

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication  
Volume 148, No. 6, August 5, 1995

Alfred Scott McLaren	Publisher
Blair Burns Potter	Interim Editor
Dan Skripkar	Production/Design Director
David Lindley	Associate Editor
Janet Raloff	Senior Editor
	Environment/Policy
Ron Cowen	Astronomy
Bruce Bower	Behavioral Sciences
Richard Lipkin	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
John Travis	Biology
Kathleen Fackelmann, Lisa Seachrist	Biomedicine
Tina Adler	Life Sciences
Ivars Peterson	Mathematics/Physics
Damaris Christensen	Editorial Assistant
Corinna Wu	Science Writer Intern
Caft Anthony	Books/Resource Manager
Donald R. Harless	Advertising/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, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Second-class 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 © 1995 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. ♻️  
Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

**Editorial and Business Offices:**  
1719 N St. N.W., Washington, D.C. 20036  
(202-785-2255)

**Advertising Representative:**  
Lewis Edge & Associates, Inc.  
366 Wall St., Princeton, N.J. 08540  
(609-683-7900)

**Subscription Department:**  
P.O. Box 1925, Marion, Ohio 43305  
For new subscriptions only, call 1-800-247-2160.  
For customer service, call 1-800-347-6969.

## This Week

- 84 Do Brain Cells Run Out of Gas?
- 84 Plants recruit oil-detoxifying microbes
- 85 Circuitry simulates genetic networks
- 85 Faulty seals delay shuttle
- 86 Conscious memories may emerge in infants
- 86 Tranquilizers mimic Parkinson's symptoms
- 87 Saturn ring toss: Hubble finds more moons
- 87 Polar ice's age? More than 8 million years

## Research Notes

- 89 Astronomy
- 89 Biology
- 92 Biomedicine
- 92 Environment

## Articles

### 90 Dowsing Expectations

Cover: Many people claim success in prospecting for water and other underground minerals by dowsing. To test such claims, a German physicist engineered a series of experiments—like the one shown here—aimed at “blinding” dowsers to external cues. While he interprets the findings of those tests as confirming the ability of certain individuals to divine underground aquifers, other scientists explain their reservations. (Photo: H.-D. Betz)

### 94 What Risk Hormones?

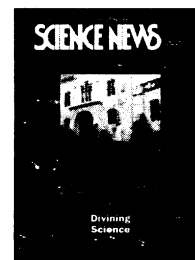
## Departments

### 83 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

**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; C. Bradley Moore; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. **Honorary Trustees** — *Chairman Emeritus*, Glenn T. Seaborg; Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan.

**President:** Alfred Scott McLaren; **Vice President and Business Manager:** Donald R. Harless.



## Letters

### How much oxygen is too much?

“Ancient animals got a rise out of oxygen” (SN: 5/13/95, p.294) suggests that oxygen concentrations had been as high as 35 percent in the Carboniferous era. Hasn't there been some research that has shown that fire is so fierce at 25 percent that even the damp wood of a tropical rain forest will burn?

Hoff Stuart  
Reston, Va.

*There is no scientific consensus on the maximum possible oxygen concentration. Other factors, such as carbon dioxide concentrations and climate, may also play a role.*

—R. Monastersky

### ADD's link to delinquency

“Criminal Intellects” (SN: 4/15/95, p.232) reviews recent research on IQ and impulsivity as risk factors for delinquency yet fails to mention the extensive clinical and

experimental literature on attention deficit disorder (ADD).

Characterized by inattention and impulsivity, ADD is the most widely diagnosed childhood mental disorder in the United States today. It is currently considered a personality predisposition with prenatal and neonatal determinants, much in keeping with the studies cited. I point this out to emphasize the existence of treatments that can be quite effective with early diagnosis and intervention, a fact also absent from the article.

Eduardo Ysern  
Caguas, Puerto Rico

*The article contains a reference to a prior story about delinquency that includes data on its links to ADD (“Delinquent Developments,” SN: 5/1/93, p.282).*

— B. Bower

### Take your vitamins minus minerals

“Power Foods” (SN: 4/22/95, p.248) quotes Kedar Prasad as warning against multivita-

mins with high doses of iron, copper, and manganese, which create free radicals when they interact with vitamin C. However, I don't know what “loaded with iron, copper, and manganese” means.

Every multivitamin I am familiar with has vitamin C and minerals. Is he suggesting that one find a multivitamin without minerals or that one simply find one with a low dose of minerals?

Harold Kassel  
Chicago, Ill.

*Prasad recommends avoiding any multivitamin containing iron, copper, or manganese.*

—T. Adler

Address communications to:  
Editor, SCIENCE NEWS  
1719 N Street, N.W.  
Washington, D.C. 20036  
All letters subject to editing.