## CONTENTS

### EDITORIAL
1042 Governance of Both Poles  
Albert Grimaldi

### NEWS OF THE WEEK
1046 Yes, There’s Ice on the Moon—But How Much, and What Use Is It?
1046 Belt-Tightening Could Claim Some Scientific Scalps
1047 Galactic Glare Reveals Birthplace of Cosmic Rays

### NEWS FOCUS
1052 Eco-Alchemy in Alberta
1056 Better Homes and Hearths, Neandertal-Style
1058 Ninth International Plant Molecular Biology Congress

### LETTERS
1060 Getting His Goat  
S. Levay
1060 Cell Therapy Ahead for Parkinson’s Disease  
O. Isacson

### NEWS FOCUS (continued)

### ENVIRONMENTAL MARKETS
1048 Splitting the Difference Between Oil Pessimists and Optimists
1049 Clean Pigs Offer Alternative to Stem Cell Transplants
1049 From Science’s Online Daily News Site

### NEWS FOCUS
1050 University Head Zhu Qingshi Challenges Old Academic Ways
1051 Research Centers Promise a Break on Medical Patents in Developing Countries
1051 From the Science Policy Blog

### NEWS FOCUS (continued)

### CORRECTIONS AND CLARIFICATIONS

### BOOKS ET AL.
1063 The Age of Empathy  
F. de Waal, reviewed by J. J. Bolhuis
1063 The Mathematics of Sex  
S. J. Ceci and W. M. Williams, reviewed by R. T. Miller

### POLICY FORUM
1065 New Science for Chemicals Policy  
M. R. Schwarzman and M. P. Wilson

### PERSPECTIVES
1067 Monitoring Earth’s Critical Zone  
D. deB. Richter Jr. and M. L. Mobley
1068 The Hotter the Engine, the Better  
J. H. Perepezko
1070 Hydrate Molecular Ballet  
P. G. Debenedetti and S. Sarupria
1071 Solving the Maze  
C. Feuillet and K. Eversole
1072 MegaFaunal Decline and Fall  
C. Johnson

### REVIEW
1074 Controlling the Velocity of Light Pulses  
R. W. Boyd and D. J. Gauthier

### COVER
An ear of *Zea mays* (maize) shows color variation among kernels. Maize is one of the most important crop species worldwide, a vital source of food and fuel, and a valuable model organism for genetic research. Reports starting on pages 1112 and 1115 describe the genome sequences of the B73 and Palomero Toluqueño varieties. See also the related Report (p. 1118), Brevia (p. 1078), and Perspective (p. 1071).

*Photo: Kate Mathis/Getty Images*
The Palomero Genome Suggests Aragonite Undersaturation in the Arctic

Aragonite Undersaturation in the Arctic

The Schizophrenia Susceptibility Gene

Microsecond Simulations of Spontaneous Shape-Controlled Colloidal Interactions

Pleistocene Megafaunal Collapse, Novel Plant Communities, and Enhanced Fire Regimes in North America

J. L. Gill et al.
The decline in Pleistocene megafauna led to the formation of novel plant communities and increased fire.

>> Perspective p. 1072; Science Podcast

High Symbiont Relatedness Stabilizes Mutualistic Cooperation in Fungus-Growing Termites

D. K. Aanen et al.
In symbioses of independently reproducing partners, a genetically uniform population of symbionts excludes cheating variants.

Episontic Seas Versus Open-Ocean Settings: The Kinetics of Mass Extinction and Origination

A. L. Miller and M. Foote
Three major mass extinctions affected organisms inhabiting open-ocean-facing coasts much more so than those inhabiting shallow seas.

A Periplasmic Reducing System Protects Single Cysteine Residues from Oxidation

M. Depuydt et al.
A thioredoxin-like enzyme controls the oxidation state of the bacterial periplasm.

The B73 Maize Genome: Complexity, Diversity, and Dynamics

P. S. Schnable et al.
The sequence of the maize genome reveals it to be the most complex genome known to date.

>> Perspective p. 1071; Brevia p. 1078

A First-Generation Haplotype Map of Maize

M. A. Gore et al.
In maize, recombination in the genome has been a limiting factor affecting evolution and breeding efforts.

>> Perspective p. 1071; Brevia p. 1078

Paternal Dominance of Trans-eQTL Influences Gene Expression Patterns in Maize Hybrids

R. A. Swanson-Wagner et al.
Gene expression variation in maize hybrids is influenced by distant DNA sequences subject to paternal genomic imprinting.

>> Perspective p. 1071; Brevia p. 1078

Symbiotic Nitrogen Fixation in the Fungus Gardens of Leaf-Cutter Ants

A. A. Pinto-Tomás et al.
Leaf-cutting ants engage in a mutualism with nitrogen-fixing bacteria that help fertilize their fungus gardens.

The Schizophrenia Susceptibility Gene dysbindin Controls Synaptic Homeostasis

D. K. Dickman and G. W. Davis
The dysbindin protein is required for the modulation of presynaptic neurotransmitter release in Drosophila.
Researchers link a single genetic difference to the ability to read others’ emotions.

Socially Awkward? Check Your Genes

Contamination in the country’s aquifers.

A Silent Killer in Bangladesh Wells

A relaxation technique may be as powerful as modern drugs.

Meditation Halves Risk of Heart Attack

Highlights From Our Daily News Coverage

SCIENCECAREERS
www.sciencecareers.org/career_magazine

Free Career Resources for Scientists

Tooling Up: The Project Management Career Track
D. Jensen

Project management, as a career and a skill, requires detail management, good communication, and people skills.

The New Science Careers Communities
Science Careers Staff

Expand your professional network in MySciNet, a community for scientists from diverse backgrounds, and CTSciNet, the Clinical and Translational Science Network.

SCIENCETRANSLATIONAL MEDICINE
www.sciencetranslationalmedicine.org

Integrating Medicine and Science

PERIODICALS
www.sciencemag.org/multimedia/podcast

Free Weekly Show

Download the 20 November Science Podcast to hear about the demise of Pleistocene megafauna, strengthening memories during sleep, cleaning up tar sands, and more.

ORIGINSBLOG
blogs.sciencemag.org/origin

A History of Beginnings

SCIENCEINSIDER
blogs.sciencemag.org/scienceinsider

Science Policy News and Analysis

Per the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that $20.00 per article is paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923. The identification number issued to the AAAS for its serials is 0036-8075.

Change of address: Allow 4 weeks, giving old and new addresses and 8-digit account number. Postmaster: Send change of address to AAAS, P.O. Box 6532, Washington, DC 20010. Periodicals Mail postage (publication No. 494600) paid at Washington, DC, and at additional mailing offices. Copyright © 2009 by the American Association for the Advancement of Science.
Science 326 (5956), 1040-1131.