

SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication
Volume 144, No. 18, October 30, 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
Ron Cowen	Environment/Policy
Bruce Bower	Astronomy
Richard Lipkin	Behavioral Sciences
Richard Monastersky	Chemistry/ Materials Science
Kathy A. Fackelmann, Elizabeth Pennisi	Earth Sciences
Ivars Peterson	Life Sciences/ Biomedicine
Larry Norland	Mathematics/Physics
Gabrielle Strobel	Editorial Assistant
Cait Anthony	Science Writer Intern
Donald R. Harless	Books/Resource Manager 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.

Letters

Nile delta concerns 2,400 years old

The increased estimates for the rate of sinking of the Nile delta are alarming ("Pottery shows Nile delta dropping fast," SN: 8/7/93, p.87), and they leave me curious about the rationale for the Aswan dams.

More than 2,400 years ago, Herodotus, in book 2 of his *Persian Wars*, noted the rapid rate of silt deposition by floods and the associated rise of the Nile delta, which he estimated to be at least 10 feet in 900 years, or more than 3 centimeters per decade — remarkably close to modern estimates. Herodotus was not aware that the crust beneath the delta was sinking as rapidly as the delta was rising, but he was concerned about the famine that would result from "stoppage of the inundations" of the Nile, and I am sure he would have disapproved the building of the Aswan dams.

Robert H. Thomas
Washington, D.C.

This Week

- 276 Researchers 'Clone' Human Embryos
- 276 Shattering the SSC vision: What next?
- 277 Fossil jaw offers clues to human ancestry
- 277 Fighting bugs with bugs to save cassava
- 278 Add tea to that old 'apple a day' adage
- 278 Cosmic dust can ferry in organic molecules
- 279 A buried Iowa crater finally comes of age
- 279 Embryo's nerve-inducing messenger found

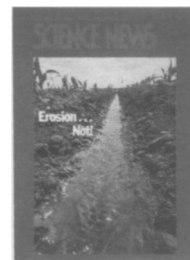
Research Notes

- 285 Biology
- 285 Biology
- 287 Astronomy
- 287 Science & Society

Articles

280 Holding on to the Earth

Cover: The cost of watering crops from irrigation ditches has been the erosion of valuable topsoil. But no eroded silt particles cloud the water traveling down this cornfield furrow. The reason? Growers experimentally treated the furrow soil with a promising, inexpensive polymer that they mixed into the irrigation water. (Photo: ARS/Doug Wilson)



282 Making Votes Count

Departments

- 275 Letters
- 284 Books

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.

Is test tube evolution Darwinian?

"Evolution in a Test Tube" (SN: 8/7/93, p.90) suggests that an exciting new biotechnological tool — directed molecular evolution — is analogous to Charles Darwin's concept of natural selection. I disagree.

The scientists who use this biotechnology have a purpose that motivates their selection of molecular structures. In contrast, Darwinian evolution depends on random events and chance. If molecular selection is an accurate model of natural selection, it suggests that there has been a design behind evolution for millions of years and, by logical extension, a Designer.

Unless I have misread *The Origin of Species*, Charles Darwin would not have supported such a paradigm.

Lawrence E. Armstrong
Storrs, Conn.

Extracting meaning from what's there

The story "Microwaves accelerate chemical extractions" (SN: 8/21/93, p.118) raises the

significant dichotomy between what's there and what's important. Merely knowing the amount of a substance that's present in a matrix often tells little about the significance of that amount. For example, there are tons and tons of gold in the ocean, but that gold has no commercial value. By the same token, the mere presence of a toxicant in a soil sample tells little about its bioavailability or the hazard it may pose.

What we are really looking for is an analytical method that answers not the question of what's there, but of what's significant to the task at hand.

B. J. Luberoff
Summit, N.J.

Address communications to:

Editor, SCIENCE NEWS
1719 N Street, NW
Washington, DC 20036

All letters subject to editing.

OCTOBER 30, 1993

275