ENCE N

The Weekly Newsmagazine of Science

A Science Service Publication Volume 142, No. 23, December 5, 1992

Alfred Scott McLaren Patrick Young Laurie Jackson Vaughan Janice Rickerich

Publisher Editor Managing Editor Production/Design Director

Associate Editor

Blair Burns Potter Janet Raloff

Ron Cowen

Bruce Bower

Elizabeth Pennisi

Senior Editor Environment/Policy Astronomy **Behavioral Sciences** Chemistry/ Materials Science Earth Sciences Life Sciences/ Biomedicine

Richard Monastersky Carol Ezzell, Kathy A. Fackelmann Ivars Peterson Larry Norland Daniel Pendick Connie Williams Donald R. Harless

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, 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 © 1992 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:

FO. Box 1925, Marion, OH 43305
For new subscriptions only, call 1-800-247-2160.
For customer service, call 1-800-347-6969.

This Week

388 Treat Hypertension, Nix Kidney Failure 388 Large prehistoric earthquake ripped Seattle 389 Fullerene-like molecules without carbon 390 Were spiral galaxies once more common? 390 Breast milk: Can it slime away disease? 391 Bringing water down to a new critical point 391 Depression rates rise over generations

Research Notes

398 **Riomedicine** 398 **Physics**

Articles

392 Talking Maps

> Cover: With this tactile map of Washington, D.C., people who see poorly or not at all can feel their way to the monuments. But to help cartographers compensate for the limitations of tactile graphics, researchers are developing technologies to make these maps (Photo by John Consoli, University of Maryland, College Park)

394 Anatomy of Alzheimer's



386 Books 387 Letters



Science Service, a nonprofit corporation founded in 1921, 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 Program 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; 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

Icing the caffeine habit

I cannot believe that the results of research on caffeine addiction and withdrawal can be news to the scientific community ("Caffeine: The pain of going cold turkey," SN: 10/17/92, p.263). The Army seems to have known about it for half a century.

I was an infantryman in World War II. When for the first time our outfit was cut off from contact with the field kitchen and we had to eat emergency rations or nothing, I thought I was going to die in mid-morning from nausea and the most intense headache I had ever experienced. I recovered by late afternoon, but four or five days later the same thing happened

My companions perceived my distress, and by noon I was at the door of the medical tent, truly frightened by my horrendous symptoms. I described them to the medic, who immediately asked me if I drank coffee regularly. I answered in the affirmative. Then he asked me

if I had drunk any coffee on that day or on the previous morning I was ill. I told him I hadn't. He said he knew what was wrong and had just the thing to cure me. He gave me a cup of coffee, and within an hour I was right as rain.

The medic explained to me that some soldiers apparently became so dependent on coffee that they became ill if they didn't get their morning shot. He pointed out that since my unit could hardly have coffee every morning in the field, I should try to quit drinking it. The way to do this was to drink a little less each morning for about two weeks until I could do without it. I did what he said and it worked out just as he had predicted.

I thought everybody knew that by now! John W. Bowling Troy, Ala.

Your article on caffeine gives new insight to the Pepsi ad campaign "Gotta have it!"

Rebecca Hobart Westport, Mass.



Ins and outs of the spacelab

I am mystified by the three-character sign shuttle astronaut Mark C. Lee is apparently pointing to on the cover of Science News (10/17/92).

Stephan Waters Lyons, Ore.

NASA says the symbols are an entrance-exit sign in Japanese.

DECEMBER 5, 1992 387