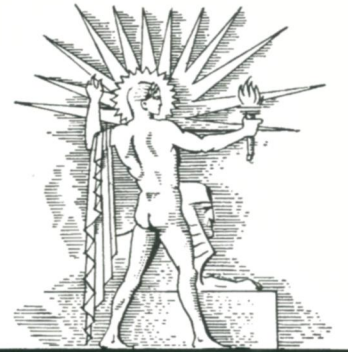


PRICE  
15¢

# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE ●



December 14, 1940

Birth of Cold Light

See Page 382

A S C I E N C E S E R V I C E P U B L I C A T I O N

## Do You Know?

On a battleship carrying 1,500 men, 500 are assigned to man the *guns* in time of action.

A photoelectric meter for measuring *vitamin A concentration* in fish oils has been devised.

*Pine needles* are one of the sources of Vitamin C found worth gathering in Soviet Russia.

The *carpet shark* of Australia reminds some people of the color pattern in an old-fashioned carpet.

A Brazilian factory for making plastics from surplus *coffee* will use about 3,000 bags of coffee monthly.

The *earth* gains about 100,000 tons weight in a year from meteoric material, mostly dust, from the sky.

*Pearls* require contact with skin moisture to retain their luster, and will dry out if long stored away.

From cottonseed hulls, heretofore mainly a waste material, a new *plastic* has been developed, in Tennessee.

Almost any type of steam locomotive on American railroads can be identified by the arrangement of the *wheels*.

Nutritionists say that there is no harm in eating different *fruits* together for fear of combining different acids—nature sometimes combines acids in the same fruit.

## QUESTIONS DISCUSSED IN THIS ISSUE

Most articles which appear in SCIENCE NEWS LETTER are based on communications to Science Service, or on papers before meetings. Where published sources are used they are referred to in the article.

### ARCHAEOLOGY

Where are airplane flights being conducted over ruins they did not cause? p. 373.

Where can we see the serene beauty of the Acropolis in case bombs destroy the original treasure? p. 372.

### ASTRONOMY

When can you see fragments of a comet watched by your Stone-Age ancestors? p. 375.

Where is the new white dwarf star? p. 373.

### BIOLOGY

What proportion of sponges were killed by the recent epidemic? p. 383.

### CHEMISTRY—AGRICULTURE

What substitute has been found for linseed oil meal in cattle feed? p. 376.

### CONSERVATION

What Christmas greens should you boycott? p. 383.

### ENGINEERING

How can the tanks storing explosive gases be prevented from exploding? p. 376.

What new college courses are being planned to fill a defense shortage? p. 371.

What new principle is employed in a new light steam engine? p. 376.

### GENERAL SCIENCE

What are the rarest and most spectacular phenomena in the universe? p. 374.

What new hope is offered for rescue of anti-Nazi intellectuals? p. 377.

### GEOGRAPHY

Why is Kra important in world affairs? p. 376.

### ICHTHYOLOGY

What characteristic of the ocean accounts for the wealth of West Coast fisheries? p. 376.

### MEDICINE

What method of treatment has been found successful for brain tumors? p. 380.

What method is used to shorten the longer legs of cripples? p. 380.

### NUTRITION

What four problems will receive first attention in national nutritional program? p. 371.

### PHYSICS

How does cold light serve in television? p. 382.

Who will measure cosmic rays near the South Pole? p. 377.

### PHYSIOLOGY

What dangers may be encountered by amateurs experimenting with colchicine? p. 382.

### PSYCHOLOGY

How can you satisfy yourself that swing is becoming great art? p. 377.

### PUBLIC HEALTH

What should you do if the influenza epidemic strikes your community? p. 373.

An agriculturist predicts that California, now growing 11 varieties of *wheat*, will grow only about half that number in a few years, due to scientific breeding of improved, disease-resistant types.

The male and female of some kinds of *birds* have special sounds of greeting when they meet.

The *boundary* between the United States and Canada is 3,987 miles long, 2,198 miles of it being water.

America *mobilized* about 350,000 men for the American Revolutionary War, 2,129,000 for the Union forces in the Civil War; 4,791,000 for the World War.

*Caves* once worked for sand have been turned into air raid shelters in England, with improvements of ventilation and bomb and sound-proofing.

Europe has been quicker to use *aptitude tests* in placing industrial workers in jobs than America, says an American psychologist.

## SCIENCE NEWS LETTER

Vol. 38 DECEMBER 14, 1940 No. 24

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 2101 Constitution Avenue, Washington, D. C. Edited by WATSON DAVIS.

Subscriptions—\$5.00 a year; 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.

In requesting change of address, please give your old address as well as the new one, at least two weeks before change is to become effective.

Copyright, 1940, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service.

Cable address: Scienservc, Washington.

Entered as second class matter at the post-

office at Washington, D. C., under the Act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and in the Engineering Index.

Members of the American Association for the Advancement of Science have privilege of subscribing to SCIENCE NEWS LETTER at \$3 a year.

The New York Museum of Science and Industry has elected SCIENCE NEWS LETTER as its official publication to be received by its members.

Advertising rates on application. Member Audit Bureau of Circulation.

SCIENCE SERVICE is the Institution for the Popularization of Science organized 1921 as a non-profit corporation.

