EDUCATION DOCUMENTATION SERVICES

CURRENT CONTENTS

JULY-2016

edited by: P.L. Negi



INSTITUTE LIBRARY

REGIONAL INSTITUTE OF EDUCATION, BHUBANESWAR (NCERT)

SACHIVALAYA MARG, BHUBANESWAR-751 022

E-mail: riebbslib@rediffmail.com, riebbs@nic.in

PERIODICALS COVERED

<u>S. No</u>	Name of the Journal	Vol./ Issue No.	Month	Year	<u>Pages</u>
1. A	Action Research	14/02	June	2016	01
2. A	American Journal of Physics	84/05	May	2016	02
3. B	BioScience	66/04-05	April-May	2016	03-06
4. C	Campus Counsellor	09/11	July	2016	07
5. C	Current Science	111/02	25 th July	2016	08-10
6. D	Desh (B)	59/18	July	2016	11
7. E	Down to Earth	25/04-05	July	2016	12-15
8. E	Economic and Political Weekly	51/26-30	June-July	2016	16-18
9. E	Edutracks	15/11	July	2016	19
10. H	Harvard Educational Review	86/04	Winter	2015	20
11. I	ndia Quarterly	72/02	June	2016	21
12. I	ndian Journal of Experimental Biolo	gy 54/07	July	2016	22
13. I	ndian Journal of Open Learning	24/01&02	Jan. & May	2015	23
14. I	ndian Journal of Pure and Applied P	hysics 54/07	July	2016	24
15. I	ndian Literature	59/02	March-April	2016	25-26
16. I	nternational Journal of Science Educ	eation 38/07-08	May	2016	27
17. J	hankar (O)	68/04	July	2016	28
18. J	fournal of Chemical Sciences	128/07	July	2016	29-32
19. J	Journal of Curriculum Studies	48/04	August	2016	33
20. J	ournal of Educational Psychology	108/02-03	FebMarch	2016	34-37
21. J	Journal of Educational Psychology	108/05	July	2016	38-39
22. F	Kurukshetra	64/09	July	2016	40
23.1	National Geographic Magazine	03/12	July	2016	41
24. N	Navneet (H)	01(64)/11	July	2016	42
25. I	Pramana: Journal of Physics	87/01	July	2016	43
26. 0	Quest in Education	40/03	July	2016	44
27. I	Review of Educational Research	86/02	June	2016	45
28. \$	School Science and Mathematics	116/01-03	JanMarch	2016	46-48

PERIODICALS COVERED

<u>S. 1</u>	No. Name of the Journal	Vol./ Issue No.	<u>Month</u>	Year	<u>Pages</u>
1.	Action Research	14/02	June	2016	01
2.	American Journal of Physics	84/05	May	2016	02
3. BioScience		66/04-05	April-May	2016	03-06
4.	Campus Counsellor	09/11	July	2016	07
5.	Current Science	111/02	25 th July	2016	08-10
6.	Desh (B)	59/18	July	2016	41
7.	Down to Earth	25/04-05	July	2016	12-15
8.	Economic and Political Weekly	51/26-30	June-July	2016	16-18
9.	Edutracks	15/11	July	2016	19
10.	Harvard Educational Review	86/04	Winter	2015	20
. 11.	India Quarterly	72/02	June	2016	21
12.	Indian Journal of Experimental Biolo	ogy 54/07	July	2016	22
13.	Indian Journal of Open Learning	24/01&02	Jan. & May	2015	23
14.	. Indian Journal of Pure and Applied P	Physics 54/07	July	2016	24
15.	. Indian Literature	59/02	March-April	2016	25-26
16	. International Journal of Science Educ	cation 38/07-08	May	2016	27
17	. Jhankar (O)	68/04	July	2016	28
18	. Journal of Chemical Sciences	128/07	July	2016	29-32
19	. Journal of Curriculum Studies	48/04	August	2016	33
20	. Journal of Educational Psychology	108/02-03	FebMarch	2016	34-37
21	. Journal of Educational Psychology	108/05	July	2016	38-39
22	. Kurukshetra	64/09	July	2016	40
23	. National Geographic Magazine	03/12	July	2016	41
24	. Navneet (H)	01(64)/11	July	2016	42
25	. Pramana: Journal of Physics	87/01	July	2016	43
26	. Quest in Education	40/03	July	2016	44
27	. Review of Educational Research	86/02	June	2016	45
28	. School Science and Mathematics	116/01-03	JanMarch	2016	46-48

