SCIENCE AND CULTURE

JANUARY-FEBRUARY 2004/VOLUME 70/NOS. 1-2

A JOURNAL OF NATURAL AND CULTURAL SCIENCES

PUBLISHED BY THE	EDITORIAL		
INDIAN SCIENCE	Linking Rivers : A Razor's Edge — Samarjit Kar		1
NEWS ASSOCIATION	ARTICLE		
EDITORIAL BOARD R. K. Mandal	Interlinking Indian Rivers — A. K. Ghosh		3
Editor-in-Chief Amalendu Bandyopadhyay Julie Banerji	Doubts over the Scientific Validity of the Justifications for the Proposed Interlinking of Rivers in India — Jayanta Bandyopadhyay and		
Syamal Chakraborty N. C. Datta Amit Krishna De Vinod Kumar Gupta	Shama Perveen Chamoli Earthquake of 29th March 1999 Garhwal Himalaya India: An Observation		7
Samarjit Kar N. D. Paria	— Ajay K. Naithani, V. Joshi, M. M. Kimoth and J. K. Garg		21
S. C. Roy COLLABORATORS	Jute and Jute-like Fibres: Current Situation — M. K. Sinha, D. Sengupta, H. S. Sen and T. Ghosh		32
S. Aditya Amiya Bagchi B. B. Biswas R. N. Chatterjee D. P. Chattopadhyay	Women and Environment: A Critical Analysis of the Environmental Awareness Among the Women of Orissa — D. Dash and M. K. Satapathy	•••	38
Mihir Chowdhury D. P. Duary D. Ganguli S. K. Ghaswala Irfan Habib A. K. Hati	SCIENCE CORNER Probiotics: An Overview — S. C. Mukherjee and Sukanta K. Nayak WE REMEMBER Prof. M. L. Schroff: Doyen of Indian Pharmacy Education		46
S. B. Karmohapatro Balaram Majumdar	— A. P. Hardas	•••	49
C. H. Meheta A. S. Mukherjee Biswapati Mukherjee	NOTES AND NEWS SCIENCE IN LIGHTER VEIN	æ.	52
S. K. Mukherjee S. P. Mukherjee	Third Indo-Pakistan War —— D. P. Burma		57
R. P. Purkayastha P. K. Ray Parimal Sen	Asymptote of Phytophagous Species Accumulation in Tea: The Relevance of Guilds	1	
S. P. Sen S. P. Sengupta	Barundeb Banerjee		59



Indian Science News Association

President

Dr. A. P. Mitra

Vice-Presidents

Dr. S. K. Bhattacharya
Professor M. M. Chakrabarty
Professor (Mrs.) Asima Chatterjee
Professor M. K. Das Gupta
Professor Asis Datta
Dr. S. C. Pakrashi

Secretaries

Professor (Mrs.) Julie Banerji Professor Naresh Chandra Datta

Treasurer

Professor Amalendu Bandyopadhyay

Council Members

Professor Basudeb Barman Professor Sujit Kumar Basu Professor Jagadish Chandra Bhattacharyya Professor Samir Kumar Brahmachari Professor Dipankar Chakraborty Dr. D. P. Duari Professor Sudhendu Mandal Professor Ananda Deb Mukherjee Professor Biswapati Mukherjee Dr. Debasish Mukherjee Dr. G. B. Pant Professor H. S. Ray Professor Nityananda Saha Professor Parimal Chandra Sen Professor M. Siddiqi Professor D. K. Sinha

