LANGUAGE

Aid in Pronouncing Names; Easier To Say Than Spell

BELGIAN and French scenes of fighting and bombing in Europe's vast battle recall the World War, when Americans endeavored to pronounce Rheims and Liege in European fashion. Here are a few names in the conflict, accented more or less evenly, with stress on last syllable.

Belgian: Liege (lee-ahzh); Tongres (tohn-gr'); Namur (nah-moor); Arlong (ahr-lon—with nasal ending); Brabant (brah-ban—with nasal ending); Louvain (loo-van—with nasal ending).

French: Orleans (or-lay-an—with nasal ending); Rheims (rahnts—with nasal ending); Vosges (vohzh); Montmedy (mohn-may-dee); Longwy (lohn-wee); Nancy (nahn-see); Sedan (say-dan—with nasal ending); Epernay (a-pair-nay).

Science News Letter, May 25, 1940

PLANT PHYSIOLOGY

Gas From Moldy Lemons Speeds Yellow Coloration

GAS of still unknown chemical composition, given off by moldy lemons, greatly speeds up the production of yellow color on the rinds of sound lemons kept in the same room or container, it has been discovered by Dr. J. B. Biale of the University of California at Los Angeles.

When dark green lemons are exposed to the vapors produced by the mold fungus they color up several weeks earlier than similar unexposed fruits and their respiratory activity is greatly accelerated. There is also a tendency to shed the stem bases or "buttons," and in some cases pitting of the rind has resulted.

Science News Letter, May 25, 1940

METEOROLOGY

West Africa Is Blamed For New England Hurricane

WEST Africa is to blame for the famous and disastrous hurricane of September 21, 1938, which will not be forgotten for many years. Study of weather maps by a French meteorologist reported by Dr. Charles F. Brooks, of Harvard's Blue Hill Meteorological Observatory, shows that a wave of low pressure in the south central Sahara desert on September 4 was joined by a northerly trade and a southwesterly monsoon as it neared the African coast at Cape Verde and also an easterly equatorial wind on the north. These three air masses interplayed to create the tropical cyclone which marched across the Atlantic and on up the American east coast to cut a swathe across New England. Probably other tropical hurricanes like the famous one also have West African origin.

Science News Letter, May 25, 1940

CHEMISTRY

America's Self-Sufficiency Shown in Chemical Display

HOW the United States is attaining national self-sufficiency by its chemical research is shown in the exhibit of E. I. du Pont de Nemours & Company which has been redesigned for the New York World's Fair.

Made-in-America materials are displayed which can replace former imports that in times of war may be difficult to obtain. Included in the display were:

Nitrates, dyes, medicinals, potash, synthetic rubber, optical glass, and camphor.

A feature of the exhibit this year will be the actual knitting of hosiery made of Nylon fiber; the synthetic material which is one of America's best answers to the Japanese domination of the natural silk trade.

Science News Letter, May 25, 1940

ENGINEERING

Heat Spreading a Test For Safe Maximum Load

A NEW way for engineers to calculate safe maximum loads at all speeds on a bearing, such as those in your automobile engine: The way in which heat spreads around the bearing, considered in connection with what is known about the friction in such bearings, can be used to make the necessary calculation, S. A. McKee of the National Bureau of Standards has discovered.

Science News Letter, May 25, 1940

ASTRONOMY

Latest Super Explosion Observed in Heavens

LATEST super explosion in the universe is a new object, star-like, not moving, located at the southern tip of the edgewise galaxy of stars, spiral NGC 5907, discovered by Dr. Josef J. Johnson of the California Institute of Technology, observing at Palomar Mountain, site of the new 200-inch telescope. The object is apparently a gigantic exploding star, a supernova.

Science News Letter, May 25, 1940

IN SCIEN

NUTRITION—ECONOMICS

Newest Kind of Candy Is By-Product of Cheese

NEWEST candy is a by-product of cheese developed by B. H. Webb and C. F. Hufnagel of the U. S. Department of Agriculture's Bureau of Dairy Industry and called "Wheyfers" because they are made from whey, waste product in cheddar or Swiss cheese manufacture. The new candy is not cooked but is dried hard and crisp. Sweet pasteurized whey and sugar are evaporated together under vacuum to a thick, smooth consistency. Then air is whipped into it until light and fluffy. Chopped nuts or cooked cereal is added and the mixture is rolled out into a thin layer and dried, cut into wafers and dipped in chocolate.

Science News Letter, May 25, 1940

ENGINEERING

Accident May Have Led To Self-Lubricating Wire

BECAUSE of a happy accident, graphite, being used as a lubricant in drawing stainless steel wire through a die was ground into the metal surface, the extremely fine colloidal graphite particles intimately combining with the metal. As a result, Acheson Colloids Corporation engineers may have found a way to make a self-lubricating wire for use where such a lubricant will prevent binding, sticking and wear. Graphite is already used as a dry lubricant, reducing the tendency to stick even when oils and greases are not used.

Science News Letter, May 25, 1940

CHEMISTRY

Pocket Indicator Made For Carbon Dioxide

LATEST use of methyl methacrylate, crystal-clear plastic that is lightweight and shatter-proof: To make a pocket carbon dioxide indicator used to check whether fuel is being wasted in the gases that go up the chimneys of power plants. The passages for the testing liquid are drilled directly into the transparent plastic. Manufacturer: F. W. Dwyer Manufacturing Company, Chicago, using du Pont "Lucite."