Volume 14 Number 2 June 2016

Action Research

LIBRARY



Contents

Articles

Developing primary care occupational health services for informal sector workers in Thailand Kessarawan Nilvarangkul, Sara Arphorn, John F Smith, Teerasak Phajan, Nusaraporn Kessomboon and Kesorn Thaewnongiew	113
Multi-agency action learning: Challenging institutional barriers in policing and mental health services Heather Noga, Alison Foreman, Elizabeth Walsh, Jenny Shaw and Jane Senior	132
Do-it-yourself biology: Action research within the life sciences? Stefano Golinelli and Guido Ruivenkamp	151
Measuring in action research: Four ways of integrating quantitative nethods in participatory dynamics of Martí	168
nsider action research and the microsystem of a Danish surgical ward Charlotte Paltved, Anne Mette Morcke and Peter Musaeus	184
he action research case study approach: A methodology for complex hallenges such as sustainability in aviation eter McManners	201
nsider Action research as an approach and a method — Exploring stitutional encounters from within a birthing context sold Nyman, Marie Berg, Soo Downe and Terese Bondas	217

AMERICAN JOURNAL of PHYSICS

407

CODEN: AJPIAS ISSN: 0002-9505

Volume 84, No. 5 May 2016

Cover figure: An example of a periodic orbit for a massive particle in a wormhole spacetime. The orbit is obtained by solving the geodesic equation for the Teo metric and looking for bound timelike orbits that traverse the throat of the wormhole. For more detail (and additional orbits) see the article on page 375.

GUEST EDITORIAL An introduction to the theme issue 325 Dean A. Zollman and Duncan Brown **PAPERS** Clarifying possible misconceptions in the foundations of general 327 Harvey R. Brown relativity and James Read 335 Using graphical and pictorial representations to teach introductory Colin S. Wallace. astronomy students about the detection of extrasolar planets via Timothy G. Chambers. gravitational microlensing Edward E. Prather, and Gina Brissenden 344 Relativity on rotated graph paper Roberto B. Salgado 360 Using worksheets to solve the Einstein equation Thomas A. Moore 369 Visualizing relativity: The OpenRelativity project Zachary W. Sherin, Ryan Cheu, Philip Tan, and Gerd Kortemever 375 Empirical exploration of timelike geodesics around a rotating Thomas Müller and Oliver Fechtig 384 The relativistic gamma factor from Newtonian mechanics Daniel J. Cross and Einstein's equivalence of mass and energy 388 The Coriolis field L. Filipe Costa and José Natário 396 Why does a ball fall?: A new visualization for Einstein's model Roy R. Gould of gravity NOTES AND DISCUSSION 403 Einstein's lecture in Pittsburgh, PA, December 1934: A note on David Topper and further visual documentation Dwight Vincent **BOOK REVIEWS** Allen I. Janis The Road to Relativity: The History and Meaning of Einstein's 407 "The Foundations of General Relativity." by Hanoch Gutfreund and Jürgen Renn **Books Received**

NEWS AND OPINION

EDITORIAL

263 Big, Integrative, Open Biological Data

Robert E. Gropp

VIEWPOINT

265 Will Publons Popularize the Scientific Peer-Review Process?

David Roy Smith

FEATURE

267 The Ethics of Changing the Human Genome

Beth Baker

BIOBRIEFS

334 Food, Water, and Energy for Thought

Timothy M. Beardsley

OVERVIEW ARTICLES

The Importance of Benthic Habitats for Coastal Fisheries

Jacob P. Kritzer, Mari-Beth DeLucia, Emily Greene, Caroly Shumway, Marek F. Topolski, Jessie Thomas-Blate,
Louis A. Chiarella, Kay B. Davy, and Kent Smith

285 Subaerial Biofilms on Outdoor Stone Monuments: Changing the Perspective Toward an Ecological Framework

Federica Villa, Philip S. Stewart, Isaac Klapper, Judith M. Jacob, and Francesca Cappitelli

295 Mainstreaming Fish Spawning Aggregations into Fishery Management Calls for a Precautionary Approach

Yvonne Sadovy de Mitcheson

Cover: A spawning aggregation of the vulnerable reef fish, the Cubera snapper (Lutjanus cyanopterus). Each year, thousands of males and females gather briefly at the full moon to release large clouds of sperm and eggs in a spawning rush in the Gladden Spit and Silk Cayes Marine Reserve in Belize, one of the few sites where the species' aggregation is protected. Whale sharks time their migrations to feed on the nutritious eggs. Such aggregations are the fish's only reproductive opportunities and are readily extirpated if not managed effectively by seasonal, spatial, or fishery control measures. Globally, many important commercial fishes aggregate to spawn, and like the Cubera, their aggregations need precautionary management or risk being lost.