*Board of Trustees—Nominated by the American Association for the Advancement of Science:* Henry B. Ward, University of Illinois; Edwin G. Conklin, American Philosophical Society; J. McKeen Cattell, Editor, Science. *Nominated by the National Academy of Sciences:* R. A. Millikan, California Institute of Technology; Harlow

Shapley, Harvard College Observatory; William H. Howell, Johns Hopkins University. *Nominated by the National Research Council:* Ross G. Harrison, Yale University; C. G. Abbot, Secretary, Smithsonian Institution; Harrison E. Howe, Editor, Industrial and Engineering Chemistry. *Nominated by the Journalistic Profession:* O. W. Riegel, Washington and Lee School of Journalism; A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Baltimore Evening Sun. *Nominated by the E. W. Scripps Estate:* Karl Bickel, E. W. Scripps Co.; Warren S. Thompson, Miami University, Oxford, Ohio; Harry L. Smithton, Cincinnati, Ohio.

*Officers—Honorary President:* William E. Ritter. *President:* Edwin G. Conklin. *Vice-President and Chairman of Executive Committee:* Harlow Shapley. *Treasurer:* Harry L. Smithton. *Secretary:* Watson Davis.

*Staff—Director:* Watson Davis. *Writers:* Frank Thone, Emily C. Davis, Jane Stafford, Marjorie Van de Water, James Stokley. *Photography:* Fremont Davis. *Librarian:* Minna Gill. *Sales and Advertising:* Hallie Jenkins, Austin Winant. *Correspondents* in principal cities and centers of research.

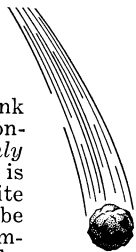
# CHRISTMAS INNOVATION!!

IMMEDIATELY upon publication of last week's Announcement of an *increase* in the number of available memberships for 1941 THINGS of science—many people asked if they could give one or more memberships as Christmas Gifts. This was not the original plan, but so many asked the privilege, that we now announce that Gift Memberships may be had for adults or for children in school or college. If you wish to use THINGS of science as an unusual gift remembrance, please fill in the coupon below and send it to us, with your remittance.

What will Members get in the units of THINGS which start 1941?

## METEORITE UNIT

Members will receive an actual chunk from the heavens, a pebble of iron-nickel meteorite—one of *Earth's only imports* from the outer space! It is certified to be an actual meteorite fragment such as can usually be viewed only in certain museums. Members will also receive some of the sand pulverized by the tremendous *impact* of one of the largest meteorites ever to hit the Earth. With these materials members will receive a stirring explanation of this unusual exhibit.



## FABRICS UNIT

Members will receive a piece of *cloth spun from glass*; a tuft of fiber *made from milk* which feels like wool; a silk-like cloth made from *salt, coal, lime and air*; a sheet of paper that feels like cloth; and other new fabrics which are products of scientific experiment.

## FINGERPRINT UNIT

Fingerprinting is in the news these days. One thinks of impressing an ink-smudged finger on paper—a messy business. Members will receive an *inkless fingerprinting outfit* with material good for many impressions. There will be a purse fingerprint card that may sometime be useful to you in cashing a check, and two official complete fingerprint record documents which may be registered with the Government or kept in your safety deposit box. We'll tell you *how to classify* the arches, loops, whorls and composites in yours or any fingerprints.



**New**—THINGS units on Taste, Plastics, Heredity, Odors, Milk, Metals, Archaeology, to name a few of the units on which the Staff of Science Service is now working.

## MESSAGE TO SCHOOLS

In addition to a clear explanation of the material in each unit of THINGS, we will supply a museum-style legend card of bristol board for use in a laboratory display cabinet. Instantaneous and enthusiastic was the gratification expressed by teachers for this feature when we announced it in connection with the first series of THINGS units.

## IF IT HAPPENS

that you did not read last week's Announcement, here is a brief description of this unusual new membership opportunity. The new organization, increased to 5,000 members, is sponsored by Science Service, the non-profit institution for the dissemination of scientific knowledge.

Members are privileged to look at, try out, feel—and OWN unusual THINGS of science, three units of which are described in the column at the left.

To each member of the group of friends of science, we will each month dispatch a *unit of scientific material*, unusual, intriguing, surprising. With each unit we supply a brief, clear explanation of its contents.

Since this is a non-profit organization, THINGS will not attempt to make money, so the membership charge has been set at \$4. Every member will get the full measure of interest and curiosity-satisfying knowledge from his monthly unit of THINGS.

The new membership period will reach from January 1941 through December 1941, during which time each member will receive *twelve* units of THINGS, one each month.

To give a THINGS membership as a Christmas Gift, please use the Application Form which follows. If you wish to make the presentation to more than one person, please supply their names and addresses on additional paper and remit \$4 for each.

## GIFT MEMBERSHIP COUPON

To *Things*

2101 Constitution Avenue, Washington, D. C.

Please enroll the following as a member of your new science group. I enclose \$4 for this membership which pays in full for the twelve units to be dispatched monthly, postage prepaid, from January 1941 through December 1941.

Mail to.....

Mailing Address.....

City & State.....

My own name and address is:

.....  
.....