Assessment of Relative Potential for Fast Growing Habit at Early Stage of Development in Five Fuel Wood Yielding Plants — Arijit Sinhababu, Arpita Banerjee, Rup Kumar Kar and Sudhendu Mandal 61 Source of Sulphur and Leaf Yield in Tobacco - K. Deo Singh 65 Qualitative Composition of Soil Micro Arthropods in Sugarcane Farming System — Lakshman Lal and S. K. Gangwar 67 Host Specificity of Mistletoes, Semi-parasites and Epiphytes Occurring in the Sundarbans Mangals - Asok Ghosh, Neera Sen and Kumudranjan Naskar 71 Variability of Physio-Chemical Properties in the Different Genotypes of Vetiveria zizanoides (Vetiver) -Alok Pandey 75 Effect of Low Dose Arsenic in Irrigation Water on Allium cepa - Producing Sterility -Supriti Rani Datta and Subhankar Das 77 Four Test Tube Approach: Towards cost Effective Screening of Thalassaemia and Haemoglobinopathy Syndromes -Prosanto Chowdhury and Gopeswar Mukherjee 81 SCIENCE CONGRESS SUPPLEMENT New Dimensions of Opportunities for our Nation - A. P. J. Abdul Kalam S-1 Excerpts from the Speech of Prime Minister Shri Atal Behari Vajpayee at 91st Indian Science Congress (Presented in Absentia), Chandigarh, 2004... S-6 Life Sketches of General President, Sectional Presidents and Conveners, 91st Indian Science Congress, Chandigarh 2003-2004 S-7

Members of the Editorial Board are also members of the Council

Professor S. K. Talapatra

Cover: Top: Government's vision of India's river linking project.

Bottom: Mighty Brahmaputra may one day become shallow agricultural basin in the dry season.

Members of the Advisory Committee of Indian Science News Association

Professor Padmanabham Balaram	Bangalore
Professor B. B. Baliga	Mangalore
Professor Ashok Nath Basu	Kolkata
Dr. Sandip Kumar Basu	New Delhi
Professor Jagadish Chandra Bhattacharyya	Bangalore
Dr. S. Datta Gupta	Kolkata
Dr. H. K. Gupta	Hyderabad
Dr. K. Kasturirangan	Bangalore
Dr. R. A. Mashelkar	New Delhi
Professor M. G. K. Menon	New Delhi
Professor Yash Pal	New Delhi
Dr. R. S. Paroda	New Delhi
Dr. V. S. Ramamurthy	New Delhi
Dr. C. N. R. Rao	Bangalore
Professor (Mrs.) Manju Sharma	New Delhi
Professor P. N. Tandon	New Delhi

SCIENCE & CULTURE

ADVERTISEMENT

RATE

	Single Insertion		
	(Full Page)	(Half Page)	
COVER (Back)	Rs. 5,000/-	×	
COVER (Front Inside)	Rs. 3,500/-	×	
COVER (Back Inside)	Rs. 3,500/-	×	
OTHER PAGES	Rs. 2,000/-	Rs. 1,200/-	

N.B.: For colour or any other special types of advertisement—rates may be negotiated.

A discount of 20% for insertions in all issues in a year and of 15% for atleast three insertions will be allowed.

TO OUR READERS

Your appreciation of the journal makes us bold to suppose that some of your friends would also like to read SCIENCE & CULTURE, the premier scientific monthly of India devoted to the publication of the progress in pure and applied sciences. The Indian Science News Association has been conducting the journal for over 69 years with the editorial co-operation of eminent scientists of India with the object of promoting and diffusing knowledge laying special stress on the progress of scientific studies here and abroad, and advocating methodical application of science to problems of national regeneration.

Editorial correspondence should be sent to the Editor, *Science and Culture*, 92, Acharya Prafulla Chandra Road, Kolkata: 700 009. Manuscripts prepared in accordance with the Instruction to Contributors should be submitted in **Triplicate** and will not be returned unless accompanied with return postage.

