

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 135, No. 3, January 21, 1989

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 Raloff	Environment/Policy
Kathy A. Fackelmann, Rick Weiss	Life Sciences/ Biomedicine
Ivars Peterson	Mathematics/Physics
Jonathan Eberhart	Space Sciences
Susan Arns	Assistant to the Editor
Ingrid Wickelgren	Science Writer Intern
Wendy McCarren	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

Copyright © 1989 by Science Service, Inc.,
Editorial and Business Offices,
1719 N St., N.W., Washington, D.C. 20036.
Republication of any portion of SCIENCE NEWS
without written permission of the publisher is
prohibited.

Subscription Department
231 West Center Street, Marion, Ohio 43305

Subscription rate: 1 yr., \$34.50; 2 yrs., \$58.00.
(Foreign postage \$6.00 additional per year.) Change of
address: Four to six weeks' notice is required. Please
state exactly how magazine is to be addressed.
Include zip code. For new subscriptions only call
(1) 800-247-2160. Printed in U.S.A. Second class
postage paid at Washington, D.C., and additional
mailing offices. Title registered as trademark U.S. and
Canadian Patent Offices. Published every Saturday by
SCIENCE SERVICE, Inc., 1719 N St., N.W.,
Washington, D.C. 20036. (202-785-2255)
ISSN 0036-8423

This Week

- 36 Fluoride-Calcium Combo Builds Better Bones
- 36 Sunshine fuels a bacterial relationship
- 37 Safety gets short shrift on long night shift
- 37 Fate of Arctic ozone remains up in the air
- 37 AIDS and attitude
- 38 Making waves that travel like beams
- 38 High-precision tests in particle physics
- 39 Getting to the heart of panic disorder
- 39 Vaccination success convicts seal killer
- 39 Greek contact for humans, Neanderthals?

Research Notes

- 44 Archaeology
- 44 Astronomy
- 46 Biology
- 46 Technology

Articles

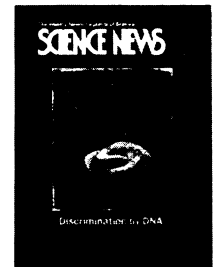
- 40 Predisposition and Prejudice
Cover: The double-helical coil of DNA present in every living cell contains much more than simple sugars, phosphates and nucleic acids. Encoded within those strands rest hints of the future: genetic predispositions toward metabolic and neurological diseases, certain cancers and a variety of other hereditary disorders. As scientists become better able to decode this information and predict individuals' medical fates, there arises an unprecedented possibility for discrimination on the basis of one's genes. (Illustration by Randy Fletcher)
- 43 Lessons and Questions Emerge from Armenian Quake

Departments

- 34 Books
- 35 Letters

Science Service Institution for the public understanding of science founded 1921; a nonprofit corporation.
Board of Trustees — *President*, Glenn T. Seaborg; *Vice President*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; *Secretary*, Hilleary F. Hoskinson; *Joseph W. Berg Jr.*; *Edward Bliss Jr.*; *Bowen C. Dees*; *David A. Goslin*; *J. David Hann*; *Milton Harris*; *Elena O. Nightingale*; *O.W. Riegel*; *H. Guyford Stever*; *John Troan*; *Deborah P. Wolfe*.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless.



Letters

Fire and fur

"Ancient human ancestors got all fired up" (SN: 12/10/88, p.372) may contain the information that solves the "Naked Ape" question. Fire, rather than sexuality or some other silly factor, was probably the force behind humanity's loss of fur.

If the use of fire was really important for early hominids' survival in territory shared by predators, the ability to use it would have been a great selective advantage. The down side would be that no furry animal could have lived closely with it. The hominids would thus have had to become "naked" in order for fire to be very useful to them.

Then, when the weather was cold or hominids moved to colder climates, they would wear animal furs, which could easily be thrown off if they caught fire.

The sequence would have been: Tool-making animal discovers fire, fire becomes essential to the animal's survival, fur becomes a liability causing selection for hairlessness,

fire's warmth and animal furs substitute for natural hair.

Roger P. Zabkie
Roseville, Calif.

I question the use of the word "caves" in "Ancient human ancestors got all fired up."

The eyes of early hominids must have been as sensitive to smoke as those of the much later Cro-Magnons, who used "rock shelters" for living and cooking.

If fire was used only to ward off predators, it was surely in "rock shelters" and not "caves." These early hominids and early humans were evidently more intelligent than Modern Man, who is only now realizing the danger of smog and smoke-filled rooms.

Evelyn Horn Wootton
Port Ludlow, Wash.

The Swartkrans site, where the evidence for hominid fires was found, is indeed an underground cave complex. It is far from clear exactly

how fire was used, or if hominids endured smoky eyes to keep predators at bay. —B. Bower

A hole in the logic?

In reference to the letter written by Richard K. Downs concerning wormholes (SN: 12/10/89, p.371): Although he offers an interesting scenario with gold bars, et al., I do believe he is somewhat off track in his logic.

His time traveler will not have more than two bars at any given time, and then only briefly. At some point in time, he will send his original bar into the past and wind up with only one bar again.

Or, in short (or is it in long?):

*A man of the future, I'm told
Wanted more than one bar of gold
But his past self received
Just a temporary reprieve*

When he got the new, he'd send out the old.
Vanita A. Green
Chicago, Ill.

JANUARY 21, 1989

35