the Journal and promote their sales.

AWARDS

The Vice-President announced the names of the earth scientists selected by the Council for various awards instituted by the Society for the year 2004. He stressed that the presentation of Awards in recognition of the significant contributions made by earth scientists was an important part of the Annual General Meeting of the Society.

Bellur Rama Rao Birth Centenary Award for significant contributions to Precambrian Geology of India to Subimal Sinha-Roy formerly of the Geological Survey of India and presently of Birla Institute of Scientific Research, Jaipur for his contribution in the Himalaya and Rajasthan.

S.S. Merh Award for contributions in the field of Quaternary Geology to Javed Noormohamad Mallik of Department of Civil Engineering, Indian Institute of Technology, Kanpur for his contribution in various aspects of the study of Quaternary sediments particularly in the field of reconstruction of depositional models and investigations of the role of paleoclimate and neotectonism and also palaeoseismology.

M.R. Srinivasa Rao Award for contributions in the field of Petrology to C. Srikantappa for his research work on charnockites and other related granulites and also in the field of fluid inclusion studies.

JGSI Radhakrishna Prize for the best paper published in the Journal of the Geological Society of India for the calendar year 2003 to Jean-Francois Moyon, Mudlappa Jayananda, Anne Nedelec, Herve Martin, B. Mahabaleswar and Bernard Auvray (deceased), respectively of Laboratoire Magmas et Volcans, OPGC-Universite-Blaise Pascal & CNRS, Clermont-Ferrand Cedex France, Bangalore University, Bangalore, India, L M T G, Universite Paul Sabatier and CNRS, Toulouse, France, Geosciences Rennes Av Du General, Leclere, Rennes Cedex Evance. Their publication "From the Roots to the Roof of a Granite: The Closepet Granite of South India" (*JGSI*, v 62, pp 753-768, Dec 2003), was selected as the best paper published in the Journal during the calendar year 2003.

H.S. Pareek Award for the best paper on Coal Sciences to Shibananda Sen Gupta and S N Chaudhuri of the Geological Survey of India, Kolkata for their paper "Characterization of Morpho-Petrological Aspects of Lignite Horizons from East Coast Area, Cauvery Basin, Tamil Nadu" (*JGSI*, v 62, pp 439-446, Oct 2003) published in the Journal during calendar year 2003.

N.N. Chatterjee Award for Energy Resources, no selection was made.

SEMINAR ON DELTAS OF INDIA

A National Seminar on Deltas of India was held during the 2nd and 3rd November 2004 under the aegis of Department of Geology, Andhra University, Visakhapatnam. The inaugural function was organized in the historic TLN Sabha Hall, Andhra University Campus. The function started with a prayer followed by opening remarks by Prof K L V Ramana Murthy, Principal, College of Science and Technology, Andhra University. Prof K L V Ramana Rao gave a brief profile of the Department of Geology, Dr J C Mohanty, Principal Secretary to Government of Andhra Pradesh, and an alumnus of Geology Department, Andhra University, as chief guest, spoke on the contribution made by students of Andhra University in the field of delta studies and on placer studies. He called up on earth scientists for greater application of GIS in groundwater studies, unconformity controlled uranium deposits, easy access to data and greater interaction among universities and between universities and industries.

Prof R. Vaidyanadhan at the outset read the address of Dr B P Radhakrishna, President, Geological Society of India, in which the president had referred to the glorious tradition of Andhra University and the footprints left behind by great scholars of the past. He had referred to exciting new discoveries, the development of Geological Society of India as an organization and need for increasing its membership. Referring to the theme of seminar he emphasized the significance of rivers, the civilization that developed along its banks and deltas. Prof Vaidyanadhan, referred to the services rendered by the office bearers of the Society and the role the Society played in the cause of earth science. He exhorted the faculty members not to forget academic excellence in the wake of economic prosperity.

