Nature Publishing Group The Macmillan Building, 4 Crinan St, London N1 9XW, UK e-mail: nature@nature.com



NATURE'S MISSION, 1869: 'The objective which it is proposed to attain by this periodical may be broadly stated as follows. It is intended, first, to place before the general public the grand results of scientific work and scientific discovery; and to urge the claims of science to move to a more general recognition in education and in daily life ... Secondly, to aid scientific men [sic] themselves, by giving early information of all advances made in any branch of natural knowledge throughout the world, and by affording them an opportunity of discussing the various scientific questions which arise from time to time."

Nature's mission statement was updated in 2000:

www.nature.com/nature/about
 Submissions and Guide to Authors:
 www.nature.com/nature/authors

Author and referee policies and services:

www.nature.com/authors

Noture** (ISSN 0028-0836) is published by Nature Publishing Group, a division of Macmillan Publishers Ltd (The Macmillan Building, 4 Crinan Street, London N19XW). Registered as a newspaper at the British Post Office.

North and South American orders to subscriptions@natureny.com (Tel: +1866 363 7860). Other orders to subscriptions@nature.com (Tel. +44 (0)1256 329242; Fax +44 (0)1256 812358).

Fax +44 (0)1256 812358). Authorization to photocopy material for internal or personal use, or internal or personal use of specific clients, is granted by Nature to libraries and others registered wi the Copyright Clearance Center (CCC)
Transactional Reporting Service, provided the relevant copyright fee is paid direct to CCC, 222 Rosewood Drive, Darivers MA 01923, USA. Identification code for Nature: 0028-0836/03. CPC PUB AGREEMENT #40032744. In the US Nature (ISSN 0028-0836) is published weekly on Thursday, except the last week in December by Nature Publishing Group, 75 Varick St, 9th Fl, New York NY 10013-1917, USA: US Periodicals postage paid at New York NY, and additional mailing post offices. US POSTMASTER; send address changes to Nature, Subscription Dept. 342 Broadway PMB 301, New York NY 10013-3910, USA. Published in Japan by NPG Nature Asia-Pacific, Chiyoda Building, 2-37 Ichigayatamachi, Shinjuku-ku, Tokyo 162-0843, Japan. © 2010 Macmillan Publishers Limited. All rights reserved



nature publishing group

nature

EDITORIALS

7 Public trust is key in climate change | Stemcell therapies need to be evidence-based | A role for blogs in science

RESEARCH HIGHLIGHTS

- 10 Genetic sarcoma prognosis | A virus in Crohn's disease | Complex diseases | Prostate cancer genetics
- 11 JOURNAL CLUB Variety in gene regulation Marcelo A Nobrega

NEWS

- 12 NEWS BRIEFING
- 14 Counting the cost of Deepwater Horizon oil on marine life
- 16 Hayabusa asteroid mission short of samples, full of promise | Strikes threaten chaos in Italian universities
- 17 Battle lines drawn over stem-cell samples
- 18 Hosts prompt G8 review of progress on push for mother and child health
- 19 Report backs US natural gas for clean electricity
- 20 Q&A Presidential adviser Arnold Munnich on French science policy

NEWS FEATURES

- 22 Profile: The field medic Erik Vance
- 24 Climate science: An erosion of trust?
 Jeff Tollefson

COLUMN

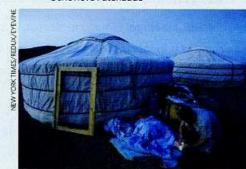
27 WORLD VIEW Entertaining science Daniel Sarewitz

CORRESPONDENCE

28 Volcanic ash in airspace | Sex bias and animal research | The role of advocacy groups | European-Chinese collaborations

OPINION

- 29 Behavioural research: Most people are not WEIRD
 Joseph Henrich, Steven J Heine & Ara Norenzayan
- 30 Climate class for business schools Genevieve Patenaude



The doctor will see you now, p. 22.

The tarpon game fish, possible oil-spill victims, p. 14.

BOOKS & ARTS

- 31 A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming by Paul N Edwards Reviewed by Myles Allen
- 32 The Price of Altruism by Oren Harman Reviewed by W F Bynum
- 33 EXHIBITION Antonio Santucci's armillary sphere at the Museo Galileo, Florence Martin Kemp
- 34 EXHIBITION Close Examination at the National Gallery, London Daniel Cressey

NEWS & VIEWS

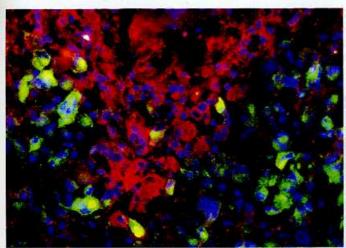
- 35 Atomic physics: X-ray laser peels and cores atoms
 - Justin Wark See Article p. 56
- 36 Applied ecology: How to get even with pests Lindsay A Turnbull & Andy Hector See Letter p. 109
- 37 Astrophysics: The supernova has two faces Daniel Kasen See Letter p. 82
- 38 Autophagy: A snapshot of the network Beth Levine & Rama Ranganathan See Article p. 68
- 40 Cancer stem cells: Invitation to a second round Peter Dirks See Letter p. 133
- 41 Early life: Origins of multicellularity
 Philip C J Donoghue & Jonathan B Antcliffe
 See Letter p. 100
- 42 Drug discovery: Pulled from a protein's embrace William L Jorgensen
- 43 Statistical physics: Closing in on evaders Tamás Vicsek
- 45 OBITUARY Richard Langton Gregory (1923– 2010) Colin Blakemore

NATUREJOBS

- 145 Q&A Leslie Vosshall on the pleasures and pains of gaining tenure
- 146 CAREERS Denver: Mile-high dreams Laura Cassiday

FUTURES

150 The end of God Shelly Li



A possible marker for cancer-causing stem cells in melanomas, pp. 133, 40.

