

ratio persists. Furthermore, most of these men will have little capital and will be living in the poorer farming regions, for it is in such regions that young people are most numerous. An increase of one-fifth in number of farms, mostly in areas of hilly or poor land, will accelerate the loss of soil fertility and tend to lower both the productivity and the standard of living of the rural people.

If migration to the cities is resumed in its predepression magnitude, Dr. Baker sees the population of the nation beginning to decline within a few decades, because of the much lower birth-rate in the cities than on the farms. There are now not within 25 per cent. enough children under five years of age in the large cities of over 100,000 population to maintain their population

permanently stationary without migration from rural territory or immigration from abroad, while in the smaller cities the deficit exceeds 10 per cent.

The solution of the dilemma, in Dr. Baker's opinion, appears to be through migration from the farms to the villages rather than to the cities, associated with decentralization of many urban industries, suburban development, and much part-time farming. In the village and suburban (rural nonfarm) population there is about a 25 per cent. surplus of children above the number needed to maintain a stationary population, and it seems reasonable to hope that the village birthrate may become stationary before a deficit develops. In the farm population the surplus is, at present, 40 to 50 per cent.

Science News Letter, September 30, 1933

ARCHAEOLOGY

Road Roller of Prehistoric Road Builders Found in Yucatan

WHAT IS BELIEVED to be a prehistoric American road roller, forerunner of the steam-roller that levels out modern highways, has been discovered in Yucatan.

The roller, a piece of stone 13 feet long and over two feet in diameter, was a giant cylinder which archaeologists believe was used by slaves, captives, or willing laborers who pushed it over the road surface to smooth and level it.

Discovery of the roller, now broken in half, was made by an expedition sent out by the Carnegie Institution of Washington with the aim of following one of the famous Mayan roads from end to end. The road in question leads out from Coba, once an important Mayan city, to Yaxuna, which lies 62½ miles away. Today the line of the highway is obscured by wild vegetation so that traversing it is difficult.

The expedition sent out by the Carnegie Institution was led by Alfonso Villa, young Yucatecan schoolmaster who has assisted in scientific studies of the living Mayas. Twelve Mayan Indians accompanied Sr. Villa. The party was three weeks pushing its way through the 62 miles of bush and forest.

The road they followed was once a magnificent highway 30 to 34 feet wide, and raised several feet above the surface level of the ground. The Indian

engineers built retaining walls for their roads and filled the space between with boulders and small stones to fit the chinks. The upper layers were finer in quality, and the top was of finely broken rock hammered or rolled into a hard level surface and then coated with mortar cement. Modern Indians in Yucatan call the old stone roads *sacbeob*, which means white roads. Under a dazzling sun the "great white ways" of the Indian civilization must have been impressive to see.

It was on the highway, toward one side, that the five-ton stone roller was found, probably where it was left by builders or repair men centuries ago.



EARLY AMERICAN ROAD-ROLLER

Broken pieces of a huge stone cylinder that was once laboriously pushed by Indian-power over the famous "White Ways" of Coba.

Harry E. D. Pollock of the Institution staff, who has studied the ruins of Coba, estimates that the road was built before the end of the seventh century A.D.

Science News Letter, September 30, 1933

ARCHAEOLOGY

Mexican Clay Horses Recall Spanish Conquest

FUNNY little horses of baked clay have been discovered among broken pottery unearthed by government archaeologists in excavations downtown in Mexico City.

The horse figures are among the earliest efforts of American natives to represent in art the strange animals white men brought from Europe. Horses ridden by Cortez and his followers were the first in the New World since geologic ages when wild horses in various stages of evolution, roamed the country and vanished.

How mysterious the anatomy of the horse seemed to the amazed Aztecs is well shown in the little clay statues. Although one horse has a rider on him, and another a pack on his back, the two look more like dogs.

The Aztecs called the Spanish horses "mazatl" or deer. In the only Indian version known to describe the conquest of Mexico City, a document preserved in Aztec by the Spanish monk Sahagun, the natives speak of supplying deer-food for Cortez's deer.

Science News Letter, September 30, 1933

One Colorado hospital for mental diseases has a "hostess" on its staff, a graduate nurse especially trained, who introduces each new patient to the ward nurse, shows him around the hospital and keeps in touch with him for the first ten days of his stay.