

awe-inspiring, as unexplained psychic phenomena always are.

Until psychologists and ethnologists came along to explain the unbelievable, by ferreting out the natural laws, the Indians kept their secrets. A medicine man transmitted his power and the techniques for using it only to his son or nephew. With solemn ceremonies, the youth received the power which was "coughed up" by his older relative, held invisible

in his hand, and transferred to the boy's heart through the chest wall.

Indian medicine men never tried their famous power to down the white men, when they invaded America. Or, if they did, it failed to work. The Spaniards and other foreigners were, as Dr. Harrington has pointed out, mere infants in psychic development, and the Indian's most potent medicine failed to "take."

Science News Letter, October 5, 1935

ARCHAEOLOGY

Earliest Americans Linked With Old Stone Age Europeans

WERE the earliest known Americans contemporaries of the cave men of the end of the Old Stone Age in Europe and Asia? The remains we have of their arts and crafts indicate that they were, Sir Arthur Smith Woodward of the British Museum, noted student of Stone Age man, intimated at the meeting of the British Association for the Advancement of Science.

Sir Arthur identified the stone implements of the "Yuma" culture of the American Southwest with the "Solutrean" culture of France, carried on by an apparently highly intelligent branch of the Cro-Magnon race. This does not mean, however, that the earliest Americans were also Cro-Magnons; very different races often use similar things—as Indians and Fiji Islanders of today drive Fords. But the use of similar things by different peoples in widely separated parts of the world is at least an indication of their possession of a common culture,

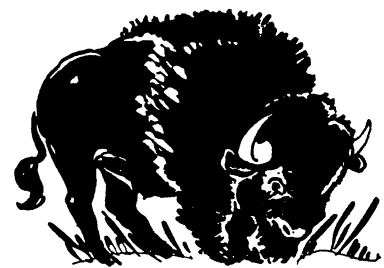
and suggests that they lived at about the same time. On this basis, Sir Arthur provisionally assigned the end of the Ice Age as the possible date of the first human immigration into the North American continent.

Once man got here, he was not content to use only his own versions of Solutrean tools which he had brought with him, but branched out into inventions of his own. The speaker told of types of spearheads used by these earliest comers from the "Old Country," which were fitted to the shaft after a fashion never used by Stone Age man in Europe. It is perhaps the first known instance of "Yankee inventiveness."

These first Americans came into a land that must have been as strange to them as the later America, with its bison, grizzly bears, pronghorn antelope and other animals never before seen by white men, must have looked to the first settlers from Europe. Associated with implements of human manufacture in the Southwest are bones of extinct species of bison and musk ox, the latter found only as a vanishing genus in today's Arctic regions. Even stranger were the lumbering long-haired ground-sloths, which have been found not merely as fossils but as dried natural mummies, with parts of flesh and hide and hair still on them. Sir Arthur mentioned having visited these sites during a recent sojourn in the United States.

All these things make the "dating" of the earliest American very difficult. These animals were all dead in Europe by the end of the Ice Age. The most plausible inference at present seems to be that they survived, at least in small numbers, considerably later on this continent, to serve for food to the earliest American immigrants—and no doubt to give him moments of bewildered wonderment as well.

Science News Letter, October 5, 1935



Buffalo-Grass

MANY features of the proposed national reform program for land use are simple returns to the natural state, as things were before our young and over-eager civilization "tore the country wide open" to transplant into it cultivation and exploitation methods that worked all right "in the Old Country." Now we are undertaking to re-grow the forests our grandsires cut down, to re-flood the lakes and swamps our fathers drained. It has been realized that wildlife at high productivity may quite readily pay better than farming at low.

In keeping with the rest of this program is the endeavor to re-establish buffalo grass on the now unprofitable plowlands of the Great Plains region. We have found that a cycle of drought will easily wipe out all the agricultural gains made by years of "boom" wheat farming, and that winds often double the ruin and make it permanent by whirling away the soil itself, after drought and the locust have eaten every green thing.

The old native vegetation of the "short-grass" country was dominated by a low-growing, crisply curled, thick-sodded species known as buffalo grass, because of its importance in the diet of the great herds of bison that once covered the

FALL BOOK NUMBER

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● RADIO

Tuesday, October 8, 4:30 p. m., E.S.T.
WORLD'S OLDEST LANGUAGE—ETHIOPIAN, by Dr. John P. Harrington, Bureau of American Ethnology, Smithsonian Institution.

Tuesday, Oct. 15, 4:30 p. m., E.S.T.
WHEN THE DUCKS FLY SOUTH, by Dr. W. B. Bell, Chief, Division of Wild Life Research, Biological Survey.

In the Science Service series of radio addresses given by eminent scientists over the Columbia Broadcasting System.

plains. Buffalo grass is highly resistant to drought, will stand all but the most extreme cold, and with its everlasting habit of sending out "runners" like those of a strawberry plant it keeps an uninterrupted year-after-year hold on the soil.

