



Science Service Publication
Volume 152, No. 14, October 4, 1997

Thomas Peter Bennett	Publisher
Julie Ann Miller	Editor
Blair Burns Potter	Managing Editor
Dan Skripkar	Production/Design Director
David Lindley	Associate Editor
Janet Raloff	Senior Editor
Ivars Peterson	Environment/Policy Online Editor
Bruce Bower	Mathematics/Physics Behavioral Sciences
Richard Monastersky	Internship Coordinator Earth Science
Kathleen Fackelmann, Nathan Seppa	Biomedicine
Ron Cowen	Astronomy
Christine Mlot	Life Sciences
John Travis	Biology
Corinna Wu	Chemistry/Materials Science
Sid Perkins	Science Writer Intern
Meghan Mitchell	Editorial Assistant
Gwendolyn Gillespie	Editorial Secretary
Cait Anthony	Books/Advertising
Donald R. Harless	Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$49.50 for 1 year or \$88.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, 1719 N Street, N.W., Washington, D.C. 20036. Preferred Periodicals postage paid at Washington, D.C., and additional mailing office. POSTMASTER: Send address changes to SCIENCE NEWS, P.O. Box 1925, Marion, Ohio 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided. Copyright © 1997 by Science Service. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited. For permission to photocopy articles, contact Copyright Clearance Center at 508-750-8400 (phone) or 508-750-4470 (fax).

Editorial, Business, and Advertising Offices
1719 N St. N.W., Washington, D.C. 20036
202-785-2255; scinews@sciserv.org

Subscription Department
P.O. Box 1925, Marion, Ohio 43305
For new subscriptions and customer service, call 1-800-552-4412.

Visit SCIENCE NEWS ONLINE for special features, columns, and references.
<http://www.sciencenews.org>

This Week

- 212 Mad Cow Disease, Human Illness Tied
- 212 Satellite views Earth's living plumage
- 213 Why greenbacks make good 'drug money'
- 213 Feds tackle toxic cell
- 213 Atoms bounce back to form frigid cloud
- 214 Deadly bacteria pop up in fruit flies
- 214 An alphabet for a letter-perfect protein
- 215 Variety reigns in ancient hominid's skull
- 215 Hubble sizes up a lone neutron star

Research Notes

- 218 Biology
- 223 Biomedicine
- 223 Earth Science

Articles

- 216 Dying Breeds

Cover: George Washington was one of the farmers who raised Leicester Longwool sheep, like the one shown here. Once prized for its blanket-quality fleece, this breed is today endangered globally. Some 5 percent of livestock breeds go extinct annually—eliminating genes for traits that might have proved useful to farmers. In hopes of slowing this drain on biological diversity, several institutions are working to preserve today's rare breeds. (Photo: The Colonial Williamsburg Foundation)



- 220 The Big Chill

Departments

- 210 Books
- 211 Letters

SCIENCE NEWS is published by Science Service, a nonprofit corporation founded in 1921. The mission of Science Service is to advance the understanding and appreciation of science through publications and educational programs.

Board of Trustees — *Chairman*, Dudley Herschbach; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Shirley M. Malcom; Eve L. Menger; C. Bradley Moore; Ben Patrusky; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe; *Chairman Emeritus*, Glenn T. Seaborg; *Honorary Trustees*, Edward Bliss Jr.; Bowen C. Dees; Elena O. Nightingale; John Troan.

Officers—*President*, Thomas Peter Bennett; *Vice President and Business Manager*, Donald R. Harless.

Letters

Gotcha!

Microdevices might indeed do all those exotic deeds you describe ("From Microdevice to Smart Dust," SN: 7/26/97, p. 62), but perhaps with the inevitable unintended consequences: universal silicosis from all that dust.

Ben Johnson
Adjuntas, Puerto Rico

Astronomical gaffes

I noticed a couple of errors in "Galileo Explores the Galilean Moons" (SN: 8/9/97, p. 90). It is well known that Galileo discovered the moons of Jupiter on Jan. 7, 1610, with a telescope of about 30X, not on Jan. 10 with a telescope of 1,000X. Also, Jupiter officially has 16 moons, not 14.

Kevin Conod
Newark Museum
Newark, N.J.

You are correct. In his "Sideral Messenger," Galileo writes, "Finally . . . I progressed so far that I constructed for myself an instrument so excellent that things seen through it appear about a thousand times larger and more than 30 times closer. . . ." In other words, as astronomy historian Owen Gingerich of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass., notes, the telescope that Galileo built made objects appear 1,000 times larger because it appears to bring an object about 30 times closer.

Regarding the other matters, Jupiter indeed has 16 known moons, and Galileo made his momentous discovery of three starlike objects on Jan. 7, 1610. He later found a fourth; together, they constitute the four Galilean moons of Jupiter.

—R. Cowen

Bored babies?

The apparent failure of 14-month-olds, in contrast to younger and older children, to discriminate between some speech sounds

need not mean that they lose and later regain a perceptual ability ("Wordy tots ignore some speech sounds," SN: 7/26/97, p. 54).

Perceptions can indeed change with maturation and experience: Babies can detect some phonemes that adults cannot. However, perceptions can also be selectively ignored when irrelevant to the task at hand: Toddlers have difficulty learning color names, despite color's perceptual salience, because they expect words to refer to objects or events. Unfortunately, habituation-based experiments do not distinguish between babies' inability to detect a stimulus change and their simply finding the change uninteresting.

The researchers' findings are made no less intriguing by the notion that, at various states in the language acquisition process, young learners shift their focus of attention despite stable perceptual capabilities.

Phyllis Koenig
New Brunswick, N.J.