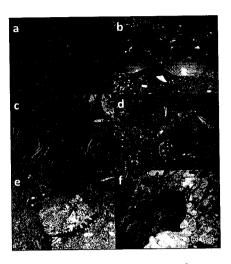
DEPARTMENTS

FORUM

Prospects for Increasing Sugarcane and Bioethanol Production on Existing Crop Area in Brazil Fábio R. Marin, Geraldo B. Martha, Jr., Kenneth G. Cassman, and Patricio Grassini

Optimizing Available Network Resources to Address
Questions in Environmental Biogeochemistry
Eve-Lyn S. Hinckley, Suzanne P. Anderson, Jill S. Baron, Peter D. Blanken,
Gordon B. Bonan, William D. Bowman, Sarah C. Elmendorf,
Noah Fierer, Andrew M. Fox, Keli J. Goodman, Katherine D. Jones,
Danica L. Lombardozzi, Claire K. Lunch, Jason C. Neff,

Michael D. SanClements, Katharine N. Suding, and William R. Wieder



Examples of categories of species considered in the evaluation of habitat importance. Benthic habitats and their importance for these and other species are discussed in an article in this issue by Jacob P. Kritzer and his colleagues. Photographs:

(a) Jake Kritzer; (b)-(f) NOAA.

Officers	264
Calendar/Classifieds	332
Information for Contributors	333



BOOK REVIEWS

327 Lions in the Balance: Man-Eaters, Manes, and Men with Guns by Craig Packer
Reviewed by Felicia Keesing

328 Evolutionary Medicine by Stephen C. Stearns and Ruslan Medzhitov
Reviewed by John D. Nagy

329 DDT Wars: Rescuing Our National Bird, Preventing Cancer, and Creating the Environmental Defense Fund by Charles F. Wurster
Reviewed by Elena Conis

Printed by The Sheridan Press

Coming next month

Integrating the Effects of Ocean Acidification across Functional Scales on Tropical Coral Reefs
The Climate Change Challenge and Barriers to the Exercise of Foresight Intelligence
Systems Biology Approaches to Development beyond Bioinformatics: Nonlinear Mechanistic
Models Using Plant Systems

Mobile Applications to Link Sustainable Consumption with Impacts on the Environment and Biodiversity
Spatial Gaps in Global Biodiversity Information and the Role of Citizen Science
Paying the Pipers: Mitigating the Impact of Anticoagulant Rodenticides on Predators and Scavengers
Formal Integration of Science and Management Systems Needed to Achieve Thriving and Prosperous Great Lakes
Spring Spotlight on Books

BioScience • MAY 2016 • VOLUME 66 • NUMBER 5

NEWS AND OPINION

EDITORIAL

339 A Communication Challenge for the Biodiversity Community

Robert E. Gropp

FEATURE

341 Wild Medicine

Cheryl Lyn Dybas

BIOBRIEFS

432 Whole-Plant Defenses: How Eukaryotes Catch and Kill Unwary Microbial Predators

Marcia Stone

OVERVIEW ARTICLES

Integrating the Effects of Ocean Acidification across Functional Scales on Tropical Coral Reefs
Peter J. Edmunds, Steeve Comeau, Coulson Lantz, Andreas Andersson, Cherie Briggs, Anne Cohen,
Jean-Pierre Gattuso, John M. Grady, Kevin Gross, Maggie Johnson, Erik B. Muller, Justin B Ries,
Sylvie Tambutté, Eric Tambutté, Alex Venn, and Robert C. Carpenter

363 The Climate Change Challenge and Barriers to the Exercise of Foresight Intelligence
Lee Ross, Kenneth Arrow, Robert Cialdini, Nadia Diamond-Smith, Joan Diamond, Jennifer Dunne,
Marcus Feldman, Robert Horn, Donald Kennedy, Craig Murphy, Dennis Pirages, Kirk Smith, Richard York,
and Paul Ehrlich

371 Systems Biology Approaches to Development beyond Bioinformatics: Nonlinear Mechanistic Models Using Plant Systems

Elena R. Álvarez-Buylla, Jose Dávila-Velderrain, and Juan Carlos Martínez-García

Cover: Backscatter electron image of a cross-section through the widespread and abundant Caribbean coral Acropora cervicornis, revealing the intimate micron-scale association of coral components that may be differentially affected by ocean acidification; symbionts (Symbiodinium algae = larger, textured spheres and bacteria = smaller, smooth spheres), tissue layers (gray material), and aragonite skeleton (white, crystalline material). The image captures the coral's most basic functional scale discussed in an article by Peter J. Edmunds and colleagues that appears in this issue. The coral was frozen in liquid nitrogen, fractured perpendicular to its growing surface, mounted in a cryogenic stage, and scanned at a 9.7-millimeters working distance, 6000 times magnification, and 10-kilovolts accelerating voltage. Image credit: Professor Justin Ries, Marine Science Center, Northeastern University.