It is as good food for cattle as it once was for the native bison, it can be made into handsome lawns and well-kept golf courses, and in general it offers to be a better vegetable citizen of the West than many of the "fancier" immigrant plants that have been unable to "take it" when the pinch comes. Government and state scientists have carried out experiments with it along a number of lines, and they recommend it highly.

It does, however, need encouragement to re-establish itself where it has been plowed out. It was thought at first that if an abandoned field were just left alone the buffalo grass would reclaim it. But experience has shown that this will not take place fully in less than 20 or 30 years, and in the meantime less desirable grass species and weeds will be in possession.

Fortunately, its growth habits make it fairly easy to propagate. It will grow from seed, it will take hold as solid sheets of transplanted sod, and chopped-up sod bits send out their runners to extend and solidify their little conquests in quite rapid fashion. A recent circular of the U. S. Department of Agriculture gives practical suggestions for those who would aid nature in re-establishing the West's ancient mantle of buffalo grass.

Science News Letter, October 5, 1935

SEISMOLOGY

Quake Shakes Sea Bottom Off British Columbia

AN EARTHQUAKE of moderate severity shook the sea bottom off the coast of British Columbia on Tuesday afternoon, Sept. 24, at 5:12.2 p. m., Eastern Standard Time. The location of the quake's epicenter, in latitude 50 degrees north, longitude 131 degrees west, was worked out by seismologists of the U. S. Coast and Geodetic Survey from data transmitted by wire through Science Service.

Stations reporting were those of the Dominion Observatory, Ottawa; the Dominion Meteorological Observatory, Victoria, B. C.; Pennsylvania State College; Georgetown University, Washington, D. C.; the private observatory of Mrs. M. M. Seeburger, Des Moines, Iowa; the University of California, Berkeley, Calif., and the observatory of the U. S. Coast and Geodetic Survey, Chicago, Ill.

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ASTRONOMY—AVIATION

200-Inch Telescope Mirror Now Nears Room Temperature

Announcement That Huge Disk Will Not Be Ready Until December Changes Army Plans for Huge Airplane Wing

THE giant 200-inch diameter glass disk, which eventually will be the great mirror for the observatory of the California Institute of Technology on Mt. Palomar, will be removed from the annealing ovens at the Corning Glass Works within the next month.

The temperature of the huge glass disk is now 302 degrees Fahrenheit, still far above the temperature of boiling water at 212 degrees. The carefully controlled cooling will have so progressed, however, that it is expected that the disk can be removed from the annealing ovens between October 15 and November 1.

Approximately two months later the disk will be placed on its specially built flat car for shipment to California. Tentative date for shipment is between December 15 and January 1.

Announcement that the giant 200-inch glass disk from the Corning Glass Works will not be shipped until the middle of December has altered the plans of the U. S. Army Air Corps to use the specially built flat car to transport east a huge airplane wing now under secret construction at the plant of the Douglas Aircraft Co. at Santa Monica, Calif.

The glass disk, destined for future use as the world's largest telescope mirror, is sixteen feet in diameter. The chord of the huge airplane wing—the distance front to back at the widest point—is approximately the same size.

Aviation officers at Rockwell Field, Calif., had been investigating the possibility of using the special flat car to bring the huge wing back to Middletown, Pa., for assembly.

Because of the delay in shipping the glass disk, the huge wing will probably have to be shipped by water via the Panama Canal, since it will be completed long before December 15.

Details of the new plane are guarded by the Army officials in Washington. Whether the new plane will be a large bombing plane to enter the Army's competition for such planes, or whether a new seaplane is planned, are questions which Army officials will not answer at present.

Because of the experience of the Douglas factory in building commercial land

transport planes, conjecture would indicate a bomber. The chord dimension of the new plane of 16 feet would bear out this supposition. The new Douglas transports have a chord of 14.1 feet.

The new clipper ships which the Martin Company recently built for the use of Pan-American Airways in their trans-Pacific flights, by contrast, have a chord dimension of 20.5 feet.

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Since the advent of commercial aviation, almost exactly 25 years ago, the major achievements in a popular sense, reports Mr. Warner, have been (1) the Navy's flight across the Atlantic Ocean in 1919; (2) the Army's round-the-world flight in 1924; (3) Lindbergh's solo flight to France and (4) Wiley Post's flight around the world "in barely more than the scriptural six days of labor."

The supreme developments which have made possible the feats of 1935 airplane transports must include, the aviation authority indicates: (1) the development of the supercharger to improve engine performance at high altitudes; (2) the evolution of an airway system of lighting adequate for night flying of passengers; (3) the improvement of the technique of radio navigation; and (4) the engine cowling, or cookiecutter-looking cover which shields aviation engines and makes possible a reduction of effective air resistance by almost one-third.

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