

# Science<sup>®</sup> News

A Science Service Publication  
Vol. 106/July 20, 1974/No. 3  
Incorporating Science News Letter

## Of the Week

West Germany's space plans	36
Salyut 3 flies on	37
Ear seen in new light	37
Test-tube babies reported	37
National health care programs	38
Government health research	38
Alcohol abuse and cancer	39

## Research Notes

Natural Sciences	40
Technology	40
Botany	41
Climatology	41

## Articles

Botanist intrigued with fossils	42
Hospital-acquired infections	44

## Departments

Books	34
Letters	35
Off the Beat: Physicists and Geller	46
Need for an <i>arbitrator scientiarum</i>	46

**COVER:** Fossilized leaves from the Smithsonian collection. Both of these are extinct plants over 40 million years old. Although they were found at high altitudes in North Dakota and Wyoming, they are relatives of tropical and subtropical plants now found only in South America. They are evidence of vast climatic changes. See p. 42. (Photos: Leo J. Hickey)

<b>Publisher</b>	<b>E. G. Sherburne Jr.</b>
<b>Editor</b>	<b>Kendrick Frazier</b>
<b>Senior Editor and Physical Sciences</b>	<b>Dietrick E. Thomsen</b>
<b>Senior Editor and Behavioral Sciences</b>	<b>Robert J. Trotter</b>
<b>Biological Sciences</b>	<b>Joan Arehart-Treichel</b>
<b>Science and Society</b>	<b>John H. Douglas</b>
<b>Space Sciences</b>	<b>Jonathan Eberhart</b>
<b>Writer/Copy Editor</b>	<b>Lisa J. Shawver</b>
<b>Art Director</b>	<b>Dale Appleman</b>
<b>Assistant to the Editor</b>	<b>Esther Gilgoff</b>
<b>Books</b>	<b>Margit Friedrich</b>
<b>Advertising</b>	<b>Scherago Associates, Inc.</b> 11 W. 42nd St. New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

Copyright © 1974 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Republication of any portion of SCIENCE NEWS is strictly prohibited.

**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. Established as Science News Letter in mimeograph form March 13, 1922. 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). Cable SCIENSERV.

# To the Editor

## Babies' awareness-III

Mrs. Westman (SN: 6/1/74, p. 347) has just provided a fine example of the attitude Mrs. Carter and I were criticizing (SN: 5/11/74, p. 299). I don't recall that either of us attacked the scientific method (in which I gather all three of us were trained) itself, but merely the habit of discounting observations made by "unscientific" methods or persons.

Actually, I made a great many observations and tests on my infant daughters, beside those I specifically mentioned, and came to much the same conclusions as Ms. Carpenter (SN: 4/6/74, p. 222); but no one would believe them then, because 25 years ago science didn't believe babies were aware. In the same 25 years, science has "proved" a great many things about human behavior, which I disagreed with and which have subsequently been modified. Science isn't infallible, nor are tests; and insight and observation in the laboratory can often be misleading about behavior under more natural conditions. While I agree with Mrs. Westman on the need for (much belated) precise studies of infants, I do not agree with her that strict laboratory tests are the only way of arriving at exact knowledge of human or animal behavior.

(Mrs.) *Otis Kidwell Burger*  
New York, N.Y.

## Benefits of the pill

Re "Birth control pills: More controversy" (SN: 6/1/74, p. 352), does Philip Corfman consider pregnancy to be one of the menstrual disorders whose incidence is reduced by oral contraceptives? If so, I am interested to see that he classifies said condition under "trivial events." If not, has it occurred to him (or to the Royal College, for that matter) to consider balancing the "rather serious events, such as strokes" against other rather serious—and more common—events: pregnancies?

Most pill users have decided that the small risk of blood-clotting diseases and strokes is more than counterbalanced by the benefits of avoiding an unwanted and hence potentially socially and psychologically, as well as physically, hazardous pregnancy. The question to be considered is not, "Do the trivial benefits of oral

contraceptives outweigh the serious risks?" but rather, "Does the cheap, simple, and effective prevention of conception—and hence the substantial risk of death due to pregnancy and childbirth—outweigh the minuscule chance of death due to strokes or blood-clotting diseases?"

*Susan E. Weaver*  
Livermore, Calif.

## A Russian invention

I am confused by your application of metric system units with regard to the surface pressure on Venus (SN: 3/16/74, p. 176; 93 kg/m<sup>2</sup>). In engineering school, we were taught that there were two systems of metric units, mks and cgs. The text we used, *Principles of Physics I*; Sears, defined pressure as the force per unit area. In the same text force is expressed in newtons or dynes, mass in kilograms or grams and pressure in newtons/m<sup>2</sup> or dynes/cm<sup>2</sup>. In your article it appears that pressure is expressed in mass per unit area instead of force per unit area.

*Walter L. Rees*  
Glen Ellyn, Ill.

(In the first place we made an error. It should have read kg/cm<sup>2</sup>. And that's how the Russians do it. Evidently they don't read Sears.—Ed.)

## Lobster immunity

In "Proteins and Metals Stick Together" (SN: 5/18/74, p. 324) it is stated that "all vertebrates and only vertebrates make antibodies." In "Immunizing lobsters" (SN: 5/25/74, p. 338) it is stated that "they have successfully immunized the spiny lobster against the disease, using a live attenuated strain of the bacterium." Doesn't this method of immunization require the lobster to make antibodies against the attenuated bacterium? The lobster is not a vertebrate. If so, one of the statements appearing in your magazine must be incorrect. Please clarify this apparent contradiction for me.

*Gray Johnson, R.Ph.*  
Gainesville, Fla.

(Apparently the work with the lobster is new. *Giaever* was quoting the older opinion.—Ed.)

Address communications to Editor,  
Science News, 1719 N Street, N.W.,  
Washington, D. C. 20036

## 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**, National Academy of Sciences; **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: **Norman Cousins**, "World"; **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.

July 20, 1974

35