DEPARTMENTS

- Mobile Applications to Link Sustainable Consumption 384 with Impacts on the Environment and Biodiversity T. P. L. Nghiem and L. R. Carrasco
- Spatial Gaps in Global Biodiversity Information 393 and the Role of Citizen Science Tatsuya Amano, James D. L. Lamming, and William J. Sutherland
- Paying the Pipers: Mitigating the Impact of Anticoagulant 401 Rodenticides on Predators and Scavengers John E. Elliott, Barnett A. Rattner, Richard F. Shore, and Nico W. Van Den Brink
- Formal Integration of Science and Management Systems 408 Needed to Achieve Thriving and Prosperous Great Lakes Irena F. Creed, Roland Cormier, Katrina L. Laurent, Francesco Accatino, Jason Igras, Phaedra Henley, Kathryn B. Friedman, Lucinda B. Johnson, Jill Crossman, Peter J. Dillon, and Charles G. Trick

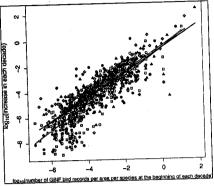
SPRING SPOTLIGHT ON BOOKS

SPECIAL BOOK ARTICLES

Together in Hard Hope 419 Curt Meine

The Annihilation of Nature: Human Extinction of Birds and Mammals by Gerardo Ceballos, Anne H. Ehrlich, and Paul R. Ehrlich

On Care for Our Common Home (Laudato Si') by Pope Francis



The relationship between the number of the Global Biodiversity Information Facility (GBIF) bird records per area per species at the beginning of each decade and the increase in that decade by country (1980s: circles in blue, 1990s: squares in sky blue, 2000s: diamonds in orange, 2010s: triangles in pink). Regression lines are also shown. In an article in this issue, Tatsuya Amano and colleagues discuss the spatial gaps in biodiversity information and citizen science's potential role in filling them.

Officers	340
Calendar/Classifieds	427
Information for Contributors	428



Pathogen Emergence in the Age of Pandemics 421 Sarah Bevins

Ebola: An Emerging Infectious Disease Case Study by George Ealy and Carolyn A. Dehlinger

Pandemic: Tracking Contagions, from Cholera to Ebola and Beyond by Sonia Shah

BOOK REVIEWS

- The End of Plenty by Joel Bourne 423 Reviewed by Nathaniel D. Mueller
- Patterns in Nature: The Analysis of Species Co-Occurrences 424 by James G. Sanderson and Stuart L. Pimm Reviewed by Eric J. Chapman

Printed by The Sheridan Press

Coming next month

Measuring Ecological Integrity: History, Practical Applications, and Research How Landscape Ecology Informs Global Land Change Science and Policy A Vicious Circle? Altered Carbon and Nutrient Cycling May Explain Low Resilience of Caribbean Coral Reefs A Pedagogical Model for Team-Based, Problem-Focused Interdisciplinary Doctoral Education Taming a Wicked Problem: Resolving Controversies in Biodiversity Offsetting The Importance of Indigenous Knowledge in Curbing the Loss of Language and Biodiversity Haeckel's Biogenetic Law and the Land Plant Phylotypic Stage

CAMPUS ECOUNSELLOR

Board of Publications

Vol. 09 * Issue. 11 * July 2016

Chairman

Dr. J. Varghese

Editor

Prof. Mathew P. Thomas

Gen. Editor

John Philip

Asst Editors

Prakash V. Mathew

Dr. D. Joshua

Prof. Oommen George

Members

Prof. Raju Korula

Dr. James George

Geo Verghese

Promotional Co-ordinators

Kunjumon Mathews

Moncy T

Aji Markose

Oommen P. Clementson

Joseph Joy

Ronpaul Chandran

Jose Mathew

Biju Jacob

Bobu N.D.

Aji A.S : Production

Biji John :Circulation

Address for Correspondence

Mount Olive School of Counselling

Board of Publications ICPF

Post Box 41, Muttumon

Pathanamthitta - 689 547, India

E-mail: icpfbop@yahoo.com

www.icpfhome.org

Layout & Design: ICPF BOP

Mount Olive Counselling Centre

Post Box-41, Muttumon.

