EDITORIAL
449  The Power of Curiosity
  Michael S. Turner

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

NEWS & ANALYSIS
457  Soaring MERS Cases in Saudi Arabia Raise Alarms
458  Perovskite Solar Cells Keep On Surging
459  Drones Flying High as New Tool for Field Biologists
460  As Pentagon Downsizes, Budgets Shrink for Academic Research
461  Male Scent May Compromise Biomedical Studies
462  Therapeutic Cloning Reaches Milestone
463  Seafloor Mining Plan Advances, Worrying Critics

NEWS FOCUS
464  Death of the Stars
  >> Slideshow

LETTERS
469  Shining a Light on Solar Water Splitting
  E. A. Chandross
  Response
  J. A. Turner
  Advanced Photon Source Upgrade Benefits All
  B. Stephenson

470  CORRECTIONS AND CLARIFICATIONS

BOOKS ET AL.
471  Falling Behind?
  M. S. Teitelbaum, reviewed by A. B. Jaffe
472  Missing Microbes
  M. J. Blaser, reviewed by A. E. Mather

POLICY FORUM
473  Evaluating Flood Resilience Strategies for Coastal Megacities
  J. C. J. H. Aerts et al.

PERSPECTIVES
476  Tolerance for Predatory Wildlife
  A. Treves and J. Bruskotter
477  Dysfunctional Mechanosensing in Aneurysms
  J. D. Humphrey et al.
479  Forming Terrestrial Planets
  J. Chambers
480  A New Wrap for Neuronal Activity?
  M. E. Bechler and C. ffrench-Constant
  >> Research Article p. 487
482  Assembly and Disassembly of Ferrocene-Based Nanotubes
  Z. M. Hudson and I. Manners
  >> Report p. 499
483  Nonlinear Optics Pushed to the Edge
  D. Neshev and Y. Kivshar
  >> Report p. 488
484  Limits on Yields in the Corn Belt
  D. R. Ort and S. P. Long
  >> Report p. 516

REVIEW
486  Multiple Dimensions of Climate Change and Their Implications for Biodiversity
  R. A. Garcia et al.
  Review Summary; for full text:
  http://dx.doi.org/10.1126/science.1247579

CONTENTS continued >>

ON THE WEB THIS WEEK
  >> Science Podcast
  On this week’s show: links between intensive farming and drought sensitivity in corn and a roundup of stories from our daily news site.
  >> Find More Online
  Check out Science Express, the weekly podcast, videos, daily news, our research journals, and Science Careers at www.sciencemag.org.

DEPARTMENTS
447  This Week in Science
450  Editors’ Choice
452  Science Staff
539  New Products
540  Science Careers

COVER
A blood star (Henricia leviuscula) near Whidbey Island, Washington state. It is one of 10 species of sea star that appear to be affected by a mysterious wasting syndrome on the west and east coasts of North America. Various levels of mortality have been confirmed in 10 other species, making this the largest documented die-off of echinoderms. See page 464 and http://scim.ag/slide_6183.

Photo: Jan Kocian

What’s Killing the Sea Stars?

www.sciencemag.org  SCIENCE  VOL 344  2 MAY 2014
Published by AAAS
RESEARCH ARTICLE
487 Neuronal Activity Promotes Oligodendrogenesis and Adaptive Myelination in the Mammalian Brain
E. M. Gibson et al.
Optogenetic stimulation of the mouse motor cortex incites proliferation of myelin-producing cells and axonal myelination.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1252304

REPORTS
488 Edge Nonlinear Optics on a MoS₂ Atomic Monolayer
X. Yin et al.
Second-harmonic generation is used to probe and characterize atomically thin layers of molybdenum disulfide.

491 Probing Exchange Pathways in One-Dimensional Aggregates with Super-Resolution Microscopy
L. Albertazzi et al.
One-dimensional supramolecular aggregates can swap constituent monomers through a homogeneous exchange mechanism.

495 Interfacial Effects in Iron-Nickel Hydroxide–Platinum Nanoparticles Enhance Catalytic Oxidation
G. Chen et al.
An alloy catalyst for room-temperature CO₂ creates sites for O₂ activation when the CO₂ product is released.

499 Manipulation of Discrete Nanostructures by Selective Modulation of Noncovalent Forces
T. Fukino et al.
Self-assembled, large-diameter ferrocene-based nanotubes can be cleaved into stable rings and then reassembled into tubes.

503 Vibrationally Promoted Dissociation of Water on Ni(111)
P. M. Hundt et al.
The barrier to this reaction, a key step in methane steam reforming, is mainly surmounted by vibrational energy.

508 Faster Decomposition Under Increased Atmospheric CO₂ Limits Soil Carbon Storage
K. J. van Groenigen et al.
Soil carbon turnover increases as atmospheric carbon dioxide rises, which limits carbon accumulation in soils.

510 Genomic Signatures of Specialized Metabolism in Plants
L. Chae et al.
A comparative genomic analysis of plant metabolism can distinguish the evolution of specialized versus primary metabolism.

513 Deception by Flexible Alarm Mimicry in an African Bird
T. P. Flower et al.
A clever African bird flexibly mimics the calls of other species to keep fooling them into abandoning their food.

516 Greater Sensitivity to Drought Accompanies Maize Yield Increase in the U.S. Midwest
D. B. Lobell et al.
Selective breeding focused on increasing corn and soybean yields has left a weakness in corn drought tolerance.

519 Polarization of the Effects of Autoimmune and Neurodegenerative Risk Alleles in Leukocytes
T. Raj et al.
Genetic variants affecting gene expression show both shared and specific immune cell type effects.

523 Reconstructing the DNA Methylation Maps of the Neandertal and the Denisovan
D. Gokhman et al.
Estimates of differentially methylated nucleotides illuminate differences between modern human and ancient hominin bones.

527 Chemical Inhibition of NAT10 Corrects Defects of Laminopathic Cells
D. Larrieu et al.
The small molecule Remodelin can correct nuclear architecture defects and improve cellular fitness of progeric human cells.

533 Molecular-Level Functional Magnetic Resonance Imaging of Dopaminergic Signaling
T. Lee et al.
Development of a molecular functional magnetic resonance imaging tool to quantify dopamine release simultaneously in different brain regions is shown.

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 © 2014 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): $153 ($74 allocated to subscription). Domestic institutional membership and subscription (51 issues): $253 (134 allocated to subscription). Domestic institutional subscription (51 issues): $282; Foreign postage extra. Mexico, Caribbean surface mail: 55; other countries (air assisted delivery): $85. First class, airmail, student, and emeritus rates on request. Canadian rates with GST available upon request, GST #125488122. Publications Mail Agreement Number 1096924. 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, PO. Box 96178, Washington, DC 20090–6178. Single-copy sales: 130.00 current issue. 155.00 back issues (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 $30.00 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.