The technical session commenced with a talk by P V L P Babu who spoke on Delta Studies for Oil and Gas. He gave a resume of the investigations to be carried out to find out the total picture of deltas in assessing their potential for oil and gas reservoirs. R. Bastia presented aspects of

deepwater depositional systems linked to delta systems in the east coast of India. Besides providing a broad classification of deepwater deposits, he traced the link from delta to deepwater. He emphasized the need for adoption of technologically advanced methods in obtaining a virtual reality picture for working out a model.

K. Kameswara Rao presented a comparative analysis of Holocene deltas along the coastal plains of Andhra Pradesh. T. K. Mallik spoke on shoreline retrogression of the Gangetic delta front based on satellite imagery observation. K. Nageswar Rao discussed the coastal morphodynamics and asymmetric development of the Godavari delta and its implications to facies architecture and reservoir heterogeneity. S. M. Ramasamy gave a remote sensing perspective of the delta tectonics of Tamil Nadu. He broadly covered the river systems like Palar, Ponnaiyar, Cauvery, Velar, Kottakkaraiyar, Vaigai and Tambrparni from north to south and most of these rivers have developed well fabricated deltas. Geological processes seem to have remained active both during and after the formations of these deltas.

On the 2nd day of the session commenced with a presentation by Stuart Burley who highlighted that in understanding the evolution of delta slope systems, the synergy of mapping, slicing and interpreting shallow 3D-seismic data provide the crux. He illustrated the theme from the offshore Nile Delta of Egypt. He was of the opinion such seismic mapping technique could be extended to older and potentially hydrocarbon-bearing sediments in the Delta. B. T. V. Seshavatharam spoke on the deltaic systems and hydrocarbon prospects of Myanmar particularly of the south Chindwin basin. N. K. Mahalik dealt with the evolution of the Mahanadi Delta and its multiphase geomorphological features. He has worked out a relationship between sedimentation, morphology and land use. Singa Raju presented aspects of Holocene marine transgression in the Eleri Delta, East Godavari district. He has worked out facies sequence based on borehole data. T. K. Rao analysed the enigmatic aspects of the source of the famous diamondiferous alluvial deposits of the Krishna river.

S. Mahalingam presented the optimal image processing of IRS 1A data for mapping deltaic provinces with example from Vaigai Delta. Dhana Raju spoke on the potential of the delta region of the east coast of India for exploration of heavy minerals. M. Sambasiva Rao described the morpho-structures and morphotectonics of the deltas of Krishna, Godavari and Mahanadi rivers along the east coast using remote sensing data. S. Das gave a detailed account of the occurrence of potential and quality aquifer systems in the Mahanadi Delta. Ravikumar presented the geoscientific

'GIS' datasets of parts of Godavari delta. S. Shah traced the history of Krishna Delta through ages. S. Selvakumar showed by remote sensing data the post deltaic geological history of the Cauvery Delta. G. Shalini presented the morphodynamic status of the beach in the vicinity of Venkatapur river in the central west coast. J. Seetaramaiah discussed the natural and anthropogenic effects in recent time along the coastline of the Penner Delta. D. Rajasekhar in his presentation brought out major gaps in our study of Holocene Evolution of Indian deltas. A. Bhandari in his presentation referred to Recent Ostracoda from the deltaic subenvironment and shallow inner shelf of the east coast of India. Bhattacharjee based on sedimentological characteristics, fossil contents and geochemical behaviour of the seabed sediments, brought out the Quaternary sedimentary environment in the Ganga prodeltaic region of the northern part of the Bay of Bengal. M. Chandra Rao touched the topic of the role of ancient sediments in deltaic environment.

The significance of mangroves in deltaic conservation and petrology was the topic of a talk by N. A. Vara Prasada Reddy. He discussed the ecological significance of mangroves in the highly sensitive coastal zone and also the conservation strategy.

The Seminar covered wide ranging aspects of the deltas, their sedimentation, architecture, fauna, flora, evolution, economic potential and in a nutshell – a broad spectrum of deltaic studies along the east coast of India, not leaving out a reference to gaps in our knowledge and future studies.

