

# FIRST AID

Help In Understanding Literature is Always Available at Your Cliff's Notes Dealer

Over 175 Titles See Your Dealer or Use Coupon



Cliff's Notes, Inc.  
P.O. Box 428, Lincoln, Nebr. 68501

NAME \_\_\_\_\_  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ Zip \_\_\_\_\_

\$1.00 each, postpaid. Amount enclosed \$ \_\_\_\_\_  
 Please send complete title list.

Circle the titles you want: Brave New World • Canterbury Tales • Catcher in the Rye • Crime and Punishment • David Copperfield • Divine Comedy • Inferno • Don Quixote • Grapes of Wrath • Great Expectations • Great Gatsby • Gulliver's Travels • Hamlet • Heart of Darkness & Secret Sharer • Huckleberry Finn • The Iliad • Ivanhoe • Jane Eyre • Julius Caesar • King Henry IV Pt. 1 • King Lear • Lord Jim • Lord of the Flies • Macbeth • Moby Dick • The Odyssey • Othello • Paradise Lost • Portrait of an Artist • Pride and Prejudice • Red Badge of Courage • Return of the Native • Scarlet Letter • Silas Marner • Tale of Two Cities • Walden • Wuthering Heights

Dept. SN-10

Circle No. 70 on Readers' Card.

344

## films OF THE WEEK

Listing is for readers' information of new 16mm and 8mm films on science, engineering, medicine and agriculture for professional, student and general audiences. For further information on purchase, rental or free loan, write to distributor or circle the appropriate number on the Readers' Service Card.

**HEAT TRANSFER TRICKS.** 16mm, b&w, sound, 28 min., transferred from network-quality 2-inch video tapes. Methods of heat transfer are illustrated with glass and copper tubing, hot and cold water and a radiometer activated with a heat lamp. A series of demonstrations are performed and explained, but the explanations can be either true or false. Answers are selected and reasons for choosing them are developed. Demonstrations include unburnable paper money, a radiometer run with cold water, a home-made infrared detector and a hot air balloon made from plastic clothing bags. Audience: upper elementary, junior high. Purchase \$130 from Prism Productions, 220 E. 23rd St., New York, N. Y. 10010 (part of Inquiries in Science Series, with TV's Mr. Wizard).

Circle No. 151 on Readers' Service Card

**IRREGULARLY DELAYED EXPERIMENTAL CLOSURE IN THE RHESUS MONKEY.** 16mm, color, sound, 17 min. Shows laboratory apparatus and experimental procedure. Animals are trained to a stimulus sequence that consists of a low brightness warning light, a bright-safe light and a bright-shock light. A response during the bright-safe period, pushing a lever, produces a reward and prevents a shock. Groups are tested under various conditions, some which involve unpredictable variations in the stimulus sequence. Effects on behavior of animals are shown. Results indicate that if an unpredictable situation exceeds an organism's experiential capacities for control, it introduces aberrations of behavior in intensity, diversity and persistence—what in humans would be called neurotic to psychotic. Audience: psychologists, psychology students. Purchase \$180 or rental \$6.10 from Audio-Visual Services, The Pennsylvania State University, University Park, Pa. 16802.

Circle No. 152 on Readers' Service Card

**MODERN GEODETIC SURVEYING.** 16mm, color, sound, 20 min. Explains the origins and development of geodetic surveying and man's progress in measuring the earth. Audience: general. Free loan from Public Affairs Officers in all Naval Districts.

Circle No. 153 on Readers' Service Card

## LETTERS

# to the editor

### The Apollo era

You say, "Apollo made it under the wire with only six months to spare in fulfilling President John F. Kennedy's desire of putting a man on the moon by the end of the decade" (SN: 7/19, p. 58).

I beg your pardon but that statement is not correct. The Christian era did not begin with the year zero but with the year one. The first decade was the year one to the year 10. The first century, from the year one to the year 100. The first 1900 years, from the year one to the year 1900.

This decade began 1961 and ends Dec. 31, 1970. So Apollo made it under the wire by 18 months.

Eldorous L. Dayton  
U.S. Steel Corp.  
Pittsburgh, Pa.

### Claim premature

The claim of Dr. Abraham Ravich in recent letters to the editor (SN: 9/20, p. 231) that his viral venereal concept of genital cancer, promulgated in the JOURNAL OF UROLOGY in 1942, has been confirmed is premature. Thus far, the evidence implicating type 2 (genital) herpes virus in the causation of cervical carcinoma, while highly suggestive, is in fact circumstantial. The available data are also compatible with other interpretations, including, namely, that type 2 herpetic infections and cervical carcinoma are independent concomitants with some other factors, e.g., sexual promiscuity, or that the progressive cytologic changes leading to invasive carcinoma providing increasingly favorable conditions for initiation of herpes type 2 infection. In the latter case, malignancy would cause increase incidence of infection rather

(see p. 346)

## SCIENCE NEWS

Copyright © 1969 by Science Service, Inc., 1719 N Street, N.W., Washington, D.C. 20036 Republication of any portion of SCIENCE NEWS is strictly prohibited.

