IN SCIENCE FIELDS

GEOLOGY—ZOOLOGY

Beavers Pointed Out As Important Geologic Forces

BEAVERS got into the news in a big way, not so long ago, when soil conservation workers planted them in Western valleys where their dams would check the erosional appetites of tumbling streams.

But it's all an old story to the beavers, Dr. Rudolph Ruedemann and W. J. Schoonmaker of the New York State Museum point out. (*Science,* Dec. 2) Their field studies indicate that for thousands of years these dam-building animals have been acting as important geological forces, not only in slowing down the erosion of soil but in actually building it up. Many of the flat-floored creek and small river valleys in the East, sites of some of the most prosperous farms, represent filled-up ancient beaver ponds.

Science News Letter, December 31, 1938

ARCHAEOLOGY

Harpist Found in Art In Armageddon Ruins

A CRUDE sketch of a woman twanging the strings of a harp has been found in the pavement at Armageddon in Palestine, in a layer of ruins that date from before 3000 B. C.

That the harp is an old instrument, of course, has long been known. In the Bible, the harp is mentioned more than forty times. When David played the harp to quiet the harassed mind of King Saul, he was making music in a manner that was then several thousand years old.

Harps have been pictured in Egyptian art of about 3000 B. C. Harps of gold, silver, and lapis unearthed at Ur of the Chaldees are as beautiful in their way as the gold piano that has just been transferred from the White House in Washington to the National Museum. The harps of Ur were played a few centuries prior to 3,000 B.C. and they must have been preceded by more primitive types.

Armageddon's pictured harp is, therefore, not the world's oldest. But it is the oldest evidence of harps in Palestine. It shows that long before the Israelites marched in to conquer the Promised Land, the harp was played there by early inhabitants, ancestors of the peoples who figure vaguely in Old Testament narrative as idol-worshipping enemies who were present in the land.

The harpist is a discovery at Megiddo, or Biblical Armageddon, by archaeologists of the Oriental Institute of the University of Chicago. The strategic fort-town which overlooked many battles is known now to have been built and re-built twenty times. Nineteen layers deep, the archaeologists found the rock pavement on which some unknown artist recorded impressions of life in his day, including pictures of dancers or warriors—it's not too clear, which—and a variety of animals, and the lady with the harp.

Science News Letter, December 31, 1938

PHYSIOLOGY

Calcium Lack Linked With Paralysis in Animals

CALCIUM deficiency, all too common a fault in human diets in America, has for the first time been linked with certain types of paralysis in animals.

Possibly akin to certain brain hemorrhages in man, this paralysis is of hemorrhagic origin, it is pointed out in the report of the research issued by the University of California.

Collaborating in the research were the following University of California scientists: Dr. David M. Greenberg, Muriel D. D. Boelter, and Dr. Benjamin W. Knopf.

Too little calcium in the blood has already been identified as cause of tetany, a convulsive disorder not to be confused with tetanus infection or lockjaw. Paralysis, however, has not heretofore been attributed to a deficiency of calcium, despite the fact that it has been observed often in nature among browsing animals.

Calcium is said to be the substance most commonly lacking in the American diet. Good food sources of it are eggs, beans, milk, cheese and almonds.

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MEDICINE

Sulfanilamide's Effects Related to Type of Injury

HOW sulfanilamide does its amazing work in relieving certain disease conditions and why it sometimes fails or brings unpleasant reactions, are questions that must be answered before use of this new drug can be put on a rational basis for the treatment of human beings.

An important next step in this direction is reported by Drs. John S. Lockwood, Alvin F. Coburn and Herbert E. Stokinger of Columbia University College of Physicians and Surgeons. (*Journal, American Medical Association,* Dec. 17.)

The effectiveness of sulfanilamide is related more to the character of the lesion or injury done by germs than to the identity of the bacterial infection, they find. Sulfanilamide's most striking aspect in treatment is a depression of the invasive properties of the micro-organism causing the disease conditions, these scientists state.

This effect is definite within 18 hours in the case of bacteria circulating in tissue fluids or in newly invaded tissues.

However, in tissue already broken down, effectiveness is lost.

It is not known whether the debris itself in the broken-down tissue protects the harmful organisms or whether the drug cannot penetrate sufficiently into the tissue when debris is present.

Science News Letter, December 31, 1938

PHYSICS

Double-Walled Goblet Contains Liquid Air

See Front Cover

NO TOAST to New Year's is the cover picture of SCIENCE NEWS LETTER this week. The "steaming" goblet is really a form of Dewar flask containing liquid air whose chilling temperature of 313.6 degrees below zero Fahrenheit has caused frost to form on the mouth of the vessel. Roses dropped into the liquid air are quickly frozen solid and become so brittle that the slightest touch will shatter them.

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