EDITORIAL
A Perverted View of “Impact”
Marc Kirschner

NEWS OF THE WEEK
A roundup of the week’s top stories

NEWS & ANALYSIS
Network Science at Center of Surveillance Dispute
Bold Plan, Uncertain Future for Gun Violence Research
Educators, Lawmakers Question Proposed Reorganization
Magnet on the Mighty Mississippi: A New Life for Muon Experiment

NEWS FOCUS
On the Trail of Ancient Killers
Geophysical Exploration Linking Deep Earth and Backyard Geology

LETTERS
The Age of Man: A Father Figure
The Age of Man: Outpacing Evolution
Shale-Gas Plans Threaten China’s Water Resources
The Human Animal

CORRECTIONS AND CLARIFICATIONS

BOOKS ET AL.
Exotic Aliens
The Quantum Divide
A Human Right to Science
Dark Clouds over Spanish Science

POLICY FORUMS
Better Oxygen Delivery
Watch Water Flow
Circuit Logic of Avoidance and Attraction
Cold-Atom Magnetism
Two Two-Dimensional Materials Are Better than One
Rapid Aging Rescue?
Water in the Balance

PERSPECTIVES
Cerebral Asymmetry and Language Development: Cause, Correlate, or Consequence?

REVIEW

ON THE WEB THIS WEEK
>> Science Express
Read about medieval versus modern leprosy, fossilized muscles for primitive jaws, ice shelf melting around Antarctica, and more.

>> More Online
Check out Science Express, our podcast, videos, daily news, our research journals, and Science Careers at www.sciencemag.org.
RESEARCH ARTICLE

Evolution of Mammalian Diving Capacity Traced by Myoglobin Net Surface Charge
S. Miceta et al.
Increasing the number of charged amino acids allows for higher myoglobin concentrations in the muscles of diving mammals.

Root Effect Hemoglobin May Have Evolved to Enhance General Tissue Oxygen Deliveries
J. L. Rummer et al.
The evolutionary origin of the unloading of oxygen at low pH is traced back to teleosts.

Epistasis Among Adaptive Mutations in Deer Mouse Hemoglobin
C. Natarajan et al.
Deer mice have discovered that mutations distant from the oxygen-binding site help them live at high altitude.

Carbonaceous Chondrite Heritage Glasses and Melt Inclusions Reveal a Subducted Carbon as a Function of Mantle Source
E. Cottrell and K. A. Kelley
Subducted carbon from ancient oceanic crust results in a more reduced mantle.

Clarifying the Dominant Sources and Mechanisms of Cirrus Cloud Formation
D. J. Cziczo et al.
Mineral dust and metallic particles initiate most ice nucleus condensation during cirrus cloud formation.

Hydrogen Isotope Ratios in Lunar Samples: Carbonaceous Chondrite Heritage Glasses and Melt Inclusions Reveal a Subducted Carbon as a Function of Mantle Source
E. Cottrell and K. A. Kelley
Subducted carbon from ancient oceanic crust results in a more reduced mantle.

Evolved to Enhance General Tissue Oxygen Deliveries
J. L. Rummer et al.
The evolutionary origin of the unloading of oxygen at low pH is traced back to teleosts.

Parallel Neural Pathways Mediate CO2 Avoidance Responses in Drosophila
H.-H. Lin et al.
Different concentrations of carbon dioxide activate distinct receptor pathways and, hence, elicit attractive or aversive responses.

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C. Natarajan et al.
Deer mice have discovered that mutations distant from the oxygen-binding site help them live at high altitude.

Salt-Taste Coding in Drosophila
Y. V. Zhang et al.
Low or high concentrations of sodium chloride activate distinct receptor pathways and, hence, elicit attractive or aversive responses.

Subangstrom Resolution X-Ray Structure Details Aquaporin-Water Interactions
U. Kosinska Eriksson et al.
A really, really close-up view of an aquaporin hints at how water passes through but protons do not.

Spatiotemporal Selectivity in Heterostructures of Atomically Thin Films
L. Britnell et al.
A metasurface-based design is used for polarization conversion in the terahertz regime.

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