## First American Colonizations Traced

Following are further reports of the meeting of the International Congress of Americanists in New York.

The real discovery of America, by primitive men who long ago crossed the icy waters of Bering Strait from Siberia, was probably not looked upon as any great adventure at all. It was almost as simple and natural a step as crossing New York harbor might be, thinks Dr. Ales Hrdlicka, anthropologist of the Smithsonian Institution.

This problem of why and how the first human beings came into America has long been a great point of controversy, but Dr. Hrdlicka stated that new evidence has accumulated in such quantities that conclusions can at last be drawn with reasonable certainty. An official report of many hundreds of skulls, a large part of which were collected personally by Dr. Hrdlicka in western and Arctic Alaska recently, will soon be issued, he stated.

"There could have been, it is now certain, no great single wave of the immigrants that became the first Americans," he said. "Instead, there was a steady and natural passing over of small groups of people, and this process lasted until recent times. Siberia is an inhospitable region, where famine and cold always threaten. Less than thirty miles across, the people who wandered or were forced by others into northeast Siberia could see signs of a more pleasing shore, freer of snow and ice. The winds from that direction were warmer. Driftwood floated from that side. There were islands which served as stepping-stones, and it was easy in suitable weather for skin boats to carry groups of these Asiatics safely across the northwest passage."

They did not necessarily stop in Alaska, or stop for a long time, Dr. Hrdlicka said, but mostly in all probability, kept on down the coast, looking for warmer and pleasanter places ahead, and so the new world was gradually populated.

"Northeasternmost parts of Asia presented the only feasible route into America for the original inhabitants in their state of culture," the anthropoligist declared. "The Asiatic ancestry of the Indian and Eskimo is demonstrated by much evidence obtained recently from old burials."

There are now more than thirteen thousand skulls in the Smithsonian collection, most of them American Study of this vast material shows that the Eskimo and Indian are related, like two fingers that extend from one hand, Dr. Hrdlicka said, and he pointed out that many typical Indian as well as Eskimo faces bear a striking resemblance to Mongoloid tribesmen of the Siberian wilderness today.

"The population of America has been established in the course of only a few thousand years, probably no more than 5,000," he concluded. "It would be a fine thing for anthropologists to find evidence of ancient man in this country, but no human bones indicating such antiquity have ever been discovered. Considering the large number of skilled observers who have been searching for clues to prehistoric life in this country it would seem likely that some ancient skeleton remains or other indisputable evidence of ancient man would have appeared by this time if there were any here.

"Another important point which now can be demonstrated through collections made during the last few years, is that the people coming over the Bering Strait and Sea were not crude barbarians, but were bringing with them a rich and highly developed culture, exceeding that of the Eskimo or Alaska Indian of the present time. This suggests strongly that the origin of the native cultures on this continent, just as the diversification of languages, may not have been wholly evolved on American soil, as was hitherto believed."

The first adventurers to set foot on South American shores followed the easiest route from North America, Dr. Marshall H. Saville, of the Heye Foundation, Museum of the American Indian, declared. This easiest route was followed in a canoe by Dr. Saville himself, and in the islands of this mangrove swamp region he found many antiquities indicating the old habitation of the islands by migrating tribes. Later, traveling groups found land routes to the southern continent, he said.

#### The Maya Calendar

Resemblances between the Maya calendar, an important feature of the great Maya civilization in tropical America and the calendar of the Chinese were described by Dr. Max Uhle, of the Academy of History of Ecuador. Other features of old South American cultures which Dr. Uhle believes must have been brought from Asia were also cited, supporting the theory that these

similar inventions were not likely to have been evolved independently by different races. Dr. Franz Boas, of Columbia University, debated this theory, holding that the higher civilizations of Peru and Mexico might have developed quite independently of other nations.

#### Tell of Mexican Ruins

The actual state of preservation of prehistoric Indian cities in Mexico and lesser archæological sites, is described in a book just published by the Mexican Ministry of Education, called "Present State of the Chief Archæological Structures of Mexico," and brought to the United States by the Mexican delegation to the Congress of Americanists.

An archæological map has also been prepared by the Direction of Archæology of the Ministry of Education, under the direction of Sr. Jose Reygadas, chief of the delegation, showing the principal archæological sites of the country. There are about 1,200 such localities now registered in Mexico where there are still vestiges of the ancient civilizations sufficiently important to be preserved.

While the Mexican Direction of Archæology has done actual excavation work at but few archæological sites, work of preservation and repairing of ancient buildings has been carried on all over the country, and some of the famous ancient cities that were bearded mounds some years ago may be seen today in all the grandeur that remains; for example, Palenque, the famous ancient Maya city in Chiapas, and many ancient cities in southern Yucatan.

