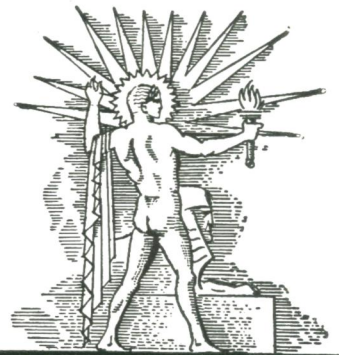
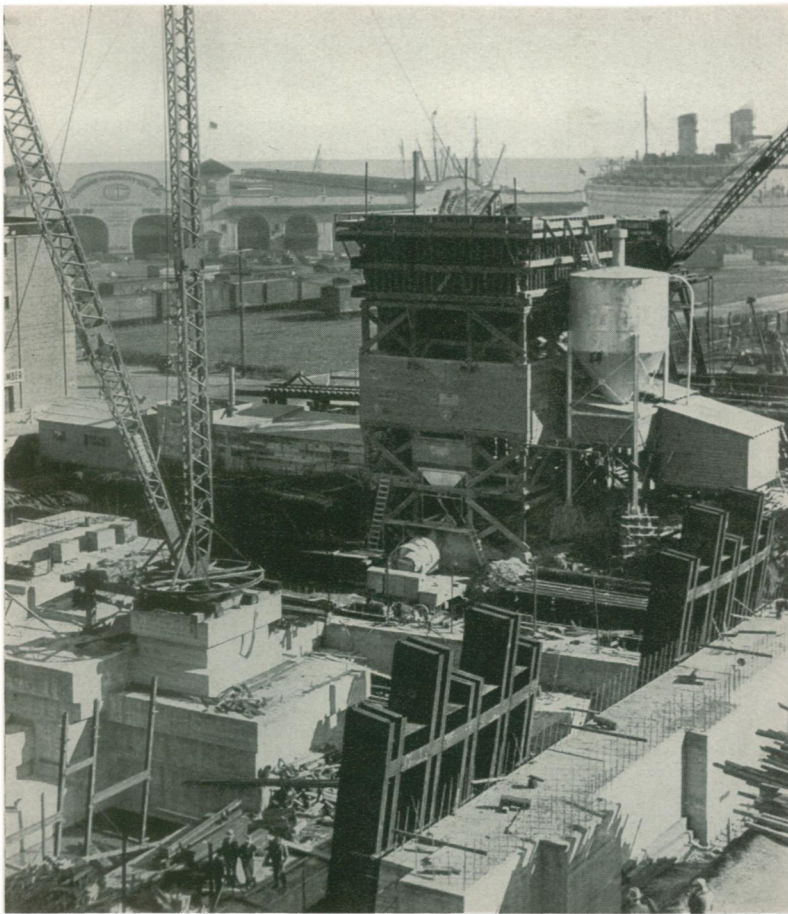


PRICE
15¢



SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE ●



FEBRUARY 3, 1934

Ground Anchor

See Page 73

A



SCIENCE SERVICE PUBLICATION

SCIENCE NEWS LETTER

VOL. XXV

No. 669

The Weekly  Current
Summary of Science

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 two dollars (\$2.00) per 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

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.; Burton 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, Washington, 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.

Staff of Science Service

Director, Watson Davis; Staff writers: Frank Thone, Emily C. Davis, Jane Stafford, Marjorie Van de Water, J. W. Young; Librarian, Minna Gill; Sales and Advertising Manager, Hallie Jenkins.

Copyright, 1934, by Science Service, Inc. Reproduction of any portion of the SCIENCE NEWS LETTER is strictly prohibited since it is distributed for personal, school, club or library use only. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued 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 reduced price of \$3 per year. Application for this privilege should be accompanied by privilege card obtained from the Permanent Secretary, A. A. A. S., Smithsonian Institution Building, 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: Scienserv, 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?

More than 100 firms are selling air-conditioning equipment.

