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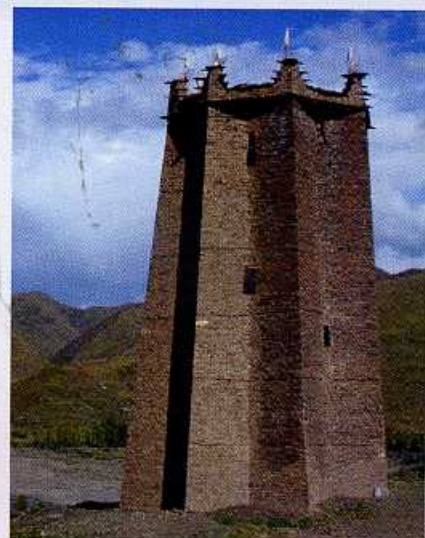
**REVIEW**

- 704 **Bioluminescence in the Ocean: Origins of Biological, Chemical, and Ecological Diversity**  
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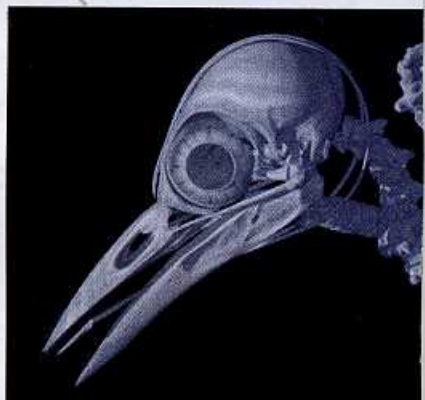
**BREVIA**

- 709 **Washing Away Postdecisional Dissonance**  
*S. W. S. Lee and N. Schwarz*  
The act of scrubbing clean one's hands also removes the tendency to justify prior decisions.  
>> Science Podcast

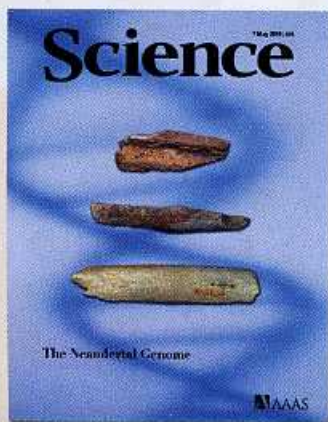
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**COVER**

Three Neandertal bone fragments, approximately 40,000 years old, from Vindija Cave, Croatia (shown to scale). DNA extracted from these bones was used to generate a draft sequence of the Neandertal genome, which was then compared to the genomes of five present-day humans. See page 710 and [www.sciencemag.org/special/neandertal/](http://www.sciencemag.org/special/neandertal/).

Photo: *Christine Verna/Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology*

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## RESEARCH ARTICLE

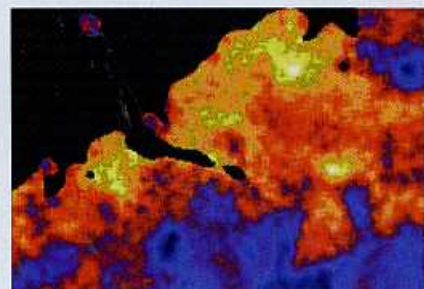
- 710 **A Draft Sequence of the Neandertal Genome**  
R. E. Green et al.  
Gene flow has occurred from Neandertals to humans of Eurasian descent, but not to Africans.  
>> News story p. 680; Report p. 723
- REPORTS**
- 723 **Targeted Investigation of the Neandertal Genome by Array-Based Sequence Capture**  
H. A. Burbano et al.  
Array capture of Neandertal DNA identifies amino acid substitutions that occurred after the split between humans and Neandertals.  
>> News story p. 680; Research Article p. 710
- 725 **Fermi Gamma-Ray Imaging of a Radio Galaxy**  
The Fermi-LAT Collaboration  
Gamma rays from a radio galaxy are relic cosmic microwave background radiation that underwent inverse Compton scattering.
- 729 **The Equation of State of a Low-Temperature Fermi Gas with Tunable Interactions**  
N. Navon et al.  
A Fermi gas is characterized along the crossover regime between its weak and strongly interacting limits.
- 732 **Nanoscale Three-Dimensional Patterning of Molecular Resists by Scanning Probes**  
D. Pires et al.  
A molecular glass can be patterned to dimensions of tens of nanometers with a heated scanning probe tip.
- 736 **Visualizing the Electron Scattering Force in Nanostructures**  
C. Tao et al.  
Effects of particular surface features on electron-induced atomic motion in metal structures are revealed.
- 740 **Viscosity of MgSiO<sub>3</sub> Liquid at Earth's Mantle Conditions: Implications for an Early Magma Ocean**  
B. B. Karki and L. P. Stixrude  
The behavior of the liquid mantle during Earth's earliest stages was controlled by the viscosity of silicate melts.

- 742 **Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow**  
J. Duprat et al.  
Interplanetary dust particles recovered from Antarctic snow may provide a sample of the early solar system.  
>> Perspective p. 698; Science Podcast
- 745 **Cross-Reacting Antibodies Enhance Dengue Virus Infection in Humans**  
W. Dejnirattisai et al.  
Variable maturation of a dengue viral antigen results in incomplete neutralization and promotes secondary pathology.
- 749 **Induction of Lymphoidlike Stroma and Immune Escape by Tumors That Express the Chemokine CCL21**  
J. D. Shields et al.  
An immunotolerant microenvironment driven by chemokine expression contributes to tumor growth and spread.  
>> Perspective p. 697
- 753 **Altered Histone Acetylation Is Associated with Age-Dependent Memory Impairment in Mice**  
S. Peleg et al.  
Deregulated histone acetylation may represent an early biomarker of age-dependent cognitive decline.  
>> Perspective p. 701
- 757 **Sequential Checkpoints Govern Substrate Selection During Cotranslational Protein Targeting**  
X. Zhang et al.  
Protein cargo is monitored at several points during membrane translocation to improve targeting fidelity.
- 760 **Dynamic Ca<sup>2+</sup>-Dependent Stimulation of Vesicle Fusion by Membrane-Anchored Synaptotagmin 1**  
H.-K. Lee et al.  
A synaptic vesicle protein must be membrane-anchored to stimulate fusion in vitro at physiological Ca<sup>2+</sup> concentrations.

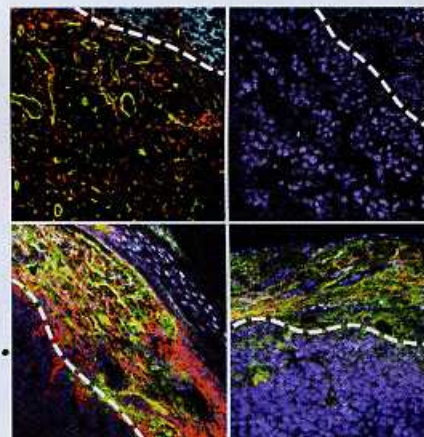
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