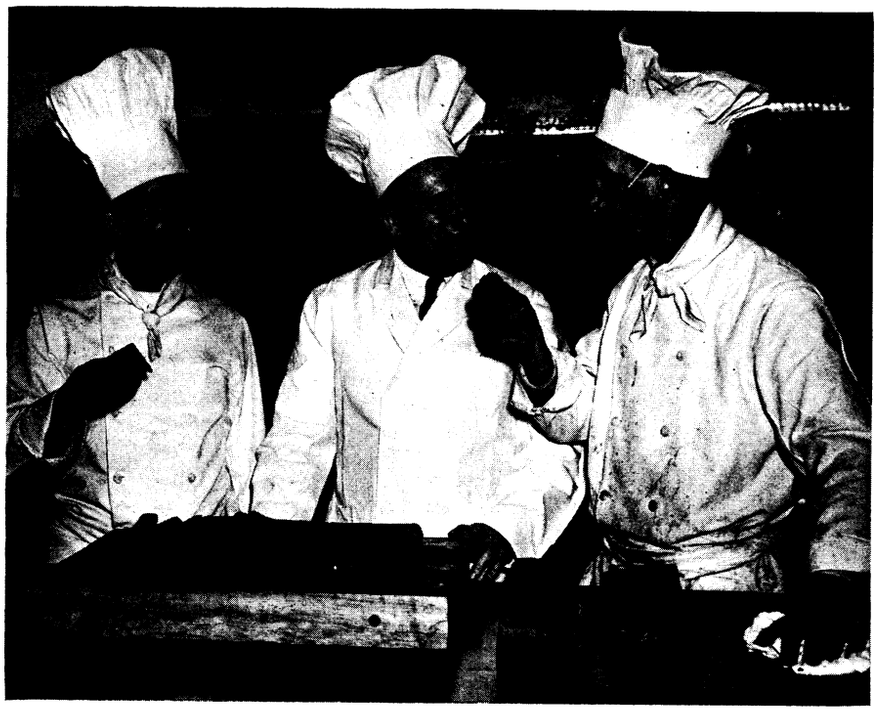

LEND-LEASE FOOD—Chefs at the new Statler Hotel in Washington, sample the meatloaf they have prepared from compressed dehydrated food for the Lend-Lease anniversary celebration.

NUTRITION

"Square Meals" Literally

Lend-Lease Administration demonstrates the compact little blocks of compressed dehydrated foods that are going to hungry Europe.

➤ BORTSCH for the fighters of Russia —enough to make two good helpings packed into a little block no bigger than a safety-match box—featured a demonstration of the newest things in space-saving shipping, put on by the Lend-Lease Administration to mark the second anniversary of the Lend-Lease Act.

The bortsch "briquets" contain the cabbage, shredded beets and all other ingredients of the red soup that is the Red soldiers' favorite, dehydrated and compressed. All Ivan needs to do is peel off the cellophane covering, soak for 20 minutes in cold water, then boil it up and eat while hot.

Compressed tablets of many kinds of dehydrated foods were demonstrated to representatives of Russian, Chinese, British and other Allied governments, and to members of the Cabinet and the Congress and other government officials. They sat down to a luncheon of soy-bean soup, meat loaf, mashed potatoes, carrots and beet salad, all "reconstituted" from the dehydrated state, and topped it off with custard made from dehydrated milk and dehydrated eggs.

The great step forward which was demonstrated is the compression of dehydrated foods, adding saving in bulk to the great savings in weight already effected by dehydration. For instance, potatoes lose something over 85% of their weight upon dehydration, but still remain rather bulky. Putting heavy pressure on them squeezes out the air that makes the bulk, and reduces the size of the package by another 75%.

Other reductions in bulk obtained by compressing dehydrated foods are: beets, onions, and beef, 65%; carrots, 55%; eggs, 50%; cranberries, 35%; whole milk powder, 30%. Prepared coffee, dehydrated and then compressed, loses 42% of its bulk; one of the little bricks, plus hot water, makes four good cups.

Relatively simple equipment suffices for the compression of dehydrated foods, and much of it can be obtained by the conversion of ceramic tile presses and similar machines now idle. Depending on the type of commodity and the degree of squeezing it will stand without being crushed, pressures used vary from 500 pounds per square inch up into tons per square inch.

Despite being squeezed down past any ready recognition, the compressed dehydrated foods bulk up to normal size and appearance on being soaked in the right proportions of water. Even the cranberries swell up full and round, as if they had come straight from their bogs and had never seen a drier or a press.

Each of the little compressed blocks is individually wrapped in cellophane to exclude moisture, and the blocks are packed in stout cartons of processed fiber board that protect them in handling and discourage hungry insect pests.