Subscription rate: 1 yr., \$7.50; 2 yrs., \$13.50; 3 yrs., \$19.50. Special trial offer: 39 weeks, \$3.97. Single copy, 25 cents. \$1.00 per year for foreign postage. Change of address: Three weeks' notice is required. Please state exactly how magazine is addressed. Include zip codes.

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. Indexed in Reader's Guide to Periodical Literature, Abridged Guide and the Engineering Index. Member of Audit Bureau of Circulation. UNSOLICITED MANUSCRIPTS will not be returned unless accompanied by a stamped, self-addressed envelope.

Published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. North 7-2255. Cable Address: SCIENSERV.

### ADVERTISING STAFF

Director: EARL J. SCHERAGO Advertising Sales Manager: RICHARD L. CHARLES  
Address all advertising to Scherago Associates, 11 West 42nd St., New York, N.Y. 10036.

Sales: New York, N.Y. 10036: Robert S. Bugbee, 11 W. 42 St. (212-PE-6-1858); Scotch Plains, N.J. 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); Medfield, Mass. 02052: Richard M. Ezequille, 4 Rolling Lane (617-444-1439); Chicago, Ill. 60611: Herbert L. Burkland, Room 2107, 919 N. Michigan Ave. (312-DE-7-4973); Beverly Hills, Calif. 90211: Winn Nance, 111 N. La Cienega Blvd. (213-657-2772).

science news, vol. 96

# "SCIENCE NEWS YEARBOOK 1969/1970... an eye-opening retrospective look at the year just past in science...you may very well wonder how you ever got along without such an in-depth and comprehensive volume....

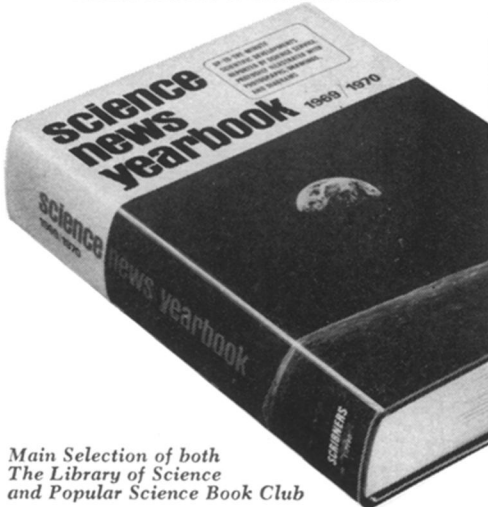
"Until now information on the latest scientific developments quickly passed into a scientific limbo. . . . The editors of *Science News* decided to correct this long-standing deficiency. SCIENCE NEWS YEARBOOK 1969/1970 is the first of a projected series of annual volumes which will provide a comprehensive report on the current year's developments in science. . . . Yet it is more than a reference work; I suggest that you read it also for the sense of wonder it communicates about the here and now of science, for the coherence that it gives to science's many discoveries and conclusions, and for its glimpses of the onrushing future that presses so insistently upon us."

—ROBERT F. SCOTT, *The Library of Science*

From heart transplants to the Christmas Eve trip around the moon, here in one convenient book is all the latest information in every area of scientific endeavor during 1968, a highly significant year in science. Prepared by Science Service, the only national organization dedicated to improving the public understanding of science, this profusely illustrated record is based on material originally published in *Science News* and guided through publication by an Editorial Advisory Board of distinguished scientists. The book also includes major awards and prizes for the year and a 20-page index. SCIENCE NEWS YEARBOOK, this year and in years to come, will not only serve as an invaluable reference for students, teachers, and scholars, but will fascinate readers of all ages.

## SCIENCE NEWS YEARBOOK 1969/1970

Compiled and edited by Science Service  
Introduction by Lee A. DuBridg, Science Adviser to President Nixon



Main Selection of both  
*The Library of Science*  
and *Popular Science Book Club*

Circle No. 30 on Reader's Service Card

Contents	
<b>BIOMEDICINE</b>	
Transplants: The Surgical Revolution. Immunology. The Living Cell. Genetics. Pharmacology. Clinical Medicine.	
<b>SPACE</b>	
Man in Space. Unmanned Exploration. Applications and Technology. Space Programs Abroad. Law on the Space Frontier. Transition.	
<b>ASTRONOMY</b>	
Galactic and Extragalactic. Cosmology. Solar System. New Observation Opportunities.	
<b>PHYSICS AND CHEMISTRY</b>	
Particle Physics. Nuclear Physics: Ultraheavy Elements. Solid-state Physics. Plasma Physics: Control of Fusion. Lasers. Chemistry.	
<b>EARTH</b>	
The Solid Active Earth. Volcanism. Continental Drift. Oceanography. Water and Other Resources. Meteorology.	
<b>ENGINEERING AND TECHNOLOGY</b>	
Construction and Planning. Civil Engineering. Computers. Communications. Transportation. Engineering Research. Power Production.	
<b>ENVIRONMENT AND ECOLOGY</b>	
Pollution. Ecology and Conservation. Agriculture. Herbicides and Pesticides. Bees, Hornets and Moths. Animal Husbandry. Food Production.	
<b>BEHAVIORAL AND SOCIAL SCIENCES</b>	
Neurophysiology. Schizophrenia and Depression. Institutional Mental-Health Therapy. Animal Behavior: The Great Apes. Culture and Human Behavior. Testing, Learning and Creativity. Sociology. Archaeology. Anthropology.	
<b>SCIENCE POLICY</b>	
Research and Manpower. Reorganizing the Effort. Environmental Quality. A Loss of Momentum.	

