## GEOLOGICAL SOCIETY OF INDIA

The Geological Society of India had arranged at the time of the Annual general meeting on 21st April 1973 a special function to felicitate Prof. L. Rama Rao on the award of the P. N. Bose medal of the Asiatic Society and to award the Mysore Geologists Association gold medal to Dr. B. P. Radhakrishna.

*Prof. C. S. Pichamuthu, President of the Society in welcoming the distinguished gathering said:*

'It gives me very great pleasure to welcome you here this evening. As you know we have gathered together here to honour two of our distinguished geologists Prof. L. Rama Rao on the award of the P. N. Bose Medal by the Asiatic Society, and Dr. B. P. Radhakrishna who will be given the Mysore Geologists Association Gold Medal. As I was ascending the platform to take the chair between these two geologists, it struck me that there was a very interesting coincidence as far as I was concerned, because one of them is an old teacher of mine and the other an old student of mine. It is an extremely remarkable and rare coincidence, and I seem to bridge this generation gap! I now request Prof. Nikam to felicitate Prof. Rama Rao.

### FELICITATION TO PROF. L. RAMA RAO

*Prof. N. A. Nikam, former Professor of Philosophy aud Vice-Chancellor of the Mysore University in felicitating Prof. L. Rama Rao said:*

'I am a philosopher who has the good sense to be in the company of geologists. As a philosopher, I know all about heaven and geologists know all about the earth. There can be no better companion for a philosopher if he wants to keep his feet firmly on the earth, than to be in the company of geologists. My association with geologists although not with geology is rather ancient. I have known Prof. L. Rama Rao now for about 40 years. I want to say one or two things about Prof. Rama Rao, his personal qualities and his achievements. Prof. Radhakrisnnan when he was a Professor in the Maharaja's College was asked by some one as to how his relations were with Mr. N. S. Subba Rao, the then Principal of the College. Prof. Radhakrishnan replied 'correct but not cordial'. In all institutions, it is not easy to find even correct relations between faculty members, let alone cordial relations. So far as I know Prof. Rama Rao was an exception; he was both cordial and correct in his relation with others. Prof. Rama Rao is being honoured for a work that he did when he was in the Central College. In honouring Prof. Rama Rao I think the Central College is also being honoured, for it is there he did his life's work.

Prof. Rama Rao and I have been close friends. We are neighbours. I call on him frequently and we have identity of views on many things. One such view is that we think a man in a University should do his work quietly, and this quiet work will elevate him in spite of hostile circumstances, in spite of unfriendly colleagues.

I welcome this opportunity given to me to be present here to offer our warm felicitations and congratulate Prof. Rama Rao on the distinction that has been conferred on him by the award of the P. N. Bose gold medal. It is not easy to achieve distinction in science because it takes long years of patient research.

Eventually patient research will be rewarded. This is the lesson that we learn from the two recipients of the medals who are seated on the platform this evening. Ladies and gentlemen, it gives me the greatest pleasure to offer our warmest felicitations to Prof. L. Rama Rao on his long and distinguished career of research, and offer him our best wishes for many more years of useful work.

*Sri M. V. A. Sastry, Director, Palaeontology Division, Geological Survey of India, speaking about the contributions of Prof. L. Rama Rao to Palaeontology said:*

'Prof. Rama Rao's palaeontological work is well known even to the non-palaeontologists as it has in one way or the other influenced the thoughts of contemporary workers and is still viewed with interest today. I shall attempt to highlight a few of his achievements in the field of palaeontology and stratigraphy which have significantly contributed to the progress of science in India.

It is difficult to assess the importance of one's own preceptor's work and judge its merit. To judge the value and significance of Prof. Rama Rao's singular efforts in pursuing palaeontological research in India we have to keep in mind the circumstances of his time. During the early decades of the present century when Prof. Rama Rao started his career as a teacher and research worker at the Central College, Bangalore, there was no one to guide him. It was a time when very little attention was paid to palaeontological research by the Indian Universities. Hardly a few of them taught geology. The Geological Survey of India was the only institution which maintained a Palaeontologist on its staff, and most of the fossil collections made by the survey were invariably sent abroad to be studied by European workers. There was no incentive or encouragement for palaeontological work in the country.

When we view Prof. Rama Rao's palaeontological contributions in this background, we will perhaps be in a better position to assess its merit. As a teacher he led students of Central College, batch after batch, for field excursions to the Cretaceous Formations of Trichinopoly, which were the nearest marine sedimentary formations from Bangalore. These formations had received considerable attention of the palaeontologists of the nineteenth century, and they constitute, according to Sir Thomas Holland 'a veritable natural museum of Upper Cretaceous palaeo-zoology'. After the monumental works of Blanford, Stoliczka and Kossmat it was thought difficult to add to the palaeontology and stratigraphy of these formations. This however did not deter Prof. Rama Rao who pursued these problems step by step till he could prove that much more remained to be known about these formations.

One of his earliest contributions was on the age of the Utatur marine transgression, which was thought by earlier workers to be a sequel to the rise of the Himalayas and withdrawal of Tethys.

A major discovery that goes to Prof. Rama Rao's credit is the find of fossil Algae from the Niniyur beds of South India which he announced in 'Nature' in 1931. Julius Pia of Vienna described the taxonomy of these algae and Prof. Rama Rao contributed the stratigraphic account. The results of their studies were jointly published in Palaeontologia Indica. For the first time Prof. Rama Rao established the existence of the Niniyur group as a distinct stratigraphic unit, which had been hitherto considered as uppermost Ariyalurs. . His contributions on the palaeontology and stratigraphy of Niniyurs later attracted many workers. Recent researches show that the Niniyur group marks the beginning of the Tertiary era in South India.