Pin: 689547, Ph. 0469-2668225

This publication is solely supported by the subscription and voluntary donations of its readers and well wishers. Your contributions-intellectual and financial are most welcome.

Neither the organisation nor the editorial board shall be responsible for the accuracy of information contained in either articles or advertisements appear in the publication.

Statements, opinions, point of views expressed by the writers and advertisers are their own and do not necessarily repre-

sent those of the organization or the editorial board
Publisher

07 How to face difficulties in Life...

Dr. Thomas V. Thomas



03 Fearlessness, a sign of victory

Dr. J. Varghese

04 William Wilberforce

05 God and Science

Prof. Raju Korula

06 Population: A World of Solutions

09 A Christian's Worldview

Dr. C.T. Luiskutty

11 He died for Me

13 Violence breeds Violence

Dr. D. Joshua

14 The Greatest thing in the World

Henry Drummond

15 Everybody at home

16 The Physician of Gilead!

Joanna Sara Nithin

17 Seeking God diligently

Prakash V. Mathew

18 Seasoned with Salt

Zeno Ben Sunny

19 George Mueller

21 Elisha

Dr. Ron Meyers

23 To walk in the fear of your God

Mary Mathew

CURRENT SCIENCE

Volume 111 Number 2

25 July 2016

238	In this issue
	GUEST EDITORIAL
239	Biomedical research in India: paradigm shift to translation Govindarajan Padmanaban and Renu Swarup
	CORRESPONDENCE
241	Rediscovering our universities by increasing their level of support, M. Periasam 241 Leading Indian higher education institutions and the Leiden 201 ranking, Gangan Prathap 243 Relocation of <i>Ophioglossum gramineum</i> Wille (Ophioglossaceae), Kishore S. Rajput, Ronak N. Kachhiyapatel, V. M. Raole and Anirudh Pratap Singh
	NEWS
244	Science Last Fortnight, edited by K. P. Madhu and Gita Madhu 246 Visi KKNPP – an initiative for public understanding of nuclear power, J. Devaprakas 247 Science writing workshop, K. P. Madhu
	OPINION
250	Would scientists be willing to write anonymous papers?
	COMMENTARY
252	Drug discovery research in India Madhu Dikshit and D. K. Dikshit
	SCIENTIFIC CORRESPONDENCE
256	Natural resource conservation through weather-based agro-advisory D. R. Palsaniya, S. K. Rai, Purusottam Sharma, Satyapriya and P. K. Ghosh
258	Mitochondrial genome sequence of <i>Oryza sativa</i> indica cultivar RP Bio-226 Mettu Madhavi Reddy and Kandasamy Ulaganathan
261	Cysted forms of halophilic microalga Dunaliella salina under different stress conditions Suman Keerthi, Uma Devi Koduru, Subba Rao Durvasula Venkata and Nittala Subrahmanya Sarma
	GENERAL ARTICLES
263	Evolving human dimensions and the need for continuous health assessment o Indian rivers Ipsita Nandi, Ananya Tewari and Kavita Shah
272	Scaling-up of protected cultivation in Himachal Pradesh, India Anil K. Choudhary
	SPECIAL SECTION: INTEGRATIVE MEDICINE
278	Preface S. R. Narahari, Terence J. Ryan and M. Guruprasad Aggithaya
280	Expanding the scientific horizon of integrative medicine

S. R. Narahari, Terence J. Ryan and M. Guruprasad Aggithaya

- Manasamitra Vataka and Shirodhara treatments preserve slow wave sleep and promote sleep continuity in patients with generalized anxiety disorder and comorbid generalized social phobia

 Basavaraj R. Tubaki, Anupriya Verma, Arun Sasidharan, S. Sulekha, T. N. Sathyaprabha, D. Sudhakar, C. R. Chandrashekar, G. S. Lavekar and Bindu M. Kutty
- 293 Status of regulation on traditional medicine formulations and natural products:
 Whither is India?
 Nandini K. Kumar and Pradeep Kumar Dua
- Developing an integrative medicine patient care protocol from the existing practice of Ayurveda dermatology
 S. R. Narahari, Madhur G. Aggithaya, Sara E. Morrow and Terence J. Ryan
- 318 Integrative medicine atlas of skin diseases S. R. Narahari and Madhur G. Aggithaya
- Disorders of pigmentation of the skin hypotheses underlying interventions by multiple systems of medicine: is there a role for integrated medicine?

