

PLANTS INEFFICIENT; WASTE SUN'S ENERGY

Energy from the sun pours on every acre of ground to the equivalent of 1,476 tons of coal during an average 90-day growing season. Of this wealth of power a crop of wheat yielding 50 bushels to the acre, a very high figure, puts into the bin an energy equivalent of less than two-thirds of a tone of coal. These striking figures are given by Dr. H. A. Spoehr, plant physiologist of the Carnegie Institution Coastal Laboratory at Carmel, California, writing in the forthcoming annual report of the Smithsonian Institution.

But inefficient as plants are, Dr. Spoehr points out, they have been the only means of major importance we have had for capturing solar energy and making it available for man's use. The coal and oil deposits, representing sun power captured during long periods and stored ages ago, are being used thousands of times faster than they were originally made, and we shall soon find ourselves up against the proposition of getting our energy supply from day to day as we need it.

Plants, in Dr. Spoehr's opinion, do not hold much promise of effective usefulness when that time comes. They cannot work fast enough, and besides, plant production must be increasingly used to supply food and little can be spared for fuel. Man must use his ingenuity to duplicate and improve upon the process that plants have used for ages, and devise means for the direct capture of the great quantities of sunlight energy that daily waste themselves around us. Little progress has been made so far, but Dr. Spoehr is confident that when the problem is attacked in earnest by scientists it will eventually be solved.

SWEDISH EXCAVATIONS DISCLOSE BRONZE AGE AND VIKING RELICS

Three skeletons of persons who died 4,500 years ago in Sweden are among the many valuable relics of the Stone Age which Swedish archeologists have unearthed this summer in their assiduous efforts to reconstruct Sweden's prehistoric past. Other objects among the new finds now being studied are weapons, tools, and pottery from the Stone Age, funeral urns, bronze axes, swords, etc., from the Bronze Age, remains of workshops in the Iron Age, hoards of gold and silver treasures amassed in the Viking Age, and various relics that shed light on medieval life in Sweden.

Another interesting find made earlier in the summer while excavating in the market-place of the ancient town of Visby were the remains of a workshop in which bone objects had been made. Antlers of moose and deer in various states of manufacture, and various horn objects such as combs, chisels, and punches, were found. These objects, it is said, belong to the latter part of the Iron Age. Relics of medieval times, when Visby was in her prime, are frequently found, the latest being a domestic aquarium, in which, according to custom, fish were preserved alive until the time when they were to be served up in a favorite dish for some merchant prince of the city. Four or five aquariums of this type have previously been found in Visby.

A curious and unique object recently found at Laholm, in the province of Halland, is a flint saw from the Stone Age. And another object of special interest in the study of Stone Age civilization in Sweden is a grindstone for sharpening stone tools and weapons, which has been found this summer near Piteaa, on the Gulf of Bothnia. Piteaa is only about sixty miles south of the Arctic Circle. The curious appearance of this grindstone has led the experts to the theory that it was once used by the Lapps as an idol - a strange elevation in service of a common object that had lost its practical utility at least 3,000 years earlier.