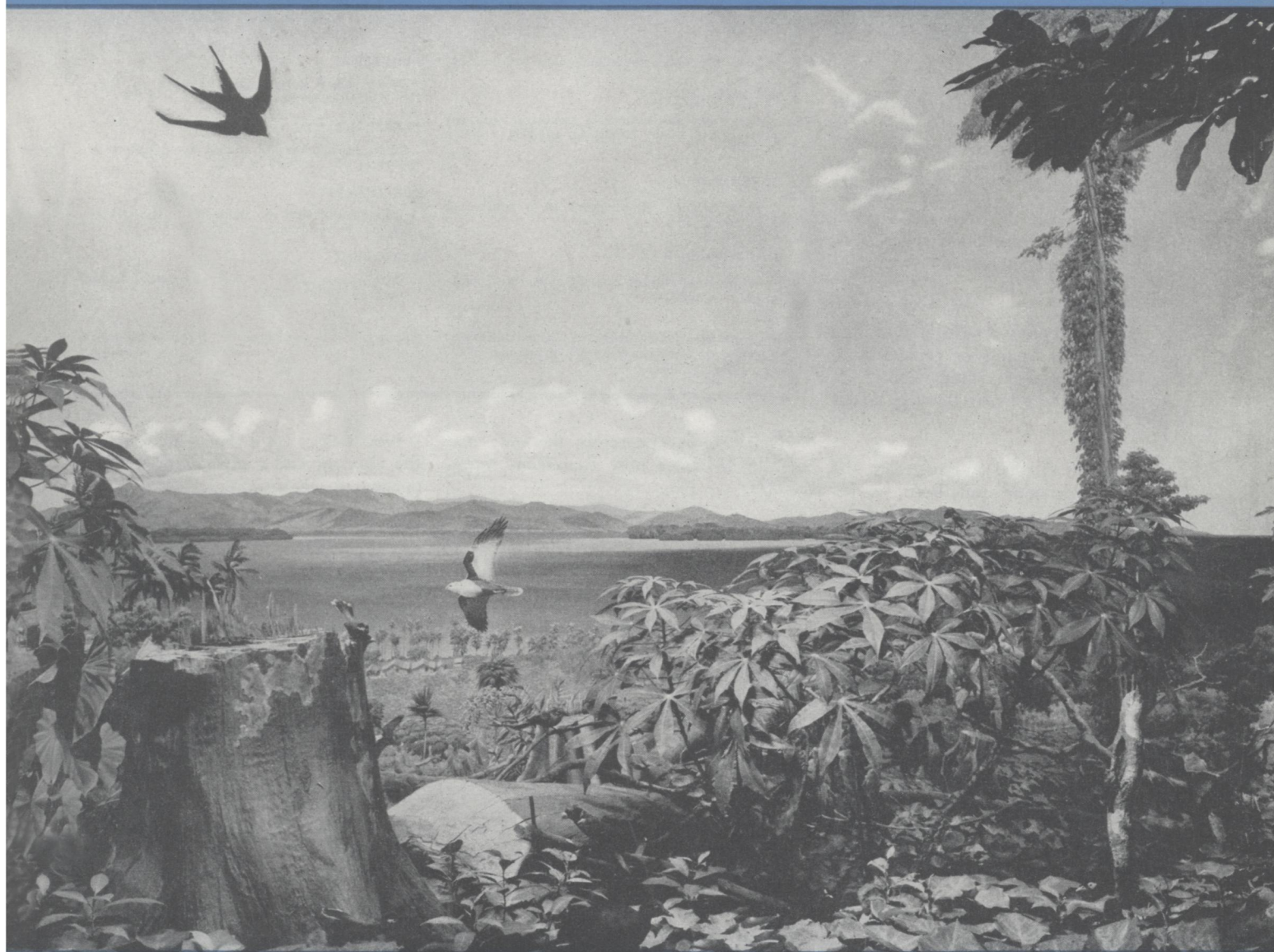


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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • NOVEMBER 21, 1942



Guadalcanal

See Page 326

A SCIENCE SERVICE PUBLICATION

Do You Know?

Eating *eggs* is taboo in large regions of Africa and Asia.

Honey contains mineral elements not found in sugar, and is more easily and quickly digested.

Flying visibility and weather conditions can be estimated to some extent by the color of the *sky*.

Feeding young livestock more *protein*, such as soybean meal, reduces the total amount of feed required for growth.

Destruction of all *chokecherries* within 500 feet of peach trees is the only way to protect peaches from the fatal "X" disease.

A *synthetic rubber* from wood products has been developed in Sweden, suitable for bicycle tires but not for motor cars.

Normally humans absorb 70% of the *carotene* in raw carrots or cooked spinach, furnishing them with vitamin A, but this drops to 50% if there is no fat in the diet.

An area of 150,000 square miles, the Oriente of Ecuador and Peru, is believed to be the world's largest *unoccupied land* available for successful settlement and development.

Mosquitoes, commonly supposed to have a flight limit of 10 to 15 miles, have been recorded by one observer as flying 110 miles across the open sea, under favorable wind conditions.

Question Box

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Where does rotenone for insecticides come from? p. 330.

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.

Delaware is apparently the only one of the 48 states now free from *rattlesnakes*.

Increasing the oil content of *sole leather* from 3% to 5% makes shoes last at least 10% longer.

The *driest* and the *rainiest* spots in the United States are both on the West Coast: Death Valley, Calif., and Gray's Harbor, Wash.

Newly-discovered Canadian deposits of the vital mineral *molybdenite* have been opened up for mining.

There are more than 15,000 *islands* in the mid and south Pacific, in addition to countless coral reefs and atolls.

