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8000 YEAR OLD DISCOVERIES MAY LINK MESOPOTAMIA AND INDIA

By E. N. Fallaize

Secretary of the Royal Anthropological Institute, London.

Information from Mesopotamia respecting the progress of the various archaeological expeditions in the field indicates that the excavations now in progress, especially at Kish, where the Weld-Blundell Expedition of Oxford University is at work, are likely to produce results of the greatest importance for the prehistory of this center of early civilization. A number of complete skeletons of early Sumerians have been found and brought to England where they are now being studied. It is expected that they will throw much light not only on the physical characters of the early inhabitants of Sumeria, but they will provide material towards solving the problem of the racial origin of these people which is at present unknown.

Owing to the differences in physique and headform between them and the Semitic inhabitants of Early Mesopotamia, it has been thought that they were derived from the mountains of Asia Minor or from Central Asia, whence they swept down the valley of the two rivers Euphrates and Tigris to found the kingdom of Sumeria. On linguistic grounds attempts have been made to connect them with the Chinese. It has also been suggested that elements of Sumerian culture may have been derived from India, where in the Indus Valley seals with inscriptions like the Sumerian hieroglyphs, vases, and other objects resembling objects from Mesopotamia have been found. It is now announced that about a dozen skeletons have been found on these Indo-Sumerian sites in India, and it will therefore be possible to see whether any resemblances in these early human remains give ground for attributing any racial affinity to the early peoples of India and Mesopotamia, or whether the evidence points to a cultural contact only.

A find at Kish of equal if not more importance is a complete series of perfect specimens of the beautiful early Sumerian pottery painted in monochrome or polychrome in geometric design. No large quantity of perfect specimens of this pottery has been found before and the present find gives a complete series of the various forms. This painted pottery is one of the most important pieces of evidence for the cultural history of the Early East. It is very widely distributed but the chronological relation of its occurrence on different sites had not hitherto been determined. It occurs in Turkestan at Anau in a very early deposit which may date back as far as 6,000 B. C. or even earlier. It was also found in the second period at Susa in Persia by the French Delegation which was excavating under the late M. de Morgan, and it occurs on several sites in Mesopotamia, such as Ur, Tel-el-Obeid, and Abu Shahrein. It is now possible to say definitely that not only is it related to the painted pottery of the second period of Susa, but the forms indicate beyond doubt that it is related to the fine and beautiful pott-

ery of the first period on that site. This is the first definite piece of evidence to this effect which has come to hand, and is contrary to what has been the generally accepted opinion. The form of the plano-convex bricks with which the pottery was found dates it conclusively as belonging to a period not later than 3,500 B. C., when this form of brick was still in use in Mesopotamia. Sumerian inscriptions were found with the pottery, and these, therefore, are the earliest hieroglyphic writing known in Mesopotamia up to the present.

ETHER MEASUREMENTS REVEAL PLANETARY MOTIONS

The sun, and the solar system with it, is moving through space with a speed of over a hundred and thirty miles a second, towards a point in the direction of the constellation Draco, the Dragon, which partly encircles the north pole. This is one of the conclusions reached from recent experiments by Prof. Dayton C. Miller, of the Case School of Applied Science in Cleveland, and described by him in a recent radio talk given through station WCAP, under the auspices of Science Service and the National Research Council.

The experiments of Prof. Miller have been made at the Mt. Wilson Observatory in California since March, 1921, and involve the use of a delicate instrument called the interferometer and invented by one of Prof. Miller's predecessors, Dr. A. A. Michelson, now professor of physics at the University of Chicago. When the experiment was first performed by Prof. Michelson in 1887, an effort was made to detect the motion of the earth through the ether, which is supposed to pervade all space, and to be the medium through which light and similar forms of radiation are transmitted. However, though the apparatus was delicate enough to detect the expected motion, only a negligible drift was found, and one of the ultimate results of the effort to explain this anomaly was the Einstein theory of relativity.

In 1905, Prof. Miller, and the late Prof. Edward W. Morley, who collaborated in the original set of experiments, repeated them on a hill 200 feet high near Cleveland, and found a slight effect, but nothing further was done until 1921 when the present series was started at Mt. Wilson, more than a mile above sea level. These have resulted in what is interpreted as a marked drift of the ether and the explanation offered has been that under conditions such as those in Cleveland, and at sea level, the ether tends to be dragged along, but on a mountain top, there is nothing to obstruct it, and so it drifts by.

The general direction and amount of the drift has been determined by Prof. Miller by comparing measurements made at different times of the day and year. In the series of experiments which he conducted last year, Prof. Miller stated, over 100,000 readings of the instrument were made. "This required," he said, "that I should walk, in the dark, in a small circle, for a total distance of 100 miles, while making the readings."

The general motion of the earth, and the rest of the solar system, which Prof. Miller finds is in good agreement with measurements made by astronomers of the motion, and is towards a point in the sky having the right ascension, the celestial equivalents of longitude, of 262 degrees, and a declination, which corresponds to latitude, of 68 degrees north. Other determinations of the motion and its direction have been made by measurements of the motions of the stars in the sky, and of the star clusters. "These three determinations of the absolute