

Boys and girls in their teens not only LOOK at the war but give practical suggestions for Victory.

During the First Annual Science Talent Search forty of the most brilliant boys and girls were selected to come to Washington to compete for Westinghouse scholarships. Each of these finalists wrote an essay so stimulating, so thought-provoking that Science Service compiled the forty articles in book form. The subject of each is "How Science Can Help Win the War."

YOUTH LOOKS AT SCIENCE AND WAR contains 140 pages of well-printed text and includes, besides the essays, the science aptitude test that was requested by over 10,000 high school seniors. The answers to the questions are given, also. Grown-ups need not worry if they cannot answer each question correctly for not one of the seniors made a score of 100.

So that many readers may enjoy the book, Science Service has reduced the cost to the minimum—25 cents. Please clip the attached coupon and send to our Washington office.

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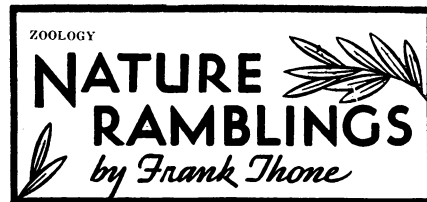
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From a Warm Climate

DON'T pity the poor polar bears in your city zoo, when the mercury is bubbling in its tube and threatening to put on a creditable imitation of Old Faithful geyser. Polar bears don't mind the heat as much as you think they do. They aren't altogether unused to it, for the Arctic gets hot days in midsummer, even though they may not be quite such sizzlers as the Old Home Town can boast of.

U. S. Weather Bureau records show real summer temperatures for three sea-coast towns near or above the Arctic circle in Alaska. Highest on record at Nome, facing Bering Strait just below the circle, is 84 degrees Fahrenheit, in a period of 32 years. A little to the north, and just above the circle, is Kotzebue, where a 14-year maximum is given as 81 degrees. At Point Barrow, northernmost spot on the North American mainland, a 25-year record shows 78 degrees as the highest.

Admittedly, this is nothing for the Chambers of Commerce of those places to get "all het up" about; nevertheless they are real summer temperatures. They'd be considered pretty high, for instance, in London. Reason for such high temperatures at such high latitudes of course is the continuous sunshine. When the sun doesn't set at all for several weeks, it can get pretty warm, even 'way up north.

Inland, it does even better than that. Temperatures of 100 degrees have been reported from interior valleys in Alaska; but they don't count here, for polar bears never go inland. They stick around the beaches, where they can get seals and fish, and an occasional feast of stranded whale.



Of course, if the polar bear doesn't like his 80-degree day at the seashore, he can always jump right in where it's cool, just as he jumps into his cool pool in the zoo's bear pit. All bears can swim, but the polar bear is the "swimmin'est" of them all. Despite his great size, he can chase and catch a salmon under water, as easily as an otter.

Like all bears, the polar bear eats anything. Force of circumstances, however, compel a diet more predominantly of meat and fish than other bears ordinarily choose. The berries, fleshy roots and succulent grubs in which other bears delight are available to him only during the brief Arctic summer. And the greatest bear treat of all, the finding of a honey tree, is entirely out of his ken. There can't be any bee trees in his habitat, because there aren't any trees at all.

Science News Letter, August 8, 1942

New Machines And Gadgets

Novel Things for Wartime Living

The fine gossamer wires for the delicate electrical instruments which make it possible for our giant bombers to fly accurately on their missions and our big guns to hit their marks, are made by drawing the metal through a tiny hole in a small Brazilian diamond. The smallest of these dies is a diamond weighing only 1/800 of an ounce with a hole only four-thousandths of an inch in diameter, producing a wire far finer than a human hair. Two years ago nearly all of the smaller sized dies were imported from Europe. Now they are made in this country.

The miles per gallon you are getting can be instantly read on a meter newly patented. The fuel pump contains a vibrating diaphragm. The frequency of vibration depends on the speed of the car. The amplitude depends on the rate of fuel flow. Divide one by the other, which the instrument does for you, and you have miles per gallon.

An electromagnet carried by a truck picks up small bits of metal scattered about the yard of an automotive plant, thereby preventing tire punctures to other vehicles. Thirty punctures a month in the tires of combat vehicles manufactured by this company was the average before the magnetic "scavenger" was introduced. The number of punctures has since been much reduced.

This blackout microphone covered with phosphorescent paint gives enough light to enable the announcer to go



right on reading his script. In this case the script is also printed in fluorescent ink which glows when flooded with ultraviolet light.

Spilled coffee drains off into a deep recess in the saucer, according to a recently patented invention. Little inwardly jutting pieces spaced around the edge of the depression hold the cup clear of the spilled liquid. It should be a boon to those who saucer and blow their coffee, because the saucer holds more than the ordinary kind.

Old stiff paint brushes can be softened in the vapor of a new paint solvent. This is a radical departure from the old method of soaking, and saves solvent. The brushes are suspended above the solvent in a closed can. Good bristles are scarce, so save your old brushes.

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., and ask for Gadget Bulletin 116.

Science News Letter, August 8, 1942

FORESTRY

Fast-Growing Chinese Elm Shows Up Well in Tests

WOOD of the fast-growing, drought-resistant Chinese elm, favored for planting as an ornamental and shelter-belt tree in the prairie regions, shows up well in comparison with the wood of native elm species, Prof. A. J. Panshin of Michigan State College states (*Journal of Forestry*, July).

It is not as stiff as native elm woods, Prof. Panshin discovered, but it is harder than either white or slippery elm, and compares well with white elm in ability to bear a slowly applied load and in resistance to compression.

Science News Letter, August 8, 1942

Strategic minerals

BAUXITE and manganese have been important to American industry for years, but never more so than now.

Manganese, indispensable to the making of steel is known as the "starch of steel." Bauxite, the ore of aluminum, is also a source for many other useful items, such as artificial abrasives, alum, aluminous cements, insulating materials, and preeminently, aluminum. Airplanes are constructed about 90% of aluminum.

Where do these minerals come from? What do they look like? This unit of "THINGS of science" will give you the answer, as well as specimens of bauxite, manganese ore in the raw state, and manganese ore after concentration. Also enclosed with this unit, is an illustrated booklet on aluminum.

Strategic minerals such as bauxite and manganese are tools of war. Wouldn't you like to know more about them?

As in all units of THINGS of science, this unit contains specimens of scientific material to be examined, studied, and enjoyed. Museum-style legend cards are supplied for each science object; a brief, clear explanation of the entire contents is included with suggested experiments. This service is under the sponsorship of Science Service, the non-profit institution for the distribution of scientific information.

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