

COVER

Giraffes eye a smorgasbord of *Acacia* at the Mpala Research Centre in Kenya. Large herbivores such as giraffes are key to maintaining a mutually beneficial relationship between ants and *Acacia* in an East African ecosystem. See page 192.

Photo: Amy Wolf

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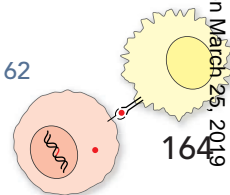
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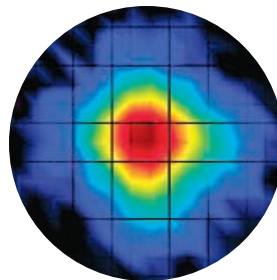
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SCIENCE EXPRESS

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VIROLOGY

Identification of Host Proteins Required for HIV Infection Through a Functional Genomic Screen

A. L. Brass et al.

An RNAi screen identified 237 new and 38 known human proteins required for HIV infection, including ones used in Golgi transport and in viral integration and transcription. >> *News story p. 143*

10.1126/science.1152725

GENETICS

Widespread Genetic Incompatibility in *C. elegans* Maintained by Balancing Selection

H. S. Seidel, M. V. Rockman, L. Kruglyak

Strong natural selection is maintaining multiple alleles of a gene in wild populations of the nematode *C. elegans*, despite their negative effect on fitness.

10.1126/science.1151107

PHYSICS

Electronic Liquid Crystal State in the High-Temperature Superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{6.45}$

V. Hinkov et al.

Neutron scattering measurements suggest that ordering of fluctuating electron spins explains the liquid crystal phases recently seen in some correlated electron systems.

10.1126/science.1152309

PHYSICS

Observation of the Spin Hall Effect of Light via Weak Measurements

O. Hosten and P. Kwiat

Displacement of light at an air-glass interface depends on its polarization, showing that photons have a spin Hall effect comparable to that seen for electrons.

10.1126/science.1152697

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full text at www.sciencemag.org/cgi/content/full/319/5860/159a

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full text at www.sciencemag.org/cgi/content/full/319/5860/159b

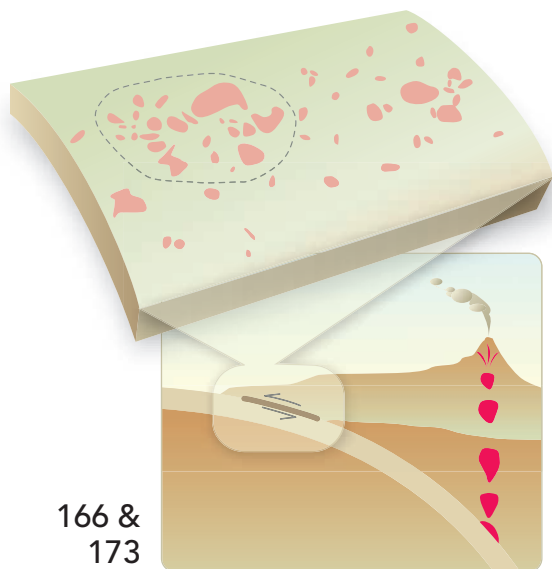
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A large Alaskan earthquake triggered tremors along the San Andreas and other strike-slip faults in California, showing that this process is not specific to subduction zones.

>> *Perspective p. 166; Report p. 186*

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A. D. Bianchi et al.

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Y. Ke, S. Lindsay, Y. Chang, Y. Liu, H. Yan

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Small tremors and slow slip along the Cascadia subduction zone pulse every 12.4 and 24 to 25 hours, implying that lunar tides are driving this activity along weak faults.

>> *Perspective p. 166; Brevia p. 173*

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A glacial interval lasting about 200,000 years interrupted the warm Late Cretaceous climate and produced ice sheets half as large as the modern Antarctic Ice Sheet. >> *News story p. 145*

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Excluding mammalian herbivores from a savanna ecosystem decreased ant colonies on the resident *Acacia* trees, leading to attack by beetles and unexpected tree mortality.

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>> *Perspective p. 164*



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SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005. Periodicals Mail postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2008 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): \$144 (\$74 allocated to subscription). Domestic institutional subscription (51 issues): \$770; Foreign postage extra: Mexico, Caribbean (surface mail) \$55; other countries (air assist delivery) \$85. First class, airmail, student, and emeritus rates on request. Canadian rates with GST available upon request, GST #1254 88122. Publications Mail Agreement Number 1069624. SCIENCE is printed on 30 percent post-consumer recycled paper. **Printed in the U.S.A.**

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 96178, Washington, DC 20090-6178. **Single-copy sales:** \$10.00 current issue, \$15.00 back issue prepaid includes surface postage; bulk rates on request. **Authorization to photocopy** material for internal or personal use under circumstances not falling within the fair use provisions of 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 code for Science is 0036-8075. Science is indexed in the *Reader's Guide to Periodical Literature* and in several specialized indexes.

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SCIENCE NOW

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Evolution: Read All About It!

New booklet aims to bring Darwin's theory to the masses.

Third Gene Copy Is a Charm

A gene triplicated in Down syndrome may provide cancer protection.



Following childhood dreams to a career.

SCIENCE CAREERS

www.sciencereers.org CAREER RESOURCES FOR SCIENTISTS

Special Feature: Changing Careers, Following Dreams

K. Travis

Moving forward can mean looking back at childhood fascinations or what first engaged your love for science.

Finding the Way Back to a First (Career) Love

S. Webb

Like rekindling an old romance, the pursuit of an old interest can be exciting and rewarding.

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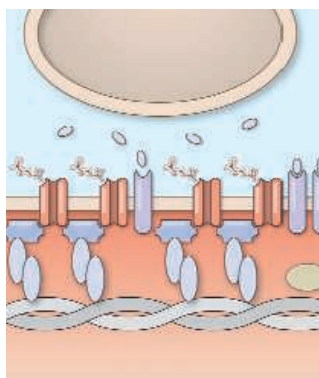
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A software developer's hobby in baseball statistics landed him a job with a major league baseball team.



Receptor clustering at the neuromuscular junction.

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A. Karsan

Notch-dependent activation of R-Ras reverses H-Ras-mediated suppression of integrin activity.

PERSPECTIVE: An Emerging Picture of Synapse Formation—A Balance of Two Opposing Pathways

F. Ono

A dispersing and a clustering pathway for acetylcholine receptors converge on the postsynaptic protein rapsyn in skeletal muscle.

SCIENCE PODCAST



Download the 11 January *Science* Podcast to hear about newly identified host proteins involved in HIV infection, cancer immunotherapy, glaciation during the Cretaceous, and more.

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319 (5860)

Science **319** (5860), 135-221.

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