

International Seminar and Workshop on “Exploring the World of Gems: Gemology, Prospecting and Identification” by Department of Geology, Fakir Mohan University, Balasore, Odisha in Collaboration with Institution of Geoscientists, Odisha

Arun Kuma Naik^{1*} and Manoranjan Mohanty²

¹Department of Geology, Fakir Mohan University, Balasore - 756 020, Odisha , India

²Secretary, IGO and Former DDG, Geological Survey of India

*E-mail: naik.arunkumar70@gmail.com

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Gemstones possess considerable economic worth for the gem and jewellery industries. Understanding the geology of gemstones and authentication of cut and polished gems are essential for the economic growth of the gemstone sector. A quantum jump in the application of advance technologies to explore new gemstone resources and identifications of natural, synthetic or treated gem materials during the last couple of decades have brought in a new dimension to the subject of gemology heralding sustainable and ethical business practices. Dwelling on the above issues a 3-day international seminar and workshop entitled, “*Exploring the World of Gems: Gemology, Prospecting and Identification*” was organized by the Department of Geology, Fakir Mohan University, Balasore in collaboration with the Institution of Geoscientists, Odisha (IGO), Bhubaneswar from 10th to 12th January 2024 attended by a large number of students, research scholars, scientists and jewellery traders. This program was convened jointly by Dr. Rosalin Das, Associate Professor and Head, Department of Geology, F. M. University, Dr. Asim Pradhan, Assistant Professor and Dr. Manoranjan Mohanty, Formerly Deputy Director General, GSI and Secretary, IGO.

The seminar was inaugurated by Prof. Santosh Kumar Tripathy, Vice Chancellor, Fakir Mohan University, along with Prof. Madhumita Das, former Vice Chancellor of the same university and Shri J.K. Nanda, President, IGO. Prof. Sabyasachi Pattnaik, Chairman of P.G. Council, F.M. University, Prof. R.V. Karanth, and Prof. Vibhuti Rai,

University of Lucknow, attended as Guests of Honour. A special souvenir containing valuable information on geology and gemology of gemstones was unveiled by the dignitaries.

Dr. James Shigley, renowned Gemologist of the Gemological Institute of America (GIA), delivered a captivating keynote address on the theme “Evolving Field of Gemology”. He shed light on the current challenges faced in gem identification and the scientific methods and equipments employed to overcome them. Shri Dibya Jyoti Baral, COO, Africa Business, Fura Gems, Dubai, discussed the challenges of gemstone mining and processing and presented strategies for developing gemstone resources. Prof. R. V. Karanth, former Professor, M.S. University, Baroda, delivered a highly informative talk on the fascinating world of gemstones and gems. Prof. Vibhuti Rai, distinguished professor, Lucknow University, presented an intriguing lecture on the journey of jewellery and gems through history. Mrs Rama Roy Rudra, former Director, GSI, Kolkata, discussed the importance of inclusion studies in gemology. Shri Jayant Kumar Nanda, former DDG, GSI, delivered an enlightening talk on the origins of gemstones with special reference to Odisha. Shri Jadaba Nanda Das, former DDG, GSI shared insights on the distribution of gemstones in India. The use of Raman Spectroscopy on Gems was lucidly discussed by Professor Gopal K. Pradhan of the Department of Physics at the School of Applied Science, KIIT University, Bhubaneswar.

The second day began with the presentation by Mr. Victor Torres



Inauguration Session: Release of seminar Souvenir. L to R Dr. M. Mohanty, Dr. Rosalin Das, Dr. Sabyasachi Pattnaik, Dr. Madhumita Das, Dr. Santosh Kumar Tripathy, Dr. R.V. Karanth, Dr. Vibhuti Rai, Shri J.K. Nanda and Shri J.N. Das



Field Visit to Emerald occurrences at Jaraguda, Saraskana Block, Mayurbhanj

Pacheco, Senior Exploration Geologist, Chakana Copper Corporation, Lima, Peru on the latest advancements in gemstone exploration technologies. Shri Jadaba Nanda Das briefly discussed on the importance of gem testing to set the tone for the workshop. Shreyansh Kumar of Jain Gems, Chennai highlighted both the treat or threat of laboratory-grown diamonds in the gem industry. Dr. Manoranjan Mohanty, former DDG, GSI shared insights and plan of field visit on the third day to explore the fascinating emerald occurrences in the Saraskana Block of Mayurbhanj district, Odisha. Followed by the talks a workshop on gemstone identification covering both theory and practicals was conducted with the support of experts from the field led by Prof. R. V. Karanth, Mrs. Rama Roy Rudra, and Shri Jadaba Nanda Das. The workshop also received dedicated support from Shri Shreyansh Kumar, Shri Samir Taunk, Odisha Gem Testing Laboratory, Bhubaneswar and Shri J. K. Panda, Owner, Ratna Jyoti Gems and Jewellery, Bhubaneswar.

The third day was fully devoted to an exciting field visit to few emerald occurrences reported by the Geology Department, Government of Odisha in Saraskana Block. This visit was aimed at providing on the spot insights into the natural occurrences of emerald within sheared metaultramafites. A group of 80 students from various universities along with faculties participated in the field visit to observe the geological setting of emerald occurrences. Shri Jayant Kumar Nanda, Dr. Manoranjan Mohanty, and Shri Jadaba Nanda Das led the trip, with the support of Ms. Maya Tripathy, Smt. Chinmayee Satapathy,

and Itishree Chinara, all Senior Geologists, State Unit: Odisha, GSI, Bhubaneswar. The visit was organised by Dr. Rosalin Das, Dr. Asim Amitabh Pradhan, Dr. Smrutirekha Sahoo, Dr. Pankajini Mahanta, and Mr. Arun Kumar Naik, faculty members of the Department of Geology, Fakir Mohan University.

A book titled “Gemstone Cadence” featuring collection of poems written by Mr. Susanta Kumar Das, Dr. Rosalin Das, and Mr. Arun Kumar Naik was released by Professor Santosh Kumar Tripathy, Vice Chancellor during the valedictory function. The poems explore the beauty and symbolism of alphabetically arranged different gemstones. Both Prof. R.V. Karanth and Prof. Vibhuti Rai, have expressed their commitment to maintaining a long-term association with the Department of Geology. On the first day, the technical sessions were followed by a spectacular ramp show in which the M. Sc. students participated donning a variety modern and traditional gems and jewellery. Besides a scintillating cultural programme adorned with folk dances and music was organised by the students. The seminar was a grand success due to the unwavering dedication and commitment by the members of both from Department of Geology and IGO, Bhubaneswar under the overall guidance of the Vice-Chancellor, F. M. University,

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