Signs of Culture Found in Rubbish

Forerunners of Mayas Were Far From Primitive

IGGING into layers of rubbish at a site beyond the outskirts of Mexico City, Dr. George C. Vaillant, of the American Museum of Natural History, has unearthed traces of some of the forerunners of the great native civilizations of tropical America.

Dr. Vaillant is seeking to understand the evolution of the people who preceded the Toltecs and the Aztecs in central Mexico, and to show the succession of events which led to the flowering of their brilliant and mysterious cultures. Once this record of progress is established, the studies may be extended south to connect with the still more remarkable Mayas, whose scholarly and artistic attainments are one of the wonders of prehistoric America.

From his study of layers of ancient rubbish deposits at Zacatenco, north of Mexico City, Dr. Vaillant is able to show three successive phases of human occupation there, all three of a type hitherto classified in one as Archaic. The site was occupied for many centuries.

"Archaic" man preceded Toltec, Aztec, and Maya, leaving his pottery, figurines, tools, and household objects all over Middle Mexico. The Archa-

ics, far from being as primitive as their name implies, were farmers, weavers, potters, idol makers, stone workers, and builders. But where they came from and under what conditions they evolved these talents is still not known, nor is the manner in which they later merged into the dimly his-

torical Toltec horizon.

The rubbish layers at Zacatenco contain cartloads of broken pottery, many typical figurines in human form, lava corn grinders, clay and stone spindle whorls, and bones of deer. There are balls of polished quartz which must have been hard to make, and for whose use there is no good suggestion. A bit of cloth was found associated with the skeleton of a child, and the imprint of a coil weave basket remained in the earth. Two jade axes, a pendant, and a broken lip or ear ornament are the oldest jade discoveries recorded from a site in Mex-

In the first period of human occupancy, according to the discoveries of Dr. Vaillant, pottery consisted mainly of thick black clay bowls, and shallow white dishes, and some red ware

roughly painted with geometrical patterns in white. Toward the end of this period, technique improved, but artistic sense remained unborn.

New shapes and improved technique came in with the second period. Dishes grew handles, and there were ladles to eat with. There were imported pottery, clay whistles with animal heads, clay rattles, and crude ornaments.

The third period was apparently the result of a complete revolution. There were entirely new styles in pottery while old ones practically disappeared. Decoration was still crude, but poly-

chrome patterns appeared.

Utilitarian household objects such as lava "metates" or corn grinders, and cooking or storage pots found at Zacatenco showed little variety and changed but slightly, if at all, during the various periods of human occupation there. In fact metates used in modern Mexican kitchens are practically the same as Archaic ones used thousands of years ago. The Indian

servant of an American family living near an ancient lava flow on the outskirts of Mexico City went there and told her mistress that she had at last found the kind of metate she had been looking for.

There was an amazing diversity in the human figurines of clay in the Zacatenco deposits, in every layer. Dr. Vaillant belives them too well made to be toys, and too diverse to be idols of well-defined gods.

Because they reflect so well the changes in style and taste of their ancient makers, Dr. Vaillant is able to show that the third period of human occupation antedates that of the people who lived across the lakes to the south who were later hermetically sealed like laboratory samples under a lava flow.

If there was a still later and fourth phase of life at Zacatenco, its traces may have been lost by the weathering of the earth, because of the nature of the site.

Science News-Letter, January 25, 1930

Staff of Science Service—Acting Director, Vernon Kellogg; Managing Editor, Watson Davis; Staff Writers, Frank Thone, James Stokley, Emily C. Davis, Jane Stafford, Marjorie Van de Water; Librarian, Minna Gill; Sales and Advertising Manager, Hallie Jenkins.

Board of Trustees of Science Service—Honorary President, William E. Ritter, University of California. Representing the American Association for the Advancement of Science, J. McKeen Cattell, President, Editor, Science, Garrison, N. Y.; D. T. MacDougal, Director, Desert Laboratory, Tucson, Ariz.; Dr. Raymond Pearl, Director, Institute for Biological Research, Johns Hopkins University, Baltimore, Md. Representing the National Academy of Sciences, John C. Merriam, President, Carnegie Institute of Washington; R. A. Millikan Director, Norman Bridge Laboratory of Physics, California; David White, Senior Geologist, U. S. Geological Survey. Representing National Research Council, Vernon Kellogg, Vice-President and Chairman of Executive Committee, Permanent Secretary, National Research Council, Washington, D. C.; C. G. Abbot, Secretary, Smithsonian Institution, Washington, D. C.; Harrison E. Howe, Editor of Industrial and Engineering Chemistry. Representing Journalistic Profession, John H. Finley, Associate Editor, New York Times; Mark Sullivan, Writer, Washington, D. C.; Marlen E. Pew, Editor of Editor and Publisher, New York City. Representing E. W. Scripps Estate, Harry L. Smithon, Treasurer, Cincinnati, Ohio; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio; Thomas L. Sidlo, Cleveland, Ohio.

It is now possible for machine guns and their crews to be dropped from airplanes by means of parachutes and to be ready for firing in a few moments.

The boundary line between Siberia and Alaska is the only definitely established boundary extending to the North Pole.

Is your son or daughter or young friend numbered among 800,000 youthful Americans who will enter high school the first week in February?

The move from grade school to high school, though a small one in time and space, is a momentous step in the life of the individual. New duties and responsibilities are now heaped upon him. New and romantic fields of interest and endeavor spread their kaleidoscopic vistas before him.

Wouldn't you like to lend a hand in making the new life even more thrilling?

Then, for a graduation gift, present him with his own copy of the magazine that makes the study of the sciences alive.

Special individual school offer-Feb. 1 to June 15, 1930. \$1.50 Regular yearly rate \$5.00

The Science News-Letter 21st and B Sts. Washington, D. C.