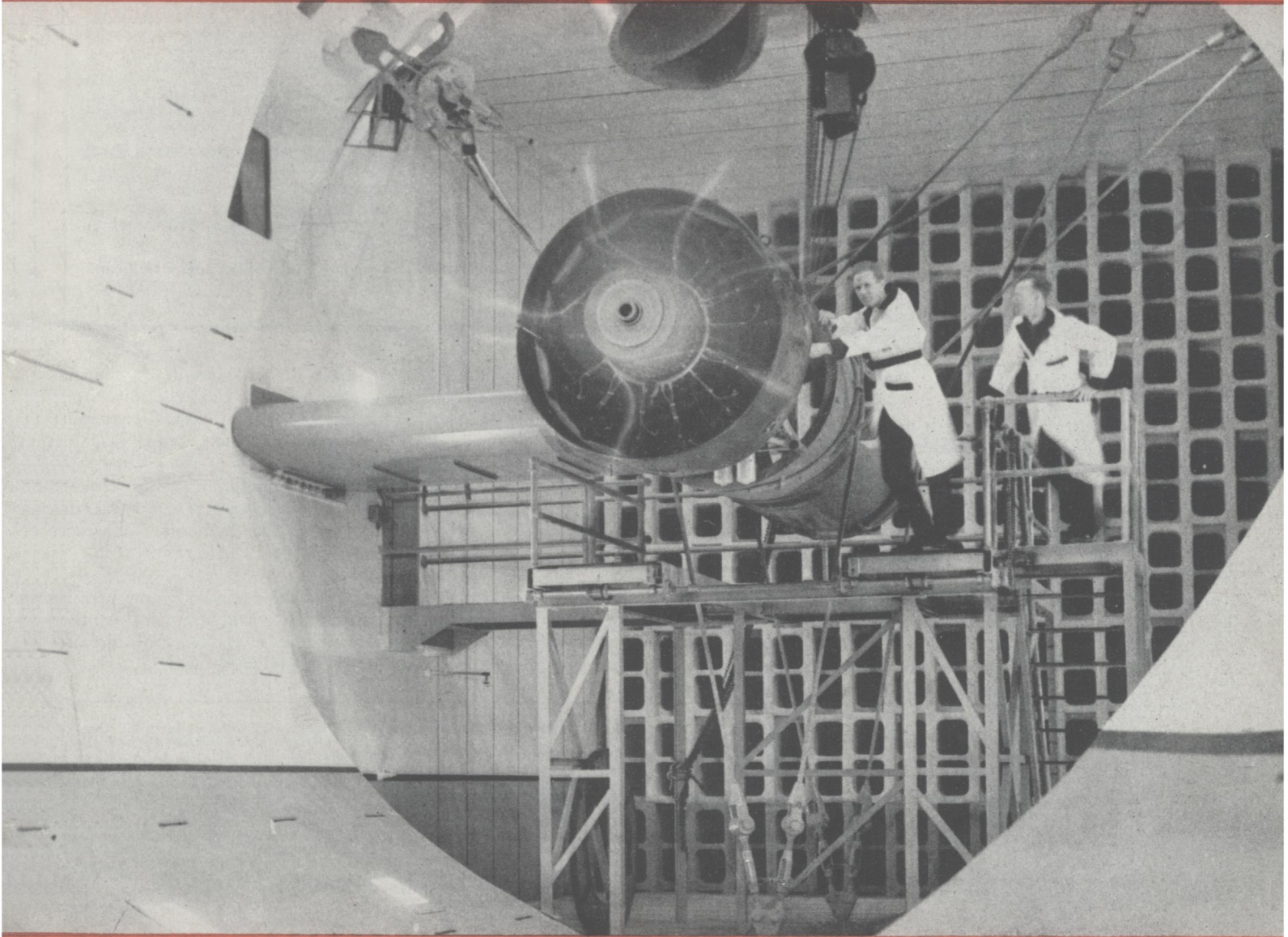


15¢

# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • OCTOBER 24, 1942



Engine Research

See Page 270

A SCIENCE SERVICE PUBLICATION

## Do You Know?

There is more *vitamin C* in canned tomatoes than in canned tomato juice.

A new paint now used for camouflage, similar to casein paint, is made from *soy-bean* protein.

