



SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication
Volume 152, No. 3, July 19, 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
Richard Monastersky	Behavioral Sciences
	Internship Coordinator
	Earth Science
Kathleen Fackelmann,	Biomedicine
Nathan Seppa	
Ron Cowen	Astronomy
Tina Adler, Christine Mlot	Life Sciences
John Travis	Biology
Corinna Wu	Chemistry/ Materials Science
Evelyn Strauss	Science Writer Intern
Meghan Mitchell	Editorial Assistant
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. on recycled paper. ♻️ Reproduction 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

- 36 Human Embryonic Stem Cells Found?
- 37 Neandertals make big splash in gene pool
- 37 Exposing chaos in a falling disk's flutter
- 38 Global warming lurks principally at night
- 38 Squirts for squirts: Flu spray guards kids
- 39 Managed care may be choking clinical research
- 39 Rover spectrometer connects with Yogi

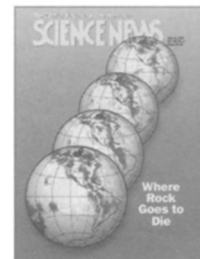
Research Notes

- 44 Biomedicine
- 44 Chemistry

Articles

- 40 Nuclear Medicine Gets Friendlier
- 46 Global Graveyard

Cover: Seismic images of Earth's interior, taken at four depths, show old ocean floor heading toward its death. Blue regions beneath North and South America indicate the presence of relatively cold oceanic rock that has descended into Earth's mantle in the shape of a broad sheet. From front to back, the images correspond to depths of 700 kilometers, 1,000 km, 1,300 km, and 1,600 km. (Graphic: Rob D. van der Hilst)



Departments

- 35 Letters
- 43 Books

Science Service is a nonprofit corporation founded in 1921 to increase the public understanding of science. It publishes SCIENCE NEWS and administers the International Science and Engineering Fair and the Science Talent Search.

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; O.W. Riegel; John Troan.

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

Letters

Myth of 'no exposure'

I doubt that any woman in the United States, aside from a hermit, has "no exposure" to tobacco smoke ("Risks for women: Passive smoke and obesity," SN: 5/24/97, p. 318).

Laura Elsa Sabath
Lubbock, Texas

Given the choice of regular, occasional, or no exposure to smoke, some respondents to the survey questions said they had no exposure. However, Harvard's Ichiro Kawachi notes, "people are notoriously poor judges" and tend to "massively underestimate what they've been exposed to." —J. Raloff

Using gene to curb bone creation?

The question of "whether doctors may someday use *Cbfa1* or its protein... to treat osteoporosis" ("No bones about it: Gene vital to skeleton," SN: 6/7/97, p. 349) is only

one side of the issue. On the other side is Paget's disease, in which bone creation is out of control.

As someone who has a number of in-laws with Paget's, I hope that doctors will investigate whether inhibitors of *Cbfa1* or its protein can someday offer them relief as well.

K.A. Boriskin
Bellingham, Mass.

Cause of sea change in climate?

To suggest that the disappearance of the Paratethys sea rather than the uplift of the Tibetan Plateau was a major cause of climate change in the Oligocene doesn't sound right ("Vanished sea leaves climatic legacy," SN: 5/24/97, p. 327). No doubt a large sea would

affect the climate, but it disappeared for a reason. Changing climate patterns could have reduced inflow and increased evaporation, or perhaps the uplift of the Tibetan Plateau changed the lay of the land, causing the sea to drain away.

To establish that the climate is different without the body of water does not determine causality.

Douglas B. McCallum
Lansing, Mich.

Morphine and immunosuppression

The discovery that morphine can suppress the immune system ("Morphine's actions outside the brain," SN: 5/24/97, p. 322) raises a number of interesting and important questions. For openers: Does long-term narcotic use lead to increased and perhaps irreversible immunosuppression? Do users of narcotics suffer from immunosuppression independent of their HIV status?

Robert A. Palmero
West Orange, N.J.

Send communications to:
Editor, Science News
1719 N Street, N.W.
Washington, D.C. 20036
or: scinews@sciserv.org
All letters subject to editing.