

## Do You Know?

Red Cross *blood* donations, by July 1, had reached 8,500,000 pints.

The Chinese, hundreds of years ago, conceived the idea of *ball bearings* made of leather.

French Morocco, Africa, exports each year iris roots, leafy herbs, wild marjoram and rose leaves for use in *perfumes*.

Hydroxylin is a new low-cost *plastic* developed in a government laboratory as a general purpose material made from mill-run sawdust or chips.

Haiti is prohibiting the exportation of *mahogany* and other fine woods as a measure to guard against depletion of supply.

Chile is planning to establish *tung-tree* orchards to produce tung oil for domestic uses; tung orchards in neighboring Argentina are successful.

*Quartz crystals*, essential material that plays an important part in radio transmission and reception, were thought by ancients to be ice congealed by long exposure to severe cold into durable form.

Scientific, agricultural and many other documents are included in the 45,000 letters and writings of *Thomas Jefferson* that Princeton University is now editing and preparing for publication.

The *scales* of a fish, which it keeps through life, unless lost through injury, tell its age to an experienced fish biologist, who counts the annuli, much as dendrochronologists count tree rings.

The African giraffe-like *wild okapi* is included in the list of interesting animals known as "living fossils" because it is more nearly related to extinct forms than to the modern giraffe.

A wine company at St. Catherines, Ont., has converted to making *apple sirup* from windfalls and culls; the sugar content of the product will be 60% and it will be prepared as a table sirup or for use in cigarettes.

*Radio-telephotos* of embarkation activities to invade France, received by the War Department in Washington, were developed and copies made ready for distribution within four hours of the time they were sent.

GENERAL SCIENCE

## Postwar Wars

After Hitler and Hirohito, mankind must still battle the unknown. Cancer is an enemy killing 400 every day; more killed in World War I by flu than by bullets.

► POSTWAR wars must still be fought by mankind, Dr. Harlow Shapley, director of Harvard College Observatory, declared in the annual Phi Beta Kappa address in Cleveland. They will be fought, not against the tyranny of known and tangible dictators like Hitler and Hirohito, but against the tyranny of the unknown, and if we are to win we must put into them effort and treasure comparable to the sacrifices we are making now.

Dr. Shapley was invited to deliver the lecture before Phi Beta Kappa, national honor society for scholars, because he is president of its sister organization, Sigma Xi, national honor society of research scientists. He titled his talk, "A Design For Fighting."

As specific examples of enemies to be attacked in the postwar wars, Dr. Shapley pointed out illnesses that age and kill men and women before their time. He indicated five as particularly evil: cancer, mental derangements, arthritis, and the diseases of the circulatory and respiratory systems. He stated that in one 10-month period 25 years ago four times as many Americans were killed by influenza as died in the whole of World War I. As against the 300 men killed per day during the critical stage of the Normandy invasion he cited 400 deaths a day from cancer in a war that never ends.

Exhausting and debilitating as are the after-effects of a shooting war, the speaker went on, they have no worse effects on nations than persisting illiteracy and low educational standards. Nor do people need to await an authoritarian suppression of "dangerous thoughts." A deadening cultural uniformity is one of the dangers inherent in the very unity which we are seeking as a means to peace.

Two contradictory and amazing situations exist in America at the present time, the speaker pointed out. One is the fact that Americans are profiting from the war both materially and in social and intellectual ways. The other is the fact that all Americans want the war to end as quickly as possible.

This seeming paradox, as Dr. Shapley saw it, is explained not only by our fears

of what may happen as a consequence of continued fighting but by our innate antipathy to war as such.

"This antipathy," he said, "is a characteristic that has been slowly bred into man by centuries of ethical teaching. When he is rational, man almost instinctively believes that peace is good, war is evil and that peace is the concomitant of desired individual liberty and democratic society.

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STATISTICS

## Industrial Research Has Grown Greatly in Past Years

► PRIVATE industry's appreciation of the importance of scientific research was held against a numerical yardstick by G. Edward Pendray, assistant to the president of the Westinghouse Electric & Manufacturing Company.

Before the first World War, Mr. Pendray stated, most of the scientific work of the country was done in university laboratories, and even in 1920 only 297 American companies had research laboratories of their own, employing about 7,400 scientists. By 1927, the number of laboratories had grown to 1,000, with staffs totaling about 19,000 employes.

In 1931 there were 1,520 industrial laboratories, staffed by 33,000; in 1938 there were 1,722, with 43,300 scientists; in 1940, 2,350 companies had laboratories, manned by 70,000 researchers. The prospects are for continued and accelerated growth.

Another encouraging tendency, in Mr. Pendray's opinion, has been the great increase in the lay public's interest in science, fed by plain-English accounts of new scientific discoveries and events which are prepared by a group of specialists in popular science writing. He appealed to this group to recruit new members for its ranks, so that the need for more and better science popularization can be met.

*Science News Letter, September 23, 1944*

*Dairy cows* should have one pound of grain for each 1½ to two quarts of milk produced.