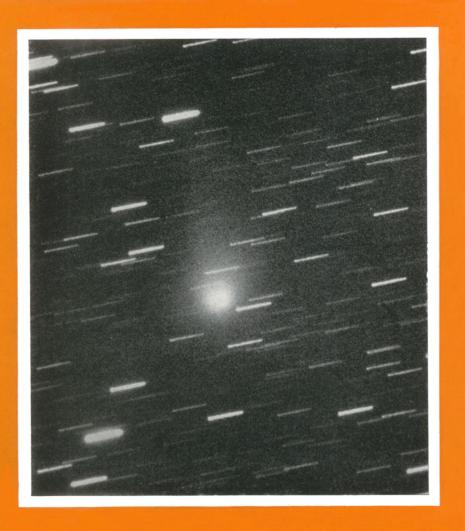
SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE .





November 16, 1940



Christmas "Star"

See Page 312

A SCIENCE SERVICE PUBLICATION

Do You Know?

The Dutch were first to grow pineapples in Europe.

In an average lifetime, a human *heart* beats two billion times.

Speeding up production, *nylon* yarn factories expect to turn out 16,000,000 pounds a year by the end of 1942.

The British Navy's newest motor torpedo-boats are described as fastest small warships in the world.

Dahlia roots, says an agricultural extensionist, are stored best in dry sand or peat moss, in a cool basement.

In 1782, Spain tried and failed to take Gibraltar by using a *secret weapon*—bomb-proof floating batteries.

While a *battleship* is 93% steel, its materials also include copper, lead, zinc, aluminum, cork, wood, asbestos, cement and glass.

When meadow mice destroy *pine trees*, they girdle the tree above ground; pine mice, on the other hand, usually work underground at the roots.

Among the Aranda tribe of Australia, says an anthropologist, a man is ordinarily expected to *marry* his mother's mother's brother's daughter.

A new *sewing thread* patented in the United States is said to be so smooth that it greatly reduces friction in passing through a fabric.

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.

ASTRONOMY

How long has the spot-producing area of the sun been active? p. 312.

What are nebulium and coronium? p. 316. What star became 20% brighter within one week? p. 313.

BOTANY

How can holly be treated to keep the leaves from falling off? p. 312.

CHEMISTRY

How much Scotch is required to give whisky the desirable smoky taste? p. 312.

CHEMISTRY—INVENTION

How do the Germans make gasoline from water-gas? p. 311.

ENGINEERING

How much does use of Diesel buses save on fuel? p. 315.

INVENTION

Into what sort of concrete can nails be driven? p. 313.

MEDICINE

How can neutrons be used to cure cancer in mice? p. 315.

What effect has the removal of tonsils on susceptibility to infantile paralysis? p. 308.
What new kind of protection is being tried against infantile paralysis? p. 307.

What substance found in livers may lead to new understanding of cancer? p. 309.

MEDICINE—PSYCHOLOGY

What is a better test of drunkenness in a driver than a measure of blood alcohol? p. 313.

MILITARY SCIENCE

How would super-heavy tanks have to travel in the United States? p 313.

Why may solid shot be used instead of shell against tanks? p. 316.

NUTRITION

What new development makes it possible for the housewife to keep her own store of frozen foods? p. 314.

PALEONTOLOGY

Where were the oldest wormholes discovered? p. 310.

PHYSICS

Where has evidence been found for a fourth series of radioactive elements? p. 310.

PHYSICS—FORESTRY

What new use has been found for the wind tunnel? p. 313.

PHYSIOLOGY

What grafting operation has made it easier to study the sex cycle? p. 318.

PUBLIC HEALTH

How long has the U.S. Department of Agriculture been battling bovine tuberculosis? p. 312.

A *soap* company is producing 17 varieties, to fit regions having water of varying degrees of hardness.

A fine collection of *moths*, which are attracted by airport lights, has been made by Austin McMahon, airport night watchman at Moncton, Canada.

A New York physician states that a young child's *appetite* naturally slumps when growth rate decreases in the second and third year.

China's military leaders are said to regard the war in their country as henceforth 30% military and 70% industrial.

A polar bear, says Dr. Roy Chapman Andrews, has partly webbed toes, and huge flat feet which serve both as paddles and snowshoes.

A British archaeologist finds alarming the extent to which defense measures have endangered or engulfed his country's ancient *earth monuments*.

SCIENCE NEWS LETTER

Vol. 38 NOVEMBER 16, 1940 No. 20

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

Copyright, 1940, by Science Service, Inc. Republication 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; 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. Kirchhofer, 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.