

Though small in size and bereft of embellishment with sculpture, the *Koda Kallu* has proved to be a sturdy structure. The ancients had not only recognised the dressability of laterite in the wet state, but also possessed the engineering skill to build simple structures that have withstood the revages of the elements of nature for over two thousand years. Perhaps even in megalithic times, umbrellas made up of twigs and leaves were in use as a measure of protection against monsoonal rains. If this assumption be true, it is tempting to think that the umbrella shape of the monument is symbolic of the protection of the dead from nature's fury.

Schellman (1981) has remarked that in the present day, many kinds of residual rocks, not conforming to the property recorded by Buchanan, are included under laterites. So, he has suggested that laterites with the distinct characteristic of being soft when wet and hard on drying, be named "Buchanan's laterite". This is a reasonable nomenclature, based on the physical property, the recognition of which even in megalithic time, led to the use of the rock in constructions. Apart from possessing the honour of being the terrain in which scientific studies on laterites were initiated, Kerala is perhaps the home of the oldest structures built with Buchanan's laterite.

283, 17th East Street
Thiruvanniyur, Madras - 600 041.

K.S. SUBRAMANIAN

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ANNUAL GENERAL MEETING 1995 : A REPORT

The Annual Convention of the Geological Society of India was held at Tirupati from 9th to 12th September 1995, hosted by the Department of Geology, Sri Venkateswara University, on the focal theme- "Cuddapah Basin". A very tight and stimulating programme was planned and executed in an excellent and praiseworthy manner. The planning of the seminar had been initiated during a preparatory meeting at NGRI, Hyderabad, in February '95, where eleven major themes and the principal contributors were identified. These contribution were compiled into a volume - "Tirupati '95" which also included notes on the field excursions that followed.

Two memoirs of the Society (Memoir 34: "India and Antarctica during the Precambrian" edited by M. Yoshida and M. Santosh; and Memoir 32: Rajaguru felicitation volume - "Quaternary Environments and Geoarchaeology of India" edited by S. Wadia, R. Korisettar and Vishwas S. Kale) were released by the Vice Chancellor of S.V. University at the inaugural session on the 9th September. Prof. C.V.R.K. Prasad (Convener of the symposium) welcomed the participants and Prof. E.A.V. Prasad (Head of the Department of Geology, S.V. University) proposed the vote of thanks.

Dr. Radhakrishna set the tone of the scientific deliberations in his opening address. He pointed out the uniqueness of the Cuddapah Basin from several angles and emphasised the fact that it could provide significant information encompassing 1000 million years of the Earth's history for this segment of the crust. Yet, he opined that the available knowledge is scanty and full of contradictions. He lamented that although the Cuddapah Basin contains an estimated stratigraphic thickness of over 10,000m of unmetamorphosed sediments, modern sedimentological studies have not been even attempted.

A simple exercise of classifying all the contributions and citations compiled in the "Tirupati '95" volume vividly demonstrates this situation. Contributions of Geophysics lead with 38% of citations. Publications on Tectonic models/interpretations and general reviews come second (29%), followed by those on Geochemistry and Igneous Petrology (15%). Notwithstanding its mineral riches, Economic Geology and allied publications account for only 11% of this listing. It is sad that sedimentology and Sedimentary Petrology related work on this vast sedimentary basin trail far behind with only 7% of the total listing in this volume.

The technical sessions and poster session which followed the Inaugural session covered the following aspects of Cuddapah Basin;

1. Basin evolution and sedimentation; Speakers: S.H. Mehdi, M.N. Rao, Vivek S. Kale, S.V. Srikantia, A.V. Jayagopal, T.R.K. Chetty. Chair: Prof. K.S. Valdiya.
2. Geophysics; Speakers: V. Babu Rao, D.S. Bhaskara Rao, D.C. Mishra, B.S.P. Sarma, G.V.S. Poornachandra Rao, H.C. Tewari. Chair: Dr. B.P. Radhakrishna.
3. Mineralisation; Speakers: D.C. Banerjee, S. Zakauilla, A.K. Pai, S.K. Sharma, C. Srinivasa Reddy, T.S. Ramakrishna, T. Harinarayana, M.V.R. Chandrashekar. Chair: Sri. Y.N. Rama Rao.
4. Igneous activity, Geochronology, Geochemistry; Speakers: K.V. Subba Rao, J. Mallikharjuna Rao, K. Gopalan, Ramvati Mathur. Chair: K.V. Subba Rao.
5. Ground water; Speakers: D. Shivane, V. Raghu, Chakravarthy.
6. Two poster papers were also put up on Remote Sensing and Sedimentological themes. The theme on palaeobiology was unrepresented in the Volume, but a solitary contribution on the stromatolite studies from the Cuddapah Basin (M. Sharma) was presented in Pulivendla on the evening of the 11th.