REVIEWS

The polar ocean and glacial cycles in atmospheric CO2 concentration D M Sigman, M P Hain & G H Haug

ARTICLES

- Femtosecond electronic response of atoms to ultra-intense X-rays 56 L Young, EP Kanter, B Krässig, Y Li, A M March, ST Pratt, R Santra, S H Southworth, N Rohringer, L F DiMauro, G Doumy, C A Roedig, N Berrah, L Fang, M Hoener, P H Bucksbaum, J P Cryan, S Ghimire, J M Glownia, D A Reis, J D Bozek, C Bostedt & M Messerschmidt See N&V p. 35
- Chromatin regulation by Brg1 underlies heart muscle development and disease CT Hang, J Yang, P Han, H-L Cheng, C Shang, E Ashley, B Zhou & C-P Chang
- Network organization of the human autophagy system C Behrends, M E Sowa, S P Gygi & J W Harper See N&V p. 38
- Spatial organization of the flow of genetic information in bacteria P Montero Llopis, A F Jackson, O Sliusarenko, I Surovtsev, J Heinritz, T Emonet & C Jacobs-Wagner

LETTERS

An asymmetric explosion as the origin of spectral evolution diversity in type la supernovae K Maeda, S Benetti, M Stritzinger, F K Röpke, G Folatelli, J Sollerman

S Taubenberger, K Nomoto, G Leloudas, M Hamuy, M Tanaka, P A Mazzali & N Elias-Rosa See N&V p. 37

- A macroscopic mechanical resonator driven by mesoscopic 86 electrical back-action J Stettenheim, M Thalakulam, F Pan, M Bal, Z Ji, W Xue, L Pfeiffer,
- K W West, M P Blencowe & A J Rimberg Tailoring light-matter-spin interactions in colloidal hetero-nanostructures
 - J Zhang, Y Tang, K Lee & M Ouyang

M Whitehouse & A Meunier See N&V p. 41

- Ecosystem response to elevated CO2 levels limited by nitrogen-induced plant species shift J A Langley & J P Megonigal
- Large colonial organisms with coordinated growth in oxygenated environments 2.1 Gyr ago A E Albani, S Bengtson, D E Canfield, A Bekker, R Macchiarelli, A Mazurier, E U Hammarlund, P Boulvais, J-J Dupuy, C Fontaine, F T Fürsich, F Gauthier-Lafaye, P Janvier, E Javaux, F O Ossa, A-C Pierson-Wickmann, A Riboulleau, P Sardini, D Vachard,
- 105 The giant bite of a new raptorial sperm whale from the Miocene epoch of Peru O Lambert, G Bianucci, K Post, C de Muizon, R Salas-Gismondi, M Urbina & J Reumer
- Organic agriculture promotes evenness and natural pest control D W Crowder, T D Northfield, M R Strand & W E Snyder See N&V p. 36
- 113 Genome-wide association study in alopecia areata implicates both innate and adaptive immunity L Petukhova, M Duvic, M Hordinsky, D Norris, V Price, Y Shimomura, H Kim, P Singh, A Lee, W V Chen, K C Meyer, R Paus, C A B Jahoda, C I Amos, P K Gregersen & A M Christiano
- The male mouse pheromone ESP1 enhances female sexual receptive behaviour through a specific vomeronasal receptor 5 Haga, T Hattori, T Sato, K Sato, S Matsuda, R Kobayakawa, H Sakano, Y Yoshihara, T Kikusui & K Touhara
- Sensitivity to perturbations in vivo implies high noise and suggests rate coding in cortex M London, A Roth, L Beeren, M Häusser & P E Latham
- Spatiotemporal regulation of cell-cycle genes by SHORTROOT links patterning and growth R Sozzani, H Cui, M A Moreno-Risueno, W Busch, J M Van Norman, T Vernoux, S M Brady, W Dewitte, J A H Murray & P N Benfey
- Human melanoma-initiating cells express neural crest nerve growth factor receptor CD271 A D Boiko, O V Razorenova, M van de Rijn, S M Swetter, D L Johnson, DPLy, PD Butler, GP Yang, B Joshua, MJ Kaplan, MT Longaker & I L Weissman See N&V p. 40
- SCF^{Cyclin F} controls centrosome homeostasis and mitotic fidelity through CP110 degradation V D'Angiolella, V Donato, S Vijayakumar, A Saraf, L Florens, M P Washburn, B Dynlacht & M Pagano

NATURE ONLINE

ADVANCE ONLINE PUBLICATION PUBLISHED ON 25 JUNE 2010

Negative plant-soil feedback predicts tree-species relative abundance in a tropical forest

5 A Mangan et al. doi:10.1038/nature09273

PUBLISHED ON 27 JUNE 2010

Single-cell NF-kB dynamics reveal digital activation and analogue information processing

S Tay et al. | doi:10.1038/nature09145

PUBLISHED ON 30 JUNE 2010

Co-option of the hormone-signalling module dafachronic acid-DAF-12 in nematode evolution

G Bento, A Ogawa & R J Sommer | doi:10.1038/nature09164

Replacing underperforming protected areas achieves better conservation outcomes

R A Fuller et al. | doi:10.1038/nature09180

Allelic variation in a fatty-acyl reductase gene causes divergence in moth sex pheromones

J-M Lassance et al. doi:10.1038/nature09058

PODCASTS AND VIDEOS

On this week's podcast, regular features and background on the latest Nature papers. Go to iTunes or download from:

www.nature.com/podcast

For the latest videos from Nature, and the other NPG journals:

www.youtube.com/NatureVideoChannel