Science News Letter, May 25, 1940

CE FIELDS

BOTANY

Wild Foods Are Available For Your Own Dinner

THE adventure of hunting dinner in the wild, recommended in European countries, is not confined to nations eating war rations. The Washington Monument grounds in our capital this spring are dotted—as usual—with dandelions and with citizens gathering dandelion greens. Market stands feature cress, wild mustard, tender poke shoots. The British and Germans are going further, of course. A new book *Wild Foods of Britain,* by Jason Hill (Black, London) praises crab apple tea, tansy pudding and pickled ash keys (walnut flavor). Mr. Hill claims to have tried everything wild he recommends, and some wild food he doesn't. He votes thumbs down for acorn coffee.

Science News Letter, May 25, 1940

MEDICINE

Must Change Procedure In Cancer Treatment

HOSPITALS using the new high-powered 1,000,000-volt X-ray tubes in the treatment of cancer must change their procedure in using the erythema reddening of the skin as an index of dosage, Dr. G. Failla and Mrs. Edith Quimby, physicists of Memorial Hospital, New York City, told the American Physical Society.

Frequent method of collimating the 1,000,000 volt X-rays is to pass them through a lead opening whose open end is covered with a piece of bakelite. This bakelite, it has been found, creates large numbers of so-called secondary electrons which are highly effective in producing skin reddening.

Dr. Failla and Mrs. Quimby reported experiments in which they set out to demonstrate clearly the creation of these unwanted secondary electrons in the X-ray beam. To do this they radiated a patient with a beam of 1,000,000 volt X-rays which passed through nothing except air for the last 10 inches of its path before reaching the skin. They covered half the exposed area with a piece of rubber sheeting. It was found that after a given treatment the skin under the rubber sheeting was strongly reddened while the uncovered area still showed no erythema reddening.

The scientists showed that the reddening of the skin as an index of X-ray dosage in cancer treatment may be permissible for 200,000 volt X-ray tubes widely used, but that it is not a proper gage of dosage for the new 1,000,000 volt X-rays. They claim that with 1,000,000 volt X-rays there should be nothing in the X-ray beam as it comes to the patient, which will create secondary electrons.

Science News Letter, May 25, 1940

POPULATION

Brazil Great Laboratory For Study of Population

BRAZIL, South America's largest country, was suggested as a great outdoor laboratory for the study of migration problems by Dr. Roberto C. Simonsen, technical adviser of the Brazilian Institute of Geography and Statistics, speaking before the meeting of the Eighth American Scientific Congress in Washington.

Brazil has its problems of migratory labor, especially migratory farm labor, no less than the United States, although the problems are different, at least in part, Dr. Simonsen pointed out. Their magnitude is well indicated by the migration, during the past year, of 100,000 persons from other states of the interior into the southeastern state of Sao Paulo, center of more than half of the country's entire agricultural and industrial production. These migrants, like many in the United States, were driven from their lands by drought.

Brazilian farmers are much attached to their land, and will leave it only under the urge of really bad economic conditions, the speaker stated. Not even the prospect of better living conditions will lure them away from their home acres, as long as they have any chance to wrest a living from the soil. Once detached, however, they drift toward more promising fields, and after a period as landless laborers, manage as a rule to acquire small holdings of their own.

A considerable factor in promoting folk migration in Brazil has been economic stagnation attendant upon a single-cash-crop system. First sugar, now coffee, were at first bonanza crops, then economic headaches for the great southern republic. And a prominent symptom of such economic dislocations has always been a drift of agricultural migrants.

Science News Letter, May 25, 1940

PHYSICS

Infra-Red Useless in Fog And Also in Falling Snow

SUGGESTIONS that long invisible infra-red radiation could be used to pierce fog were refuted by experiments reported to the American Physical Society by J. A. Sanderson of the U. S. Naval Research Laboratory, Washington, D. C.

The naval scientist measured the infra-red absorption of clear natural fog in the infra-red region out to wave-lengths of 12 mu, or 120,000 Angstroms. The limit of ordinary vision is in the deep red near 7,500 Angstroms. Mr. Sanderson found that the transmission of the long infra-red rays was fairly uniform throughout the entire region studied which leads "to the result, in accordance with previous measurements and theory, that there is no important advantage in employing long wave-length infra-red light in seeing through fog." It was also found that falling snow scatters all wave-lengths equally so that in a snowstorm there would be no special advantage in infra-red radiations.

Science News Letter, May 25, 1940

MEDICINE

New Role For Vitamin B_1 In Protecting Blood Vessels

A NEW role for vitamin B_1, that of protecting blood vessels from damage, was discovered in experiments by Dr. Leo Alexander of Boston reported to the American Association of Pathologists and Bacteriologists at Pittsburgh.

Pigeons deprived of this vitamin developed a disease identical with the hemorrhagic brain inflammation that afflicts chronic alcoholics, Dr. Alexander reported. This disease is characterized by degeneration and deformity of the blood vessels. It can be produced in pigeons as complication of beriberi if the pigeons are getting enough of other vitamins than B_1, the beriberi preventive. If the pigeons are getting enough of this B vitamin, however, they will not get the alcoholic brain disease even if they are deprived of any one or all other vitamins for more than six months.

Vitamin B_1 is known to act as a nerve protecting substance, or a preventive of neuritis. The pigeon experiments, Dr. Alexander said, show that it also acts to prevent blood vessel degeneration and that smaller amounts of the vitamin are sufficient for this effect.

Science News Letter, May 25, 1940