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The zinc reserves will last 20 years; copper and gold, 19; silver, 13; cadmium, 11; lead, 10; and vanadium, eight. The domestic reserves of manganese, platinum metals, antimony, mercury, tungsten, tantalum and chromite are even lower. Nickel and tin are not produced commercially in the United States.

Among the non-metals, all especially important in times of war, there is an unlimited reserve of nitrates and salt, enough bituminous coal and lignite for over 40 centuries, and sufficient anthracite for 187 years. Phosphate rocks for fertilizer and chemicals are in a six-century supply. Potash is more limited, but it will last nearly a century, it is estimated.

Sulfur reserves face exhaustion in 36 years. It is an important material, the basis of most of the sulfuric acid widely used in many industries. Fluorspar, needed for the newly-harnessed fluoride chemicals, is sufficient for 33 years.

Known reserves of petroleum will be exhausted in 15 years, according to this estimate. The discovery of new oil fields, however, is expected, and the production of fuel oil and gasoline from coal, natural gas and oil shale is about to begin. The known natural gas will last 55 years.

Mica, long-fiber asbestos suitable for weaving, flake graphite, industrial diamonds, and quartz crystals for electrical apparatus are produced only in very small quantities in the United States. These are among the non-metallic minerals that should be stockpiled.

Science News Letter, July 12, 1947

YOUR HAIR

AND ITS CARE

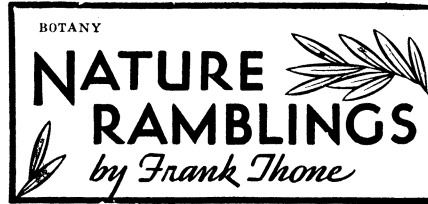
By O. L. Levin, M. D. and H. T. Behrman, M. D.

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Botanical Orphan

➤ CORN is a botanical orphan. The wild plants ancestral to most other grains, as well as to such other cultivated plants as sugarcane, potatoes, melons, onions, tomatoes, apples, pears, grapes, strawberries, raspberries, cotton and tobacco are well known. They resemble their cultivated descendants mainly in being less productive, both in quantity and in individual size of product. Botanists and plant explorers have sought them out eagerly because sometimes they can be crossed with over-refined cultivated varieties to impart new disease resistance or climatic hardiness.

Wild corn, however, has never been found. Several times it has been suggested that corn is a descendant of a tall, robust grass called teosinte, found in Mexico and Central America, or of a hybrid between this and some other grass. The theory doesn't seem to stand up; it has even been suggested that the cart may have been put before the horse, and that teosinte is descended from corn, rather than corn from teosinte.

One thing the two plants have in common, that sets them apart from all other grasses: both have "tassels," that is, their male or pollen-forming flowers are borne in a branching, tree-like arrangement at the top of the stem. But it takes a long stretch of imagination to detect a resemblance between the corn ear and the female or seed-bearing inflorescence of teosinte.

That corn ear is the real stumper. No other grass has anything like it. It is obviously the product of long selection in cultivation, for like many other plant structures desirable from the cultivator's standpoint it is very bad from the plant's. With seeds firmly fixed in the cob, and

the ear sheathed in husks, it is about as ill-adapted for a natural dispersal of its seeds as can well be imagined. It can grow only where man plants it; corn is even more dependent on man than man is on corn.

Moreover, it has been that way for centuries. In very ancient tombs of the South American uplands, older than the Inca empire, pottery vessels shaped to look like corn ears have been found—and the ears are like those raised by the Indians of those regions today.

It is quite possible that the wild form of corn never will be found. If that is so, botanists will be hunting for it on the eve of Judgment Day. For they are a persistent lot.

Science News Letter, July 12, 1947

BIOLOGY-PHYSICS

Laboratory to Study Marine Biophysics

➤ MARINE biophysics and cancer are to be the two principal subjects of research in Donner Hall, a building of 64 rooms costing \$150,000, title to which has just been handed to the Institutum Divi Thomae by the Donner Foundation.

It is adjacent to Bradley Hall, present laboratory building of the Institutum in Palm Beach, Fla.

The Institutum Divi Thomae, with northern headquarters at Cincinnati, is a graduate research institution open to all scientists without respect to race, color or creed. It has been operating since 1935, and now has 14 affiliated units throughout the United States.

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BIOCHEMISTRY

Digestive Enzymes Aid in Lard Making

➤ PROTEIN-DIGESTING enzymes like pepsin and papain are used to loosen the grip of animal body tissues upon their fat, and thereby make lard production possible in less time and at lower rendering temperatures than those used in present practice, in the process on which patent 2,423,102 was granted to Dr. H. L. Keil, research biochemist for Armour and Company.

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Early adobe houses built by Indians in Arizona, New Mexico and southern California, were left in the natural color of the mud blocks to make them less visible to enemies; Spanish settlers introduced the white finish.