Prof. Rama Rao also became interested on the problem of dating the Deccan Traps, whose age had been considered as Cretaceous. When Prof. Birbal Sahni brought forward palaeobotanical evidence in support of a Tertiary age to the traps based on the study of inter-trappean fossils, a controversy developed on the age of the Deccan volcanism. Except for indirect dating from infra-trappean marine beds, the volcanic activity could not be precisely dated. The available evidences were mostly based on palaeobotanical and fresh water mollusca only. Nevertheless, Prof. Rama Rao (1937) admirably discussed the problem of dating the Deccan Traps and suggested that the volcanic activity which started towards the close of the Cretaceous not only continued throughout the Eocene but also extended even into later periods. This assumption has now been amply proved by radiometric dating.

He continued to report new fossil finds from the Cretaceous rocks of South India, significant among them being *Orbitoids* and *Siderolites* from the Ariyalur group and recognition of Maestrichtian horizon.

Prof. Rama Rao was elected President of the Geology Section of the Indian Science Congress 1940, in recognition of his contributions to Indian stratigraphy and palaeontology. He aptly chose the subject for his Presidental Address 'Recent advances in our knowledge of the Upper Cretaceous and Lower Eocene beds of India, with special reference to the Cretaceous-Eocene boundary'. In later years he extended his studies to the development and progress of the Cretaceous-Tertiary boundary problem outside also. Even after his retirement from active service he published an important paper on 'The problem of the Cretaceous-Tertiary boundary with special reference to India and adjacent countries'.

Probably the greatest satisfaction came to Prof. Rama Rao when his efforts culminated in the organisation of a 'Seminar on the Cretaceous-Tertiary Formations of South India' held at Bangalore in 1966, which was attended by all the important organisations and Universities engaged in palaeontological research in India; and a voluminous memoir covering various aspects of these formations was edited by him.

Possibly the greatest contribution of Prof. Rama Rao to Indian geology has been to create an interest for the subject and to encourage young workers to take up new topics for research. His lucid class lectures will ever be remembered by his students. During his entire career as a teacher and research worker he was his own guide and never lagged behind other known workers of his time in India and abroad. He had no training abroad nor guidance at home, but has made a mark on the subject he chose. At the age of seventy-seven Prof. Rama Rao works with the same enthusiasm towards the better understanding of the subject. We are indeed proud of him and his achievements.

In recognition of his sustained efforts towards the progress of Indian and regional stratigraphy, the Asiatic Society has rightly awarded Prof. Rama Rao the P. N. Bose Medal for his outstanding contribution to practical geology with reference to Asia, particularly in the fields of Stratigraphy and Micropalaeontology.

I wish Prof. Rama Rao long life so that we can continue to have the good fortune of his guidance and encouragement for many years to come.

*Reply by Professor L. Rama Rao*

My first duty is to thank the Asiatic Society of Calcutta for awarding this Medal to me. I am thankful also to the Geological Society of India for their kindness in felicitating me on this occasion and I deeply appreciate this gesture coming as it does from my friends and co-workers who are all engaged in building up the reputation of this Society.

At the moment my thoughts go back to 1923, that is 50 years ago, when I first started looking into a field of study about which practically nothing was known those days. Having decided to engage myself in the study of the Trichinopoly Cretaceous rocks I visited the area in 1922-23 and collected some material; and it just struck me that I might as well make thin sections of this material and have a good look into them. I was surprised to find that they included quite a number of very interesting organic structures. That stimulated further researches and one thing led me on to another; and I am happy to recollect that this field of study to which I consistently devoted my time and attention for quite a long period has yielded very valuable results not only in the elucidation of many problems of Indian geology but also in solving certain basic problems of world stratigraphy. I am particularly referring to the problem of the Cretaceous-Tertiary boundary.

The two fields of research in micropalaeontology which specially interested us in those days were: one dealing with foraminifera and the other dealing with fossil algae. I was very fortunate in those days to have a small team of two or three workers with me who appreciated the zeal with which I was pursuing the subject and gave their fullest cooperation in matters of detailed investigatton and preparation of material. Thanks to their whole hearted cooperation we obtained certain results of the greatest interest and importance. Within recent years micropalaeontology has been receiving a little more attention, but compared to the kind and amount of work done outside, I must say we are still very backward.

Athough quite a lot of good work has been done for some time in this field, my hope that the same vigour of research will be pursued, has unfortunately not been realised. My only regret is that a field of study which is so full of interest and in which such a lot of work has been done in and outside India, and one in which there is great scope for excellent work is sadly neglected chiefly in our Universities. I should like to take this opportunity to exhort our younger workers in the Universities to take up lines of investigations in this field. They must do it with a consistency and a devotion to real research without expecting any immediate results and returns. My interest in micropalaeontological studies, I am happy to say, is continuing with unabated enthusiasm.

Another great satisfaction which I have as a teacher is to see that several of my old students have done exceedingly well in their careers as geologists throughout the length and breadth of India. And what pleases me most is to see that though they were my students more than twenty or thirty years ago they still have a certain amount of regard and affection for me and convey their good wishes to me whenever they happen to come to Bangalore.

I once again express my very sincere thanks to all of you for your felicitations and good wishes on this occasion.