GENERAL SESSION – EARTH SCIENCE RESEARCH

On the 4th November 2004, a general session on Earth Science Research was organized by the Society. There were three invited lectures, two on Bay of Bengal and one on marine archaeology of Gulf of Cambay. S. Badrinarayanan in his presentation of the multidisciplinary marine survey in the Gulf of Cambay (Khambhat) referred to the discovery of two palaeochannel like features of about 9 km each over 100 sq km area with several basements arranged in grid pattern, discovery of wide-ranging artifacts of dates between 13000 BP to as late as 3000 BP.

K. S. R. Murthy spoke on the wider aspect of evolution of the Bengal Fan based on extensive coverage of geophysical data over the sea. The mapping of major structural lineaments like the continent-ocean boundary, the 85 and 90 Deg. East Ridges has helped in understanding the tectonics of the offshore basins as well as the tectonics associated with different stages of the eastern margin. This

has helped in understanding the onset of intense intra-plate deformations in the equatorial region of the Central Indian Ocean basin since late Miocene

B L Narasayya made a comprehensive presentation on the results of marine geoscientific surveys in Bay of Bengal in the EEZ. Bathymetric and magnetic maps have been prepared. The magnetic anomaly map covers the western part of the Bay of Bengal. East coast of India being a mesotidal, wave-dominated coast, the east flowing rivers draining almost 90% of the Peninsular India, bringing huge pile of sediments to the continental slope, the hemipelagic sediments find their way upto the continental slope and rise in the Bay of Bengal. He also referred to the presence of submarine valleys off Pondicherry and Palai. The outer shelf has variable sedimentary facies ranging from mud beneath terrigenous sand, calc mud, glaucony facies, to hemipelagic silty clay etc.

Rajesh K Srivastava presented his more recent research on norite-boninite association in the Neoarchaean high Mg mafic rocks of the Bastar craton, Central India. Based on geochemistry he has identified these rocks for which a refractory lithospheric source is attributed. K V Subbarao, in the absence of Sukalyan Chakraborty, spoke on geomorphological and structural anomalies in the Western Coastal corridor. Based on IRS-IC data he has demarcated significant structural features such as lineaments, fractures, faults and other geomorphic anomalies.

Gurmeet Kaur in her presentation covered the geochemistry and petrogenesis of the Gorwala granitoid, north Khetri copper belt, Rajasthan. She has suggested a plausible granite-plagiogranite association and a marginal basin oceanic tectonic regime for the Gorwala Granitoids.

The general session, though well modulated needed larger presentation of research results by young earth scientists. The invited lectures covered a wide gamut of exciting information from Bay of Bengal and Gulf of Cambay.

GROUP DISCUSSION

On the last day of the last session of the convention Society organized a short group discussion on the topic of "Relevance of Geology in the Present Technological Revolution". There appears to be a crisis with regard to Geology in various aspects including in its definition as the term earth science becoming more common despite the fact that the definition of geology itself denotes science of earth! There is also a crisis in the academic field in two aspects – one regarding declining admissions to degree and post-graduate courses and another with regard to total

absence of exposure of geology as a subject in the school education. Lack of job opportunities is also a factor. For dwindling employment opportunities for geologists, policies of organizations like the GSI which have declared that India has been covered by 1:50,000 scale mapping and wondering whether there was any further need for mapping, have contributed. ONGC and AMD are also not recruiting geologists in any significant number.

There is a total lack of inclusion of geology in a big way in the field of soil, environment, watershed development, rainwater harvesting, civil engineering and water management. The face is lost. The sight of a geologist with a hammer, compass and haversack does not seem to convey the image of a modern (?) scientist or technologist. Geologists themselves are wondering whether geology is relevant in this ultra modern technological development. Besides, Geology is stuck in the old framework.

