A seedling carpet dominated by *Dipteryx oleifera* (almendro) in the forest understory of Barro Colorado Island, Panama. Seedlings here have a lower probability of surviving when surrounded by neighbors of their own species. However, rare species suffer more from the presence of like neighbors than do common species, suggesting a mechanism that shapes species abundances in diverse tropical forest communities. See page 330.

*Photo: Christian Ziegler*
RESEARCH ARTICLE

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Dipeptides produced by a major bacterial pathogen are essential for successful infection.

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Y. Onose et al.  
Spin excitations in an insulating ferromagnet exhibit an anomalous thermal Hall effect.

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A. Schöll et al.  
Strengthening a surface bond of an organic molecule upon cooling leads to disordering between molecules.

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W. P. Schellart et al.  
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S. Buschmann et al.  
The third class of heme-copper oxidases reveals new structural solutions to achieve redox-driven proton translocation.

330  Asymmetric Density Dependence Shapes Species Abundances in a Tropical Tree Community  
L. S. Comita et al.  
Seedling survival in a tropical forest shows that species abundance is related to a species’ sensitivity to conspecific neighbors.

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A. C. Utne-Palm et al.  
An endemic goby exploits jellyfish and microbial biomass, partially restoring the food chain in the Benguela ecosystem.

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T. Kondo et al.  
A conserved locus in insects encodes four small peptides that shift a transcription factor from repressor into activator.

339  Hedgehog Signaling Regulates Segment Formation in the Annelid *Platynereis*  
N. Dray et al.  
The processes that pattern body segmentation in annelids and arthropods both require the same signaling mechanism.

342  Chemoattraction to Dimethylsulfoionopropionate Throughout the Marine Microbial Food Web  
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A microfluidics device reveals a common response of bacterial plankton to sulfur compounds emitted by marine algae.
Mercury’s exosphere is more varied and more
and phosphorylating histone H2B.

Transcription via Histone H2B Phosphorylation

Signaling Kinase AMPK Activates Stress-Promoted

Substrate Elasticity Regulates Skeletal Muscle

Induction of Broadly Neutralizing H1N1

Influenza Antibodies by Vaccination

C.-J. Wei

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A. V. Gourine

Astrocytes Control Breathing Through

pH-dependent Release of ATP

A. V. Gourine et al.

Central nervous system glial cells are key players in the chemo-reflex essential for breathing.

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Substrate Elasticity Regulates Skeletal Muscle

Stem Cell Self-Renewal in Culture

P. M. Gilbert et al.

Muscle stem cells prefer a soft substrate.

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The energy sensor AMPK facilitates gene transcription by localizing to chromatin and phosphorylating histone H2B.

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