

## COLLOQUIUM ON MICROPALAEONTOLOGY AND STRATIGRAPHY

A COLLOQUIUM on Indian micropalaeontology and stratigraphy was convened in Bangalore from October 8-10, 1971 on the occasion of celebrating the 75th birthday of Professor L. Rama Rao. It was inaugurated by Prof. L. Rama Rao. The President of Colloquium was Prof. A. K. Ghosh of the University of Calcutta.

Prof. Rao, while declaring the colloquium open, traced the history of development of micropalaeontological research and the training of specialists at the Central College in Bangalore and referred to the progress made in this branch of geology in the country. He, however, regretted that the science of micropalaeontology and stratigraphy had not received the attention it deserved in India, particularly in the universities. The potential and prospects in these fields, according to Rao, are so great in India that it should aim at overtaking the other countries in this branch of science.

Prof. A. K. Ghosh, in his presidential address, thanked Prof. Rao for being able to inaugurate the colloquium and for his inspiring address. The President made some concrete suggestions about the way micropalaeontology should be developed in the country and said that the Oil and Natural Gas Commission should play a role in stimulating and strengthening research in this field of study, especially in the university departments. He was happy that the first colloquium was held in Bangalore where the first batch of Indian micropalaeontologists and the first crop of papers in this field were produced. It was the hope of the President that the holding of such colloquia would be an annual feature of the scientific activities in the country as it is elsewhere.

The technical session which lasted for two days covered, as planned, all eras of geological time and all groups of microfossils. There were, as expected, more papers on foraminifera dealing with systematic and stratigraphic aspects. The paper by V. V. Sastri and A. K. Datta (ONGC, Dehra Dun) on "Recent advances in the Meso-Cenozoic biostratigraphy of India" dealt with the biozones based particularly on planktonic foraminifera. It covered all the sedimentary basins of India, including those of Andaman and Nicobar Islands. The paper provided a 'spectrum', through tables and range-charts, of the biostratigraphic zonation

of the vast sequences of the entire Mesozoic and Cenozoic Eras.

The paper by M. S. Srinivasan (Varanasi) on "Late Neogene Epoch Boundaries in Andaman-Nicobar Islands" dealt with the planktonic foraminifera of the upper Miocene and Pliocene sections and the biostratigraphic zones based on them. A comparison of these zones with those established elsewhere for the same period (Miocene-Pliocene) was an important aspect of his contribution. The paper on "Stratigraphy and Microfauna of Car Nicobar Island, Bay of Bengal" by M. S. Srinivasan and V. Sharma gave an account of the complete stratigraphic sequence as well as the three biostratigraphic sequences based on planktonic foraminifera. Another paper on "Middle Miocene Foraminifera from Nancowry and Kamorta Islands, Bay of Bengal" by M. S. Srinivasan and S. S. Srivastava dealt with the fairly rich assemblage of smaller foraminifera belonging to zones N.10 and N.11 of the Neogene. These three papers from Varanasi provided a fair knowledge of the Neogene stratigraphy and foraminifera of Andaman and Nicobar Islands. It was interesting to note that certain sedimentary rocks in these islands had been mapped as basic igneous rocks by earlier workers and shown as such in the geological maps published by the G.S.I. and accordingly accepted by the ONGC in their reports.

Papers dealing with Paleogene foraminifera from Rajasthan were presented by Prabha Kalia (Delhi) and S. N. Singh (Lucknow). In her paper, Kalia dealt with 12 species of Buliminids from the Middle Eocene of Rajasthan of which 6 species are new. Post-Cretaceous occurrence of *Eouvirgerina* Cushman in Rajasthan is an interesting item of the results given by Kalia. A new Lituolid genus from the Middle Eocene of Rajasthan was described and discussed by Singh and Kalia who proposed a standardised terminology for describing the wall structure of arenaceous foraminifera.

V. Venkatachalapathy (Mysore) discussed the morphology of *Ammonia beccari* from the West Coast of India with special reference to the structure of the wall. The paper by M. V. S. Gupta (Panaji) dealt with the distribution pattern and taxonomic aspects of planktonic foraminifera from the top layers of three core samples collected from slope region off Bombay.

Two papers on Ostracoda were presented by S. P. Jain (Chandigarh) and M. S. Rao (Waltair). Jain's paper on "Ostracodes from the Bagh beds of Madhya Pradesh" dealt with a rich assemblage of species and its value in fixing the age of the beds. Rao's paper on "Recent Ostracoda from the continental shelf of East Coast of India" dealt mainly with the evolution of the environment as indicated by the fauna.

The paper by S. B. Bhatia and A. K. Mathur (Chandigarh) on "Some Pliocene Charophyta from the Siwaliks" was the only contribution on fossil algae. It provided an account of a rich charophytic flora from the Middle Siwalik rocks of the Himalayas and was considered as a major addition to the knowledge of the charophytic remains from India which were, until recently, from the central regions of the country only. The paper by S. S. Gowda and S. S. Kumar (Bangalore) on "The Microfossils from the Type Rocks of Dharwar Group" dealt with the acritarchs and their significance in the classification and correlation of the Dharwar Group of rocks in Mysore State. Implications of this discovery of microfossils in the correlation of other Precambrian rock formations of India with the Dharwar Group of

rocks were also discussed. The paper by B. S. Venkatachala (ONGC, Dehra Dun) with the title, "Palynological studies in the ONGC—A Review" covered different aspects of the research applied in the exploration for oil and natural gas by the Commission.

In the Review Session, the following participants representing different centres reviewed the work going on in their respective centres: Prof. B. S. Tewari (Chandigarh), Dr. P. Kalia (Delhi), P. P. Kumar (ONGC, Dehra Dun), Dr. S. N. Singh (Lucknow), Dr. M. S. Srinivasan (Varanasi), Sri M. V. A. Sastry (GSI, Calcutta), Dr. M. S. Rao (Waltair), Dr. V. Ragothamman (Madras), Dr. S. S. Gowda (Bangalore) and Dr. V. Venkatachalapathi (Mysore).

On the third day, the field excursion to the Archaean fossil localities near Chitradurg was not such a success as was anticipated because of very bad weather. However, a visit to the Ingaldal Mines of the Chitradurga Copper Company was a great reward to the participants, thanks to the authorities of the Company.

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## CHEMICAL TREATMENT, PRESERVATION AND ANALYTICAL STUDY OF PAUNAR COINS

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PAUNAR (20° 47' N, 78° 42' E) is today a small village in Wardha Taluk of Wardha District in Maharashtra State. Recent excavation in the village has shown that it is a place of much antiquity<sup>1</sup>. In 1965 when the foundation of Village Panchayat School was being laid, a beautiful, globular, spouted copper vessel with a fitting lid came to light (Fig. 1). It was found to contain a hoard of coins. Professor S. B. Deo, Head of the Department of Ancient History, Culture and Archaeology, Nagpur University, identified the coins as Vishnukundin coins.

Professor Deo brought these coins, 310 in all, to the Department of Archaeology and Ancient History, M.S. University of Baroda, for their chemical treatment and preservation. When

it was suggested that an analytical study in a few coins might reveal interesting data on



FIG. 1. Globular, spouted copper vessel beside the hoard of Vishnukundin coins which it contained. Coins are covered with corrosion incrustation.