

The Weekly Newsmagazine of Science

Science Service Publication Volume 143, No. 24, June 12, 1993

Alfred Scott McLaren
Patrick Young
Laurie Jackson
Vaughan,
Blair Burns Potter
Janice Rickerich

Publisher Editor Managing Editors Production/Design

Director

Greg W. Pearson Janet Raloff

Ron Cowen

Bruce Bower

Karen F. Schmidt

Associate Editor Senior Editor Environment/Policy Astronomy Behavioral Sciences Chemistry/ Materials Science Earth Sciences General Science

Richard Monastersky Daniel Pendick Kathy A. Fackelmann, Elizabeth Pennisi Ivars Peterson Larry Norland Bernice Wuethrich Cait Anthony Donald R. Harless

Life Sciences/ Biomedicine Mathematics/Physics Editorial Assistant Science Writer Intern 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, PO. 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)

(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

HIV Provides Tools for Gene Therapy
Some lasting memories emerge at age 2
Globe-trotting insects spread resistance
Speedy spin kept early Earth from freezing
Monkey virus may lead to anti-HIV insights
Mystery flu hits Southwest
Nearby galaxy sheds light on dark matter

Lipoprotein link to heart disease revealed

Rippling the surface of an electron sea

Research Notes

382 Astronomy 382 Earth Science 383 Technology

Articles

375

375

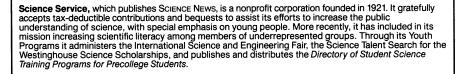
376 Light at the End of the Tunnel

Cover: People with glaucoma gradually lose their peripheral vision — a loss that can be quite debilitating. After investigating one family's pedigree, researchers are homing in on a gene that may cause this blinding disorder. (Photo: Chris Butcher)

378 The Flap Over Magnetic Flips

Departments

371 Letters 383 Books



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

Forceful arguments

I must comment on Samuel Vance's letter (SN: 4/24/93, p.267) commenting on your black hole article (SN: 2/6/93, p.86). He said that his 1950s physics course taught him that centrifugal force counters the gravity of the sun.

There is no such thing as centrifugal force. It's a fictitious force that simplifies some calculations and is consonant with intuition. The *real* force is centripetal force, the centerseeking force.

Siegfried N. Lodwig Chair, Science Division Centralia College Centralia. Wash.

Samuel Vance complained that you called Earth's orbital motion "rotation." Neither he nor you used the distinction I was taught in the 1930s: Earth *rotates* on its axis and *revolves* around the sun.

John Biddle Lawrence San Bernardino, Calif.

Land use study faulted

"Study erodes image of pre-Columbian farmers" (SN: 3/6/93, p.149) appears to make some excessive generalizations about land use in the Americas prior to 1500.

The overall tone of the article seems to be part of the currently fashionable debunking of traditional Native American practices and relationships with the environment. Data from one lake in central Mexico are extrapolated to Native Americans in general. Given the diversity and complexity of Native Americans, this is astonishing.

Could a parallel assertion be made, for instance, after researching long-term erosion patterns into Lake Como in Italy and then issuing a blanket statement about the land use practices of Eurasian peoples? Most researchers would not be so foolish as to make such a pronouncement. The fact that such generalizations are made about Native Americans and other non-European peoples perhaps says something about Euroamerican ethnocentrism.

This is not to imply that the study reported is without significance; it probably has important light to shed upon the problems of environmental degradation associated with hierarchical civilizations and large concentrations of population.

Philip Snyder Lecturer in Anthropology Wells College Aurora, N.Y.

SCENCE NEVS ...

Roping aquiferians above ground

Investigators bent on "Saving Hades' Creatures" (SN: 3/13/93, p.172) should visit downtown New Braunfels, Texas, located over the Edwards Aquifer. There, a river gushes from a hole in the ground, runs a way, then drops out of sight, as though seeking to join the Styx. Perhaps some of Hades' creatures could be captured while flowing along on their brief ride in the upper world.

Alan L. Bossinger Locust Valley, N.Y.

JUNE 12, 1993 371