Birds are not the only long-distance travelers; caribou of North America are known to migrate 800 miles.

Among Alaskan Indians and Eskimos, the village and not the tribe is the governing unit, the villages being widely separated.

The giant panda of western China was first discovered by travelers when a French missionary saw one of these rare animals, in 1869.

An "electric nose," which detects even very small amounts of mercury vapor in the air and sets off a warning gong, has been invented.

Within a few weeks after Roentgen discovered X-rays in 1895, physicians had begun using them in examining broken bones.

The population of India increased by 34,000,000 from 1921 to 1931.

Investigations show that there are about 3,000 cases of undulant fever in France each year.

At Crater Lake, Oregon, last winter the total snowfall was 879 inches, or more than 73 feet.

As recently as 20 years ago, tuberculosis in cattle was generally thought to be an uncontrollable disease.

Cases of children with mottled teeth have recently been found in Iowa, and the condition is believed traceable there to drinking water from certain deep wells.

Mats made of canes or reeds are being tried as foundations for roads in one low section of Holland where lack of enduring road beds has been a serious problem.

WITH THE SCIENCES THIS WEEK

ARCHAEOLOGY

How many tombs have been opened at Monte Alban? p. 76.

When did man begin to make tools? p. 69.

ASTRONOMY

How long will the paradox eclipse be total at an observation point? p. 71. *Eclipses of the Sun—S. A. Mitchell—Columbia Univ. Press, 1932, \$5.*

What is the largest star in Orion? p. 75. *Other Worlds—Edwin Lincoln Moseley—Appleton, 1933, \$2.*

How much does the temperature of the McDonald 80-inch telescope mirror drop in a day? p. 68.

ASTRONOMY—PHYSICS

How many nebulae are in two per cent. of the sky seen from Mt. Wilson? p. 72.

AVIATION

What are the strength and weakness of rotating wing aircraft? p. 68.

What is the "weight cost" of soundproofing an airplane cabin? p. 72.

BACTERIOLOGY

How may the black-beet organism be made to grow faster? p. 73.

EDUCATION

How many ousted German scholars have been appointed to American faculties? p. 77.

What is the "mortality" of correspondence course students? p. 70.

ENGINEERING

How may auto muffler noise be eliminated? p. 79.

ENGINEERING—RADIO

What bridge is being linked with a tunnel? p. 73.

GEOGRAPHY

How many photographs will map Indian lands in New Mexico? p. 69.

GEOLOGY

How did the great California storm change the geography of the state? p. 74.

MEDICINE

When was yellow fever vaccination announced? p. 78.

METEOROLOGY

How high does a stratosphere sounding balloon rise? p. 67. *The Drama of Weather—Sir Napier Shaw—Macmillan, 1933, \$3.50.*

What changes the refractivity of the air? p. 74. *Signals from the Stars—George Ellery Hale—Scribner's, 1931, \$2.*

NAVIGATION—PHYSICS

How would the cathode-ray finder locate ships? p. 72.

OPTICS

Why is a swimmer's underwater vision poor? p. 76.

ORDNANCE

Is overloading likely to burst a shotgun? p. 72.

ORNITHOLOGY

Where does the oil-bird live? p. 79.

Where have Army bombs ceased killing ducks? p. 74.

Where was the wingless rooster raised? p. 70.

PALEONTOLOGY

What is the Paleontological Research Institution? p. 73.

PHYSICS

How much heat could a pound of heavy hydrogen give off in atomic energy? p. 76.

How was radium found in iron ore? p. 70.

What camera magnifies 30 billion times? p. 67.

PLANT PHYSIOLOGY

How may starchless potatoes be raised? p. 72.

PUBLIC HEALTH

What prompted the reorganization of the Manchurian Anti-Plague Commission? p. 77.

Riders of the Plagues—James A. Tobey—Scribner's, 1930, \$3.50.

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 are references for further reading. Books cited can be supplied by Book Department, Science News Letter, at publishers' prices, prepaid in the United States.