The discussion on the topic was open and several suggestions have been made for remedying the situation. These are:

- Popularization of geology by publication of geological maps at Taluk level in local language for the benefit of farmers, teachers in rural area, civil contracts and anybody interested
- Geology should have social relevance
- Introduction of geology as a subject in the school and the need for school level text books
- Separation of geology from geography in the school syllabus
- Reorientation of University courses to the needs of evolving branches of geology
- Institutional provision for in-service training for University teachers
- Availability of toposheets, maps and the aerial photographs to all those who need them without restriction or hassles
- Need for increasing application of geology in environmental related studies
- To create mobility among geologists of University, industry and GSI-ONGC-AMD combine
- Preparation of database of geologists of all discipline
- Preparation of Georef database for easy access
- Booklets on minerals and topics on various aspects of geology
- Need for major incursion into the domain of environment, watershed development, rainwater harvesting, soil, landuse, geomorphology, engineering construction, agricultural geology, medical geology
- Miniaturization of camp equipment, introduction of

trailer huts, increasing use of the laptop (in the field) GPS, satellite imageries

- Quick publication of scientific results of investigations of the GSI
- Encouragement for publishing original scientific contribution in Indian Journals, specially of the Geological Society of India
- Dynamic websites should be developed
- Increasing utilization of computers in the geological data analysis
- Development of indigenous software for application in solving geological problems
- Greater synergy in various disciplines of geology and related science

There was a broad consensus that geology can still have relevance in the developmental activities of the country but it requires a reorientation in quickly adopting to the rapidly changing technological development and social needs of the people. However, the basic fact remains that there is no shortcut to field work and for geologists field is the main laboratory for collecting primary data. Geological mapping should continue as an important activity and there

is an increasing need for geological maps on 1:25000 and larger scales with integration of geochemical and geophysical data and quick publication of these maps for greater and wider utility among users. Organizations like the GSI have a great role in energizing the mapping activity for which it has the best expertise and tradition. Publication of geological maps and reports of all public organizations should be made mandatory and given a top priority. In the final analysis the responsibility rests on the geological community to make geology relevant and vibrant.

CONCLUSION

After the conclusion of the group discussion and the Annual Convention, S V Srikantia conveyed the grateful thanks of the Society to Prof K L V Ramana Rao, his associates and students for the excellent arrangements made for holding the Annual convention at Visakhapatnam and with this expression of thanks, the curtain was drawn on the 45th Annual convention of the Geological Society of India.

Bangalore

S V SRIKANTIA

Presentation of Awards

The presentation of Annual awards in recognition of significant contribution to Earth Science is an important part of the Annual General Meeting of the Geological Society of India. For the year 2004, the following awards were presented — Bellur Rama Rao Birth Centenary Award, K Naha Award, S S Meih Award, *JGSJ* Radhakrishna Prize and H S Pareek Award.

Bellur Rama Rao Birth Centenary Award

Referring to the awardee Dr Subimal Sinha-Roy, who could not be present to receive the award personally, Vice-President said

For the award this year the Council of the Society selected Dr Subimal Sinha-Roy for his contribution to Precambrian Geology of Rajasthan and Sikkim-Darjeeling Himalaya. Dr Sinha-Roy was born in 1939 and had his early education in Calcutta. He had an excellent academic record. He obtained his Master's Degree from Calcutta University and was awarded Ph D in 1978 for his thesis on structural Geology, tectonics, geochemistry and metamorphism of the Proterozoic Daling and associated rocks of east and south Sikkim Himalaya. He carried his research work in Norway,

CESS, Trivandrum and the GSI. He retired from the GSI as Deputy Director General and is at present Emeritus Scientist, Birla Institute of Scientific Research, Jaipur.

His main work was in the sector of Daling rocks and Lingtse Gneiss of Sikkim-Darjeeling Himalaya where he worked out strain estimates of Himalayan thrusting, mylonite gneiss and polymetamorphic characteristics of inverted metamorphism associated with the Main Central Thrust. He reported blueschist facies metamorphism in the Daling rocks from Kalimpong-Sikkim Hills.

In Rajasthan, his contribution was mainly on the structural evolution of polyphasedly deformed Jahazpur rocks and on tectonic aspects of basement-cover relations. He reported a folded unconformity.