

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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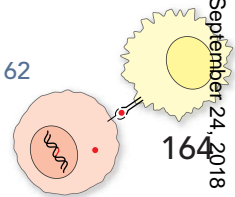
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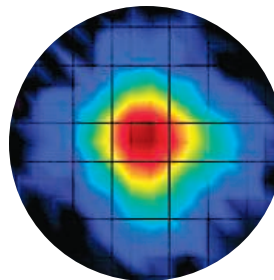
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SCIENCE EXPRESS

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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

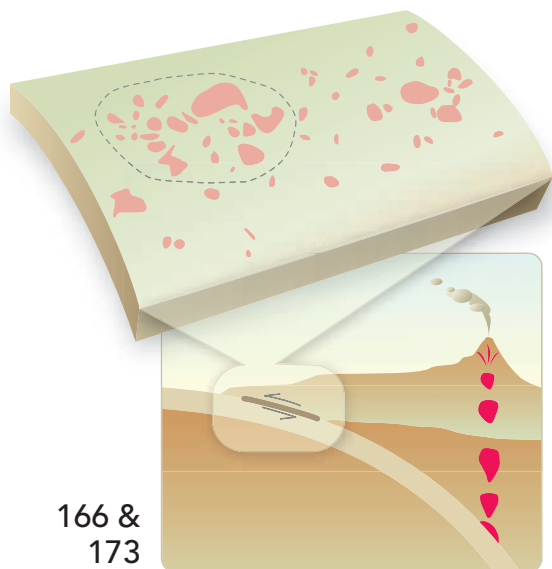
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Widespread Triggering of Nonvolcanic Tremor in California

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J. Gomberg et al.

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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S. Mashchenko, J. Wadsley, H. M. P. Couchman

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Superconducting Vortices in CeCoIn_5 : Toward the Pauli-Limiting Field

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A. D. Bianchi et al.

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

Large DNA scaffolds with multiple pairs of single-strand overhangs can capture specific RNA molecules for subsequent label-free detection by atomic force microscopy.

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J. L. Rubinstein et al.

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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P. A. Savage et al.

In mice, a common histone protein that coats DNA is unexpectedly detected within prostate tumors by the immune system, suggesting a potential therapeutic approach.

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SCIENCE NOW

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Biofuels on a Big Scale

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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

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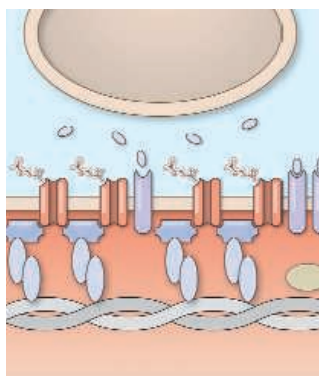
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Receptor clustering at the neuromuscular junction.

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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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