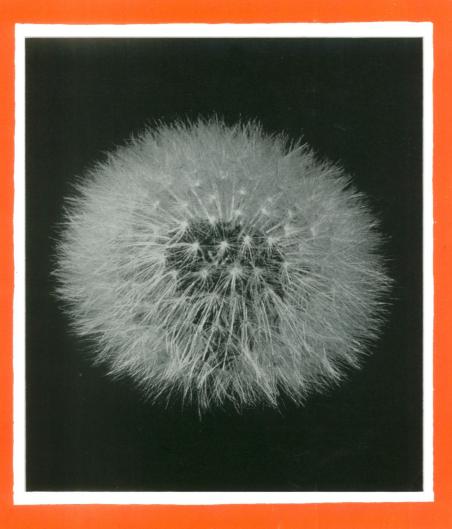
SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE.





JULY 7, 1934



Fireworks in Fairyland

See Page

SCIENCE SERVICE PUBLICATION

SCIENCE NEWS LETTER

VOL. XXVI

No. 691



Published by

SCIENCE SERVICE

The Institution for the Popularization of Science organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Edited by WATSON DAVIS

Subscription rates—\$5.00 a year postpaid; two years \$7.00; 15 cents a copy. Ten or more copies to same address, 5 cents a copy. Back numbers more than six months old, 25 cents.

Canadian and Foreign subscribers please add \$1 a year to regular subscription rates to cover postage. In requesting change of address, please give your old address as well as the new one in notification to Circulation Department, SCIENCE NEWS LETTER, 21st and Constitution Ave., Washington, D. C., at least two weeks before change is to become effective.

Advertising rates furnished on application.

Board of Trustees of Science Service

Advertising rates furnished on application.

Board of Trustees of Science Service

Honorary President, William E. Ritter, University of California. Representing the American Association for the Advancement of Science, J. McKeen Cattell, President, Editor, Science, Garrison, N. Y.; Button E. Livingston, Johns Hopkins University, Baltimore, Md.; Raymond Pearl, Director, Institute for Biological Research, Johns Hopkins University, Baltimore, Md. Representing the National Academy of Sciences, W. H. Howell, Vice-President and Chairman of Executive Committee, Johns Hopkins University, Baltimore, Md.; R. A. Millikan, Director, Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, Calif.; David White, Senior Geologist, U. S. Geological Survey. Representing National Research Council, Vernon Kellogg, Secretary Emeritus, National Research Council, Washington, D. C.; C. G. Abbot, Secretary, Smithsonian Institution, Washingon, D. C.; Harrison E. Howe, Editor of Industrial and Engineering Chemistry. Representing Journalistic Profession, John H. Finley, Associate Editor, New York Times; Mark Sullivan, Writer, Washington, D. C.; Marlen E. Pew, Editor of Editor and Publisher, New York City. Representing E. W. Scripps Estate, Harry L. Smithton, Treasurer, Cincinnati, Ohio; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio; Thomas L. Sidlo, Cleveland, Ohio.

Director, Watson Davis; Staff writers: Frank Thone, Emily C. Davis, Jane Stafford, Marjorie Van de Water, Robert Potter, H. C. Rowland, Jr.; Librarian, Minna Gill; Sales and Advertising Manager, Hallie Jenkins.

Copyright, 1934, by Science Service, Inc. Republications are invited to avail themselves of the numerous syndicate services listed by Science Service, details and samples of which will gladly be sent on request.

Members of the American Association for the Advancement of Science have the privilege of subscribing to the SCIENCE News LETTER at the

Members of the American Association for the Advancement of Science have the privilege of subscribing to the SCIENCE NEWS LETTER at the reduced price of \$3 per year. Application for this privilege should be acompanied by privilege card obtained from the Permanent Secretary, A. A. A. S., Smithsonian Institution Building, Washington, D. C.

ing. Washington, D. C.

Publication Office, 1930 Clifton Ave., Baltimore, Md., Editorial and Executive Office, Constitution Ave. at 21st St., N. W., Washington, D. C. Address all communications to Washington, D. C. Cable address: Scienservc, Washington. Entered as second class matter October 1, 1926, at the post-office at Baltimore, Md., under the act of March 3, 1879. Established in mimeographed form March 13, 1922. Title registered as trade-mark, U. S. and Canadian Patent Offices.

