

He also introduced the basic instruments that are used in environmental magnetic studies. A brief account was also given of sample collection, preservation and storage procedures. K.B. Vijaya Kumar and R. Shankar also gave lectures on the central theme. The afternoon sessions were devoted to laboratory work where hands-on experience was provided to participants.

The publication titled "Environmental Magnetism: A

Practical Guide" by J. Walden, F. Oldfield and J. Smith formed the valuable course material.

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WORKSHOP ON LIFE

The interdisciplinary "Workshop on Life" was one of the scientific meetings before the Millennium World Meeting of University Professors in Rome. It was held on September 3-8, 2000 at Modena, Italy and organized by the University of Modena and Reggio Emilia, the Accademia Nazionale di Scienze, Lettere ed Arti, the (Italian) Ministry of Universities (MURST) and National Research Council (CNR).

The workshop consisted of 23 keynote lectures, 42 short communications and two round table discussions, carrying many of the exciting scientific, philosophical, moral and religious aspects of life on the earth or even its possibilities elsewhere in the universe. 91 participants from 25 countries delivered lectures.

The participants represented a wide variety of scientific expertise, ranging from sub-molecular aspects of biomolecules and the fundamental physical features of chirality (the inherent molecular asymmetry of most life-forming molecules), to instrumentation problems of searching for life on other planets like Mars and Europa (Jupiter's satellite) to social, religious and moral concerns.

Deep interrelations between the definition, origin(s) and social-moral-religious values of life have been evaluated and analysed. The lectures and discussions contributed significantly to get a clear picture of possible definition of life, to mathematical and chemical description of minimal models for living systems, as well as limits and development of molecularly coded information required for life.

One of the highlights of the workshop was the lecture by C. de Duve (Bruxelles) analyzing the current model of prebiological and early evolution.

Most of the philosophical contributions were dedicated to comparison between the religious and scientific visions of life. Many representatives of various religions were present. All the talks have tried to put in evidence for continuity between the two different approaches to knowledge.

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NATIONAL WORKSHOP ON COMPUTER APPLICATIONS IN MINERAL EXPLORATION, MINING AND WATER RESOURCE MANAGEMENT

A two-day national workshop was organized jointly by the South Asian Association of Economic Geologists (SAAEG, India Region) and the Government Engineering College at Raipur on 23rd and 24th March, 2001. The workshop was inaugurated by Satyanarayan Sharma, Minister of Education, Chhattisgarh State who exhorted the scientists and technocrats to develop a practical work plan

for eradication of poverty by employing modern technology for exploration of our rich mineral resources. R.C. Jain pleaded for optimal use of computers in planning and programming the technological education in the State. K.L. Rai was the convener of the workshop. S.K. Sarkar in the valedictory address hoped that the geoscientists shall optimally utilize computer techniques to ensure proper

and sustainable development of mineral resources in the mineral-rich, yet backward parts of the country like Chhattisgarh and Jharkhand, in the foreseeable future.

About 18 invited papers including 4 keynote addresses were presented in five technical sessions. They covered a variety of topics highlighting the applications of computers in the fields of mineral exploration and resource assessment,

deposit modelling from mining point of view and ground-water data processing for modelling and management.

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NATIONAL SYMPOSIUM ON EXPLORATION AND SURVEY FOR NOBLE METALS AND PRECIOUS STONES

Geological Survey of India (GSI) is celebrating its 150th anniversary of service to the nation (S.V. Srikantia, *Jour. Geol. Soc. India*, v.57, pp.279-282, 2001) during the current year. A series of seminars are being held at some important centers to mark the occasion. In this series belongs the national seminar organized by the GSI and held at the auditorium of Central Research Institute for Dryland Agriculture (CRIDA-ICAR) in Hyderabad on 22nd and 23rd May 2001. The seminar was inaugurated by Dipak Chatterjee, Secretary, Ministry of Mines, Government of India. He felt that the financial crunch faced by GSI, which was coming in the way of intensification of mineral exploration and advanced research involving expensive instruments was largely due to its unplanned past recruitment that is consuming bulk of the allocated funds. Further the lack of recruitment in recent years has left the GSI with an ageing work force that is unable to meet the present-day challenges. He therefore felt that some pruning and possible re-look into GSI's charter of functions may be necessary. This criticism not only calls for introspection by GSI, but also in-depth assessment by the geoscientific community. Mineral exploration, which is the mainstay of the Ministry of Mines, forms only a small percentage of GSI's work. GSI has recently diversified its activities to meet the societal needs in the fields of seismology, environmental geology, engineering geology, geothermal and glaciological studies, Antarctic expedition, publication of results of research and exploration through special volumes, brochures and maps etc. – fields which are beyond the purview of the Ministry of Mines. This anachronism has been high-lighted by M.S. Rao (this issue, p.85). The bloated strength of ancillary staff along with the numerically depleted and ageing personnel is a fall out of rapid expansion during the successive Five Year Plans and sudden contraction recently through economic

liberalization. Rather than wielding the stick – the traditional weapon of bureaucracy – a more positive and sympathetic approach towards the organization in distress is called for, so that the yeoman services rendered in the past by GSI under trying circumstances in inhospitable and arduous terrains, are amply rewarded. These are points to ponder.

The Seminar is notable for many achievements:

- 1) The pre-seminar volume (Spec. Publ. no.58, 2001) containing 70 papers and covering nearly 680 pages reflects a commendable effort. The volume contains several review papers and status notes on the gold potential of Eastern Dharwar craton, Southern granulite terrain, Sakoli and Mahakoshal belts of Central India, Sonbhadra prospect in the Son valley, Bhukia prospect in Rajasthan and other areas. Discovery of kimberlite in Narayanpet (Andhra Pradesh), and in Bastar and adjoining areas in Chattisgarh was highlighted. PGE mineralisation in Baula in Orissa was also emphasized. Geothermal fluids as a potential source of gold etc. was pointed out. Over 50 papers from this volume covering these subjects were presented in two parallel technical sessions of the seminar.
- 2) The Symposium on Cuddapah Basin conducted in a novel way through post during the 125th year celebrations of GSI (1976) under the inspiring leadership of the late Ch. Narasimha Rao and assisted ably by S. Rajaraman and N.K. Sood was brought to public attention through a belated publication. Although Ch. Narasimha Rao was jocularly compared to Don Quixote by S.K. Majumder, and to W.F. Smeeth for all-igneous theory of the Dharwar by others, Narasimha Rao's diehard espousal of the igneous cause has resulted in the discovery of felsic volcanics and