The mount for a 5-inch *anti-aircraft gun* weighs about 24 tons, contains 2,700 different parts.

All the *bombs* dropped on London in the last war could be carried in one flight by seven of today's heavy bombers.

More trapping of rabbits is urged by the government not only to protect farm crops but to supply *felt* for hat manufacturers.

Enough *rayon* to make 13 dozen pairs of stockings goes into the recoil mechanism of one 37-mm. gun as packing to make it airtight..

*Lac insects*, which produce the world's supply of shellac from tree gum, look like small, purple beads strung along the bark of a twig.

The Bureau of Standards now has an instrument, called a Photoelectric Tristimulus *Colorimeter*, which can distinguish 100,000,000 shades of color, mostly invisible to the naked eye.

The average 10,000-ton merchant ship requires approximately a quarter of a million pounds of *copper* and its alloys; while a single battleship such as the U.S.S. Washington, requires two million pounds of copper and its alloys.

## Question Box

### Page numbers of Questions discussed in this issue:

#### BIOLOGY

How do animals escape death by feigning death? p. 269.

#### ENGINEERING

How can dyes be used to detect flaws in metals? p. 270.

#### FORESTRY

Where are African mahogany trees growing successfully? p. 263.

#### INVENTION

How can a new sort of polarized glasses affect color vision? p. 268.

#### PHYSICS

What will a rocket plane be like as envisioned by the Germans? p. 266.

Where have jet-propelled planes been developed? p. 267.

#### MATHEMATICS

How does the size of sand grains affect the amount of oil the sand can hold? p. 271.

*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.*

#### MEDICINE

How do the Army's deep helmets protect the ears against explosion damage? p. 260.

What new hope is there that infantile paralysis may some day be prevented? p. 259.

What weapon is available that may protect against an influenza epidemic? p. 261.

Why is it dangerous to lose the cilia in your bronchial tubes? p. 260.

#### NUTRITION

What strange foods may be substituted for beefsteak if times are hard enough? p. 259.

#### ORNITHOLOGY

How do the submarines kill birds? p. 261.

#### PSYCHIATRY

How is the Army preventing mental illness among the troops? p. 263.

#### PUBLIC HEALTH

How does the health of the Army compare with that during the World War? p. 268.

To foil Nazi bombs, one British *war factory* may be scattered over as many as 42 separate regions, taking in five counties.

Out of every seven and a half dozen *eggs* produced in the U. S. this year, at least one dozen will be dried to supply Lend-Lease needs.

The new definition for *morale*, by Australian soldiers in New Guinea, is "what makes your legs do what your head reckons impossible."

A much higher vitamin A content than required for U.S.P. codliver oil as recently been found in the Uruguayan fish, *pescadilla* or hake.

*Fuel oil* consumption varies almost exactly with the weather; if a winter is 10% warmer, consumption in each burner is about 10% less.

New production methods now permit use of Indian wood (spruce) in the manufacture of *airplanes*, thus increasing India's war production.

## SCIENCE NEWS LETTER

Vol. 42 OCTOBER 24, 1942 No. 17

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington, D. C. North 2255. 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, 1942, 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.  
New York office: 310 Fifth Avenue, CHickering 4-4565.

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.

The Science Observer, established by the American Institute of the City of New York, is now included in the SCIENCE NEWS LETTER.

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

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N. Y. C., PENnsylvania 6-5566; and 360 N. Michigan Ave., Chicago, STate 4439.

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 Observa-

tory; W. H. Lewis, Wistar Institute. **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. Kirchhofer, Buffalo Evening News; Neil H. Swanson, Executive Editor, Sun Papers. **Nominated by the E. W. Scripps Estate:** Frank R. Ford, Evansville Press; 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:** O. W. Riegel. **Secretary:** Watson Davis.

**Staff—Director:** Watson Davis. **Writers:** Frank Thone, Jane Stafford, Marjorie Van de Water, Morton Mott-Smith, Glenn Sonnedecker. **Science Clubs of America:** Joseph H. Kraus, Margaret E. Patterson. **Photography:** Fremont Davis. **Librarian:** Page Secrest. **Business Manager:** Alvin C. Stewart. **Sales and Advertising:** Hallie Jenkins. Correspondents in principal cities and centers of research.