

New Sugar

Chemistry

Something new under the sun, a form of sugar that does not occur in nature, has been artificially put together by Edna Montgomery and Dr. C. S. Hudson, of the U. S. Public Health Service. Miss Montgomery and Dr. Hudson used common milk sugar as their raw material, and by treatment in an alkaline medium obtained a substance analogous in structure with common table sugar, but having a different chemical nature. They call their new product lacto-ketose.

At the same session Dr. Hudson and Eugene Pacsu, a Fellow of the International Education Board, announced that they had succeeded in crystallizing turanose, a rare sugar which has never before been secured in a wholly pure form.

Science News-Letter, May 4, 1929

Hoover Given Medal

Engineering

President Herbert Hoover received the highest award of the engineering profession when he was presented the John Fritz Gold Medal for 1929 on Thursday, April 25.

Four leading engineering societies, the American Societies of Civil, Mining and Metallurgical, Mechanical and Electrical Engineers, joined in awarding the medal annually for "notable scientific or industrial achievement without restriction on account of nationality or sex". President Hoover was awarded the medal tentatively and without announcement in October, 1927, while he was still Secretary of Commerce.

Science News-Letter, May 4, 1929

Liver Seen as Insulin Substitute

Medicine

Liver, which is now being used extensively as a cure for anemia, may become a substitute for insulin in the treatment of diabetes, it appears from studies made at the Peter Bent Brigham Hospital by Dr. Harry Blotner and Dr. William P. Murphy. Dr. Murphy with Dr. G. R. Minot developed the liver treatment for pernicious anemia. In the study just reported, Drs. Blotner and Murphy found that liver contains a substance that will reduce the sugar concentration of the blood as insulin does.

Liver has been heretofore excluded from the diet of persons suffering from diabetes, because liver contains glycogen, a carbohydrate which may be turned into sugar in the body. In

Modern Birds in Times of Mastodons

Paleontology

Modern species of birds flew over the backs of beasts long since extinct, far back in the Ice Age, in the marshes of what is now Florida. A great collection of bird bones, only recently unearthed and not all of them yet received in Washington, was reported before the meeting of the National Academy of Sciences in Washington by Dr. Alexander H. Wetmore of the Smithsonian Institution.

The bones were found not far beneath the surface of the ground, near the town of Vero, where sensational fossil finds a few years ago hinted at the possible existence of man on this continent during the Ice Age or very soon after its close. Most of the bird bones, being delicate, were broken, but Dr. Wetmore has been able to identify 48 species by a careful examination of the fragments.

Most of the birds are of species that fly over Florida, though a part of the collection consists of birds that have never been seen in the state in modern times. They were associated with the bones of extinct mammals, such as mammoths, tapirs,

ancient horses and glyptodons or giant armadillos.

Since the bone bed from which they were taken shows indications that it was an ancient marsh, it is natural to find many swimming and wading birds, such as ducks, geese, spoonbills, herons, grebes, a large stork now known mainly from South America, and the nearly extinct whooping crane.

One of the most interesting finds consisted of bones that belonged to a condor. At present only two species of condor are known, one in the California mountains and one in the Andes of South America; they are the largest birds that fly. The Florida specimen appears to be identical with the California condor, except that it was larger.

Another extraordinary bone was a broken piece of the shank of a long-departed turkey-gobbler, with three spurs instead of the customary one. European birds with multiple spurs have been reported, Dr. Wetmore said, but this is the first instance on record of a three-spurred American turkey.

Science News-Letter, May 4, 1929

Radio over Telephone Line

Radio

The perfection of a form of radio transmitted over telephone wires and called the monophone was announced by Gen. George O. Squier.

Calling attention to the crowding of the radio lanes in space, Gen. Squier advocated the application of

currents of radio frequency to the millions of telephones in use in this country. Without interfering with the present point-to-point service and without change in equipment, the telephone wires could be made to work sixteen hours a day bringing various programs into the home.

Making this line radio or wired wireless a part of the telephone service would provide a method of support that would eliminate the necessity of the paid advertising of radio broadcasting.

Low power used in the transmitting is another advantage claimed for the system. Fifty watts would supply 5000 telephones. No tuning would be necessary when operating the telephone-connected set, as the mere turn of a switch would give a different program. Static, fading and other sorts of interference would be eliminated. Television and sound motion pictures will enter the home by his system, Gen. Squier predicted. Utilization of wired radio for educational purposes was urged.

Wired wireless, which was the early name of the monophone, was patented by Gen. Squier in 1910.

Science News-Letter, May 4, 1929