Science News Letter, March 20, 1943

PALEOPEDOLOGY

New Science Makes Its Bow: Study of Ancient Soils

➤ A NEW SCIENCE has just made its bow to the world of research. Its name is paleopedology, and it is a member of the family of geological sciences. Its sponsor is Prof. C. C. Nikiforoff, soil specialist in the U. S. Department of Agriculture.

Translated out of its rather formidable-looking Greek, paleopedology means simply the study of ancient soils. It is thus an extension into the past of the already established subject of pedology, or soil science.

Fossil soils, Prof Nikiforoff states (*American Journal of Science,* March) are even harder to find than fossil animals and plants. Although many rocks, like sandstones, limestones, slates and shales, were formed by the solidification of what were originally loose-grained materials, very few of these could be be called soils. For the most part they were laid down as underwater sands and silts, results of the decay and ruin of older rocks and soils. But sometimes deposits are found that were once actual soils, in which plants grew. They were covered up as they stood, by such things as showers of volcanic ash, or lava flows, or glacial deposits, or deep layers of wind-blown loess.

Seldom are these buried deposits

whole soils any longer. As a rule, only the mineral particles, ranging in size from coarse gravel to sand, are all that remain. These have been likened to the skeleton of the soil; they are more or less analogous to the fossilized bones that are usually the only remains we find of extinct animals. Missing is the "flesh" of the old soils—the finer clay particles and the organic humus that form the soil colloids. Missing also is the soil solution—the "blood" of the soil.

Yet despite the skeletonized condition of these fragments of ancient soils, it is possible to make some kind of legitimate inferences regarding the forest floors trodden by the dinosaurs, and the plains where the offspring of little Eohippus grew up into horses.

Science News Letter, March 20, 1943

METALLURGY

British Metallurgists Award Platinum Medal

➤ THE MEDAL of the Institute of Metals has been presented to a former president of the Institute, Dr. Harold Moore, C. B. E., director of the British Non-Ferrous Metals Research Association, a leader in industrial research in England, a communication just received in the United States reports.

The medal is unique in that it is made of pure platinum.

Science News Letter, March 20, 1943

SPACE-SAVING MEALS — These tiny packets contain large quantities of food for shipment to hungry Europe.

PUBLIC HEALTH

DI Men Avert Strike

Scientific detective force from U. S. Public Health Service tracks down the causes of skin diseases in more than 50 war plants.

➤ A THREATENED strike in a Seattle shipyard recently was averted by the DI men of the U. S. Public Health Service, the Office of War Information announced.

The DI men of the federal health service, (DI meaning "dermatoses investigation") are the six doctors specializing in skin disease and the one chemist who, under the leadership of Dr. Louis Schwartz, medical director of the Public Health Service, make up its Dermatoses Investigation Section.

This scientific detective force has tracked down the causes of skin disease threatening to cripple war production and prevented further outbreaks in more than 50 government and privately-owned arsenals and war plants.

Before these doctor-detectives went to work, almost 15% of the workers handling explosives in these plants suffered from some form of industrial dermatitis.

The strike threat in the Seattle shipyard came when electricians who had developed a skin eruption learned that they were working with cable made by a copper company where occupational hazards resulting in some deaths had recently been reported.

Plant officials persuaded the workers to stay on the job until a Public Health Service DI man could arrive to investigate. Dr. Schwartz flew to Seattle, examined the workers suffering from "cable rash" and proved almost immediately that the cause was the chlorinated compound in which the cable was packed. He recommended precautionary measures which were put into practice at once. The strike was avoided and the workers protected.

A unique case recently solved by Public Health's DI men was an unusual skin rash which developed in two State Department clerical employees in Washington. Prior to the rash these employees had been sorting mail from India. The pouch in which this mail had arrived also contained glass tubes of oil samples which had broken and spilled over the documents in the sack. The DI men found by special tests that this oil contained an irritant which had caused the rash.

Government photographers, Navy Yard machinists, Bureau of Engraving printers and building trades' laborers are some of the members of Uncle Sam's wartime force of civil service employees served by Public Health's DI men in addition to industrial plant workers all over the nation.

Science News Letter, March 20, 1943

PSYCHOLOGY

Color-Blind Family

Father and two sons have among them three different types of color-blindness. Father is completely blind to violet end of spectrum.

➤ A FATHER and two sons who among them exhibit all the three known types of color-blindness were described by Dr. Dean Farnsworth of New York University at the meeting of the Optical Society of America in New York.

The father is violet-blind. He confuses violet with yellow, blue with green, and orange with red-purple. One son is red-blind. The other is green-blind.

Violet-blindness by itself is extremely rare. Dr. Farnsworth mentioned only two conspicuous previous cases investigated in this country. One was of quite a different type, he said, and the other was not adequately investigated. However, he believes that violet-blindness is not so rare as generally supposed, that a number of cases have escaped detection because of inadequacy of the color-blindness tests.

Another rare feature of the present case is that the father is completely blind to the violet edge of the rainbow. He