earthquake of magnitude 9 on the Richter scale. A key "hint" was modeling results suggesting that a magnitude 9 event would generate a 2-meter-high tsunami in Japan, causing substantial and widespread damage and earning itself a place in Japanese records.

To my knowledge, no published tsunami modeling code exists that can quantitatively calculate inundation over transoceanic distances to within 2 meters. Modeling results from existing state-of-the-art Japanese and American codes have been shown to differ substantially and often by a factor of 10 from observed values (*1*, *2*), even for nearshore generation. More recent advances (*3*) have produced results differing by a factor of 4. It is widely believed (*2*, *3*, *4*) that the reason for this disparity is that existing transoceanic codes stop the wave propagation calculation far from the shoreline, usually at the 10 meters depth contour, to avoid either numerical artifacts associated with wave breaking or uncertainties in the available nearshore bathometry and topography data. The wave height at that location is then taken as the tsunami height. Whereas this practice has merit in that it qualitatively identifies run-up distribution patterns, it cannot calculate with any degree of confidence a 2-meter-high run-up height for a tsunami wave that was numerically propagated over a distance of more than 4000 kilometers.

Irrespective of the hydrodynamic modeling, the findings in Japan are consistent with a tsunami in 1700 originating from a giant CSZ event of a magnitude in the range inferred by the paleosedimentologic evidence in Puget Sound.

***Costas E. Synolakis***
*Department of Civil Engineering,*
*University of Southern California,*
*Los Angeles, CA 90089–2531, USA*

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## Paving the Info Superhighway

Over the past several weeks, we have been collecting and archiving the World Wide Web locations (URLs) of high-quality medical information. As one source for our database, we used all of the Internet directories and indexes mentioned in Gary Taubes's article "Indexing the Internet" (Computers '95: Fluid Dynamics, 8 Sept., p. 1354). We looked for information that we, as practicing physicians, considered reliable and useful to both health-care providers and patients. In the end, we located many excellent medical resources on the Internet, but we had to discard most of the "medical" and "health" netsites because the information was sparse, unrelated to medicine, or from unproven sources.

For example, under the heading "Medicine" of one index we found the following mix: a Centers for Disease Control and Prevention site describing a useful free fax service that distributes detailed literature on AIDS topics, an emotional home page requesting donations for a 2-year-old girl who is in need of a heart transplant, a government location providing a lengthy policy statement on the carcinogenic potential of various chemicals, and a site covering nonmedical gay and lesbian issues.

Internet directories, indexes, and search engines are powerful tools for paving the information superhighway, but they are still in their infancy. The lack of human editing makes for an interesting (albeit bumpy) ride.

***Robert S. Sikorski***
*Howard Hughes Medical Institute Fellow,*
*Division of Basic Sciences,*

*National Cancer Institute, Bethesda, MD 20892, USA*
*E-mail: rss@nchgr.nih.gov*
***Richard Peters***
*Howard Hughes Medical Institute Fellow, Harvard Medical School, and Department of Medicine, Massachusetts General Hospital, Boston, MA 02114, USA*
*E-mail: rpeters@vp3.med.harvard.edu*

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## Cockroach Immunity

Although I was pleased to see our work on the American cockroach cited in the article by Virginia Morell about female immune responses (News, 11 Aug., p. 773), I feel I must come to the defense of the male cockroach, which was characterized as less than able to withstand toxic challenges of honeybee venom. In fact, 80% of male roaches will survive a lethal dose of the venom delivered 2 weeks after immunization with a toxoid preparation (*1*). However, as Morell correctly implies, female roaches do indeed have superior immune responses compared with those of males. In fact, we have found that the female roach is so much more adept at generating a protective response that it requires a second immunization of males to even begin to match the response levels found in females receiving only a single immunization.

***Richard D. Karp***
*Department of Biological Sciences, University of Cincinnati, Cincinnati, OH 45221, USA*

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1. L. E. Duwel-Eby *et al.*, in *Immunology of Insects and Other Arthropods*, A. P. Gupta, Ed. (Academic Press, New York, 1991), pp. 385–402.

## Corrections and Clarifications

The Random Sample item "Diagnostic imagery for Florida" (8 Sept., p. 1343) should have stated that the accompanying map shows the Caloosahatchee River flowing *out of* Lake Okeechobee (to the Gulf of Mexico), not *into* it.

In the response by O. Steinbock and K. Showalter to a technical comment by D. Gareth Williams ("Minimal path algorithms," 21 July, p. 418), the word "his" was inadvertently inserted by *Science* before the word "co-workers" in the second sentence. The authors originally wrote, "We wish to emphasize that path finding from reaction-diffusion waves, which was suggested by Babloyantz and co-workers in 1991 (*2*) [J. A. Sepulchre, A. Babloyantz, L. Steels, in *Proceedings of the International Conference on Artificial Neural Networks*, T. Kohonen, K. Makisara, O. Simula, J. Kangas, Eds. (Elsevier, Amsterdam, 1991), pp. 1265–1268; J. A. Sepulchre and A. Babloyantz, in *Chemical Waves and Patterns*, R. Kapral and K. Showalter, Eds. (Kluwer, Dordrecht, 1995), pp. 191–217], represents a mechanism by which physical and biological systems might optimize transit times and distances." *Science* regrets the error.

References related to citation 2 include J. A. Sepulchre and A. Babloyantz, *Phys. Rev. E* **48**, 187 (1993); A. Babloyantz and J. A. Sepulchre, *Physica D* **49**, 52 (1991); and J. A. Sepulchre and A. Babloyantz, *Phys. Rev. Lett.* **66**, 1314 (1991).

### Letters to the Editor

Letters may be submitted by e-mail (at science_letters@aaas.org), fax (202-289-7562), or regular mail (*Science*, 1333 H Street, NW, Washington, DC 20005). Letters will not be routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for reasons of clarity or space. Beginning in October 1995, our previous policy of consulting with all letter authors before publication will be discontinued.