

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication  
Volume 139, No. 1, January 5, 1991

E. G. Sherburne Jr.	Publisher
Patrick Young	Editor
Laurie Jackson	Managing Editor
Janice Rickerich	Production/Design Director
Bruce Bower	Behavioral Sciences
Ivan Amato	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Janet Faloff	Environment/Policy
Ron Cowen	General Science
Kathy A. Fackelmann,	Life Sciences/ Biomedicine
Rick Weiss	Mathematics/Physics
Ivars Peterson	Space Sciences
Jonathan Eberhart	Editorial Assistant
Jennifer L. Miller	Science Writer Intern
Robert N. Langreth	Books/Resource Manager
Liz Marshall	Advertising/Business Manager
Donald R. Harless	

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$34.50 for 1 year or \$58.00 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, 231 West Center Street, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1991 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

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

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:  
231 West Center St., Marion, OH 43305  
For new subscriptions only, call 1-800-247-2160.

## This Week

- 4 Reoviruses Yield to Gene Rearrangement
- 4 Diagnostic duo highlights heart damage
- 5 Fighting the mite: May the best bee win
- 5 Lab-grown shells mimic seashore version
- 6 Microscope writes beneath a metal surface
- 6 Historic priapism pegged to frog legs
- 7 Detailing an active galaxy's structure
- 7 Greek site delivers historical monument

## Research Notes

- 10 Astronomy
- 12 Biochemistry
- 12 Cosmology

## Articles

### 8 Stuck on Mussels

Cover: This mussel hangs from a glass slide by the same tough adhesive threads it uses to cling to hard surfaces in the turbulent ocean. The threads, made of a natural polymer called byssus, have attracted the envy of researchers, who are unraveling the biochemical ingredients of byssus and the mussel's method of processing them into finished lifelines. Mussel-inspired underwater adhesives — with applications ranging from protecting warship hulls to replacing sutures in surgery — may emerge from these efforts. (Photo: J.H. Waite)

### 14 True Believers

## Departments

- 2 Books
- 3 Letters

**Science Service** Institution for the public understanding of science founded 1921; a nonprofit corporation.

**Board of Trustees** — *Chairman*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; *Joseph W. Berg Jr.*; *Robert W. Fri.*; *David A. Goslin*; *J. David Hann*; *Milton Harris*; *Leon M. Lederman*; *Shirley M. Malcom*; *Elena O. Nightingale*; *Ben Patrusky*; *H. Guyford Stever*; *Deborah P. Wolfe.*  
**Honorary Trustees** — *Edward Bliss Jr.*; *Bowen C. Dees*; *O. W. Riegel*; *John Troan.*

**President:** E. G. Sherburne Jr.; **Business Manager:** Donald R. Harless.



## Letters

### Health appeal

I was fascinated by the study showing that death rates in middle age are higher for unmarried people ("New twist to marriage and mortality," SN: 10/27/90, p.267). Here's a possible explanation: Unhealthy people may be less likely to attract a mate.

You report that the correlation broke down for women over age 54. Perhaps this is because the reason these older women were single was *not* that they couldn't attract a mate, but rather that their husbands had died.

*Stephen Warren  
Seattle, Wash.*

### A dose of dung?

In "Medicine on the Wild Side" (SN: 11/3/90, p.280) you report the unusual behavior of a pregnant elephant eating a small tree of the family Boraginaceae, which apparently induced labor four days thereafter.

This reminded me of another unusual behavior — coprophagia — that I witnessed among

elephants at the Milwaukee County Zoo. A presumably intestinally distressed elephant used its trunk to remove and eat the fresh dung from another's anus. Couldn't this be due to gastrointestinal discomfort that could only be alleviated by reintroducing enteric flora from a comrade's feces? Don't elephants, like other ungulates, require certain concentrations of cellulose-digesting bacteria to help assimilate their herbivorous diet?

This physiologic need might express itself as a craving for feces, and could be the elephantine equivalent of reaching for an Alka Seltzer.

*Mark Behar  
Colposcopist  
Milwaukee, Wis.*

**I have lived** with a parrot who has had constant access to a variety of plants for six years. She has appeared sick only three times, and she has chewed a leaf off an aloe vera plant on only those three occasions. I can't declare cause and effect, but each of these ingestions occurred about 12 hours after I first noticed her

malaise, and in all three cases she was back to normal 24 hours later.

*Robert McDaniel  
Las Cruces, N.M.*

### Gender gap persists

Two cheers for the research on beta carotene and arteriosclerosis in men ("Beta Carotene May Slow Artery Disease," SN: 11/17/90, p.308). Now, what about women?

Thirty years ago, veterinarians knew so much less about the physiology of cats that they had to use remedies developed for dogs to treat feline ailments. What a shame that while we've closed the research gap between cats and dogs, it persists between men and women.

*Lise Broer  
Valencia, Calif.*

## CORRECTION

*Garth Illingworth is an astronomer at the University of California, Santa Cruz, not UC Berkeley as stated in "Dawn of a Big Telescope" (SN: 12/1/90, p.348).*

JANUARY 5, 1991

3