

150

A red-necked stint lies dead on polluted mudflats in South Korea.

NEWS

IN BRIEF

140 Roundup of the week's news

IN DEPTH

143 IN CANADA, SCIENCE CAMPAIGNS FOR ATTENTION FROM VOTERS

Opponents of Prime Minister Stephen Harper try to make his record on research an issue in election *By B. Owens*

► EDITORIAL P. 139

144 NEGLECTED TROPICAL DISEASES GET THE LIMELIGHT IN STOCKHOLM

Medicine award honors pioneers who developed powerful drugs against malaria and roundworms *By E. Stokstad and G. Vogel*

145 NEUTRINO OSCILLATIONS HONORED

Observations by Japanese and Canadian teams proved ghostly particles can change identity and have mass *By A. Cho*

146 HOW CROP-KILLING WITCHWEED SENSES ITS VICTIMS

Pinning down molecules key to finding a host plant paves the way for new controls on the parasite *By E. Pennisi*

► REPORT P. 203

148 CAN EPIGENETICS EXPLAIN HOMOSEXUALITY PUZZLE?

Study in twin brothers finds link between DNA methylation and sexual orientation *By M. Balter*

149 PREHISTORIC EURASIANS STREAMED INTO AFRICA, GENOME SHOWS

First genome of an ancient African suggests widespread mixing with farmers from the Middle East *By A. Gibbons*

► REPORT BY M. GALLEGLO LLORENTE ET AL. 10.1126/science.aad2879

FEATURES

150 HOSTILE SHORES

Migratory bird populations in Asia are crashing as Yellow Sea habitat dwindles *By C. Larson*



153 FEELING THE CHILL

The bizarre properties of liquid helium transfixed generations of physicists. But its spell is fading *By A. Cho*

INSIGHTS

PERSPECTIVES

156 ANOTHER BRICK IN THE WALL

An inducible secondary wall system reveals how most plant biomass is synthesized *By R. Schneider and S. Persson*

► REPORT P. 198

158 THE ODDS OF IMMUNOTHERAPY SUCCESS

Mutation load correlates with the response of melanomas to immunotherapy *By M. M. Gubin and R. D. Schreiber*

► REPORT P. 207

159 BEYOND THE "MENDEL-FISHER CONTROVERSY"

Worries about fraudulent data should give way to broader critiques of Mendel's legacy *By G. Radick*

161 FROM TRANSIENT INFECTION TO CHRONIC DISEASE

Can some infections "scar" the immune system? *By C. Nathan*

162 MEMBRANE TRAFFIC EN ROUTE TO CANCER

The spatial organization of internal membranes influences receptor signaling and disease *By S. M. Ferguson*

► REPORT P. 211

164 THE IMPORTANCE OF BEING TOGETHER

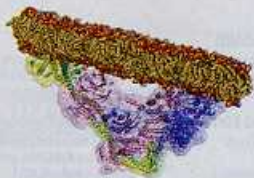
Controlling the coordination of platinum boosts catalytic reaction rates *By I. E. L. Stephens et al.*

► REPORTS PP. 185 & 189

165 DESIGNING A SUSTAINABLE DIET

Sustainability as dietary guidance created political debate *By K. Merrigan et al.*

Science Staff	138
New Products	223
Science Careers	224



178

Regulating membrane trafficking



164, 185, & 189

Pinpointing reactive sites

167 THE MARTIAN LAKE CHRONICLES

Curiosity reveals evidence for ancient lakes on Mars *By M. A. Chan*

► RESEARCH ARTICLE P. 177

BOOKS ET AL.

168 UNDISCIPLINING KNOWLEDGE

By H. J. Graff, reviewed by Y. Peled

169 HARNESS THE SUN

By P. Warburg, reviewed by A. B. Lovins

LETTERS

170 RETRACTION

By R. N. Mahato et al.

170 SPEEDING UP EPIDEMIC EMERGENCY RESPONSE

By J.-A. Rettingen and T. Godal

170 FREE THE TWEET AT SCIENTIFIC CONFERENCES

By G. Orizaola and A. E. Valdés

171 TECHNICAL COMMENT ABSTRACTS

RESEARCH

IN BRIEF

173 From *Science* and other journals

REVIEW

176 NANOPARTICLES

Nonadditivity of nanoparticle interactions *C. A. Silvera Batista et al.*

REVIEW SUMMARY; FOR FULL TEXT:

dx.doi.org/10.1126/science.1242477

RESEARCH ARTICLES

177 MARTIAN GEOLOGY

Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars *J. P. Grotzinger et al.*

RESEARCH ARTICLE SUMMARY; FOR FULL TEXT:

dx.doi.org/10.1126/science.aac7575

► PERSPECTIVE P. 167

178 STRUCTURAL BIOLOGY

Structure and flexibility of the endosomal Vps34 complex reveals the basis of its function on membranes *K. Rostislavleva et al.*

RESEARCH ARTICLE SUMMARY; FOR FULL TEXT:

dx.doi.org/10.1126/science.aac7365

REPORTS

179 FRUSTRATED MAGNETISM

Hidden order in spin-liquid $Gd_3Ga_5O_{12}$ *J. A. M. Paddison et al.*

182 TOPOLOGICAL MATTER

Chiral solitons in a coupled double Peierls chain *S. Cheon et al.*

SURFACE CHEMISTRY

185 Finding optimal surface sites on heterogeneous catalysts by counting nearest neighbors *F. Calle-Vallejo et al.*

189 Identification of active sites in CO oxidation and water-gas shift over supported Pt catalysts *K. Ding et al.*

► PERSPECTIVE P. 164

193 GEOMORPHOLOGY

Erosion by an Alpine glacier *F. Herman et al.*

196 EDUCATION

Math at home adds up to achievement in school *T. Berkowitz et al.*

► PODCAST

198 PLANT SCIENCE

Visualization of cellulose synthases in *Arabidopsis* secondary cell walls *Y. Watanabe et al.*

► PERSPECTIVE P. 156



146 & 203

203 PLANT SCIENCE

Structure-function analysis identifies highly sensitive strigolactone receptors in *Striga* *S. Toh et al.*

► NEWS STORY P. 146

207 ONCOLOGY

Genomic correlates of response to CTLA-4 blockade in metastatic melanoma *E. M. Van Allen et al.*

► PERSPECTIVE P. 158

211 ONCOGENE SIGNALING

Identification of an oncogenic RAB protein *D. B. Wheeler et al.*

► PERSPECTIVE P. 162

217 VIROLOGY

Dengue subgenomic RNA binds TRIM25 to inhibit interferon expression for epidemiological fitness *G. Manokaran et al.*

DEPARTMENTS

139 EDITORIAL

A chance to get science right

By James L. Turk

► NEWS STORY P. 143

246 WORKING LIFE

Help others—and help your career

By Tal Polak

ON THE COVER



The Franz Josef Glacier is a 10.5-kilometer-long glacier located in Westland Tai Poutini National Park on New Zealand's South Island. This glacier descends from the summits of the Southern Alps,

with an ice-sliding velocity that reaches up to 3 meters per day. Analysis of sediments in the glacial meltwater reveals how Alpine glacier erosion is related to ice velocity. See page 193.

Photo: © MicaSelects/Alamy Stock Photo

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. 484450) paid at Washington, DC, and additional mailing offices. Copyright © 2015 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 subscription (51 issues), \$1282; 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 #R1254 88122. Publications Mail Agreement Number 1069624. 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 \$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.