

Do You Know?

Rice is a basic food for half the total world population.

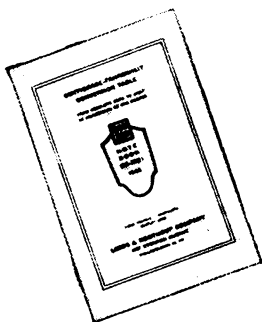
The *ostrich*, which weighs from 150 to 300 pounds, is small in comparison with the extinct giant moa from New Zealand, which weighed about 500 pounds, and the elephant bird from Madagascar, also extinct, which weighed up to 1,000 pounds.

Plants are the only living things that can use directly the sun's energy and combine it with raw materials from the earth.

Although more than 100 kinds of *birds* have become extinct during the past two centuries, none have become extinct in Africa and only one or two in Asia, South America and Australia.

Tar sands, found in both the United States and Canada, are common sands stuck together by a black tarry material from which crude oil may be obtained by washing with hot water or by direct distillation.

Soaring *hawks* circle over the edges of forests or over cliffs where there are up-currents of air to help their gliding.



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GEOPHYSICS

Ocean Bottom Mapped

Loran in conjunction with the newest developments in echo sounding is aiding scientists chart ocean currents and map mountains and valleys of the ocean floor.

➤ MORE ACCURATE charting of location and velocity of ocean currents far out of sight of land, and increasingly detailed mapping of the mountains and valleys on the ocean bottom are among the accomplishments of seagoing physicists who have been recruited to the aid of oceanographers, states Prof. Columbus O'D. Iselin, director of the Woods Hole Oceanographic Institution, in *PHYSICS TODAY* (August)

Principal scientific tools employed in this work are Loran, war-born method that enables a ship to plot her position by picking up pulsed radio signals from accurately sited sending stations on shore, together with the newest developments in echo sounding.

Loran is particularly good in giving an accurate picture of changes of position of a vessel as she drifts or sails. By dodging into and out of a current, keeping constant track of position changes, it is possible to get data on its velocity on a hitherto impossible order of accuracy. Similarly, while the echo sounding apparatus is recording depths of submarine valleys and heights of mountains, Loran measures their lengths

and breadths with reasonable accuracy.

Thus far, the use of Loran has shown that the Gulf Stream is considerably narrower and swifter than had been supposed. Larger meanders in the current have been found in the sector off New England and powerful eddies have been observed to form on either side. Data of this kind are exceedingly useful in everyday navigation.

Another discovery made by the seagoing physicists is the existence of a "false bottom" over much of the floor of the ocean. Small depth charges set to explode on reaching bottom send up a direct sound-wave signal, which is followed after a considerable interval by an echo. This indicates that over the solid rocky ocean floor there is a great depth of soft, unconsolidated sediment.

Dr. Iselin states that it was difficult at first to find physicists with stomachs reasonably resistant to seasickness. However, a group of young men have been recruited who have long since acquired their sea-legs and are able to man their instruments in all weathers.

Science News Letter, August 21, 1948

ROTANY

Puzzle Over Metasequoia

➤ CHINA'S "dawn redwood," *Metasequoia*, may turn out to be not only a "living fossil" but a "surviving ancestor" of the well-known American coast redwood, *Sequoia sempervirens*. This possibility has developed from an effort by Dr. G. L. Stebbins, Jr., of the University of California to settle the rather puzzling relationships of the recently discovered Chinese tree, hitherto known only as a fossil species (*SCIENCE*, July 30).

In characters visible to the naked eye, the dawn redwood resembles the coast redwood more than it does any one of a half-dozen other related conifer species, among which are the California big tree and the bald cypress of the South. However, it has points of difference with the coast redwood, and similarities to some of the other trees.

The study developed the interesting suggestion that the coast redwood, unlike all its kin-trees, may be a hybrid. This idea comes from an examination of the heredity-bearing chromosomes in the cell nuclei. The coast redwood appears to have a basic count of 66 chromosomes, as compared with 22 in most of the other related

species. Multiple chromosome numbers always suggest hybrid origin to plant scientists.

Science News Letter, August 21, 1948

PHARMACOLOGY

\$1,000 Prize Awarded For Iodine Research

➤ THE FIRST Iodine Educational Bureau award of \$1,000 will go to Dr. W. T. Salter, professor of pharmacology at Yale University School of Medicine. His selection was announced at the convention of the American Pharmaceutical Association in San Francisco. He will receive the award at the next annual meeting.

The Yale pharmacologist was cited for his exploration of many fundamental questions concerning the function of iodine in nutrition and the life processes of the body. Dr. Salter's research was on the function of the thyroid gland and its relation to blood iodine fractions. He did significant work with radioactive iodine, particularly its effect on the thyroid gland in cases of toxic goiter.

Science News Letter, August 21, 1948