The discussions that followed were very fruitful and high-lighted the gaps in the current status of knowledge. Prof. K.V. Subba Rao and Prof. C.V.R.K. Prasad co-ordinated the programme in these sessions.

The participants were taken on a field trip to the Tirumala Hills on the afternoon of the 10th. The National Geological Monuments marking the "Eparchaean Unconformity" and the "Natural Bridge" as well as a spot exposing the basal conglomerate were visited during this trip. Having come thus far, the participating geological community had the benefit of visiting the holy shrine of the Lord Venkateswara at the end of the day.

A special bus was arranged for the field-trips scheduled for the 11th and 12th September and the first stop was at Mangampeta Barytes mines. The Mangampeta Barytes deposit (occurring in two separate lenses) hosting a National Geological Monument is probably the world's largest barytes deposit with an estimated reserve of 74 million tonnes, accounting for more than one-fourth of the total known global resource of barytes.

Although a visit to the Vemula Barytes mine had been planned, following lunch, several factors made it impossible. Instead, the participants visited the conglomerate exposures marking the intra-basinal unconformity between the Papaghni and Chitravati Groups near Vemula. The discussions on the exposed features, both at this spot and the Mangampeta deposit were so exciting, that the participants lost track of time. As a result, the next stop at the differentiated Pulivendla sill could be completed in fading light. Yet the involvement was such that instead of the scheduled arrival at Pulivendla for the night-halt at 18.30 hrs, the bus reached the place as late as 20.00 hrs. A post-dinner presentation at Pulivendla on stromatolites in Vempalle dolomites was made by Mukund Sarma followed by discussions which continued late into the night, but was finally terminated for want of time and not lack of enthusiasm.

Early morning rains and an exceedingly warm hospitality of Mr. Y.S. Prakash Reddy of Pulivendla forced a late start of the field trip on the 12th. The asbestos mines at Brahmanapalle were visited first. Serpentinisation and contact metasomatism of the dolomitic limestones by the doleritic sill has yielded this extensive asbestos deposit, which is being mined by underground excavations. The Tummalapalle Uranium deposit, one of the rare carbonate-hosted stratabound Uranium mineralisation was visited next. The A.M.D. had arranged for an excellent overview of this deposit extensively explored by it.

Following a late lunch, the field-party returned to Tirupati. The common refrain of the participants on their way back from the Annual Convention was that there is a great deal more to be unravelled and to be integrated to build a convincing evolutionary history of the Cuddapah Basin in its totality.

Department of Geology
University of Poona, Pune - 411 007

VIVEK S. KALE

“DIAMONDS EVERYWHERE”

I wish to invite the attention of our readers to an important paper which has appeared in the latest issue of Nature (v.378, No.6552, 2nd Nov. 1995, pp.14 and 41-44) which describes the occurrence of diamond in natural form from the 23 km diameter Ries impact crater in south Germany. The diamond in cubic form is stated to be intergrown with silicon carbide, a type of occurrence not recorded so far. The importance of this find lies in the fact that diamond has not formed in rocks derived from the Earth's mantle or even through shock but form the vapour phase from the vaporized carbon-bearing rocks at the surface of the Earth. The occurrence of diamonds in minute form in meteorites has long been known. They are now claimed to be of interstellar (presolar) origin “having probably formed by vapour condensation in stellar atmosphere”. Diamonds are also reported in clays marking the K/T boundary, presenting evidences of large scale impact. These diamonds are not parts of the original meteorite but developed due to impact. The diamonds have crustal chemical and isotopic signatures. These new revelations emphasize the need to reexamine all suspected impact structures for the possible occurrence of diamond. Kimberlites and lamproites (mantle derived diatremes) obviously are not the only sources of diamonds. “There are more forms of diamond, and ways of making them between heaven and Earth than were dreamt of a few years ago”.

B.P.R

DISCUSSION

Comment

(Comment on the paper “Granitoid rocks of Wangtu Gneissic Complex, Himachal Pradesh : an example of *in situ* fractional crystallisation and volatile action” by D. Rameshwar Rao, Kewal K. Sharma and K. Gopalan; Jour. Geol. Soc. India, v.46(1), pp.5-14).

This paper by Rao *et al.* is welcome for the overall petrogenesis of the Himalayan granitoids, more so for the widespread numerous Early Proterozoic Himalayan granitoids,