

SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication
Volume 144, No. 14, October 2, 1993

Alfred Scott McLaren	Publisher
Patrick Young	Editor
Blair Burns Potter	Managing Editor
Janice Rickerich	Production/Design Director
Greg W. Pearson	Associate Editor
Janet Raloff	Senior Editor Environment/Policy
Ron Cowen	Astronomy
Bruce Bower	Behavioral Sciences
Richard Lipkin	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Kathy A. Fackelmann, Elizabeth Pennisi	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Larry Norland	Editorial Assistant
Gabrielle Strobel	Science Writer Intern
Cait 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 \$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, P.O. Box 1925, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1993 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, DC 20036
(202-785-2255)

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

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

This Week

- 212 Plasma Pipe for Intense Laser Pulses
- 212 Oldest known Maya burials found in Belize
- 213 Run-down labs hamper federal research
- 214 Super pressures heat up superconductors
- 214 Take-home message: No AIDS magic bullet
- 215 Close-up of an asteroid: Galileo eyes Ida
- 215 Gene therapy ameliorates clotting disorder

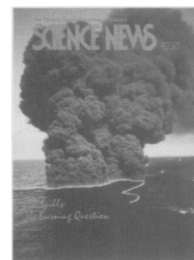
Research Notes

- 217 Archaeology
- 217 Astronomy
- 219 Materials Science
- 219 Science & Society

Articles

- 220 Burning Issues

Cover: To a casual observer, the roiling plumes of dense, black smoke created by burning oil may look like an environmental nightmare. But data from new studies — like this one conducted in the North Atlantic — suggest that for certain spills at sea, fires may prove the preferred solution for cleaning up oil. (Photo: NOBE)



Departments

- 210 Books
- 211 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*, Glenn T. Seaborg; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Dudley Herschbach; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. **Honorary Trustees** — Edward Bliss Jr.; Bowen C. Dees; O. W. Riegel; John Troan.

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

Letters

Answers to corny queries crop up

I have to chuckle when I think of the controversy raised in the letters about natural propagation of corn ("Giving ear to corny queries," SN: 7/17/93, p.35). I wish that "human intervention" really was necessary to harvest the corn in my garden. But for the past several years we have been unable to "intervene" before the raccoons and squirrels found and devoured all of the ears just before our own date for its demise.

Some of us here in the corn belt resort to repellents applied to the husks and silks just to be able to enjoy the corn we corn lovers are trying to propagate. We have even tried hot pepper sauce in addition to the standard garden fence!

Perhaps it is not a genetic loss in the corn plant itself, but our ability to control animal species around our fields that has produced the (potential) propagation problem for corn.

Brian Harmon
Downers Grove, Ill.

In answer to Roger M. Wernicke's query concerning the persistence of corn pollen in archaeological sites, J.A. Raloff states, "The sites where such apparently old pollen is found are very dry." This may be true of some sites, such as those in New Mexico, but the Koster site in southern Illinois and many sites in lowland Mesoamerica are in humid areas.

Pollen is almost indestructible under certain natural conditions, the best being the wet and highly acid environment of peat bogs. There, it is a valuable indicator of vegetative cover at the time of deposition, which, in turn, serves as an indicator of past climates. In addition, the organic matter in bogs furnishes radiocarbon time scales for pollen deposition. Pollen profiles extending back some 14,000 years are common in the upper Midwest, and sometimes it is possible to identify pollen from 200,000 years ago.

Wallace E. Akin
Professor
Department of Geography and Geology
Drake University
Des Moines, Iowa

Second thoughts on last theorem?

In his letter ("Fermat's feat still mysterious," SN: 8/28/93, p.131), Stephan Chodorov seems to assume that Fermat really did have a short, correct proof of Fermat's last theorem.

But it is worth noting that Fermat lived for nearly 30 years after he wrote his famous (infamous?) marginal note. In all that time, he never published such a proof, nor in all his correspondence with other mathematicians did he even claim to have such a proof. Nor was a proof found among his papers, published posthumously by his son Samuel (which was how the marginal note came to light).

So while it is not impossible that Fermat had some insight that has remained unduplicated for centuries, the truth is in all likelihood more prosaic: Like many people who have attempted to prove the theorem, Fermat made a mistake — but unlike several of them, Fermat caught his mistake before going public.

Leon Harkleroad
Visiting Professor of Mathematics
Cornell University
Ithaca, N.Y.

OCTOBER 2, 1993

211