While tropical vegetation has worked its strong fingers into the ancient structures and has slowly torn prehistoric cities to pieces, it is not the only enemy of the archæologist, for much destruction has come from the hand of man himself. Before federal supervision of these sites was undertaken, stone conveniently cut was carried away and used in modern buildings, and many haciendas and old colonial houses have incorporated ancient carvings coming from temple facades that have since fallen to pieces. There have also been cases where socalled scientists themselves have come and carried away as souvenirs portions of buildings such as carved doorlintels and jambs and thus hurried the destruction of the remainder.

Many of the (Turn to next page)

### International Congress of Americanists—Continued

federal guardians that now protect these sites from man and nature, live lonesome, difficult lives. This is especially true in the lesser-known Maya cities of Yucatan, where there is no water at the ruins and towns can be reached only through long tangled jungle trails.

In some cases the modern Indians who guard the ruins have rehabilitated some of the "chultunes" or archæological cisterns built by the ancients to solve the same water problem that confronted them.

The book published by the Ministry of Education of Mexico includes the description of about 30 of the most important sites. The large majority of the 1,200 sites are hardly known except for their existence and a few general details, but they have locked within them an enormous amount of detail as to the past.

Evidence that learned Maya astronomers who lived many centuries ago in tropical America understood astronomy sufficiently well to record not only eclipses visible in their part of the world but eclipses visible from any part of the earth, was presented by Dr. H. J. Spinden, of Buffalo. If Julius Caesar could have had Maya

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# SNAPSHOTS of SCIENCE

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astronomers to advise him on his calendar problems, his Roman calendar would have been more accurate than our modern calendar, Dr. Spinden's report showed. Several scientsts reported progress in understanding the complex calendar records of this remarkable race. The greater part of the picture writing carved into ruined temples and stone monuments in the jungles of Mexico and Central America is the record of the passing of time and the dating of events. Each new symbol understood is therefore a step toward surer interpretation of the dates and facts of the ancient American civilization.

Excavation of a magnificent stucco-covered pyramid in the most ancient center of Maya civilization, Uaxactun, in Guatemala, was described by Dr. Sylvanus Morley of the Carnegie Institution of Washington. When the Carnegie expedition stripped off the rubble, there was revealed a beautiful pyramid beneath, the oldest style of Maya architecture ever discovered. The outer shell of the pyramid is dated at about 97 A. D., and the inner pyramid, which was an early place of sacrifice, probably antedates the Christian era.

Moundbuilders Mayas' Ancestors

That the Mayas, flower of ancient American civilization, had as distant ancestors a race from the Mississippi Valley, from whom the North American mound builders also sprung, is the theory of the Mexican government architect, Ignacio Marquina, reported in a volume presented to the Congress.

Striking similarities between widely distant cities of prehistoric Mexico have neveer been satisfactorily explained. Most archæologists believe that the mysterious Maya race of the tropics flashed so brilliantly that it scattered some of its customs and knowledge to the rest of Mexico. Mr. Marquina explains these resemblances by evidence that all these cities and their civilizations hark back to the same stem, the Olmeca tribe, which apparently came from the Mississippi Valley region, following the Gulf shore southward.

Mr. Marquina's theories are backed by an enormous mass of data on the architecture of ancient Mexican cities and houses, in which he shows the plans used by the old architects, and the development of architectural ideas. There were sev-

eral waves of migration into Mexico, but the Olmeca were the most important, not for their numbers but for superior mentality.

The story of the important conquest of the great Maya city of Chichen-Itza by the Mexican Toltecs can be read in pictures on the walls and monuments of the city, it was shown by Dr. A. M. Tozzer, representing the American Academy of Arts and Sciences. Dr. Tozzer showed the scientists paintings in which the Maya warriors, distinguished by their leggings and deformed heads and feather - decked spears, were overcome by the Toltec conquerors with padded shields on their arms, button ornaments through their noses, and bird headdresses. The wall paintings and bas reliefs represent actual scenes of the battle and the Toltec triumph, which took place about the end of the twelfth century.

White Indians in Brazil

White Indians found in a hitherto unexplored section of northern Brazil were one of the discoveries of the seventh Hamilton Rice expedition to South America, described by the astronomer of the expedition, Weld Arnold. These white Indians had no albino traits, he said, but were very much lighter in color than other natives of the region. They had been driven to this hard jungle region where food is scarce and snakes and mosquitoes are plentiful, because four or five generations ago the Spaniards had come raiding for slaves and had forced them to seek a safe retreat. Use of aerial photography for geographical surveying was demonstrated in this exploration trip to the northern Amazon basin. Future explorations will make increasing use of aerial photographs with ground control, Mr. Arnold said.

Summer hay fever was once known as rose fever, but rose pollen seldom causes the disease.

Ducks sometimes die of lead poisoning due to their picking up stray shot while feeding.

The French police have 5,000,000 photographs in their files for use in identifying criminals.

A truck for city milk delivery which can be operated from the running board has been devised.