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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE

• APRIL 3, 1943



Stock Pile

See Page 217

A SCIENCE SERVICE PUBLICATION

Do You Know?

Ammonia has some 2,000 industrial uses.

Australia has more than one hundred kinds of *snakes*.

A *honey* crop of more than 400,000,000 pounds is produced in the United States each year.

Timber for war uses cut in national forests in 1942 was 70% greater in volume than the amount cut in 1939.

New Caledonia, 900 miles east of Australia, has among its 64 species of land birds five that exist nowhere else in the world.

Extensive *oil shale* reserves on this continent may be used as a source of gasoline and other petroleum products if necessary.

Honeybees survive the cold of winter by clinging together in a great ball, the bees on the inside frequently changing places with those on the cold outside layer.

Some 600 tons of *guayule* rubber are expected from 4,000 tons of shrubs gathered in January from a 550-acre plantation owned by the federal government in California and now being processed.

Spain is reported to be planning to make a synthetic camphor, a fuel substitute, and a rubber substitute from its surplus supply of *turpentine and colophony* which can not now be exported because of the war.

Question Box

Page numbers of Questions discussed in this issue:

ASTRONOMY

When will the minimum of the present sunspot cycle occur? p. 218.

BOTANY

What was the original home of Washington's famous Cherry trees? p. 217.

What weeds have been put to work in the war effort? p. 218.

CHEMISTRY

Who gets the "soapless soap"? p. 217.

ENGINEERING

How can hard aircraft metals be sawed at high speed? p. 222.

How can railroad tracks be replaced without delaying war traffic? p. 211.

How is castor oil being used to win the war? p. 216.

ENTOMOLOGY

What food is recommended to keep bees from getting nosema? p. 216.

What new ammunition will we have against flies next summer? p. 221.

GENERAL SCIENCE

How are the Science Clubs of America helping in the war? p. 220.

HORTICULTURE

Do you need ration coupons to get peas to plant? p. 216.

INVENTION

How can cooked foods be dehydrated? p. 221.

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 are disease germs killed by ultraviolet light? p. 211.

How can a new method of making childbirth painless be used for relief of the war wounded? p. 211.

What are the uses of sulfa chewing gum? p. 216.

What new treatment is being used for "shipyard eye"? p. 216.

What new uses are predicted for the vitamins? p. 213.

Why do the sulfa drugs fail in some cases? p. 213.

Why is the application of hot water bottles the wrong treatment for shock? p. 212.

PHARMACY

What foreign drug plants are now being grown in this country? p. 214.

PSYCHOLOGY

How can books be used to improve mental health? p. 223.

PUBLIC HEALTH

What plan has been developed to solve the milk problem? p. 218.

RESOURCES

Where do the Japanese get the toluene to make TNT? p. 217.

SEISMOLOGY

How will Mexico's new seismograph be used to learn more about volcanoes? p. 212.

Approximately 12 pounds of *manganese* go into each ton of steel to give it strength and workability.

Various chemicals, including creosote, are used to make *wood* resistant to fire, decay, and termites; the wood is impregnated under high pressure.

Six colonies of *beaver* in New York State, involving a total of approximately 15 years, cut 5,424 trees measuring from one inch to 17 inches in diameter, 7.6% being six inches or more in diameter.

Only about 10,000 of the 640,000 known *insect* species are destructive to the works of man.

Outbreaks of *hog cholera* have occurred in nearly every state in recent years, but effective controls prevent any from developing into major proportions.

In the beautiful majestic cumulo-nimbus *clouds* lurk many dangers to aircraft, including upward currents much stronger than gravity, electrical discharges, and perfect conditions for icing.

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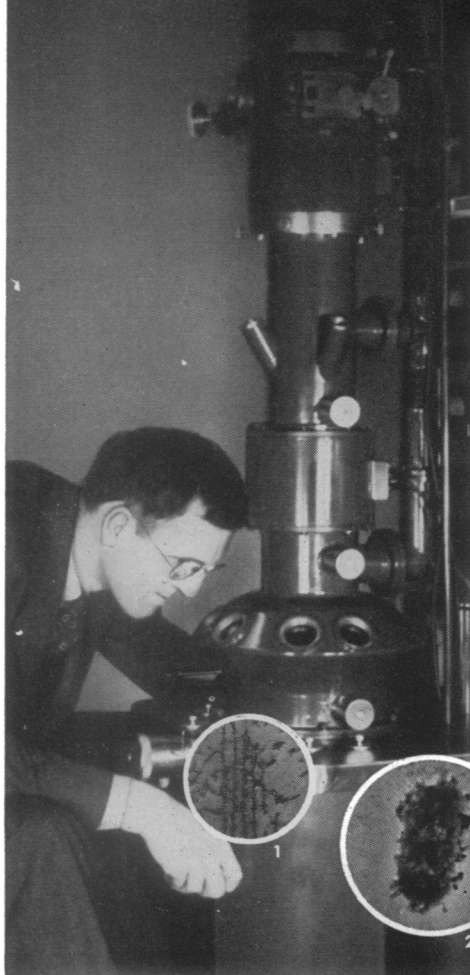
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AMERICA'S WEAPON TO UNCOVER NEW SECRETS



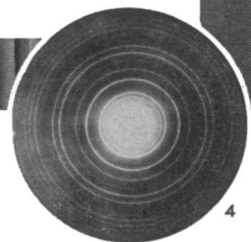
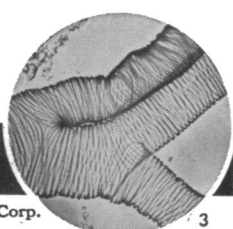
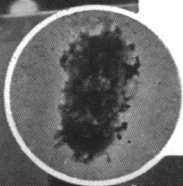
Two years ago, the RCA Electron Microscope made its timely and dramatic entry on to the stage of crucial global strategy—two years in which the struggle shifted from “blitzkrieg” techniques to the cold, emotionless battlefields of science.

Those two years have found research workers in great industries, laboratories and universities laboring tirelessly on problems whose solutions even now, though secret, are making themselves felt directly or indirectly in the great war in which we are engaged.

The RCA Electron Microscope becomes increasingly important as America's weapon to uncover new and valuable secrets. It is in the front line of every modern scientific attack upon the obscure and hidden mysteries of the sub-microscopic world.

We pay tribute, on this second birthday of the RCA Electron Microscope, to those progressive institutions and brilliant scientists who are helping in the battle of today and the building of tomorrow.

1. Pearlite, a special form of carbon steel.
2. Bacteriophage attacking and destroying germs.
3. The windpipe of a mosquito larva.
4. A diffraction pattern, enabling the atomic analysis of a structure.



Photographed by C. K. Fitzpatrick, courtesy of Interchemical Corp.



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 . . . and many others

