EKKE NE

The Weekly Newsmagazine of Science

A Science Service Publication Volume 133, No. 15, April 9, 1988

E.G. Sherburne Jr. Patrick Young Dietrick E. Thomsen

Editor Senior Editor/ Physical Sciences Laurie Jackson Managing Editor Production/Design Wendy McCarren

Bruce Bower Richard Monastersky Stefi Weisburd Diane D. Edwards, Rick Weiss Ivars Peterson

Janet Raloff Jonathan Eberhart Janice Rickerich Christopher Vaughan

Jane M. Livermore

Donald R. Harless

Director Behavioral Sciences Earth Sciences General Science Life Sciences/ Biomedicine

Mathematics/Technology Policy/Technology Space Sciences Assistant to the Editor

Science Writer Intern

Advertising/Business Manager

Copyright © 1988 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 (1) 600-247-2100. Filmed III 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

228 Consumers Thwarted in Fight on Fat? 228 Tissue transplant boosts memory in rats 229 New explanation for an old nova 229 Neighbors bugged by germ warfare lab

230 Doubts about Fermat solution 230 Searching for the better clot-buster 231 Animal patent report lacks support 231 Legacy of fire: The soil strikes back

Research Notes

232 Anthropology 232 Biology 233 Biomedicine 233 **Physics**

Articles

234 Decline of the CFC Empire

Cover: To save the life-protecting ozone layer, the industrialized cover. To save the line-protecting ozone layer, the industrialized nations of the world are planning to limit their use of chlorofluoro-carbons and halons. These ozone-destroying compounds are important elements of refrigerators, air conditioners, foam insulation and firefighting equipment. Chemical companies are now mounting a multimillion-dollar search for safe replacements. (Photo courtesy Air Force Engineering and Services' Fire Technology Research Branch)



Departments

227 Letters 237 **Books**

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

Nonvitamin D

'Study sheds light on TB resistance" (SN: 1/23/88, p.60) contains some intriguing information and a semantic error which did not originate with you but which remains, apparently ossified, in the medical literature. There is no dietary requirement for vitamin D, since it's a hormone synthesized in the body from cholesterol and activated by sunlight. Therefore it's not a vitamin. Ditto for vitamin A (retinol) synthesized in the body from beta carotene, a photosynthetic plant pigment in food, which arguably is a vitamin.

Such nitpicking is not without clinical significance, since of the hypervitaminoses, A and D occur most commonly, and most commonly from the overuse of vitamin pills. This would not happen if these substances were not included in the pills in the first place. The nonvitamins A and D should be reclassified, perhaps as drugs.

William Harris Honolulu, Hawaii

These are good points, although many scientists believe that vitamin D supplements may be recommended for pregnant women, for people

who are rarely exposed to sunlight and for the few who don't synthesize the hormone properly (a problem that can result in ricketts)

- R. Weiss

Cave conclusions questioned

I doubt that the recently dated "burnt flints" from Qafzeh, Israel, provide "direct evidence that Neanderthals could breed with people from other parts of the world," as Prof. Wolpoff is credited with saying ("An earlier dawn for modern humans?" SN: 2/27/88, p.138).

The idea of coexisting races of Homo in the Near East is not a new one. Representatives of each are alleged to be present in the hominid remains from cave sites at Mount Carmel and northern Iraq. The earlier age implied for the more modern type raises the conundrum of how the more primitive form arose and became so widespread (i.e., in the Middle East and across Europe) during the earlier phases of the last glacial epoch, after circa 70,000 years ago. The allegation that the Neanderthals "appear to have been poorer foragers" is pejorative. They may have been biologically better adapted to midlatitude and periglacial environments than their

"more advanced" contemporaries who originated in the tropics and subtropics of Africa. William P. McHugh Wilkinsburg, Pa.

Tribal terror

"Murder in Good Company" (SN: 2/6/88, p.90) provided interesting factual information on the high murder rate among the otherwise docile Gebusi of New Guinea. However, the various hypotheses offered to explain this behavior all overlook one very basic human response. Human beings, in the face of uncontrollable and inexplicable death, are most vulnerable. Helplessness and fear are dealt with by identifying a cause (in this case sorcery) for the unexplained death. The identified cause provides something tangible that can be controlled or entirely eliminated (killing the sorcerer), thereby restoring a sense of power and control.

When I read the article, it brought to mind the outbreak of bubonic plague in the 14th century. As the population of Europe was being decimated by this disease of unknown origin, accusations of Jews poisoning the

Letters continued on p. 237

APRIL 9, 1988 227