# SCIENCE AND CULTURE

## MAY-JUNE 2003/VOLUME 69/NOS. 5-6

## A JOURNAL OF NATURAL AND CULTURAL SCIENCES

PUBLISHED BY THE	DEVELOPMENT AND ENVIRONMENT		
INDIAN SCIENCE	— R. K. Mandal		165
Products Annual Manager Annual Services and			
NEWS ASSOCIATION	CORRESPONDENCE		
EDITORIAL BOARD	— Hasmukh K. Tank	•••	167
R. K. Mandal	Space Summit: Vision for the Global Space		
Editor-in-Chief	Community: Prosperous, Happy and Secure		
Amalendu Bandyopadhyay	Planet Earth		
Julie Banerji	– A. P. J. Abdul Kalam		168
Syamal Chakraborty			
N. C. Datta	David Hare: Co-Father of Modern Education		
Amit Krishna De	in India		
Vinod Kumar Gupta	—- Sisir K. Majumdar		174
Samarjit Kar			
N. D. Paria	Science and Technology in Post-independent		
S. C. Roy	India		176
,	— Manoranjan Bhattacharya		176
COLLABORATORS	Neutrino Novelties		
S. Aditya	— Amitava Raychaudhuri	570.263	188
Amiya Bagchi	- Amatera Regenation	•••	100
B. B. Biswas	Bioremediation - An Option for Sustainable		
R. N. Chatterjee	Development		
D. P. Chattopadhyay	— S. K. Ghosh, C. K. Guha Sarkar		
Mihir Chowdhury	and Debashis Mandal		192
D. P. Duary			
D. Ganguli	Gene Therapy and Gene Targeting		
S. K. Ghaswala	— Sibdas Ghosh		200
Irfan Habib			
A. K. Hati	Stress in an Organization		
S. B. Karmohapatro	— Saikat Deb Acharya, Subrata K. Ghosh		202
Balaram Majumdar	and Hem Shanker Ray	•••	203
C. H. Meheta			
A. S. Mukherjee	OBITUARY		
Biswapati Mukherjee	Dr. Santimay Chatterjee		
S. K. Mukherjee	— S. B. Karmahapatro		208
S. P. Mukherjee			
R. P. Purkayastha	Prof. Pramath Nath Nandi		
P. K. Ray	— A. K. Mishra		210
Parimal Sen			2
S. P. Sen	NOTES AND NEWS	•••	211
S. P. Sengupta	Contd	navt	nage



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

Dr. A. N. Bhaduri

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

Professor S. K. Talapatra

Members of the Editorial Board are also members of the Council

## LETTERS TO THE EDITOR

Insect Pests and Predators in Pigeonpea Agroecosystem of Tamilnadu, with a note on a Host Record of Reduviid Bugs — M Anto Claver	****	215
Influences of AM fungi on Physiological Changes		
in <i>Tamarix aphylla</i> : An endangered Tree		
Species of Indian Thar Desert		
— Jitendra Panwar and Anil Vyas		221
Epicuticular wax content in <i>Musa</i> accessions	X	
— S. Shivashankar		225
Protein Status in Desert Plants with Different		
Manure Treatments		
- Sher Mohammad and		
Pawan K. Kasera		227
Fenneropenaeus konkani, a New Species of Prawn		
(Decapoda: Penaeidae) from Indian Coast		
- Angsuman Chanda and		
Tanmay Bhattacharya		229
Natural Cross Pollination in Chickpea		
(Cicer arietinum L.)		

Cover: Development and environment: How long will the earth be able to sustain man and animals is a big question.

231

- V. S. Girase and R. B. Deshmukh

## 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 68 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.

## MEMBERSHIP FEE

Life Member	:	Rs.	1500.00
Ordinary Member	r (without journa	l) Rs.	100.00
Ordinary Member	r (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 I.T. Act 1961, Order No  $\frac{DIT(E)/548}{8E/87/99-2000}$  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. Members of the

Vice-Presidents: Dr. S. K. Bhattacharya
Prof. M. M. Chakrabarty
Prof. (Mrs.) Asima Chatterjee

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

Prof. (Mrs.) Astina Challerfee Prof. (Mrs.) Julie Banerji
Prof. M. K. Das Gupta Dr. Syamal Chakraborty
Prof. Asis Datta
Dr. S. C. Pakrashi Prof. Ajit Kumar Danda

Prof. N. C. Datta

Prof. (Mrs.) Julie Banerji
Prof. Naresh Chandra Datta

Prof. Vinod Kumar Gupta

Honorary Prof. Naresh Chanara Dana
Prof. N. D. Paria

Treasurer : Prof. Amalendu Bandyopadhyay Prof. S. C. Roy