

# SCIENCE NEWS®

The Weekly Newsmagazine of Science

Science Service Publication  
Volume 148, No. 12, September 16, 1995

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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, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Second-class 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 zip codes, must be provided. Copyright © 1995 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. ♻️ Reproduction 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)

**Advertising Representative:**  
Lewis Edge & Associates, Inc.  
366 Wall St., Princeton, N.J. 08540  
(609-683-7900)

**Subscription Department:**  
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Cover: Even beneath the sea, sunlight illuminates life. On coral reefs, scientists find some of the richest color displays—and most sensitive vision systems—in the animal kingdom. The cover image highlights the unusually color-sensitive eyes of a mantis shrimp. (Photo: Roy L. Caldwell/University of California, Berkeley)

### 188 DNA Flips Out!

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Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It 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 Programs 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*.

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## Letters

### The too-distant future

Concerning "The Little Bang" (SN: 6/24/95, p.392), if the distance from here to Maffei 1 is from 13 to 16 billion light years, the only tool useful for observing it would be a ouija board, since no light would have reached us yet.

Anthony J. Goceliak  
Lancaster, N.H.

That's right—it's 13 to 16 million light years away. —R. Cowen

### Taxonomic tidbit

I received the May 27, 1995 SCIENCE NEWS today and as usual proceeded to devour it.

One thing nearly proved indigestible however: the statement that "Ungulates include such mammals as bison, deer, elk, rabbits, cattle, sheep, goats, and antelopes..." ("Probing prehistoric art to the bone,"

p.335). The last time I looked, rabbits were classed as lagomorphs.

Thomas J. Dixon  
Williamsville, N.Y.

Indeed, rabbits do fall into the order Lagomorpha. Moreover, researchers are considering rabbits (*Oryctolagus cuniculus*) for the purpose of genetic comparison rather than as a possible source of the paint-binding bone marrow. —R. Lipkin

### Happiness, sleep, and creativity

"Moods and the Muse" (SN: 6/17/95, p.378) reminds me of the old French proverb: Les heureux ne font pas d'histoire (Happy folks don't make history).

Joseph H. Vanhoenacker  
Pittsfield, Mass.

Any study of creativity is confounded by two issues: First, only a small percentage of creative thought is "useful," and second,

sleep impairment often promotes creative imagination.

Emotionally distraught people experience intermittent or persistent insomnia. Some creative people even purposely restrict their sleep when in the creative mode. Restricted sleep causes deprivation of REM (dreaming) sleep. This REM pressure may feed the flame of wakeful creativity. Manic depressives and alcohol or drug abusers also experience REM pressure, enhancing creative images.

To study sleep patterns in creative giants would be fascinating and may well explain episodic explosions of genius. But the creative mind ends up throwing away 80 percent or more of its productions. Probably less than 20 percent are found "useful" to humanity! Nightmares and hallucinations, after all, are the most creative phenomena of the human brain.

Edward S. Friedrichs  
Brown Deer, Wis.