

ARCHAEOLOGY

News of Prehistoric America Reported to Mexico Meeting

Scientists Hear of Discovery of Temple Buried for Hundred of Years Beneath Another at Chichen Itza

NEWs of prehistoric America — its buildings concealed beneath buildings; its fortune-telling mothers; its first, all-but-wild corn crops—latest scientific discoveries on these and several hundred more angles of ancient Americans are being reported in a barrage of papers read or declaimed before the International Congress of Americanists meeting in Mexico City.

Discovery of a temple which has been concealed for hundreds of years beneath the famous lofty Mayan temple "El Castillo" at Chichen Itza was reported by José A. Erosa Peniche. The stairway, facade and chambers of this ancient building, which Mayan Indian architects covered over to raise a higher, more impressive temple on the lofty pyramid base, were found by tunneling beneath the present structure, to avoid damaging it. Other archaeologists told of probing other Indian monumental buildings in similar fashion, as Mexico burrows deep beneath the visible present.

Mayan Indians, greatest scholars of ancient America, knew exactly when to introduce inter-calendar days necessary to keep their year in step with the sun. So Erwin P. Dieselforff of Copan, Guatemala, has concluded. Eclipses of the sun were of major interest to these ancient American astronomers, he declared, explaining the Mayan method of forecasting when eclipses would occur.

Mayan Indian mothers consulted astrologers in their anxiety to know what good fortune or bad might be the destiny of their babies. Four of the lists of days and their omens, found in the books of Chilam Balam, have been studied by Alfredo Barrera Vázquez of the National Museum, in Mexico City, and he has concluded that the custom of guarding babies' fortunes by giving them calendar names up to a certain age was used by Mayan mothers of Yucatan, as well as by those in Indian nations of Mexico proper.

Tackling the much-argued question of when the first corn was raised by the first New World farmers, Pablo Martínez del Río advanced the theory that agriculture may have had a more rapid rise

in America than in the Old World. Differences in methods of seed selection and cultivation, he believes, speeded up results for Indian farmers, so that it is not necessary to conclude, as some botanists have, that American Indians must have started on their road to higher civilization an extraordinarily long time back.

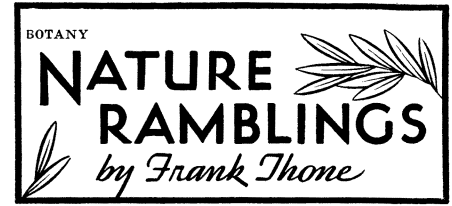
Newest excavations at Monte Alban, Mexico, scene of the discovery of a Treasure Tomb a few years ago, have demonstrated who built the mountain-top city. Indians of the same cultural heritage built both Monte Alban and the remarkable valley city of Milta not far away. Architectural ideas are the same in both cities, Dr. Alfonso Caso, director of Monte Alban excavations, has concluded. Three stages of Monte Alban's ancient history have been traced, and can be linked in time with Mexico's cultural stages of the Archaic, older than the Christian era, then Teotihuacan or Toltec, and Aztec.

The effort to find out what was going on in different parts of Middle America, during its great Indian era, have led archaeologists to explore pit tombs near Guatemala City. Dr. A. V. Kidder of the Carnegie Institution of Washington reported finding that these tomb-builders were living while Monte Alban in southern Mexico was in its middle stage, and the great Toltec Indian civilization in central Mexico was nearing its decline. Pottery from the Guatemalan tombs provides the key for linking the tomb builders with other tropical American cultures and drawing Central America more closely into the picture.

Success in finding one of the missing stone statues from Tiahuanaco, Bolivia, which a French traveler carried off to Europe a century ago, was reported by Henri Lehmann. Modern scientists have never seen these statues, he said, until now one of them, a statue combining human and animal features, has been found and placed at the Gate of the Sun in Tiahuanaco.

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A man can stand hot sun that will kill a desert diamond-back rattlesnake.



Roots by the Ton

WHEN a mowing-machine, or a big flock of hungry sheep, has finished with a field we say, "The grass is all gone."

That is a serious over-statement. A highly important half of the grass remains—the close-knit webwork of roots and underground stems. These still hold the soil against erosion, and will send up another crop of stems and leaves to make next season's pasture or hay.

Quantitative studies of this important but usually overlooked half of the grass have been going on for many years at the University of Nebraska, out on the prairies where Grass means Life. A new and comprehensive grassroots survey, extending from western Iowa across Nebraska and Kansas into the plains of eastern Colorado, has recently been completed by Drs. S. B. Shively and J. E. Weaver, for the Conservation and Survey Division.

These two botanists and their associates sought out still-unbroken stretches of native prairie of many different types, ranging from the tall, rank big bluestem to the curling, ground-hugging buffalo grass. They removed hundreds of sample sods, each half a square meter in area and ten centimeters (four inches) deep. They carefully washed out the soil, carefully determined volume and weight of the mass of roots and underground stems or rhizomes.

Results of this grassroots botanizing are astonishing. The root and rhizome crop of typical grasslands in West and Midwest can be measured in tons per acre. Total lengths add up into miles per square foot of sod.

Yields vary with rainfall, just as top yields vary. Thus, a series of 27 samples of big bluestem sod averaged out at 4.54