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## This Week

- 68 Monitoring the Movements of Nerves
- 68 Charting the spread of AIDS
- 69 Crystal-coated lipids promise new materials
- 69 Dark matter: A cosmos that runs hot and cold
- 70 Hyperactivity grows into adult problems
- 70 Biting flies flee elephants' swatters
- 70 Panel weighs health impact of herbicides
- 71 Pleistocene diet: Tough on the teeth
- 71 Atomic rebound makes breaking up hard

## Research Notes

- 79 Behavior
- 79 Biology

## Articles

### 72 Chitin Craze

Cover: The shells of crabs, lobsters, and shrimp, as well as the hard coats of insects, contain a chemical called chitin. For years scientists have worked to turn this abundant material into a variety of useful products, with mixed success. (Photo: Chris Butcher)



### 76 Refiguring the Odds

## Departments

- 66 Books
- 67 Letters

**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

### Concern about discerning dyslexia

In the study reported in "Dyslexia risk linked to summer births" (SN: 5/1/93, p.278), Richard Livingston and others defined dyslexia as "a reading score on standard tests falling at least two years behind the expected level, despite a normal IQ."

While one may predict "reading retardation" using such criteria, dyslexia cannot be defined or diagnosed in this manner. Dyslexia is not simply reading below one's IQ level: It is a language communication disability affecting information processing and reflects problems with words — in reading, spelling, writing, speaking, and listening. Thus, a reading achievement test and an IQ test alone cannot determine the existence or nonexistence of dyslexia: A battery of tests is needed for this purpose.

The researchers' definition is much too broad and general. Children in the study could have problems for a variety of reasons — motivation, visual or hearing defects, social

and academic opportunity, quality of teaching, stability of home life, and the like.

Anne Marshall Huston  
*Professor of Education and Human  
Development, Emeritus  
Lynchburg College  
Lynchburg, Va.*

### Subduction trenches as nuclear dumps

Looks like the Soviets had the right general idea for nuclear waste disposal but didn't use the appropriate technology ("Hazard from Soviet nuclear dumps assessed," SN: 5/15/93, p.310).

Nuclear waste — including parts of reactors and weapons — encapsulated in concrete could be dumped into the oceans' subduction trenches, where they ultimately would be reprocessed by interior Earth. Satellite navigation systems make accurate dumping relatively simple.

Any leakage at that depth would be confined to the trenches, unless the dumped materials became a critical mass for a self-sustaining

reaction. The International Atomic Energy Commission could develop packaging specifications and a dispersal database. All who manage nuclear energy for peaceful purposes have the capability to conform to an adequate packaging and dispersal scheme.

Darwin L. Hatheway  
*Augusta, Me.*

**The physical danger** from the deteriorating *Komsomolets*, with its plutonium-containing torpedoes, troubles me less than the apparent mind-set of Lars Føyn and others. Their casual attitude in the face of nuclear irresponsibility of unprecedented scope, continental size, and millennial time frame is outrageous.

While the Cold War is over, the cleanup will take more time, money, and manpower than we can yet imagine. The mess may be in their backyard, but we're all neighbors on this planet.

William Ellis  
*Moline, Ill.*

JULY 31, 1993

67