 Sanju Arianayagam and Terence J. Ryan
- Reverse pharmacology effectuated by studies of Ayurvedic products for arthritis Ashwinikumar Raut, Girish Tillu and Ashok D. B. Vaidya
- The integration of complementary and alternative medicine: the way forward for the health of skin and gut
 Dilraj S. Kalsi and Terence J. Ryan
- Integrated care and leprosy in India: a role for Indian systems of medicine and traditional health practice in the eradication of leprosy

 David Chandler

RESEARCH ARTICLES

- Chemometric modelling of PPAR-α and PPAR-γ dual agonists for the treatment of type-2 diabetes

 Neha Verma and Usha Chouhan
- Influence of variable bifurcation angulation and outflow boundary conditions in 3D finite element modelling of left coronary artery on coronary diagnostic parameter

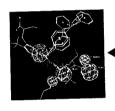
 Kalimuthu Govindaraju, Irfan Anjum Badruddin, Girish N. Viswanathan, Sarfaraz Kamangar, N. J. Salman Ahmed and Abdullah A. A. A. Al-Rashed
- Canopy temperature and water relations of kiwifruit cultivar Allison in response to deficit irrigation and in situ moisture conservation

 Preet Pratima, N. Sharma and D. P. Sharma
- Conservation effectiveness across state and community forests: the case of Jaintia Hills, Meghalaya, India
 Rajkamal Goswami, Muneeswaran Mariappan, Thangjam Somendro Singh and T. Ganesh
- Studies on bio-pretreatment of pine needles for sustainable energy thereby preventing wild forest fires
 R. K. Dwivedi, R. P. Singh and T. K. Bhattacharya

RESEARCH COMMUNICATIONS

- Histological analysis of somatic embryogenesis in Itoh peony E. V. Boltenkov, E. V. Kuritskaya and E. V. Vrzhosek
- Nature of forest fires in Uttarakhand: frequency, size and seasonal patterns in relation to pre-monsoonal environment
 Ripu Daman Singh, Surabhi Gumber, Pankaj Tewari and S. P. Singh









Flowering and fruiting patterns of woody species in the tropical montane evergreen forest of southern India

D. Mohandass, Alice C. Hughes and Priya Davidar

416 Record of Gondwana plant mega- and microfossils in Nimugudem area, Telangana, India: palynodating and palaeoenvironmental interpretation Neerja Jha, Harinam Joshi and Shreya Mishra

BOOK REVIEWS

Water Resource Economics: Towards a Sustainable Use of Water for Irrigation in India by M. G. Chandrakanth, reviewed by Mahadev G. Bhat 426 Reaction Mechanism in Organic Chemistry, Revised Edition, S. M. Mukherji and S. P. Singh, reviewed by E. N. Prabhakaran 427 Combating Hunger and Achieving Food Security by M.S. Swaminathan, reviewed by S. Mahendra Dev

PERSONAL NEWS

429 Vinod V. Modi (1929–2016) Anjana Desai



◆ COVER. Integrating Modern Medicine and Ayurveda for treating chronic diseases. See special section.

The editor thanks Dr S. R. Narahari and Dr M. Guruprasad Aggithaya, Institute of Applied Dermatology, Uliyathadka, Madhur Road, Kasaragod 671 124, India; Dr Terence J. Ryan, Department of Dermatology, Churchill Hospital, Oxford, Headington OX3 7LE, UK for agreeing to be guest editors for the special section.

Indexed in CURRENT CONTENTS/GEOBASE/CHEMICAL ABSTRACTS/IndMED/SCOPUS/WEB OF SCIENCE

সূ চি প ত্র

সম্পাদকীয় ১১ মন্তব্য: ১২

জীবন যে রকম ভিসার দুয়ারে পড়ল কাঁটা! • সুমিত মিত্র ২২

বিষারি ক্বিতা এসো করি স্নান নবধারাজলে • অংশুমান কর ২৪

> রম্যরচনা বাংলায় নয় • রাজেশ বসু ৩০

প্লেট টেকটনিক • শান্তনু দে ৩২ মুক্তিসূর্য • শ্যামল দত্তটোধুরী ৪০ সূর্য ওঠে • প্রবীর চক্রবর্তী ৪৮ আনন্দালয়ের জগদ্ধাত্রী পুজো • ইন্দিরা মুখোপাধ্যায় ৫২ প্রিমিয়ার • দেবাশিস লাহা ৫৬ নাটবল্টু • চন্দন চক্রবর্তী ৬০

