

OF THE WEEK

Blackbody deviation: An explanation 4
 FDA: Regulation and resignation 4
 Shuttle launch update 5
 Effective genital herpes treatment 5
 Arctic ice pack covers sea of activity 5
 A return to the golden age of sailing 6
 Placebo abuse revealed 6

RESEARCH NOTES

Environment 2
 Physical Sciences 2
 Energy 7
 Archaeology 7

ARTICLES

Evolution graphically displayed 10
 The evolution of genetic material 12

DEPARTMENTS

Letters 3
 Books 14

COVER: This roach-infested kitchen is not a scene from the latest summer horror flick. It is an illustration of one principle of evolution: the struggle for existence. These 130,000 roaches represent only three generations if all were to survive the struggle for existence. They are part of a new exhibit at the Smithsonian Institution's Museum of Natural History. See p. 10. (Photo: Smithsonian Institution)

Publisher	E. G. Sherburne Jr.
Editor	Robert J. Trotter
Senior Editor and Physical Sciences Behavioral Sciences Biomedicine Earth Sciences Life Sciences Policy/Technology Space Sciences Contributing Editors	Dietrick E. Thomsen Joel Greenberg Joan Arehart-Treichel Susan West Julie Ann Miller Janet Raloff Jonathan Eberhart Lynn Arthur Steen (mathematics) Kendrick Frazier John H. Douglas Michael A. Guillen
Science Writer Interns	Mary-Sherman Willis Marcia F. Bartusiak Judy Klein
Assistant Editor	Dale Appleman
Art Director	Angela Musick
Assistant to the Editor	Jane M. Livermore
Books	Donald Harless
Business Manager	Scherago Associates
Advertising	1515 Broadway New York, N.Y. 10036 Fred W. Dieffenbach, Sales Director

Copyright © 1979 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., \$15.50; 2 yrs., \$27.00; 3 yrs., \$37.50 (Add \$3 a year for Canada and Mexico, \$4 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255)
TWX 710-822-9433 SCIEN NEWS. ISSN 0036-8423

LETTERS

Waste disposal legislation

I would like to compliment you on your treatise regarding the status of present and future legislation in the area of illegal chemical waste disposal (SN: 5/26/79, p. 348). Your article provided an informative addendum to the CBS "60 Minutes" exposé, an addendum which I hope will continue to grow.

Legislation is the only method that can be presently employed to protect the public, but, as your article pointed out, the RCRA is too weak to obtain that protection. The situation is further complicated by the presence of inactive or abandoned dumps and the inadequate legislation designed to deal with them. Since funding is a major concern in any operation, we can expect further opposition from some major companies regarding the standardization of waste disposal practices. Is opposition an ethical position to assume when public safety is the major concern? Touché to the corporations who detoxify their chemical wastes. In light of the obvious benefits that result from this practice, it's worth spending a little more for a product.

Neal A. Sloane
Athens, Ohio

What's in a name

A short item in the May 19 issue of SCIENCE NEWS (p. 325) mentioned the possibility of a new Department of Education — DOE — being added to the federal maze.

To avoid confusion with the existing DOE (Department of Energy) and to more appropriately indicate the need for this new agency, I have several suggestions for alternate department names:

- Department of Public Education DOPE
- Department of Unified Public Education DUPE
- Department of Public Education and Science DOPES
- Department of Public Instruction & Educational Resources DOPIER

And somewhere in the new agency there should be a Department of Public Education — Youth. I'm sure the taxpayers will soon see General Youth Programs and that they are bound to find they have gotten a new Standard Health and Fitness Training section.

D.A. Versteeg
Spokane, Wash.

Address communications to Editor,
Science News, 1719 N Street, N.W.
Washington, D.C. 20036
Please limit letters to 250 words.

Using prudence

One should use the term "extremely dangerous" with some prudence. Mr. Bill Iverson's statement that 1,000 mR in one day is extremely dangerous (SN: 5/26/79, p. 339) is not justified. The National Council on Radiation Protection and Measurements (Report No. 54) fails to find sufficient evidence to advise therapeutic abortion for fetuses that have received up to 5,000 millirads acute dose.

The effectiveness of a warning is weakened by exaggeration of the danger. Unfortunately, this seems to be a mission of some governmental regulatory agencies. Other such agencies, not so subverted in their reporting, suffer by association through a common denominator.

James A. Hancock, Jr.
Norfolk, Va.

SCIENCE NEWS

Are you reading someone else's copy of Science News? Are you at the end of a routing list? Why not get your own — each week?

Please enter my subscription to SCIENCE NEWS for 1 year (52 weekly issues).

Science News Subscription Dept.
231 West Center St.
Marion, Ohio 43302

Bill me \$15.50 enclosed

Name _____

Address _____

City _____ State _____ Zip _____

Service to start in four to six weeks.

D279-X

Institution for the public understanding of science founded 1921; a nonprofit corporation.

Board of Trustees—Allen V. Astin, Bethesda, MD; Joseph W. Berg Jr., National Research Council, Washington, DC; Edward Bliss Jr., Newburyport, MA; Bowen C. Dees, The Franklin Institute, Philadelphia, PA; Julius Duscha (Secretary), Washington Journalism Center, Washington, DC; David A. Goslin, National Research Council, Washington, DC; Milton Harris (Treasurer), Washington, DC; Elizabeth F. Neufeld, National Institutes of Health, Bethesda, MD; O. W. Riegel, Glasgow, VA; Aaron Rosenthal, Washington, DC; Edward W. Scripps II, Edward W. Scripps Trust, Carson City, NV; Glenn T. Seaborg (President), University of California, Berkeley, CA; Gerald F. Tape (Vice President), Associated Universities, Washington, DC; John Troan, Pittsburgh Press, Pittsburgh, PA; Deborah P. Wolfe, Queens College of City University of New York, Flushing, L.I., NY

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless; Things of Science: Ruby Yoshioka.

SCIENCE SERVICE