

The Weekly Newsmagazine of Science

Science Service Publication Volume 151, No. 7, February 15, 1997

Thomas Peter Bennett Julie Ann Mille Blair Burns Potter Dan Skripkar

David Lindley

Publisher Managing Editor Production/Design Director Associate Editor

Janet Raloff Ivars Peterson Bruce Bower

Senior Editor Environment/Policy Online Editor Mathematics/Physics Behavioral Sciences Internship Coordinator Earth Science

Kathleen Fackelmann, Steve Sternberg Ron Cowen

Tina Adler, Christine Mlot

Richard Monastersky

Astronomy Life Sciences Biology Chemistry/ Materials Science Editorial Assistant

Biomedicine

Paul Smaglik Meghan Mitchell Cait Anthony Donald R. Harless

John Travis

Corinna Wu

Science Writer Intern Books/Advertising **Business Manager**

SCIENCE NEWS (ISSN 0036-8423) is published weekly on SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$49.50 for 1 year or \$88.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, 1719 N Street, N.W., Washington, D.C. 20036. Preferred Periodicals postage paid at Washington, D.C., and additional mailing office.

POSTMASTER: Send address changes to Science News, P.O. Box 1925, Marion, Ohio 43305. Change of address: Four to six weeks' notice is required — old and new addresses including rig codes must be provided. addresses, including zip codes, must be provided.

Copyright © 1997 by Science Service. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. Propublication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Editorial and Business Offices

1719 N St. N.W., Washington, D.C. 20036 202-785-2255; scinews@scisvc.org

Advertising Representative

Lewis Edge & Associates, Inc. 366 Wall St., Princeton, N.J. 08540, 609-683-7900

Subscription Department

P.O. Box 1925, Marion, Ohio 43305 For new subscriptions only, call 1-800-247-2160. For customer service, call 1-800-552-4412.

SCIENCE NEWS ONLINE http://www.sciencenews.org

This Week

Tallying Nitrogen's Increasing Impact 100 100 Car phones jack up risk of collisions

101 Younger stars and an older, bigger cosmos

101 Fish oil gets a garlic chaser for the heart

102 Combat vets show shifting trauma memories 102 New gene clearly resolves an eye debate

Science funding slips in 1998 budget 103

Research Notes

Chemistry 111 Earth Science

Articles

106 Jomon Genes

Cover: Even as growing crowds threaten to overwhelm the streets of Tokyo and the rest of Japan, researchers delve into mysteries surrounding the Jomon, the first people to live on the Japanese archipelago. By examining the Y chromosomes of Asian populations, the scientists hope to discern where the Jomon originated and the extent to which their genes persist among modern Japanese. (Photo: Charlie Westerman/Gamma Liaison International)

108 The Birth of a Breast Cancer

Departments

98 **Books** 99 Letters



Science Service is a nonprofit corporation founded in 1921 to increase the public understanding of science. It publishes SCIENCE NEWS and administers the International Science and Engineering MENCE NEWS and administers the International Science and Engineering Fair and the Science Talent Search.

Board of Trustees — Chairman, Dudley Herschbach; Vice Chairman, Gerald F. Tape; Secretary, David A. Goslin; Treasurer, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Shirley M. Malcom; Eve L. Menger; C. Bradley Moore; Ben Patrusky; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe; Chairman Emeritus, Glenn T. Seaborg; Honorary Trustees, Edward Bliss Jr.; Bowen C. Dees; Elena O. Nightingale; O.W. Riegel; John Troan.

President, Thomas Peter Bennett; Vice President and Business Manager, Donald R. Harless.

Letters

Sea turtle chanties

My immediate reaction upon seeing the headline "Do sea turtles stop and ask for directions?" (SN: 11/30/96, p. 342) was, only if they're female. When I read the article, I realized that the turtles in question were indeed female.

Tell me, was this intentional or fortuitous? Arnold Di Giulio Encino, Calif.

I remember a story, its source long forgotten, about a seaman on board a ship en route from the Panama Canal to Japan. At the end of his shift, he would take a stroll around the deck to stretch his legs before retiring.

One night, he didn't show up for his watch. The duty log was consulted, and the navigator calculated the ship's position at the estimated time the man would have fallen overboard. The captain ordered the ship to turn around and head toward its estimated position when the seaman disappeared.

Sure enough, a day or so later they found the lucky man clinging to a sea turtle that had graciously delayed its migration.

Michael J. Bihn Freedom, Calif.

I am not an animal rights fanatic, but when the target of study is an endangered species like the leatherback, can the biologists responsible for the research assure us that the tagging or tracking methods used have no effect on the reproductive success of the animal? Perhaps they just have to know where the last one went, embarrassed and

Does endangered species legislation include provisions to require something like a 'species impact statement" to address this problem? Do university biology departments have policies along these lines?

Bill McIntosh Santa Fe, N.M.

The transmitters used for studying sea turtles

are designed to have negligible effects on the animals, says Stephen Morreale of Cornell University. The picture of the leatherback turtle in the story shows a sonic transmitter that is kept on the animal for up to 3 days, after which biologists retrieve it. The small satellite transmitters mentioned are attached to the turtles by a short tether and are designed to break away after a year.

Because this study was conducted in Costa Rica, Morreale and his colleagues obtained permits from that nation's government. In the United States, most states require permits, as does the federal government. In his work for Cornell, Morreale must also get clearance from the university's school of veterinary med-- R. Monastersky icine.

CORRECTION

The report on penguin huddling ("Space jam: Energetics of a penguin huddle," SN: 1/25/97, p. 52) should have referred to Yvon Maho and his, not her, colleagues. We regret la gaffe.

FEBRUARY 15, 1997

SCIENCE NEWS, VOL. 151

99