At your bookstore or mail to:  
**CHARLES SCRIBNER'S SONS**  
597 Fifth Ave., N.Y., N.Y. 10017

Please send me \_\_\_\_\_ copies of the  
SCIENCE NEWS YEARBOOK 1969/1970  
at \$9.95 each.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Please add city sales tax where necessary.

SN

(letters from p. 344)

than the reverse. Interested readers are referred to *HOSPITAL PRACTICE* V. 4: 37-41, February 1969, and *AMERICAN JOURNAL OF EPIDEMIOLOGY* V. 89:547-554, May 1969.

J. J. Tumilowicz, Ph.D.  
Cherry Hill, N.J.

### A contribution

I found your article entitled "Pinning Down the Weed" (SN: 9/27, p. 263) interesting reading. Even though I am working in that area, I learned a good deal about the efforts of others and the legislative aspects.

You have certainly made a good pitch for basic research. I hope some of the budget-minded people in Washington will get to see it.

Sumner Burstein, Ph.D.  
The Worcester Foundation  
for Experimental Biology  
Shrewsbury, Mass.

### Just the facts

In his article about the Stanley Steamer (SN: 9/20, p. 247), Edward Gross used the following expression: "President Nixon's August promise of Federal aid for the development of unconventional car engines."

Webster's Dictionary lists August as the 8th month of the Georgian calendar. The word "august" means "state-likeness," and the phrase should consist of the following words: "President Nixon's august August promise. . . ."

Kenneth Lloyd Larson  
Los Angeles, Calif.

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

<b>STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION</b>		Publisher: The rate copies of this form 1968. Postmaster: Complete verification. See 39 CFR 1110.1-1.	
1. DATE OF FILING: <b>OCTOBER 6, 1969</b>		2. TITLE OF PUBLICATION: <b>SCIENCE NEWS</b>	
3. FREQUENCY OF ISSUE: <b>WEEKLY</b>		4. LOCATION OF HEADQUARTERS OR GENERAL BUSINESS OFFICES: <b>1719 N STREET, N. W. - WASHINGTON, D. C. 20036</b>	
5. LOCATION OF HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHER: <b>1719 N STREET, N. W. - WASHINGTON, D. C. 20036</b>		6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR: <b>B. G. SHERBERG, JR. - 5110 HAWTHORNE ST., N. W. - WASH., D. C. 20008</b> <b>WARREN KORNBERG - 11019 KENILWORTH AVE. - GARRETT PARK, MD.</b> <b>CARL SHERBERG - 1820 - 37th ST., N. W. - WASHINGTON, D. C. 20007</b>	
7. OWNERS (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of the individual owners. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)			
NAME: <b>SCIENCE SERVICE, INC.</b>		ADDRESS: <b>1719 N ST., N. W. - WASHINGTON, D. C. 20036</b>	
8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If there are none, so state.)			
NAME: _____ ADDRESS: _____			
9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (Section 132.122, Postal Manual) (Check one) The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax: <input type="checkbox"/> Have not changed during preceding 12 months <input type="checkbox"/> Have changed during preceding 12 months (If changed, publisher must submit explanation of change with this statement.)			
10. EXTENT AND NATURE OF CIRCULATION		AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	
A. TOTAL NO. COPIES PRINTED (Net Press Run)		117,642	
B. PAID CIRCULATION (1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES)		35	
C. MAIL SUBSCRIPTIONS		112,758	
D. TOTAL PAID CIRCULATION		112,793	
E. FREE DISTRIBUTION (including samples) BY MAIL, CARRIER OR OTHER MEANS		1,930	
F. TOTAL DISTRIBUTION (Sum of C and D)		114,723	
G. OFFICE USE, LEFTOVERS, UNRECOVERED, SPOILED AFTER PRINTING		2,919	
H. TOTAL (Sum of F, G and H) - should equal net press run shown in A)		117,642	
I. ACTUAL NUMBER OF COPIES OF THIS PUBLICATION (Net Press Run) (See 39 CFR 1110.1-1)		121,028	
I certify that the statements made by me above are correct and complete.			
Signature: <i>B. G. Sherberg</i>			