

SCIENCE NEWS®

A Science Service Publication
Vol. 110/September 4, 1976/No. 10
Incorporating Science News Letter

OF THE WEEK

Functioning artificial gene	148
Interstellar acetylene	149
Viking and Occam's Razor	149
Diabetes cell transplants	150
Distinguishing depressions	150
Huge Antarctic crater?	151
Deepest ocean hole	151
PCBs in mothers' milk	151

RESEARCH NOTES

Technology	152
Behavior	153
Physical Sciences	153

ARTICLES

Demystifying sharks	154
Do physical constants change?	157

DEPARTMENTS

Books	146
Letters	147

COVER: Eugenie Clark, one of America's leading shark scientists, approaches a bull shark snagged on a hook and chain. Hooked and "sleeping" sharks share the need to alter their normal breathing method in order to remain alive. See p. 154. (Photo: David Doubilet/National Geographic Society)

Publisher	E. G. Sherburne Jr.
Editor	Kendrick Frazier
Senior Editor and Physical Sciences	Dietrick E. Thomsen
Senior Editor and Behavioral Sciences	Robert J. Trotter
Biomedical Sciences	Joan Arehart-Treichel
Biology/Chemistry	Janet L. Hopson
Science and Society	John H. Douglas
Space Sciences	Jonathan Eberhart
Contributing Editor/ Mathematics	Lynn Arthur Steen
Copy Editor	Michelle Galler Riegel
Art Director	Dale Appleman
Assistant to the Editor	Evelyn Harris
Books	Margit Friedrich
Business Manager	Donald Harless
Advertising	Scherago Associates, Inc. 11 W. 42nd St. New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

Copyright © 1976 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS 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., \$10; 2 yrs., \$18; 3 yrs., \$25. (Add \$2 a year for Canada and Mexico, \$3 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.

LETTERS

Independent inventors arise

In his article on the decline of independent inventors (SN: 7/24/76, p. 60), Mr. Douglas failed to emphasize the importance of the decline in the availability of high-risk venture capital, although his success-failure statistics do make clear that that is the kind of capital required to finance new inventions.

High-risk venture capital is the first to disappear when there is a capital shortage, as we have today. This shortage in turn can be traced to our spendthrift politicians and monopoly labor unions.

M. F. Thomas
Pacific Palisades, Calif.

Your article relating to patenting and independent inventors is accurate and factual, except for the implicit assumptions that the difficulties encountered by the independent inventor and by the small businesses which own patents can be remedied by government bureaus and foundations. The only real remedy would be (1) a recognition by our legislators that patents are much more important to small business than to big business, and that they greatly help to launch new enterprises and increase employment and (2) a recognition by the courts that human beings engaged in research, development and the design and creation of new products and materials are not all geniuses, that most worthwhile improvements are made in relatively small steps, and that many patents which have been invalidated by the courts on account of "obviousness" should not have been so struck down, because the test as to what would be "obvious to a person of ordinary skill in the art" has been unrealistically applied.

John C. L. Cowen
Birmingham, Mich.

We've read the article on inventors and agree that this vanishing breed needs better nurturing. Without wanting to open the floodgates to more work than we can handle, we make the following offer: We will respond in writing to any inventor who writes us inquiring about the marketability, and marketing approaches indicated, relating to his or her idea. Our response will reflect our large data base of consumer research data, and century of market research experience within our network. We will undertake this as an appropriate adjunct to our current non-profit activities in helping to redirect American Business toward delivering more

enduring value(s). Obviously, we will hold all such inquiries in the strictest confidence.

Bill Harvey
President
Ouroboros Institute, Inc.
Moonhaw Road
West Shokan, N.Y. 12494

DNA engineering: Both sides

In reading the article "Recombinant DNA and the Cambridge City Council" (SN: 7/17/76, p. 36), I wondered if others along with me felt it contained elements departing from your usual objectivity in reporting science news. For example, do some scientists and laymen deserve to be tagged as "radical" because they are acutely aware of the potential hazards in gene transplant technology, and voice their concerns in a forceful manner? And should Mayor Velucci of Cambridge be taxed with "sniping" and being "a favorite of blue-collar workers" in connection with his attempts to delay all recombinant DNA experimentation in his city?

If there may be a serious public health hazard in such experiments, as believed by members of Science for the People and other objectors, should they not be commended, or at least be given a respectful hearing, instead of being denigrated or ridiculed, for their call for caution?

Edward Leavitt
Los Angeles, Calif.

If in fact recombinant DNA experiments present a real hazard, to argue that Cambridge's ban is foolish (SN: 7/17/76, p. 36) because universities in Boston can proceed with them, is like arguing that the United States shouldn't ban airline hijackings because there is as yet no universal international agreement on them.

Keith Nealy
San Francisco, Calif.

Viking Photos of Mars

Many readers have written asking where they might obtain prints of the Viking photographs of Mars. NASA refers you to: Bara Photographics, P.O. Box 486, Bladensburg, Md. 20710. Telephone (301) 322-7900. Bara asks that you order by number (if you know it) or send in a clipping showing a published version of the photo to identify it. Prices for prints are \$1.75 for an 8×10 B&W, \$5 for 8×10 color and \$6 for a negative. Transparencies (B&W or color) are available for \$3.50 for the first slide, 33¢ for each additional slide up to 10. All above 10, the price is reduced according to quantity desired. Most, but not all, of the Viking photos you see published are available.—Ed.

SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a nonprofit corporation

Board of Trustees—Nominated by the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: **Deborah P. Wolfe**, Queens College of City University of New York; **Bowen C. Dees**, The Franklin Institute; **Athelstan Spilhaus**, National Oceanic and Atmospheric Administration. Nominated by the NATIONAL ACADEMY OF SCIENCES: **Gerald F. Tape**, Associated Universities; **Allen V. Astin**, Bethesda, Md.; **Glenn T. Seaborg** (President), University of California, Berkeley. Nominated by the NATIONAL RESEARCH COUNCIL: **Gerald Holton**, Harvard University; **Joseph W. Berg Jr.**, National Research Council; **Aaron Rosenthal**, National Academy of Sciences. Nominated by the JOURNALISTIC PROFESSION: **Edward Bliss Jr.**, American University; **Julius Duscha**, Washington Journalism Center; **O. W. Riegel** (Secretary), Washington and Lee University. Nominated by E. W. Scripps Trust: **Milton Harris** (Treasurer), Washington, D.C.; **Edward W. Scripps II** (Vice President and Chairman of the Executive Committee), Edward W. Scripps Trust; **John Troan**, Pittsburgh Press.

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

SEPTEMBER 4, 1976

147