

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 140, No. 5, August 3, 1991

E. G. Sherburne Jr.	Publisher
Patrick Young	Editor
Laurie Jackson	Managing Editor
Vaughan	Editor
Janice Rickerich	Production/Design Director
Janet Raloff	Senior Editor
Bruce Bower	Environment/Policy
Elizabeth Pennisi	Behavioral Sciences
Richard Monastersky	Chemistry/ Materials Science
Ron Cowen	Earth Sciences
Carol Ezzell,	General Science/ Space Sciences
Kathy A. Fackelmann	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Larry Norland	Editorial Assistant
John Travis	Science Writer Intern
Liz Marshall	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 \$39.50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC 20036. Second-class postage paid at Washington, DC, 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 Street, Marion, OH 43305
For new subscriptions and address changes only, call 1-800-247-2160.
For customer service, call 1-800-347-6969.

Letters

Kamikaze contraception

I was interested by the implications of the finding that the human ovum expresses a chemical that attracts sperm ("Eggs not silent partners in conception," SN: 4/6/91, p.214). However, in the discussion of the study's potential contraceptive implications, perhaps the simplest strategy was not mentioned.

Once isolated, this chemotaxin could be synthesized and mixed with a spermicide such as nonoxynol-9 to encourage the "kamikaze" destruction of sperm and to disrupt any chemical gradient the ovum could maintain, thereby preventing the sperm from finding the ovum. The latter effect is often employed in insect control, using an aerosolized pheromone as a chemical "radar jammer" to keep bugs from finding mates.

This contraceptive strategy would have a number of advantages. For one, it would be easier than synthesizing antibodies to the chemotaxin. And if the compound is not lipid

This Week

- 68 Weather Report: NASA GOES Astray
- 68 Ancient ax helps date early Greeks
- 69 Drug proves ace at fighting heart failure
- 69 Cancer treatment uses 'suicide' gene
- 70 Iron swells up when squeezed with hydrogen
- 70 Maleness gene may be a master gene switch
- 71 Fossil pond plants bear tattoo of K-T crash
- 71 Teflon grid brings order to thin films

Research Notes

- 77 Biomedicine
- 77 Chemistry
- 79 Health Physics
- 79 Space Sciences

Articles

- 72 Plastic Math
Cover: Using a new technology called stereolithography, computer programmer and sculptor Stewart Dickson can generate two-dimensional graphic images of mathematical forms on a computer screen, then directly reproduce those figures as three-dimensional, plastic models. The surface shown here represents a visualization of the equation $x^5 + y^5 = z^5$. (Photos: Stewart Dickson)
- 74 Dancing DNA

Departments

- 66 Books
- 67 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; Sanford J. Ungar; 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.

soluble, it would not require alteration. It is an endogenous, locally acting, low-dosage chemical that should be relatively easy to test and could easily be added to existing spermicides and suppositories, requiring no more education or effort on the part of users.

Loren Rauch
Berkeley, Calif.

Making the most of copper

"Disorderly Light" (SN: 4/20/91, p.248) describes current research on copper wire transmission effects. From 1984 to 1987 I took part in a research project investigating the effects of wave-front propagation in copper wire media. We focused our efforts on producing solitons in copper. At that time, solitons were thought to be usable only in optical media, due to the same impurities noted in your article.

We found that although we could create solitons in the copper, they were attenuated in a short distance and could no longer be classified as "pure" solitons. What we did

prove, however, was that certain wave fronts produced soliton-like effects and could be used in a data transmission system that produced usable digital data at higher-than-expected frequencies and for much greater distances than theory predicted.

Michael B. Shepperd
Livermore, Calif.

CORRECTIONS

The photo of the sea snail on the May 25 cover was taken by Gary McDonald of the Joseph M. Long Marine Laboratory at the University of California, Santa Cruz.

"ROSAT Revelations" (SN: 6/29/91, p.408) described a newly discovered supernova remnant in the constellation Auriga as the largest remnant ever detected, with a diameter of about 270 million light-years. The actual diameter is 270 light-years, and the remnant — while relatively large — is not the largest known.

AUGUST 3, 1991

67

