Asian Journal of Scientific Research

ISSN 1992-1454

science alert
http://www.scialert.net

ANSInet
an open access publisher
http://ansinet.com

Was Israel the Birthplace of Modern Humans?

It has long been believed that modern humans emerged from the continent of Africa 200,000 years ago. Now Tel Aviv University archaeologists have uncovered evidence that Homo sapiens roamed the land now called Israel as early as 400,000 years ago -- the earliest evidence for the existence of modern humans anywhere in the world.

The findings were discovered in the Qesem Cave, a prehistoric site located near Rosh Ha'ayin that was first excavated in 2000. Prof. Avi Gopher and Dr. Ran Barkai of Tel Aviv University's Department of Archaeology, who run the excavations, and Prof. Israel Hershkowitz of the university's Department of Anatomy and Anthropology and Sackler School of Medicine, together with an international team of scientists, performed a morphological analysis on eight human teeth found in the Qesem Cave.

This analysis, which included CT scans and X-rays, indicates that the size and shape of the teeth are very similar to those of modern humans. The teeth found in the Qesem Cave are very similar to other evidence of modern humans from Israel, dated to around 100,000 years ago, discovered in the Skhul Cave in the Carmel and Qafzeh Cave in the Lower Galilee near Nazareth. The results of the researcher's findings are being published in the American Journal of Physical Anthropology.

Reading the past

Qesem Cave is dated to a period between 400,000 and 200,000 years ago, and archaeologists working there believe that the findings indicate significant evolution in the behavior of ancient humans. This period of time was crucial in the history of humankind from cultural and biological perspectives. The teeth that are being studied indicate that these changes are apparently related to evolutionary changes taking place at that time.

Prof. Gopher and Dr. Barkai noted that the findings related to the culture of those who dwelled in the Qesem Cave -- including the systematic production of flint blades; the regular use of fire; evidence of hunting, cutting and sharing of animal meat; mining raw materials to produce flint tools from subsurface sources -- reinforce the hypothesis that this was, in fact, innovative and pioneering behavior that may correspond with the appearance of modern humans.

An unprecedented discovery

According to researchers, the discoveries made in the Qesem Cave may overturn the theory that modern humans originated on the continent of Africa. In recent years, archaeological evidence and human skeletons found in Spain and China also undermined this proposition, but the Qesem Cave findings because of their early age is an unprecedented discovery.

Excavations at Qesem Cave continue and the researchers hope to uncover additional finds that will enable them to confirm the findings published up to now and to enhance our understanding of the evolution of humankind -- especially the emergence of modern man.

American Journal of Physical Anthropology, 2010; DOI: 10.1002/ajpa.21446