> ধারাবাহিক উপন্যাস পুনর্বাসন • নন্দিতা বাগচী ৬৫

পম্পেই, কুড়ি শতাব্দি পরে • দেবজ্যোতি রায় ৭২

শিল্পসংস্কৃতি ৭৯ • গ্রন্থলোক ৮৫ • চিঠিপত্র ৯১ নামমাত্র ৯৭ • সুদোকু ৯৮ • শেষকথা ৯৮

প্রচ্ছদ: রৌদ্র মিত্র

ে দেশ এবার ওয়েবসাইটে: www.desh.co.in

মূল্য: পঁয়ত্রিশ টাকা

সম্পাদক হর্ষ দত্ত অ্যাসোশিয়েট এডিটর সুমন সেনগুপ্ত

এবিপি প্রাঃ লিমিটেডের পক্ষে প্রদীপ্ত বিশ্বাস কর্তৃক ৬ প্রফুল্ল সরকার স্ট্রিট, কলকাতা ৭০০০০১ থেকে প্রকাশিত এবং আনন্দ অফসেট প্রাইভেট লিমিটেড, ২১১/ ২০৭, উপেন ব্যানার্জি রোড, কলকাতা-৭০০৬০ থেকে মুদ্রিত।

বিমান মাশুল: ১,০০ টাকা (আন্দামান ও মণিপুর)

RNI vol. 59 issue 18 Regd 2537/57

এই পত্রিকায় প্রকাশিত বিজ্ঞাপনের বক্তব্য ও বিষয়বস্তু সম্পর্কিত কোনও দায় পত্রিকা কর্তৃপক্ষের নয়।

স্বর্ণাক্ষরে ছোটদের বই

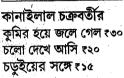


সাহিত্য অকাদেমি (শিশুসাহিত্য) ২০১৬ পুরস্কারপ্রাপ্ত অমরেন্দ্র চক্রবর্তীর

भवनाव (भाग







সুভাষ মুখোপাধ্যায়ের বকবকম ₹১৫ পূর্ণেন্দু পত্রীর আমার ছেলেবেলা ₹১৮ পবিত্র সরকারের কথামালা: ছড়ায় ঢালা ₹১৫ |



মহাশ্বেতা দেবীর **তুতুল** ৩য় মুদ্রণ ₹৬০



মৈত্রেয়ী নাগের আষাঢ়ে গল্প ₹৬০ বাঘ বেড়ালের ছড়া ছবি₹৩০ নেকড়ের চোখ ₹৬০ প্রখ্যাত ফরাসি লেখক দানিয়েল পেনাক-এর L'OEIL DU LOUP বইয়ের অনুবাদ

লিচুবাগানের

জলডাকাতের গল্প, মুড়োহাসা গ্রামে,

গরিলার পিঠে পাখি,

গুলতির গুণে, হাতির

শোক ইত্যাদি নয়টি

চৌকিদার



বরফের বাগান পরিমার্জিত ও পরিবর্থিত সংস্করণ দুঃসাহসিক সমুদ্র-অভিযানের রুদ্ধশ্বাস কাহিনি।

পাতায় পাতায় ছবি দাম ₹১২০



মাতলাগাঙের ভূত

সন্দর্বনের মাতলাগাঙের ভূতদের অবিশ্বাস্য কাণ্ডকারখানা। প্রত্যেক পাতায় ছবি। শিল্পী: যুধাজিৎ সেনগুপ্ত ₹৭৫



আমাজনের জঙ্গলে

আমাজনের গভীরে রহস্যে ঢাকা অরণ্যবাসীদের নিয়ে বিস্ময়কর কিশোর উপন্যাস। ৭ম মুদ্রণ₹৭০



পাখির খাতা ₹৪০ শাদা ঘোড়া ₹৬০ ঋষিকুমার ₹২০ ছেঁড়াকাঁথার গল্প বৰ ভূতের বাঁশি ₹৪০ গৌর যাযাবর ₹১২০ আমার বনবাস ₹১২ তালগাছের ডোঙা ব২০



হীরু ডাকাত পাগলকরা ছন্দে দম বন্ধ করা ডাকাতের গল্প ৯ম মুদ্রণ ₹৪৫

অমরেন্দ্র চক্রবর্তী সম্পাদিত এক ছবি: অনেক গল্প ৩৬ জন লেখকের ৩৬টি গল্প। প্রত্যেক পাতায় ছবি। १২২৫



Swarnakshar Prakasani Private Limited

29/1-A, Old Ballygunge 2nd Lane, Kolkata-700 019 Phone: 2283 2320 Fax: 2287 6448 E-máil: info@swarnakshar.in

