



A REPORT ON THE INTERNATIONAL FIELD WORKSHOP ON THE MARWAR SUPERGROUP, RAJASTHAN, WESTERN INDIA, 20TH-28TH JANUARY, 2014

For the last two decades, the unmetamorphosed Proterozoic basins of Indian subcontinent have been of great interest among international scientific communities for offering evidence of geological, palaeontological and geochronological aspects. The importance of palaeontology and geochronology of many of these basins has often been a matter of debate. In order to discuss such issues with regard to the Marwar Supergroup, an International Field Workshop on the Marwar Supergroup, Rajasthan, Western India was organized under the aegis of the Society of Earth Scientists (SES), Lucknow from 20th – 28th January, 2014. The meeting was co-sponsored by the Birbal Sahni Institute of Palaeobotany (BSIP). Total 34 participants of different research disciplines from China, USA, Germany, UK, Argentina, Spain, Oman and India participated in the workshop. The inaugural function was held in the Department of Geology, Jai Narayan Vyas University (JNVU), Jodhpur. It was addressed by Prof. B. C. Rajpurohit, Vice Chancellor of JNVU, followed by six lectures delivered by Dr. S. K. Bhushan, Prof. Shuhai Xiao, Prof. Joseph Meert, Dr. Mukund Sharma, Prof. Ulf Linnemann and Prof. S. C. Mathur. These presentations provided the status and gaps in the knowledge of Ediacaran palaeobiology and geochronology of the world vis-a-vis the Marwar Supergroup India. In post-inaugural technical session, Dr. Mukund Sharma, Organizing Secretary of the workshop, introduced the problem

of the Marwar Basin and aims, objectives and scope of the workshop.

The participants were provided with field guidebook, bag, stationeries and badge with photo ID. The well-prepared field guidebook was very useful as it included the short description of each stop along with a colored map, photographs of stratigraphic sections and other major features. All the 25 stops covered during the workshop were well marked and discussed in the field guidebook. Stop numbers of the field guide book were visible and durably painted on the outcrops that showed the dedication and meticulous preparation by the organizers. Contents of field guide book are an ideal key tool for those who wish to undertake fieldwork in the Marwar Basin in future.

During the nine-day field workshop, the participants studied and critically examined the geological framework of the Marwar Basin. They discussed the palaeontology, sedimentology, geochronology and possibility of hydrocarbon exploration in the basin. This was followed by general discussion in the evening. Participants appreciated the text-book type sedimentary structures and varied types of Ediacaran-Cambrian Trace fossils preserved in the Marwar Basin. The most interesting aspect of this field workshop was the occurrence of large-sized Ediacaran – Cambrian body and trace fossils viz. *Aspidella*, *Heimalora*, *Sea weeds*, *Marsonia* in Sursagar, Golasni Artiyani Kalan



(Photo Taken on 26th, January, 2014, at Sam Sand dunes, Jaisalmer.)

Front Row: Pranjal Saikia, Zhenbing She, Bandana Dimri, Dilip Saha, Satish C. Tripathi, Joseph G. Meert, Mukund Sharma, Santosh K. Pandey, Surendra Kumar, Ulf Linnemann, Daniel G. Poire, Veeru Kant Singh, Shuhai Xiao, Shamim Ahmad, Ramson Asher, Rajni Tewari, Irene Gomez.

Second Row: Balram Bhadu, Ajanta Goswami, Pitambar Pati, Arif H. Ansari, Arjun Singh Rathore, Uday Bhan, A. P. Singh, Bivin George, P. K. Mishra (Driver).

quarry sections (Sonia Sandstone) and *Treptichnus pedum*, *Rusophycus*, *Cruziana*, *Monomorphichnus* and *Diplichnites* in open cast sandstone quarry at Dulmera (Nagaur Formation). The organizers provided enough time to observe their evolutionary significance and the presence of Precambrian/Cambrian boundary in Marwar Supergroup. On the geological perspective, the origin of the Pokaran Boulder Bed exposed near Pokaran Township was a matter of debate. Another attraction of this workshop was the smell of hydrocarbon (like diesel) in the Gotan Limestone. Some samples were collected by the participants for isotopic and palaeontological studies.

Jodhpur, Nagaur, Bikaner and Jaisalmer were the camping stations during the field workshop. The participants expressed appreciation for suitable and comfortable accommodation, transportation, special care in all respects. Invited lunch by Ultra Tech Cement Limited was a part of this event. On 26th January, 2014 before starting for the field, the participants recited Indian national anthem as we celebrated Republic Day of India. Later, the same day, we also visited the famous Sam Sand dunes and enjoyed the breathtaking view of sunset at Jaisalmer. This was followed by soothing folk songs and joyful Kalbelia dance performed by local tribes. These events sublimated tiredness of the participants gained during the rigorous fieldwork for

one week. This could be easily seen in the energy level of the participants when they joined Kalbelia dancers on the floor. Most of them described this event as unforgettable moment of their life.

The field workshop ended on 28th January 2014 with valedictory session held in Hotel Rajputana, Jodhpur. Professor S. Kumar, Department of Geology, University of Lucknow presided over the function. In the concluding session, all the participants presented their evaluations, ideas and future collaboration possibilities. In the end, organizers acknowledged the support given by various national and international bodies in organizing the field workshop. Most of the participants expressed their interest on the various aspects of Marwar geology and suggested to formulate collaborative projects in future.

Interaction with senior scientists, professors, and executives of oil sector during workshop on different aspects of Precambrian palaeobiology was a great achievement for young researchers.

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