Intentionally or carelessly started *forest fires* have increased 10% this year over last year, while lightning-caused fires have dropped one-third.

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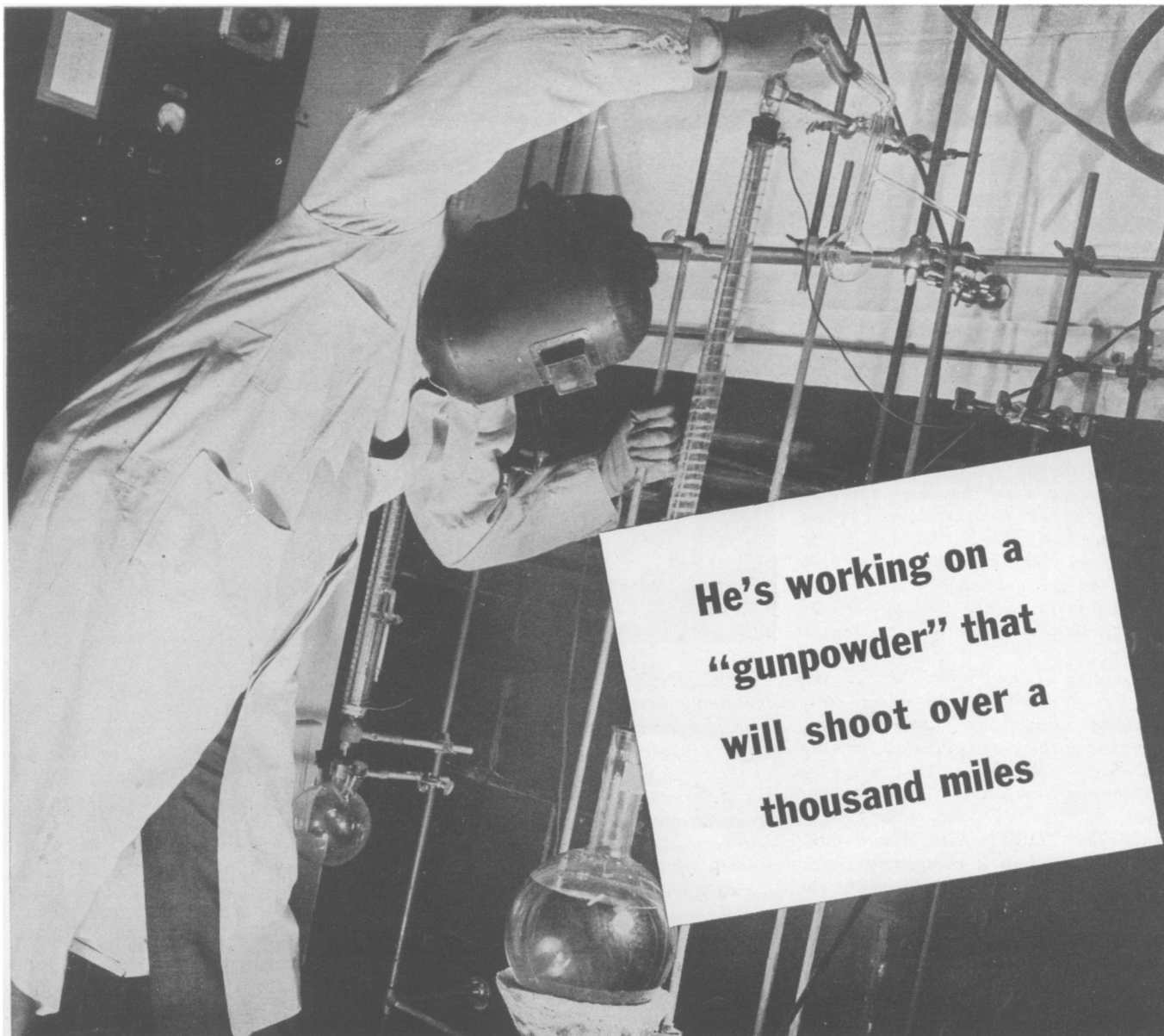
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The black powder of the American Revolution could lob a cannon ball about a mile. At the time of the First World War the normal heavy artillery range, with smokeless powder, was about twenty miles.

For this war, chemical research developed a propellant that has a range of hundreds—even thousands—of miles. Already it has carried four-thousand-pound projectiles from somewhere in England straight to the heart of German industry. It has dropped destruction on a Japanese fleet that was nearly a thousand miles from our outposts. From "Shangri La" it sent all Tokio scurrying for cover.

The new "gunpowder," which has changed the whole strategy of war, is *high-octane gasoline*.

In modern aerial war the bomb is the shell, the airplane is the cannon and high-octane aviation fuel is the propelling charge. The side which has the best aviation fuel—the one which gives the most power, the greatest range per gallon—enjoys an advantage of tremendous value.

Fortunately for the United Nations, the development of high-octane gasoline was a triumph of the American petroleum industry. Long before Pearl Harbor, U. S. petroleum chemists were seeking and finding new and better components for aviation fuels—iso-octane, Ethyl fluid and many others—developing processes and facilities for producing these aids to high-octane quality in volume. They advanced the art of refining petroleum from a simple distilling and crack-

ing process to a science of synthesizing special chemicals—then blended these chemicals into fuels of predetermined characteristics and quality. Since Ethyl fluid plays an important part in the manufacture of high-octane fuels, Ethyl research engineers have cooperated with petroleum technologists in their search for better fuels. And because fuels and engines are inseparably related in their development, we work with engine designers in their efforts to get the most from these superior fuels. Today it is our privilege to furnish our product and devote our technical experience to the cause of American victory.



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