আমাদের সব বই এখানেও পাওয়া যায়: দে বুক স্টোর, ১৩, বঙ্কিম চ্যাটার্জি স্ট্রিট, কলকাতা-৭৩ • বলাকা বুক স্টল (কলেজ স্ট্রিট) • অভিযান পাবলিশার্স (☎৮০১৭০ ৯০৬৫৫) • স্টার মার্ক-এর সব দোকান ও অন্যান্য বইয়ের দোকানে।

ই-বুক সংশ্বরণ দেখতে লগ অন করুন: www.swarnakshar.swiftboox.com আমাদের অন্যান্য বঁই 🕨 আগের পাতায় দেখুন



Amaravati farmers' vow

Farmers in three villages, which will be part of the

new Andhra capital, refuse

to part with their land

Road to nowhere

A coastal road project in Mumbal threatens the city's fragile coastal ecology and the livelihood of its fisherfolk

To cull or not to cull

The environment ministry's directives to cull certain 'vermin' species ignites a furious debate

11.

cover story Losing to cancer

Cancer cases, particularly those related to tobacco, are rising in India. It's time the country came up with a new prevention regime to beat the disease *

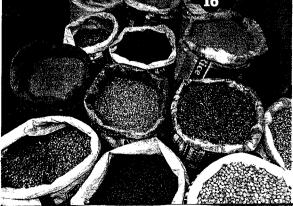
28°

India pins hope on Irrawaddy pulse

India plans to encourage its private companies to grow pulses in Myanmar to fight price rise

Tourism's dark side

Goa's state agencies are promoting marine tourism, but have done little to protect the marine wildlife



Vol. 25 Nory

1-15 JULY 2016

Thirun the ap laws

8 DOWN TO EARTH





Who is the real animal?

The recent killing of a silverback gorilla in a US zoo to save a boy exposes our moral existential dilemma about animals





OPINION Harmonious humans

Not all humans are serial killers of ecology. Many still live in harmony with nature



FOOD **Delectable** delight

Banana flowers make for a nutritious and sumptuous food item across India



REVIEW Digging up an Eden

A new book describes how Goa's mining industry has emptied the state of its natural wealth





LIFE & NATURE

wilderness

A first-hand account by a

traveller to the pristine

landscape of Antarctica

OBITUARY A continuing mandamus

T N Godavarman Thirumulpad's petition to the apex court resulted in laws against tree-felling



Asia is a challenge

FAO's Kundhavi Kadiresan believes achieving zero hunger in Asia would be difficult



Another threat to The last, great drug access

A trade pact will tighten patent laws related to generic drugs





SCIENCE **Brace for more El** Niño after-effects

This year's El Niño has boosted carbon dioxide concentrations in the atmosphere, hitting a symbolic threshold record



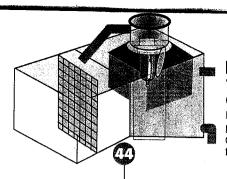
20-PAGE DTE SUPPLEMENT

WITH SUBSCRIPTION COPIES



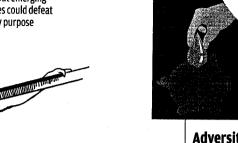
Supplement Editor: Souparno Banerjee Copy: Diksha Chopra and Arif Ayar Barrey Design: Ajit Bājaj, Ritika Bohra and Surender Singh Illustration: Sont Gupto, Janque Aziz and Ritika Bohra





TECHNOLOGY Too soon to celebrate

Bio-toilets are gaining ground. But emerging challenges could defeat their very purpose



Adversity is the best teacher

Residents of drought-scarred Bundelkhand know how to manage their region



Tilting the balance

The use of artificial light during night has led to early onset of spring in the UK



MACHENIA On the edge

Climate change will hit farmers in more than half of the country by 2050



Piracy's upside Piracy may cause copyright violation of artistes' work,

but it also brings in fame and popularity



ANALYSIS Time to bid adieu

Around 20 per cent of India's coalbased power plants have completed their life. It is time to shut them down



Gender (in)sensitive

Modern medicine and clinical trials have been male-centric. The trend is now changing



DEBATE Gauging GDP's efficacy

A new book tries to evaluate whether Gross Domestic Product is a true and accurate measure of growth and prosperity



OPINION Ambiguous perks of GI tag

Will Protected Geographical Indication for Darjeeling tea act as safety-net for small growers in times of crisis?



Return of the black fever

Treating kala-azar, or visceral leishmaniasis, is becoming difficult due to new complications