Correspondence relating to subscription, advertisement and other matters should be addressed to the Hony. Secretary, Indian Science News Association, 92, Acharya Prafulla Chandra Road, Kolkata: 700 009, Phone: – 2350-2224. E-mail: isna@vsnl.net

MEMBERSHIP FEE

Life Member	;	Rs.	1500.00
Ordinary Member	(without journal	Rs.	100.00
Ordinary Member	(with journal)	Rs.	400.00

ANNUAL SUBSCRIPTION

Inland (Institution)	Rs.	800.00
Foreign	U.S.\$	100.00
Inland (Individual)	Rs.	400.00
Foreign (Individual)	US.\$	50.00
Single Copy (Inland)	Rs.	80.00
Single Copy (Foreign)	\$	20.00

SCIENCE AND CULTURE

Published by :— INDIAN SCIENCE NEWS ASSOCIATION 92, Acharya Prafulla Chandra Road, Calcutta-700 009

AN APPEAL

The Indian Science News Association (ISNA) was established in the year 1935 by eminent scientists Professor Meghnad Saha and Acharya P. C. Ray, and was sustained by Professor S. K. Mitra, Professor B. C. Guha, Professor D. S. Kothari, Professor S. S. Bhatnagar, Professor P. C. Mahalanobish, Prof. D. M. Bose and many other stalwarts. The main objective of the Association is to promote and disseminate knowledge, laying special stress on scientific studies in India and abroad and to advocate the methodical application of science to problems of national regeneration. The Association provides a platform to the growing scientific knowledge vis-a-vis the culture of our country. The first President of the Association was Acharya P. C. Ray and the founder secretaries were Professor Meghnad Saha and Professor B. B. Roy.

The 'Science and Culture' is the mouth piece of the organization. With the above objectives in view, the Association has been publishing 'SCIENCE AND CULTURE' monthly, since 1935. Not only scientific articles but also articles on social and cultural aspects of the country are published in the journal. Many important articles on nationally important events, conservation and developmental aspects have been published in the journal.

Besides the publication of the journal, the Association holds a number of memorial and endowment lectures throughout the year. Since 1983, an annual course (of 10-12 weeks duration) on Science Communication and Media Practices is held to train young aspirants.

During its long period of existence, the Association witnessed several financial crises as it is autonomous and depends on grants and donations, both from government and charitable organizations. However, the slump during 1992-95 was acute and affected the publication of the journal. It was decided during that time to publish the journal bimonthly and keep the continuity. Since then, by acquiring some funds, an endowment has been created and the journal is brought out on the interest proceeds of the fund. Recent years have witnessed an increasing popularity of the (truncated bimonthly) journal and there is a demand amongst readers for monthly publication.

However, the funds position do not permit this. As more and more well written and thought provoking articles are arriving at our office for publication in the journal, it is all the more tempting to revamp the journal and bring it back to monthly publication. Hence this appeal to you to donate generously to ISNA to help us put our plans into action in the new millennium.

The donation will be exempt from income tax vide U/S 80G of 1.T. Act 1961, Order No $\frac{\text{DIT (E)}/548}{8E/87/99-2000}$ Dated- 23.09.99.

Any donation/contribution should be issued by crossed cheque/draft drawn in favour of Indian Science News Association.

We trust your liberal participation and patronage will help us to restore the heritage (running into 68th year) of Indian Science to new heights of glory.

Thanking you,

Honorary

Secretaries

President: Dr. A. P. Mitra, F.R.S.

Vice-Presidents: Dr. S. K. Bhattacharya

Members of the Editorial Region

Ace-Presidents: Dr. S. K. Bhattacharya
Prof. M. M. Chakrabarty

Editorial Board: Prof. R. K. Mandal (Editor-in-Chief)
Prof. Amalendu Bandyopadhyay

Prof. (Mrs.) Asima Chatterjee
Prof. M. K. Das Gupta
Prof. Asis Datta
Prof. Asis Datta
Prof. Asis Datta
Prof. (Mrs.) Julie Banerji
Dr. Syamal Chakraborty

Dr. S. C. Pakrashi

Prof. (Mrs.) Julie Banerji

Shri Samarjit Kar

Prof. N. C. Datta

Dr. Amit Krishna De

: Prof. (Mrs.) Julie Banerji Dr. Amit Krishna De Prof. Naresh Chandra Datta Prof. Vinod Kumar Gupta

Honorary Prof. N. D. Paria
Treasurer : Prof. Amalendu Bandyopadhyay Prof. S. C. Roy