DO YOU KNOW?

Our word calculate comes from the old practice of using pebbles, called in Latin "calculi," in counting.

A hoard of 26,000 ancient bronze coins was recently discovered stored in what appears to have been an Egyptian bank at Karanis.

There is no foundation for the belief that sour cream contains more butterfat; and, in fact, only butter of inferior quality can be made from it.

A welded joint for rails, which holds the rails tight and yet is flexible enough to allow for expansion and contraction, has been invented in Stockholm.

Two British trucks recently traveled the 3,000 miles from Haifa to Kabul cheaply, using gas generated from charcoal in place of the usual gasoline.

The largest granite monoliths in the world are El Capitan and Half Dome, in the Yosemite Valley in California.

Tuberculosis is killing the Indians at seven times the white man's rate, says Commissioner of Indian Affairs John Collier.

The subway now being built in Moscow is to carry passenger traffic from the center of town to the suburbs in ten directions

Not only are one-third of the Tibetan male population priests, but there are also large numbers of unmarried women who serve as nuns in convents.

Canada has begun a strong fight on mosquitoes this summer, knowing that heavy snows of the past winter would produce breeding grounds for the pests.

WITH THE SCIENCES THIS WEEK

How do plants thrive on a "liquid diet"? p.

ARCHAEOLOGY

How did Hohokam Indians bury their dead? p. 15.

ASTRONOMY

What star was pole star in 3500 B.C.? p. 10. Why is life out of the question on Pluto? p. 5. Astronomy—H. N. Russell, R. S. Dugan and J. Q. Stewart—Ginn, 1926, 2 vol., \$4.96.

Astrophysics

How often do novae occur in any star system? p. 14.

BACTERIOLOGY
What is activated ice? p. 12.

CHEMISTRY
What does nitrogen trichloride do to oranges? p. 8.

Ecology
What effect has a mild winter on animal ranges? p. 4.

ECONOMICS
What is a chemical theory of money? p. 9.

ENGINEERING

How is Admiral Byrd's hut kept warm? p.

How much ice would the heat dissipated from Boulder Dam melt? p. 7.
What are the advantages of the trolley bus? p. 15.

GENERAL SCIENCE
How should scientific research be supported?

Genetics
When does sex differentiation occur in the chick embryo? p. 3.

GEOLOGY

On what do scientists base the conclusion that the Bahamas were once part of the mainland? p. 15.

How is a broken heart mended? p. 9.

How is the infantile paralysis vaccine made sate for use? p. 4.

Where is the horse honored with a position in a museum? p. 5.

OCEANOGRAPHY

How often does the tide rise and fall on the Okhotsk Sea? p. 4. The Tide—H. A. Marmer—Appleton, 1926, \$2.50.

PALEONTOLOGY
Who was the first modern man to discover a dinosaur egg? p. 13. An Introduction to the Study of Fossils—H. W. Shimer—Macmillan, 1933, \$4.

PHYSICS
How does Dr. Millikan believe that cosmic rays are born? p. 13.

Of what is a neutron composed? p. 12.

What is the difference between the Russian and American methods of making artificially radioactive nitrogen? p. 3.

Where has Dr. Millikan sent his famous cosmic ray instruments? p. 8.

What holds the speed record 94 per cent of the speed of light? p. 12. Recent Advances in Atomic Physics—Gaetano Castelfranchi—Blakiston's, 1932, 2 vol., \$8.

Who is the exponent of the 137th dimension? p. 7.

Physiology

How can flyers prepare their bodies for high altitudes? p. 8.

What is it in pollen that causes hay fever?

What is personality? p. 14. What sugar is bitter? p. 9.

PUBLIC HEALTH
What is Nature's safeguard against infant mortality? p. 8.

SEISMOLOGY

How are artificial earthquakes created? p. 8.

These curiosity-arousing questions show at a glance the wide field of scientific activity from which this week's news comes. Book references in italic type are not sources of information for the article, but the references for further reading. Books cited can be supplied by Book Department, Science News Letter, at publishers' prices, prepaid in the United States.