NEWS & COMMENT

NASA at the Edge of the Abyss
Warm Reception for Substitute Coolant
The Academy Gives a Hard Push
The Richards Panel Tosses a Curve
NIH Spells Out Plans for A $45 Million Initiative
The Whitehead Institute Reaches Toward Adulthood

RESEARCH NEWS

Putting a Cosmic Illusion to Work
Test Could Yield Improved Colon Cancer Detection
Neandertal Language Debate: Tongues Wag Anew
Is “Flying Primate” Hypothesis Headed for a Crash Landing?
Fugitive Carbon Dioxide: It’s Not Hiding in the Ocean

SPECIAL SECTION

Computing in Science
The Third Branch of Science Debuts • Massively Parallel Machines Usher In Next Level of Computing Power • Mathematicians Join the Computer Revolution • Bringing the Computer Revolution Down to a Personal Level • Reader Response

PERSPECTIVES

Ultracomputers: A Teraflop Before Its Time
G. Bell

Selfish Genes
J. J. Bull, I. J. Molineux, J. H. Werren

ARTICLES

Physics and Device Applications of Optical Microcavities
H. Yokoyama

Biomass and Carbon Budget of European Forests, 1971 to 1990
P. E. Kauppi, K. Mielikäinen, K. Kuusela

DEPARTMENTS

THIS WEEK IN SCIENCE 7
EDITORIAL 9
LETTERS 11
SCIENCESCOPE 19

RANDOM SAMPLES 28
Rooting Out Waste in Academia • Soil and Trouble • Propping up Cold Fusion • Immunology: Pollutants a Growing Threat • A Case of Orbital Alzheimer's • Greens Greets the Old-Fashioned Way • Mercury's Metabolic Fingerprint

BOOK REVIEWS 116
Deadly Dust, reviewed by J. L. Weeks • Giving Blood, L. H. Aiken • Vignettes: Complexities and Simplicities • Books Received

PRODUCTS & MATERIALS 122
This computer visualization of global stratospheric ozone levels for 1 October 1991 highlights the Antarctic ozone hole (thin, dark blue region on lower globe). Powerful computer models are heating up research climates in molecular biology, chemistry, materials science, physics, and math—see the 19-page special report (page 44) and Bell’s Perspective (page 64). [Image: Lloyd A. Treinish, using IBM’s POWER Visualization System on data from NASA/Goddard’s National Space Science Data Center]

RESEARCH ARTICLE
Oceanic Uptake of Fossil Fuel CO₂: Carbon-13 Evidence
P. D. Quay, B. Tilbrook, C. S. Wong

REPORTS
Diamond from the Dabie Shan Metamorphic Rocks and Its Implication for Tectonic Setting
Xu Shutong, A. I. Okay, Ji Shouyuan, A. M. C. Sengör, Su Wen, Liu Yican, Jiang Laili

Variations in Strength and Slip Rate Along the San Andreas Fault System
C. H. Jones and S. G. Wesnousky

Rejection of the “Flying Primate” Hypothesis by Phylogenetic Evidence from the ε-Globin Gene
W. J. Bailey, J. L. Slightom, M. Goodman

Maternal-Effect Selfish Genes in Flour Beetles
R. W. Beeeman, K. S. Friesen, R. E. Denell

A Conformation of Cyclosporin A in Aqueous Environment Revealed by the X-ray Structure of a Cyclosporin-Fab Complex
D. Artschuh, O. Vix, B. Rees, J.-C. Thierry

Competition for Overlapping Sites in the Regulatory Region of the Drosophila Gene and Knüppel
M. Hoch, N. Gerwin, H. Taubert, H. Jäckle

Molecular Cloning of the Interleukin-1β Converting Enzyme

Balancing Selection at Allozyme Loci in Oysters: Implications from Nuclear RFLPs
S. A. Karl and J. C. Avise

Identification of ras Oncogene Mutations in the Stool of Patients with Curable Colorectal Tumors
D. Sidransky, T. Tokino, S. R. Hamilton, K. W. Kinzler, B. Levin, P. Frost, B. Vogelstein

CD19: Lowering the Threshold for Antigen Receptor Stimulation of B Lymphocytes
R. H. Carter and D. T. Fearon

Participation of Non–Zinc Finger Residues in DNA Binding by Two Nuclear Orphan Receptors
T. E. Wilson, R. E. Paulsen, K. A. Padgett, J. Milbrandt

TECHNICAL COMMENTS
The Disulfide Folding Pathway of BPTI
T. E. Creighton; J. S. Weissman and P. S. Kim

34 & 86 Flying primates get their wings clipped

Indicates accompanying News story or Perspective
Use of this article is subject to the Terms of Service

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works. The title Science is a registered trademark of AAAS.